

AN ABSTRACT OF THE THESIS OF

DONALD EDWARD WARNE for the DOCTOR OF PHILOSOPHY
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An electrical system containing a gold exploding wire is considered. The time-resolved visible spectrum radiant energy, E_{out} , is the output of interest, and the electrical energy, E_{in} , is considered the input. A radiation response function is formed by the ratio E_{out}/E_{in} which is determined by analysis of the data from a series of tests with a variety of electrical conditions and wire dimensions.

The radiation response function is presented as a surface upon which lie all the time-trajectories of exploding wires of normalized dimension for the wire. The radiation response surface lies above a plane defined by the independent variables, current density and energy density in the wire. This surface has a maximum at the location of greatest total output radiation energy per unit of electrical input energy.

A mathematical model of the exploding wire response function is designed in terms of the basic phenomena. This model has the form:

$$E_{\text{out}}/E_{\text{in}} = K \exp(-\tau_1 s) / (\tau_2 s + 1),$$

where K is the system model attenuation, τ_1 is the time delay between the time of initial excitation of the wire and the wire burst, τ_2 is the time constant of radiation output response to a step input, and s is the Laplace operator. This model was identified by fitting it numerically to the experimental response surface.

CHARACTERIZATION OF THE RADIATION
OF AN EXPLODING WIRE BY ANALYSIS
OF THE RADIANT SPECTRUM

by

DONALD EDWARD WARNE

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APPROVED:

Redacted for Privacy

Professor of Electrical Engineering

Redacted for Privacy

Head of Department of Electrical and Electronics Engineering

Redacted for Privacy

Dean of Graduate School

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LIST OF SYMBOLS

A	Area of the objective lens
A_0	Initial cross-sectional area of exploding wire (m^2)
A_s	Area of isodensitracer scan aperture (m^2)
A_{sph}	Area of a sphere of radius equal to the objective lens conjugate
A_x	External area of exploding wire (m^2)
$\text{\AA}$	Angstrom unit, 10^{-10} meter
C	Capacitance of discharge circuit (farads)
D	Density of photographic film image
E_{out}, E_0	Radiation energy output from exploding wire (ergs)
E_{in}, E_i	Electrical energy input to wire (ergs)
E_f	Energy density incident on film (ergs cm^{-2})
E_s	Sensitometer source energy density (ergs cm^{-2})
G	Transfer function
G_l	Transmission of lens system
G_s	Transmission of spectrograph-streaking camera
G_{nd}	Transmission of neutral density filter
G_{nb}	Transmission of narrow band filter
K	System model attenuation
L	Inductance of discharge circuit (henrys)
P	Power (watts)
P_{out}, P_0	Radiant power emitted by source (watts)
P_{in}, P_i	Electrical power to wire (watts)
R	Resistance of discharge circuit (ohms)

S	Film sensitivity ($\text{ergs}^{-1} \text{ cm}^2$), reciprocal of E_f
T	Temperature ($^{\circ}\text{K}$)
V_0	Initial charging voltage (volts)
c	Velocity of light, $2.997925 \times 10^8 \text{ m-sec}^{-1}$
d	Diameter of exploding wire, initial condition (mils)
e	Base for natural logarithms, 2.71828
h	Planck's constant, $6.6256 \times 10^{-27} \text{ erg sec}$
i	Electrical current through exploding wire (amps)
j	Imaginary constant, $\sqrt{-1}$
k	Boltzmann's constant, $1.38054 \times 10^{-16} \text{ erg deg}^{-1}$
l	Length of exploding wire, initial condition (mils)
m	Mass of wire (grams)
s	Laplace operator
t	Time (seconds)
(t)	Function of time
t_0	Time of initial flow of current (sec)
t_b	Time of burst of exploding wire (sec)
v	Voltage (volts)
er	Error between model and actual parameters
λ	Wavelength ($\text{\AA}$)
μ	Prefix micro (10^{-6})
ν	Frequency (Hz)
π	Constant, 3.14159
ρ	Density (g cm^{-3})

σ	Stefan-Boltzmann constant, 5.6697×10^{-5} $\text{erg sec}^{-1} \text{ cm}^{-2} \text{ deg}^{-4}$
τ_1	Time delay from t_0 to t_b (sec)
τ_2	Time constant for radiation output to a step input (sec)

CHARACTERIZATION OF THE RADIATION OF AN EXPLODING WIRE BY ANALYSIS OF THE RADIANT SPECTRUM

I. INTRODUCTION

1.0 Exploding Wire Phenomena

The exploding wire phenomenon has come under widespread scrutiny by scientists and engineers during the last decade in their search for a general theory. The search has been in vain, as no embracing theory has yet emerged to give order to this complex irreversible process.

The study of the exploding wire is interesting from the point of view of the plasma physicist, because exploding wires are an easily attainable source of a dense plasma in a laboratory environment. As such, it has a myriad of uses to the experimentalist. It is also very interesting to engineers who seek the unique properties of the exploding wire to perform practical functions in their constructive and destructive mechanisms, such as intense illumination sources and high explosive initiators. The attempt in this study was to lend a measure of understanding to the dynamics of the output radiation response of exploding wire as a portion of the total energy balance of the explosion process. The process was characterized as having an electrical input and the production of radiation as one of the observable outputs.

There has been much conjecture by scientists about the exact mechanisms by which the exploding wire functions. The generally accepted description of the very short time-history of the electrical phenomenon is as follows.

The first short period of time, a few nanoseconds after the application of current through the wire, is taken in heating the metal to the melting temperature. The phase change then occurs and is defined by the slight knee in the voltage versus time curve (see Figure 2) and an increase in the slope of the current-time curve (see Figure 1).

Melting proceeds through the next period, with another slight knee appearing in the voltage curve at the phase change to the vapor state. Throughout the melting period the current has maintained a fairly constant rate of rise, based on the values of resistance and inductance of the discharge circuit. Radiation during this period is at a negligible level.

At the onset of the explosion, the voltage suddenly rises as the still un-ionized particles of liquid and gaseous metal start to diverge, and the current starts to drop. The voltage peaks very quickly, and the burst is said to occur at the voltage peak. The explosion is marked by the sudden rise in emitted broadband radiation and the subsequent production of an audible report.

The metal vapor then becomes completely ionized, and the voltage drops. The current recovers and again rises to a value approaching or exceeding the former level.

In a later time period ($t > 3$ microseconds), the current approaches the ringing response seen in the short circuit configuration (i. e., with the exploding wire replaced by a short circuit). Radiation may persist for many microseconds after the burst.

The foregoing discussion has described the result of firing a typical gold exploding wire of small dimensions (on the order of .0015 inch

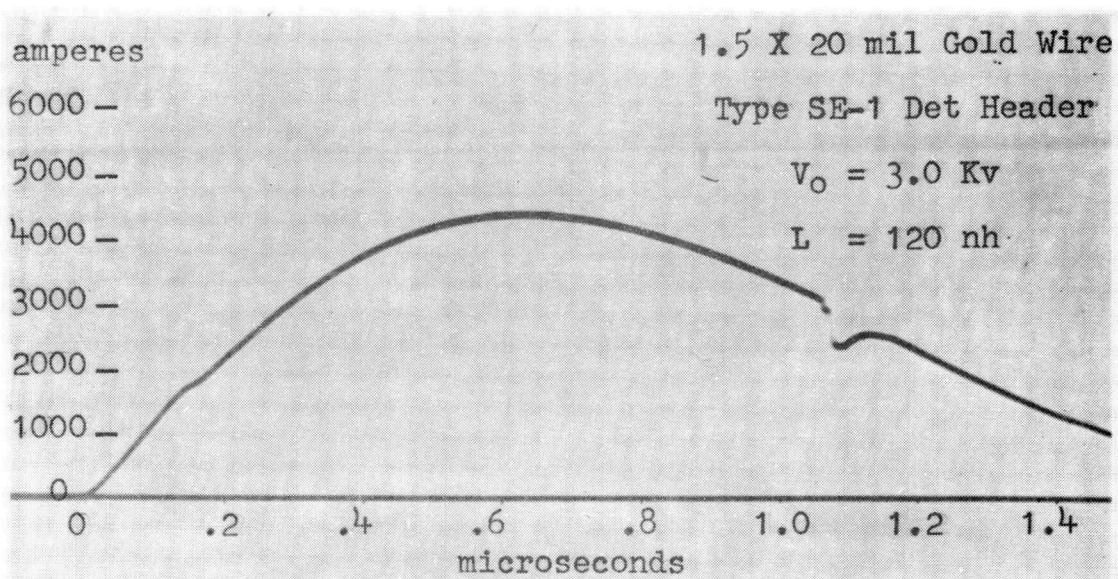
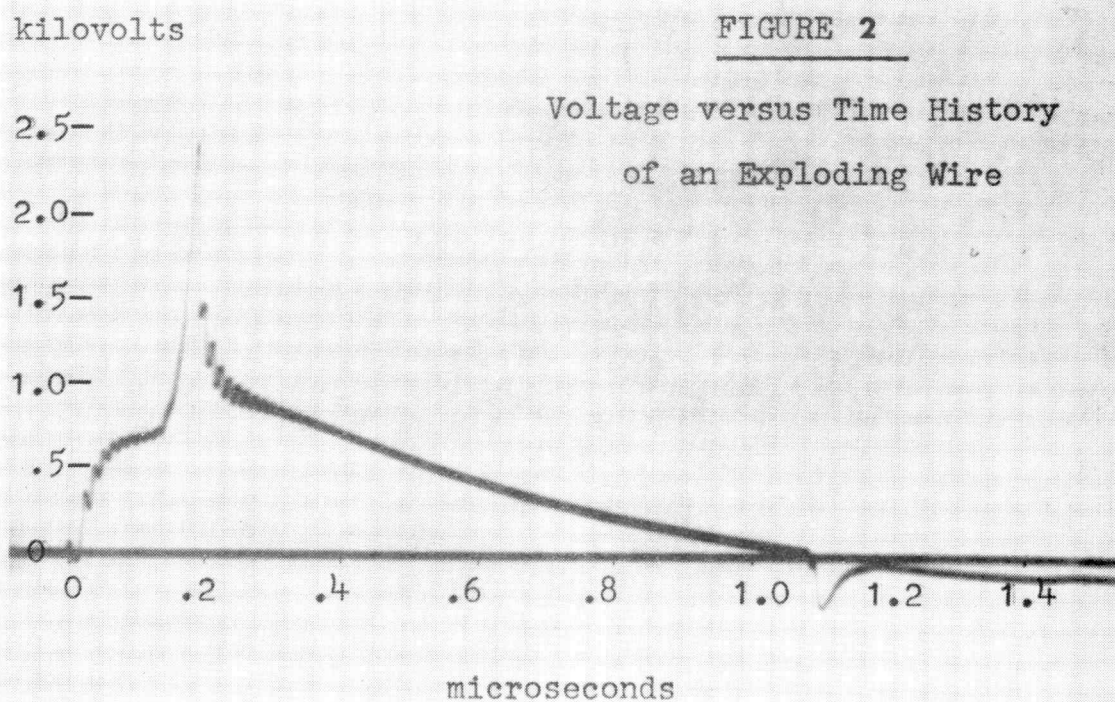


FIGURE 1

Current versus Time History of an Exploding Wire



diameter and .020 inch long) with a source energy of one to ten joules and a circuit inductance of approximately 100 nanohenrys. Other results would be seen if much lower source energies or circuit inductance were used. The present area of engineering interest in this study is in the energy range of one to ten joules.

The preceeding discussion may lead one to ask, "What is the useful output of an exploding wire, which functions in such a short time period?" Applications of exploding wires are found in the fields of photography, chemistry, metal forming, and high explosive initiation.

Initiation of High Explosives

The major use to which exploding wires have been applied has been in detonators. Exploding wire detonators provide an inherently safe device compared to previous thermal, or "hot-wire," detonators because of the large energy threshold required for the burst, thus allowing the use of less sensitive (secondary) explosives. The mechanism by which the actual initiation of secondary explosives occurs with exploding wires is not known. It may be the shock wave, the radiation, or the high temperature plasma, or more likely a combination of these outputs.

Photographic Illumination Sources

Exploding wires, sufficiently energized, provide the brightest intensities available for pulse illumination of an object. This is an extremely important application for the photography of very high temperature, highly radiative, or very fast subjects which are otherwise

obscure. In addition, the need for submicrosecond timing in photographic sequences can often be facilitated by mounting an exploding wire in the field of view of the camera. The start of each burst then may signify the accomplishment of a time-resolved event.

Catalyzing Chemical Processes

It has been found that certain chemical processes take place by use of an exploding wire as a catalyst. This work is still in its infancy, but it has been found to apply to organic reactions in petrochemical experiments.

Metal Forming

The radial pressure wave from long exploding wires is in the megabar pressure range. This pressure pulse has been used to form small tubes into symmetrical shapes that would otherwise be very difficult to manufacture. A related method, using exploding foils, has provided plane shock waves for forming areas of metal and is also used in shock spallation studies. It has also been considered as a means for the vacuum deposition of thin films.

Other Applications

Exploding wires have been used as one-shot switches and as triggers for spark gaps. In the laboratory, exploding wires represent an easily attained source of a dense high-temperature plasma, a source of high intensity shock waves, and, if the excitation is high enough, a source of x-rays.

1.1 Summary

This thesis reports on an experimental and analytical study of a means by which an electrical system containing an exploding wire can be characterized in terms of its prompt output radiation response. A predictive model is formulated to permit approximate determination of system output radiation. The system described is conceptually simple, and the approach is quite general.

Chapter II presents the theoretical analysis in which the input and output dynamics are mathematically treated. The input electrical system is modeled as a piecewise-linear, lumped-parameter differential equation with constant coefficients, but which also has a non-linear, time varying element, the resistance of the exploding wire. The output radiation during the early time period of the explosion is approximated by Planck's law for a blackbody radiator. The temperature and total output power of the radiating plasma, which are time-varying quantities, are derived by use of an approximation to Planck's law. This analysis was performed to yield theoretical power and energy values for comparison with the experimental data and verifies the correctness of the methods used. Figure 3 shows this comparison.

A transfer relationship was formed as the quotient of the output radiation energy and the input electrical energy. It has been observed that the energy of output radiation lags the input electrical energy by the time required for the wire to burst. In this study, the relation of initial input energy required from the firing circuit to initial output energy of prompt radiation was the characterization of interest. This

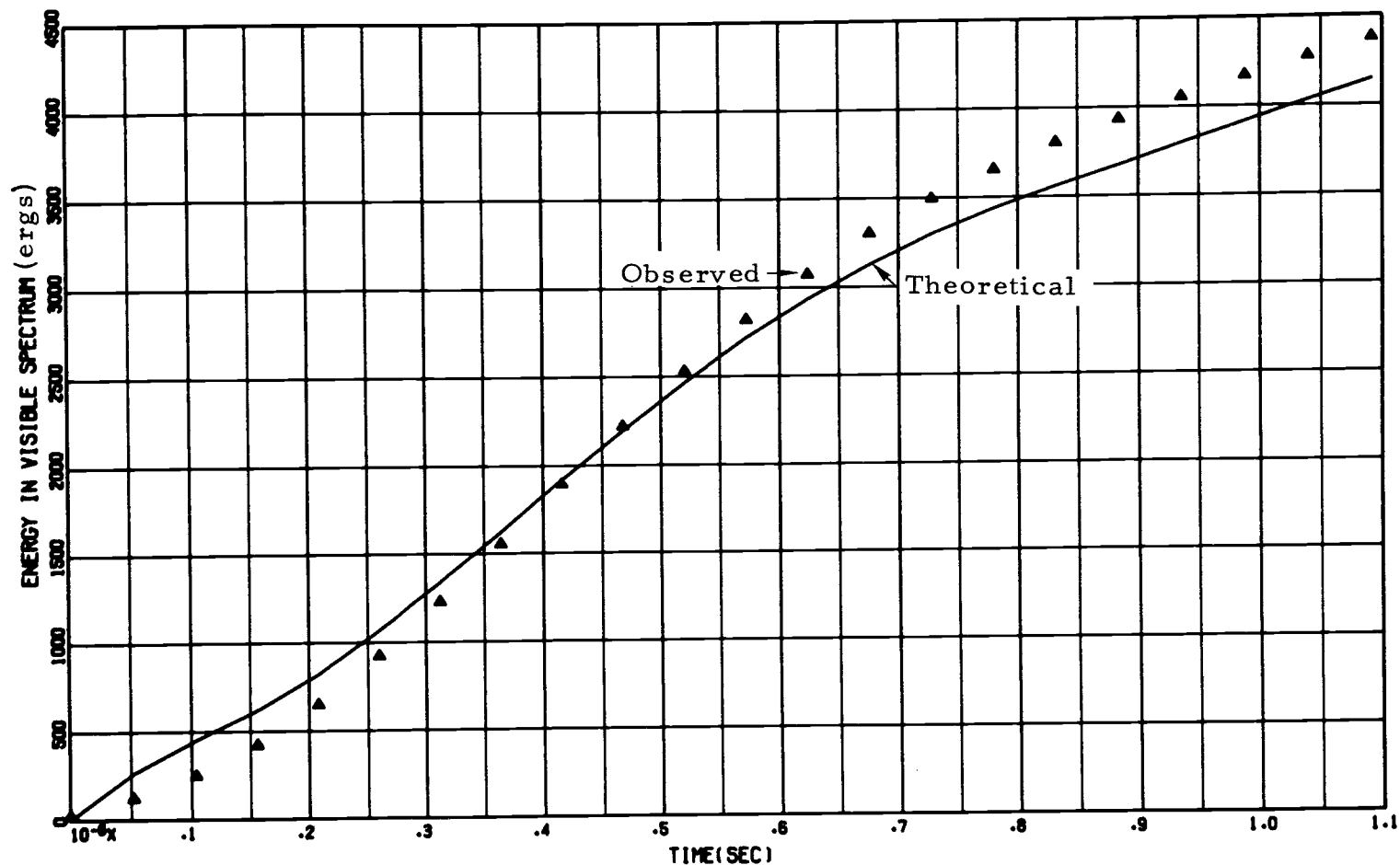


Figure 3. Comparison of Theoretical Versus Observed Energy Time History for the Visible Spectrum of an Exploding Wire

relation between the observed output and the required input involves a shift in input time by the amount of the burst delay, τ_1 . Therefore, the response function is stated:

$$\frac{E_0(t)}{E_i(t - \tau_1)}$$

This experimentally-derived relationship is termed the "Response Function" which was presented as a three-dimensional surface above a plane defined by the independent variables, current density* and energy density* of the wire. All dynamic response function trajectories for the gold wire lie on, and define, this surface. The response function surfaces for gold exploding wires are shown in Figure 4.

A mathematical model was determined, by a computer simulation method, to conform to the radiation response trajectory of the exploding wire. Since any model is dependent on the mathematical form chosen, it is important that the phenomena dictate that form. The data show that the output radiation response is a delayed, but normal rising exponential function of the input. Therefore, the above statements form the rationale for the choice of a model containing a time delay between the input and the output, with a normal exponential response to a step input. The first order model is an appropriate choice, which could be made more complex if necessary. As small time steps are used, and no discontinuities were visible in the input and the output

*Defined (by precedent of most authors, see Reference 3) on the basis of the initial (room-temperature) cross-sectional area of the exploding wire.

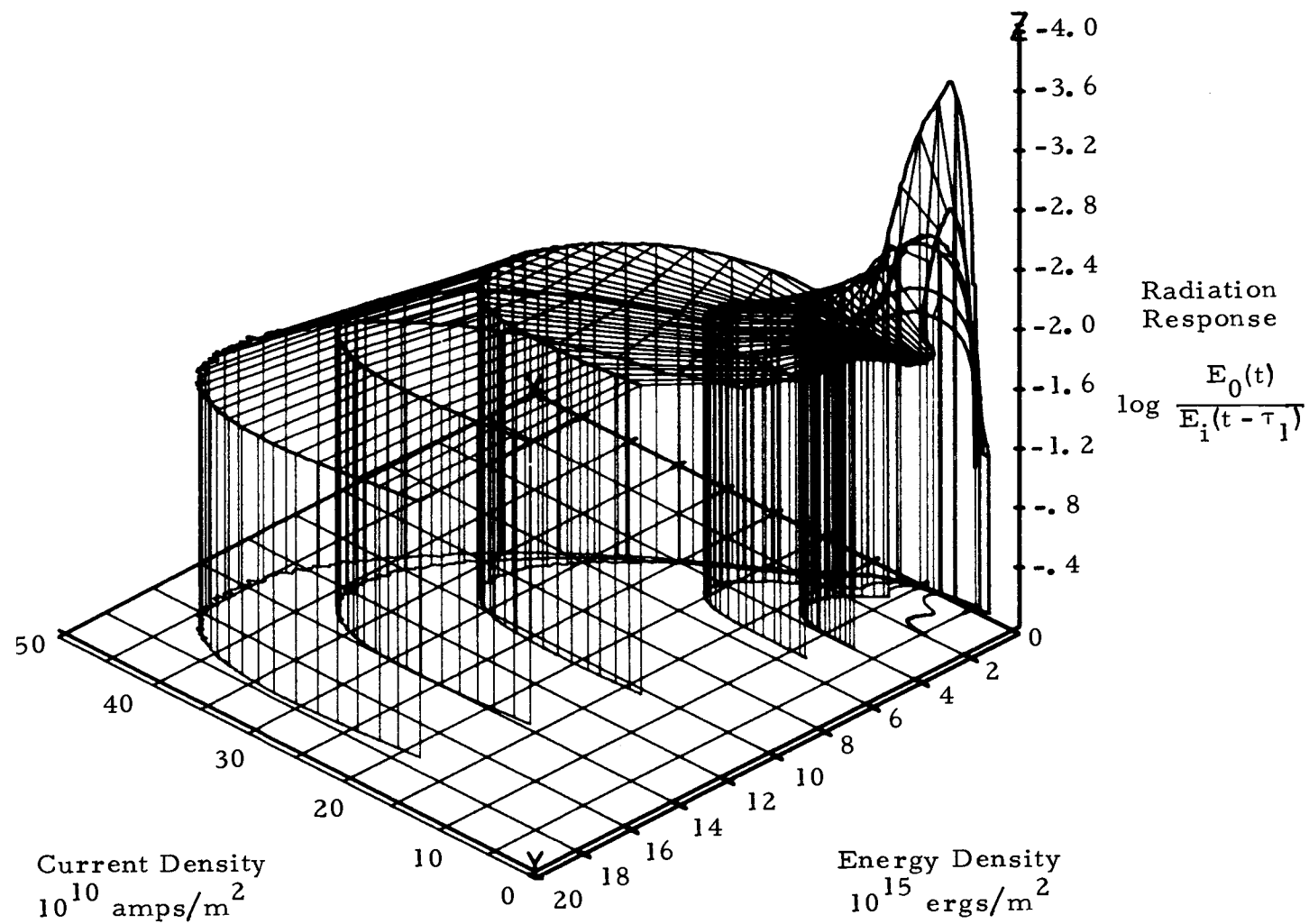


Figure 4. Radiation Response Surface for Gold Exploding Wires - Series 3

energy, a linear model was chosen. The differential equation of this model is:

$$\tau_2 \frac{dE_0(t)}{dt} + E_0(t) = KE_i(t - \tau_1)$$

where: E_0 = Radiation power emitted from the exploding wire
 E_i = Electrical power supplied to the exploding wire
 K = System attenuation
 τ_1 = Time delay from initial excitation (at t_0) of the wire until burst
 τ_2 = Time constant for the rise time of the output response
 t = Time

The model has the form in Laplace transform (s) notation:

$$\frac{E_0(s)}{E_i(s)} = \frac{Ke^{-\tau_1 s}}{\tau_2 s + 1}$$

The values of K , τ_1 , and τ_2 depend on the initial conditions and the electrical system parameters:

V_0 = Charging voltage
 L = Circuit inductance
 R = Circuit resistance
 C = Circuit capacitance
 d = Initial diameter of the exploding wire
 l = Initial length of the exploding wire

It was not the purpose of this study to try to determine the relationships between the model constants and the electrical system parameters, because a much more extensive experiment would be necessary to establish the analytical or empirical relationships required.

Chapter III describes how the exploding wire system was "characterized" or "identified" by an experiment. The time history of electrical input and the radiation output of a large number of exploding wires were recorded and digitized. These data were reduced and transformed into absolute engineering units for computation.

The recording system, both optical and electronic, was subjected to a rigorous calibration to facilitate the data reduction. Automatic processing of the experimental data was accomplished by computer programs written to apply the appropriate correction to the data at each specific interval of wavelength.

Chapter IV relates the computational methods used to perform the analysis. Program WIRE was written to determine the energy of the radiation from the exploding wire utilizing the reduced spectrographic data. Program SURFACE was also used to characterize the radiation response function of the wire. The IDENT program determined the values of the unknown constants in the predictive model.

Chapter V presents the conclusions reached in this study of radiation response of gold exploding wires. Recommendations on the possible use to which this information and these methods can be put are given. Finally, research in other areas of exploding wire phenomena associated with the radiation response are discussed.

1.2 Scope

This study is limited to the electrical source described schematically in Figure 5. It is a capacitor discharge system used to explode round wires mounted on standard type SE-1 detonator headers (see Figure 6). Gold exploding wires in various sizes were studied.

The periods in the short time history of the exploding wire that were of interest in this study were:

1. From initial excitation of the wire (t_0) to the time of burst (t_b).
2. From the time of burst (t_b) to less than two microseconds beyond.

The first limitation applies, in this study, to the input requirements of the exploding wire. The electrical energy delivered to the wire up until the burst governs the magnitude of the delayed output and, to a large degree, the design of the pulse power supply. The reason for the second limitation was that the initiation of high explosive in exploding wire detonators takes place in somewhat less than this time range. These associated interests dictated the specific limitations of this study, and thus directed the attention to the early time history of the data.

The radiation spectrum studied covers a band of the total radiation in wavelength in the visible spectrum from 4000 to 6500 Å. This was the sensitive range of the Royal-X pan film used in this study.

It will be noted by analysis of the results that, while spectral information was gathered, operated on, and otherwise computed, the results are based on the total spectrum, rather than visible bandwidth or wavelength-discriminant values. The purpose here is to present the

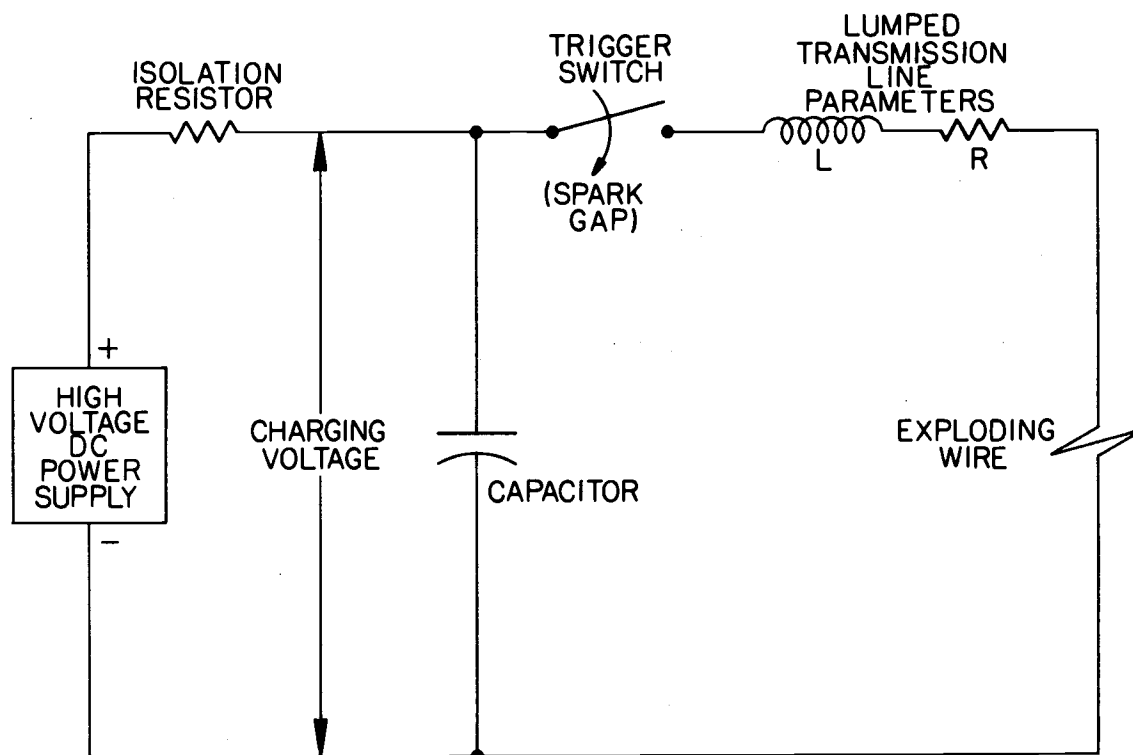


FIGURE 5
BASIC CAPACITOR
DISCHARGE EXPLODING
WIRE SYSTEM

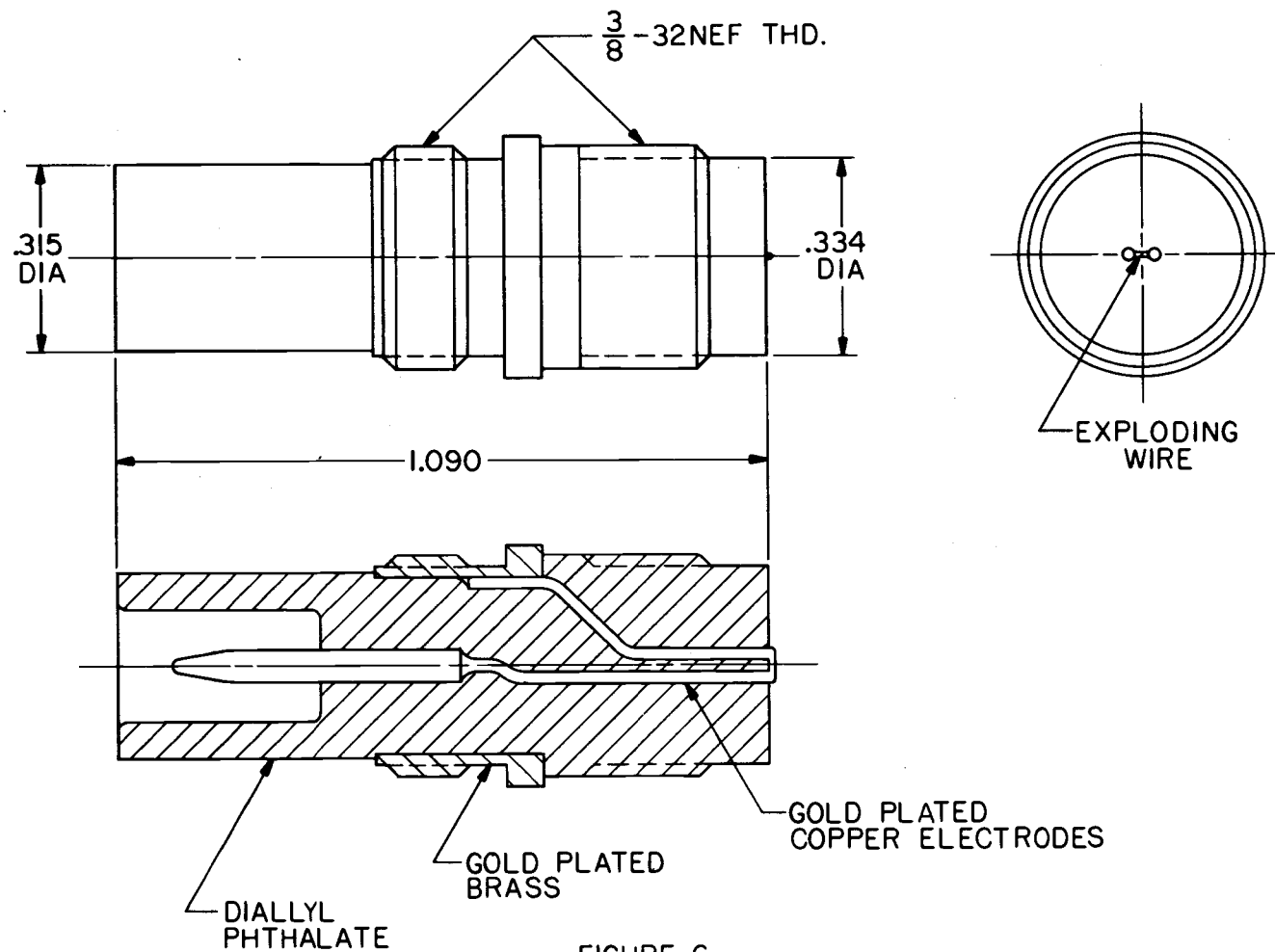


FIGURE 6
TYPE SE-I
DETONATOR HEADER

relation of the dynamics of total radiation energy time-history rather than discerning the effects at individual wavelengths. (Individual wavelengths were used, however, in the raw data calibration, i. e., the 4488 Å gold line.) Various other physical phenomena were noted in the data, but not treated in the results, as they were associated with a particular wavelength, rather than the total radiation spectrum. For example, evidence of line broadening and localized flares was seen in the spectrographic data.

All tests were performed in air at ambient temperature and pressure. The energy range of the capacitor discharge unit was varied from one to ten joules. The firing circuits were connected by coaxial cables of 120 nanohenrys and 1815 nanohenrys.

1.3 Contribution to Knowledge

The literature has not yet dealt in generality with this type of a system: a nonlinear response which proceeds almost instantly to destruction during the first microsecond after energy deposition. Dynamic characterization of the system by examination of the radiant output spectrum has not been applied to the exploding wire. Further, characterization by means of time-resolved spectroscopy of exploding wires is an untouched field.

The dynamic radiation response of gold exploding wires is characterized in this study by a three-dimensional response surface.

1.4 Previous Works

The literature of the study of exploding wires yields richly the results of work by phenomena-oriented experimental physicists. Great interest over many years has been generated in consideration of the dense plasma resulting from electrically exploding a wire in the laboratory. However, the engineering applications of submicrosecond exploding wire phenomena are few.

Below are discussed the significant results which led directly to this work in the study of the exploding wire phenomenon.

The work of Blackburn (Ref. 1)* at Stanford Research Institute directed toward characterization of exploding wire detonator electrical resistance response was significant in forming the present approach toward determination of the radiation response. The instrumental studies of Case (Ref. 2) at the Air Force Weapons Laboratory were directly applicable to the methods and to some of the analysis used in this study. The associated work of Pierce (Ref. 9) at Sandia Laboratories, Livermore, was extremely useful. Some reference was made to the early results of Tucker (Ref. 10) at Sandia Laboratories, New Mexico, in checking electrical results with previous data.

1.5 Application of the Present Work

The characterization procedure described herein can be applied to any system in which one or more components proceed to irreversible

*Other sources referred to in parentheses throughout the text are listed in the bibliography.

destruction in an extremely short period of time. The general method requires definition of the system response in terms of the observable output variables. This is usually done by absolute measurement of experimental results. The system model must be formulated on the basis of the specific application desired and is related to the phenomenon of the response. The computer analysis and determination of the system is based on straightforward techniques.

In the specific case of an application in which an exploding wire system must be found which will enhance the total radiant energy, while at the same time perform this function most efficiently in terms of input electrical energy, the method proposed here may be useful in leading to the optimal solution. If a certain portion of the spectral band is to be enhanced, then the application of this method is further exemplified.

II. THEORETICAL ANALYSIS

2.0 Purpose

The purpose of the analytical work was to support the conclusions and relate the validity of the experimental work to established theory as closely as possible. The development of the radiation response function characterizes the form of the experimental results. The radiation response model provides a means of predicting the output radiation.

2.1 Electrical System Analysis

The electrical system was taken as an electrical energy source, a lumped parameter conductor,* and a time-varying load, the exploding wire. All elements of the system except the exploding wire resistance are taken as linear, time invariant circuit elements.

The governing differential equation of the electrical system is written:

$$L \frac{di(t)}{dt} + Ri(t) + R_w [J(t), E_i(t)/A_0] i(t) + \frac{1}{C} \int i(t) dt = 0 \quad (1)$$

where: L = Circuit inductance
 R = Circuit resistance
 C = Circuit capacitance

*Because extreme care was taken to use short coaxial cable in the discharge circuit, it was felt that the assumption of lumped parameters was justified.

$$R_w [J(t), E_i(t)/A_0] = \text{Exploding wire resistance as a function of current density and input energy density}$$

$$i(t) = \text{Current}$$

The presence of the time-varying resistance, R_w , of the exploding wire makes a numerical solution necessary. As far as is known, there is no analytical form for this resistance function. Previous approaches to engineering analysis of exploding wire systems have used models of the exploding wire resistivity in the solution to equation 1 (Ref. 1). This yields electrical current and voltage time-histories which are compared with some electrical criteria for the design. However, if the exploding wire process is conceived as an interface, as in this thesis, then the electrical variables, current and voltage are input variables to the system, and radiation is one of the output variables. For this reason, equation 1, the electrodynamic equation, which has been studied extensively elsewhere (Ref. 1, 3, 10) is not of major interest in this study.

The values of electrical input energy and power used in subsequent analysis were computed directly from the recorded experimental data.

$$P_i(t) = v(t) i(t)$$

$$E_i(t) = \int P_i(t) dt$$

where: $P_i(t)$ = Input power

$v(t)$ = Voltage across exploding wire

$i(t)$ = Current through exploding wire

$E_i(t)$ = Input energy

t = Time

2.2 Output Radiation Analysis

The power radiated by a blackbody at a temperature, T, in local thermal equilibrium* is given by Planck's law:

$$\frac{P_0(\nu)}{A_x} d\nu = \frac{2\pi h}{c^2} \frac{\nu^3 d\nu}{e^{h\nu/kT} - 1}$$

where: $\frac{P_0(\nu)}{A_x} d\nu$ = The emitted power density in the frequency range $d\nu$

A_x = Area of the uniform blackbody radiator

ν = Frequency

h = Planck's constant of action

c = Velocity of light

k = Boltzmann's constant

T = Absolute temperature

In terms of wavelength, λ , the law is stated:

$$\frac{P_0(\lambda)}{A_x} d\lambda = 2\pi hc^2 \frac{d\lambda}{\lambda^5 (e^{hc/\lambda kT} - 1)}$$

where: $\lambda = \frac{c}{\nu}$ = Wavelength

Figure 7 shows the spectral power density emitted by a blackbody at a temperature of 5000°K.

*Defined in Appendix I

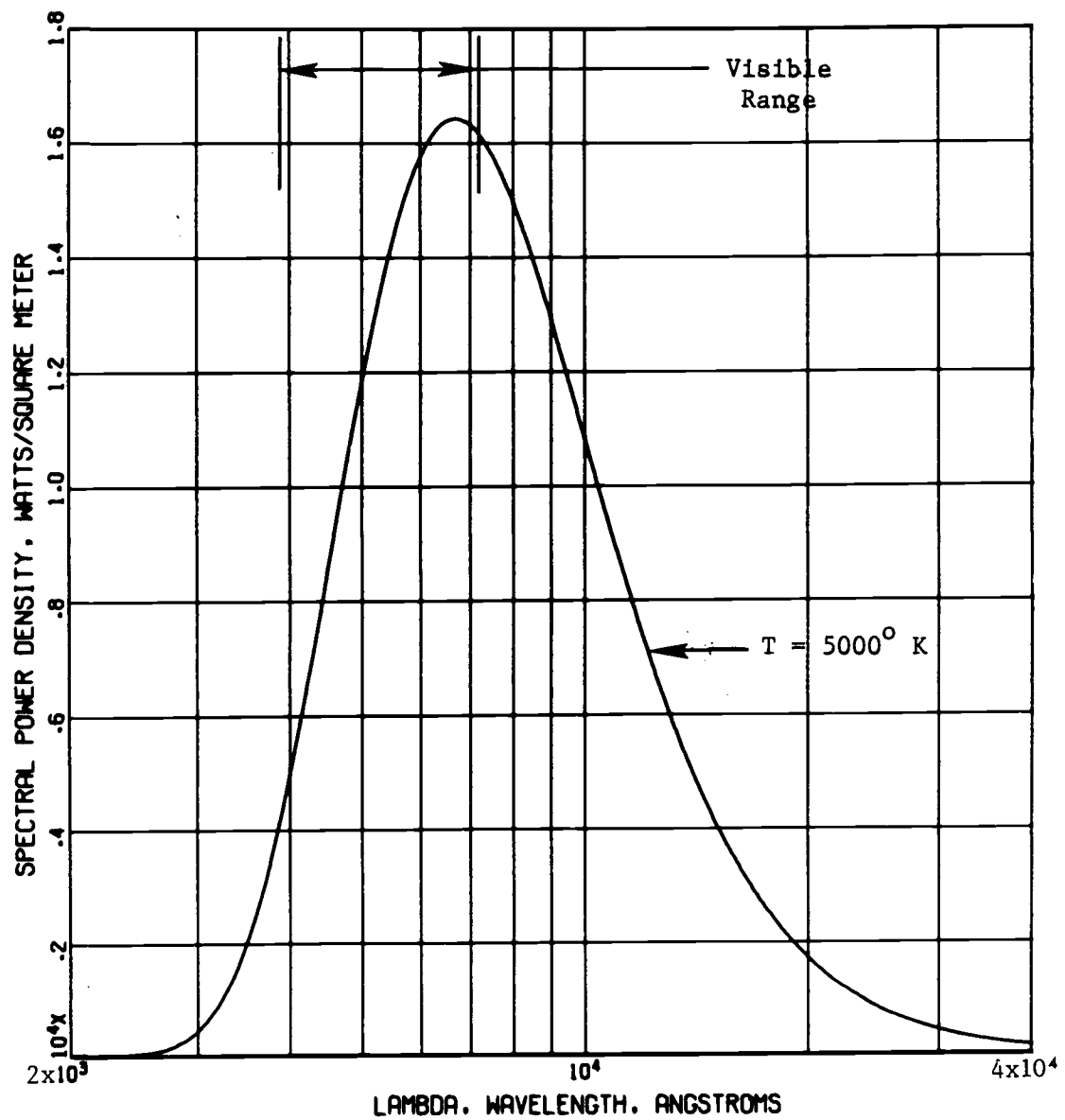


FIGURE 7

Spectral Power Density Emitted by a
Blackbody Radiator at a Temperature of 5000° K

2.3 Temperature Analysis

During the early time period, the first portion of a microsecond after the burst of the exploding wire, the plasma radiates across the entire spectrum. This is called the continuum and approximates blackbody radiation. The degree to which this approximation diverges at later times has been studied by Pierce (Ref. 9).

The power per unit area emitted by a blackbody source in a range from λ to $\lambda + d\lambda$ is:

$$\frac{P_0(\lambda)}{A_x} d\lambda = 2\pi hc^2 \frac{d\lambda}{\lambda^5 (e^{hc/\lambda kT} - 1)}$$

Wien's Approximation* to Planck's Radiation Law is now used which is stated:

$$\frac{P_0(\lambda)}{A_x} d\lambda \cong 2\pi hc^2 \frac{d\lambda}{\lambda^5 e^{hc/\lambda kT}}$$

The ratio between the power densities taken at the same instant of time, but at two different wavelengths, λ_1 and λ_2 , is:

$$\frac{P_{01}(\lambda_1, t_1)}{P_{02}(\lambda_2, t_1)} = \frac{\lambda_2^5 e^{hc/\lambda_2 kT}}{\lambda_1^5 e^{hc/\lambda_1 kT}}$$

*See Appendix I

where: P_{01}/A_x and P_{02}/A_x are the power densities at the time t_1 ,
but at two discrete wavelengths, λ_1 , and λ_2 .

Solving for temperature at time t_1 , as shown in Appendix I,

$$T(t_1) = \frac{hc}{k} \frac{\frac{1}{\lambda_2} - \frac{1}{\lambda_1}}{\ln \left[\frac{P_{01} \lambda_1^5}{P_{02} \lambda_2^5} \right]}$$

2.4 Total Output Power and Energy

The total power density of the output radiation of a blackbody source is given by the Stefan-Boltzmann equation, which is the integral of Planck's law over the entire spectrum:

$$\frac{P_0}{A_x} = \int_0^{\infty} \frac{P_0(\lambda)}{A_x} d\lambda = \sigma T^4$$

where: σ = Stefan-Boltzmann constant

If the radiating body is not a true blackbody, it is called a graybody radiator, and is characterized by emissivity, $\epsilon(T)$, a function of temperature:

$$\epsilon(T) = \frac{P_0(\text{graybody})}{P_0(\text{blackbody})} = \text{emissivity as a function of the absolute temperature of the radiating material}$$

Emissivity must be computed by numerical methods from experimentally-determined values of spectral emissivity, $\epsilon(\lambda)$, which depends on the specific radiating material.

$$\epsilon(T) = \frac{2\pi hc^2}{\sigma T^4} \int_0^\infty \frac{\epsilon(\lambda) d\lambda}{\lambda^5 (e^{hc/\lambda kT} - 1)}$$

where: $\epsilon(\lambda)$ = spectral emissivity

Plots of the emissivity and the spectral emissivity of gold are shown in Figures 8 and 9.

Using the emissivity thus computed, the Stefan-Boltzmann equation now yields the total power density of output radiation for a gray-body (where, if the temperature is time-varying, so also will be the power):

$$\frac{P_0(t)}{A_x} = \epsilon(T)\sigma T^4(t)$$

Total power is found by multiplying the total power density by the known exterior area of the radiator, $A_x(t)$:

$$P_0(t) = \left(\frac{P_0(t)}{A_x} \right) A_x(t)$$

where the time-varying external area, $A_x(t)$, was determined by streaking camera shots of the exploding wires (not spectrographic records), as shown in Figure 10. The diameter of the plasma, and hence the external area, was found to expand by a factor of approximately 100 in the early time period of interest.

The energy of output radiation, $E_0(t)$, is then determined by:

$$E_0(t) = \int_0^t P_0(t) dt$$

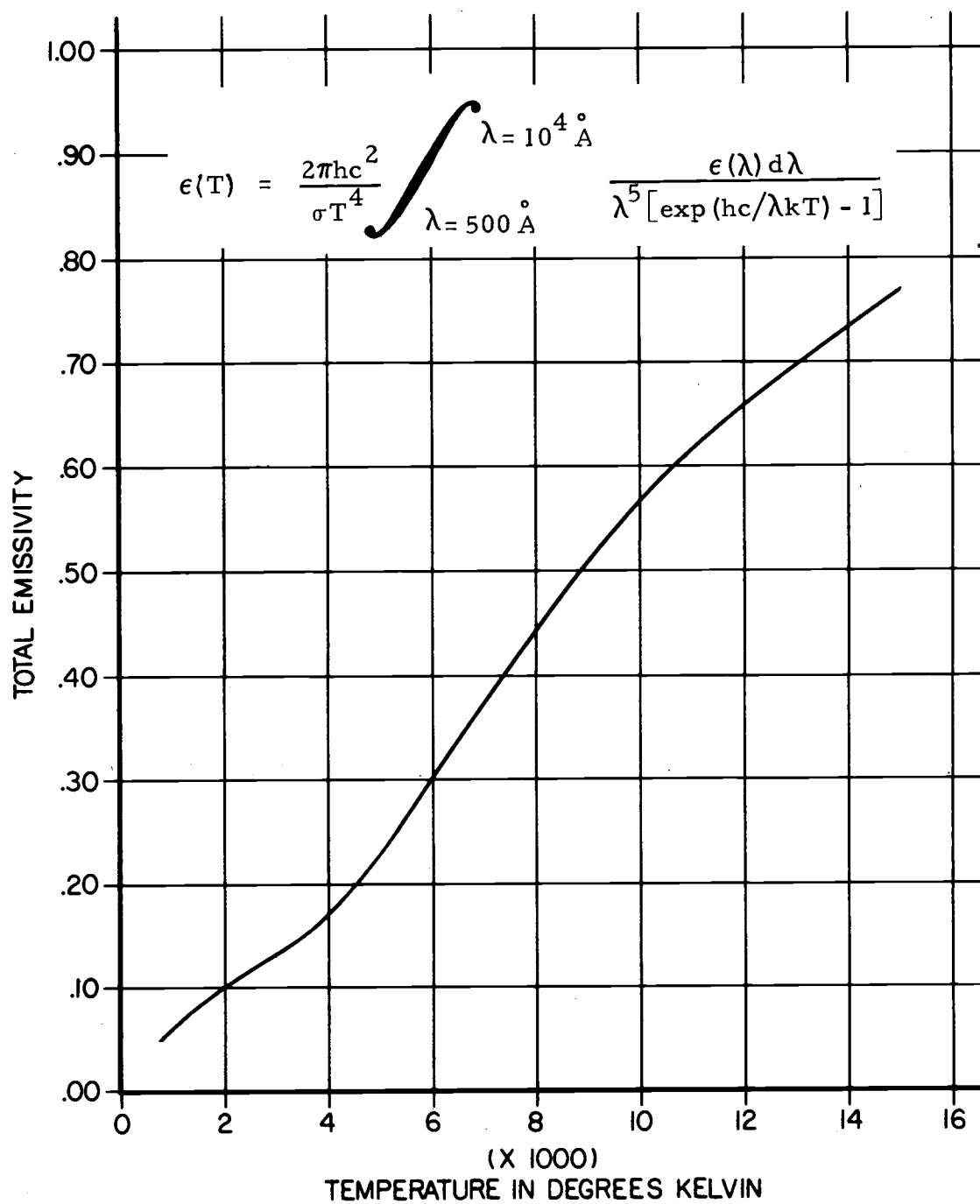


FIGURE 8
 EMISSIVITY OF GOLD
 VERSUS TEMPERATURE

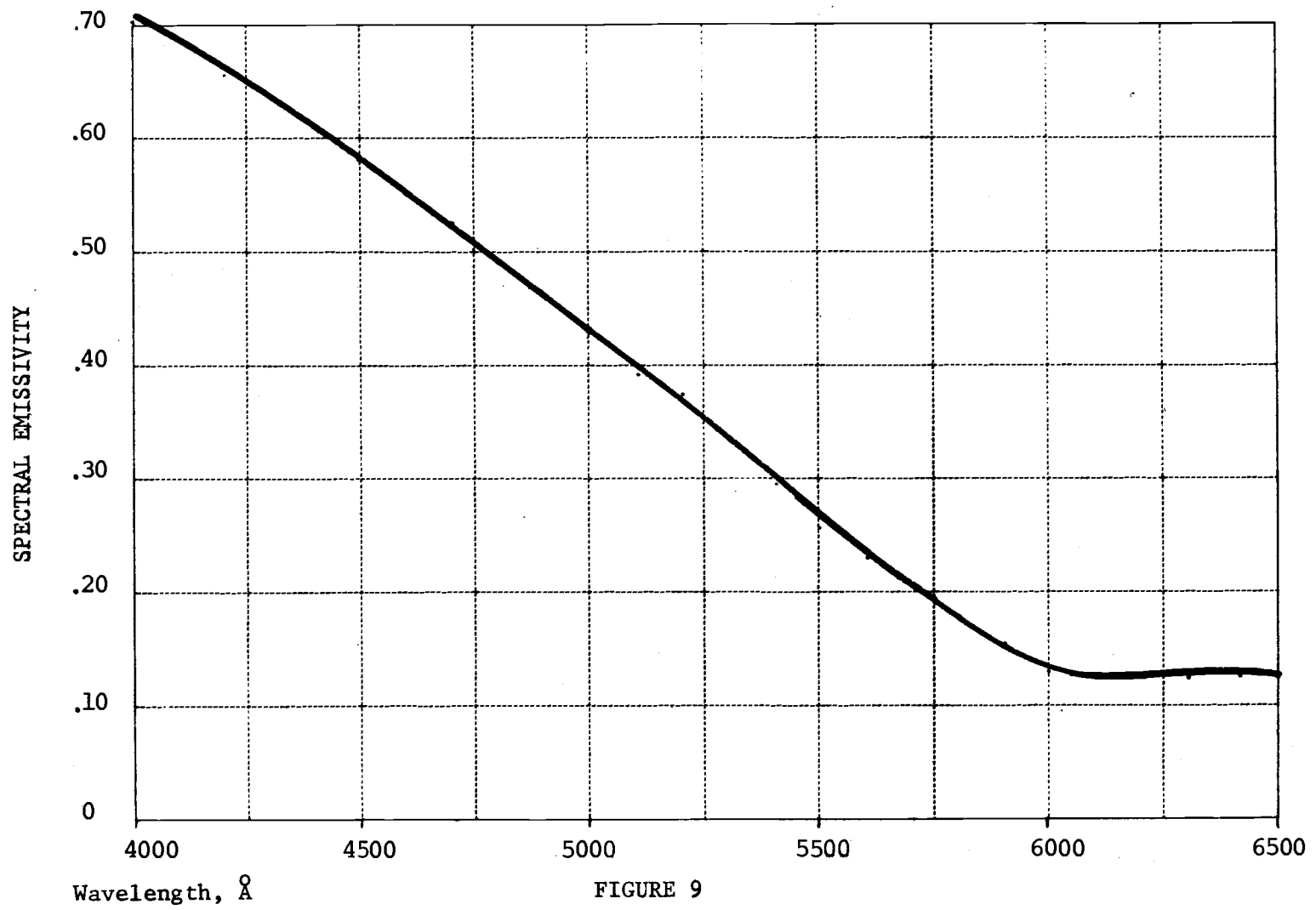
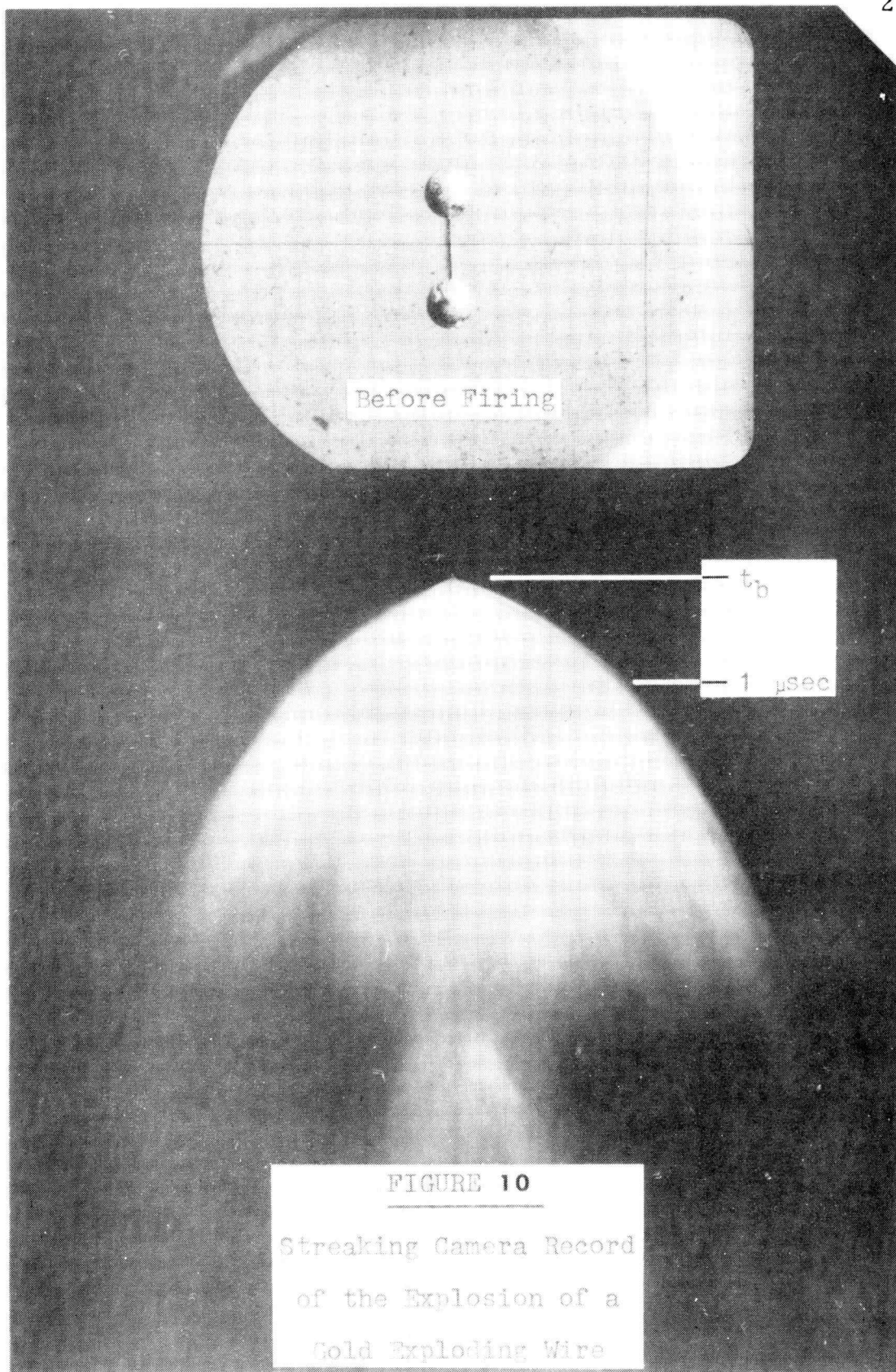


FIGURE 9
Spectral Emissivity of Gold



The time period of primary concern in this study was promptly after the explosion, during which the plasma was radiating across the entire spectrum. This period has been called the "continuum" by many authors.

This portion of the experimental data was subjected to an intensive analysis to test the validity of applying the assumptions of the previous section:

1. That the exploding wire radiates as a graybody source during the initial period after the burst.
2. That the plasma developed approximates a homogeneous optically thick* radiator.
3. That the concept of local thermal equilibrium* holds.

The analysis of the experimental work and the determination of just when in the time history the assumptions become invalid was performed at Sandia Laboratories by David M. Pierce (Ref. 9), under the direction of the author, and is reported briefly in Appendix I. This intensive analytical work was done on a single record of a gold exploding wire firing, and it corroborates and expands on the previous work by R. S. Case (Ref. 2).

2.5 Radiation Response Function

The purpose of the radiation response function was to characterize the input/output relation of the exploding wire phenomenon with respect to its experimentally determined prompt radiation and input electrical

*Defined in Appendix I

energy. Radiation is not the only output of the exploding wire during the burst, the other outputs being a shock (pressure) wave and the generation of a high temperature plasma. But the prompt radiation is one of the experimentally observable value for which a continuous time history can be described in absolute engineering units in the time frame of interest.

2.5.1 Rationale

Given that the output radiation is an output for which an observable time-history can be experimentally recorded, it was necessary for this analysis that a relationship of output radiation energy to input electrical energy be made. But a time delay between input and output exists, consequently, the input energy was shifted in time and taken as $E_i(t - \tau_1)$ and the output power is $E_0(t)$. τ_1 is the time delay between the start of E_0 and the onset of E_i . It was proposed that the function formed by the ratio of the energy be determined, and that this function would characterize the radiation in a meaningful, useful way.

2.5.2 Definition of the Response Function

The radiation response function was defined by the expression relating the input and output:

$$\frac{E_0(t)}{E_i(t - \tau_1)} = \text{Radiation Response Function}$$

The input energy in the denominator was shifted in time (Ref. 4) so that both input and output started simultaneously at τ_1 , the time of

wire burst. The function, $E_i(t - \tau_1)$, was simply the input energy, $E_i(t)$, aligned on the time scale so that each value of time, t , was replaced by its associated value of $t - \tau_1$. The values of input and output energy were experimentally determined time-histories, thus the radiation response function also changed with time. Each exploding wire test provided an individual response function time-history. The time-histories differed from each other if the experimental conditions were different, and they closely followed each other (within the experimental variation and analytical error) if the conditions of the firing were the same. It should be noted that the radiant output power was not used directly as recorded. The lens-spectrograph-camera-film arrangement was limited to wavelengths from $4000 \text{ \AA}$ to about $6500 \text{ \AA}$, the visible spectrum. Hence the data was fitted to a graybody source radiation curve, and the effective temperature was determined. The total power of the radiator over the entire spectrum was computed based on this temperature, and this value was used to determine the output energy in the radiation response function. The scope of the experiment was such that a number of radiation response time-histories was available. The presentation of these data was made after the method of Blackburn (Ref. 1) in which a three dimensional "response surface" was plotted. It was useful to conceive of the output function (the radiation response function) plotted as a dependent variable with respect to some measures of the input. In this case, the precedent set by Blackburn and others was used. The abscissas of the plot were input current density, J , and, input energy density, E_i/A_0 , with both values based on the initial cross-sectional area of the exploding wire,

A_0 . The multiplicity of response function time-histories, when plotted against these variables, forms a series of trajectories that all lie upon and define the radiation response surface.

2.5.3 A Model for Radiation Response

The existence of the radiation response surface challenges one to define a predictive model to yield the trajectory of similar but somewhat variant wire explosions. The purpose may be well suited if the response of a certain total energy output were required for a limited, or fixed, input. The matrix of data of the radiation response surface was fitted, according to the following discussion, to a particular form of model that is related to the exploding wire phenomenon.

2.5.4 Derivation of the Model

The output energy of radiation lags the input electrical energy by τ_1 , the time required for the wire to burst after initial closure of the discharge circuit. In view of the uniformity of the output phenomena, a linear, first-order differential equation was written to characterize its relation to the input forcing function.

$$\tau_2 \frac{dE_0}{dt}(t) + E_0(t) = KE_i(t - \tau_1)$$

where: $E_0(t)$ = Output radiation energy emitted from the
exploding wire

$E_i(t - \tau_1)$ = Input electrical energy supplied to the exploding wire

K	= System attenuation
τ_1	= Time delay from initial excitation at time t_0 until wire burst
τ_2	= Time constant for the rise time of the output response
t	= Time

The general solution to the above differential equation is:

$$E_0(t) = E_0(0)e^{-t/\tau_2} + \frac{K}{\tau_2} e^{-t/\tau_2} \int_0^t e^{\zeta/\tau_2} E_i(\zeta - \tau_1) d\zeta$$

where: $E_0(0) = 0$, the initial value of output energy. The solution is then:

$$E_0(t) = \frac{K}{\tau_2} e^{-t/\tau_2} \int_0^t e^{\zeta/\tau_2} E_i(\zeta - \tau_1) d\zeta$$

This solution must be analyzed by numerical methods because E_i , the input energy, is not analytically integrable, but is the time-integral of the product of the observed input variables, voltage and current.

Transformation of the differential equation into the s domain by use of the Laplace transform yields:

$$\frac{E_0(s)}{E_i(s)} = \frac{Ke^{-\tau_1 s}}{\tau_2 s + 1} \quad (2)$$

where: s = the Laplace transform operator.

The statement of the differential equation in Laplace form provides a concise shorthand format to describe the model. The values of the constants, K , τ_1 , and τ_2 , are to be determined by application of the experimental results. The system attenuation, K , the time delay, τ_1 , and the radiation output time constant, τ_2 , were found by the IDENT computer program. IDENT determined the values of the constants for a function of the form of equation (2) that fit the experimental results. The process of the IDENT program used is described in Chapter IV.

2.5.5 Application of the Model

When the radiation response model is defined, it can be used to predict the radiation output of an exploding wire. The user must have a body of experiment available if the exploding wire system diverges very far in material, geometry, or experimental conditions from that described here.

Performance of a few limited experiments permits the determination of the time delay, τ_1 , and the input electrical energy, $E_i(t)$. The values of the system attenuation, K , and the radiation output time constant, τ_2 , can also be estimated by electronic means (i. e., by use of photo cells or photodiodes). With these values, the model can be articulated to determine the output energy of the radiation response.

III. EXPERIMENTAL STUDY

3.0 Purpose of the Experiment

A parametric study was made to characterize the exploding gold wire as a source of radiant energy. Tests were made with gold wires in a variety of diameters and lengths. Electrical system parameters, such as charging voltage, system resistance, and inductance, were varied over the range of interest.

A total of 65 tests were performed, of which usable data were collected from 52 of them. The 13 tests were not used, usually because the electronic or the optical recording equipment had failed to report. In the data reduction process, excessive parity errors and dropped information bits was the cause of the loss of data from 19 tests. The final number of usable tests was 33. A resume of the experiments performed is given in Appendix II.

3.1 Design of the Experiment

The tests were designed to measure, in absolute units, the visible radiation from an exploding wire during the early time after the burst. The radiation intensity was recorded as a function of time and wavelength with an LLL* spectrograph-streaking camera on a calibrated batch of Eastman Kodak Royal-X Pan film.

*Lawrence Livermore Laboratory, University of California,
Livermore, California

When the exploding wire was fired, by discharging the energy stored in the capacitor through it, the portion of the total output radiation seen by the lensing system was focused through the spectrograph-streaking camera and deposited on the film. The energy density deposited on the film, E_f , represented a true sample of the radiation of the wire explosion, subject to the following attenuations:

$$\begin{aligned} \frac{A_l}{A_{\text{sph}}} &= \text{Reduction by the ratio of the area of the ob-} \\ &\quad \text{jective lens to the area of a sphere with} \\ &\quad \text{radius equal to the objective distance} \\ G_l &= \text{Transfer function of the lens system} \\ G_s &= \text{Transfer function of the spectrograph-} \\ &\quad \text{streaking camera} \end{aligned}$$

Thus, the basic equation used to reconstitute the experimental radiation data was:

$$E_{0v} = E_f A_s \left[\frac{A_{\text{sph}}}{A_l G_l G_s} \right]$$

where: E_{0v} = total visible spectrum energy radiated by the exploding wire as a point source

A_s = Area of the isodensitracer scan aperture (data reduction area).

Determination of all of the components of the above equation was the large part of the experiment. The energy deposited on the film, E_f , was sampled in very small, non-overlapping steps in both time and wavelength by a recording microdensitometer called an isodensitracer. The lens transfer function, G_l , and the spectrograph-

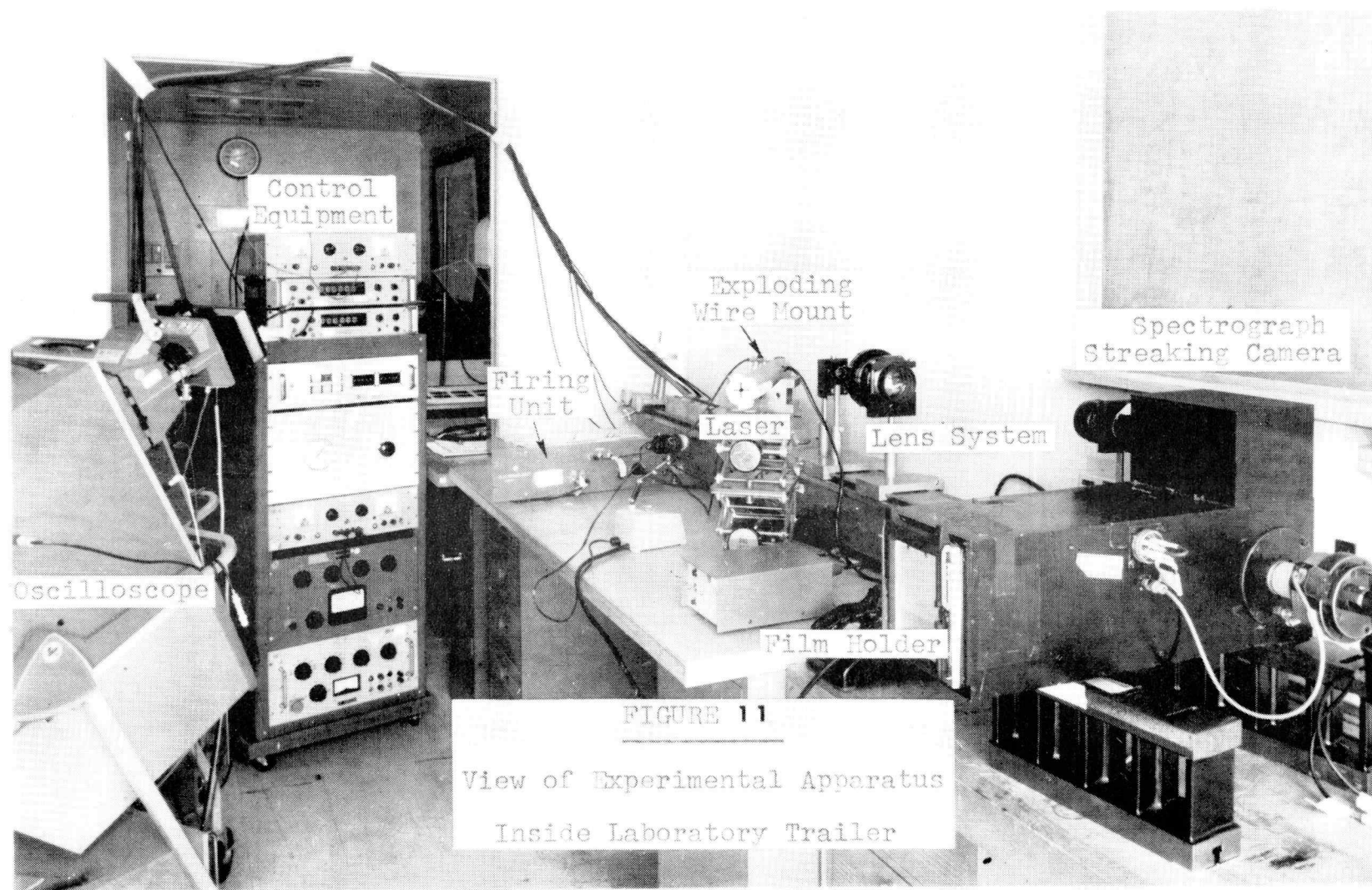
streaking camera transfer function, G_s , were determined by standard optical laboratory techniques. The area reduction ratio, A_l/A_{sph} , was computed from the geometry of the test setup. These items are discussed in detail in the following sections.

Simultaneously with the recording of the output radiation, records of the input electrical parameters, voltage and current, were made with oscilloscope cameras. These data were used to compute the input electrical energy, E_i , as the time integral of the product of the voltage and the current. The voltage and current were physically measured in close proximity to the exploding wire by a current viewing resistor (CVR) (Figure 27) with a built-in voltage divider.

3.2 Test Configuration

All tests were performed in a Sandia Laboratories field test trailer, set on jacks for stability. The trailer was air-conditioned to maintain a uniform inside temperature of 25°C. It was windowless and its interior was sealed to prevent stray light from entering the optical recording equipment. A view of the inside of the laboratory trailer is shown in Figure 11.

The test equipment can be separated into the electrical system and the optical system. A block diagram of the test configuration is shown in Figure 12.



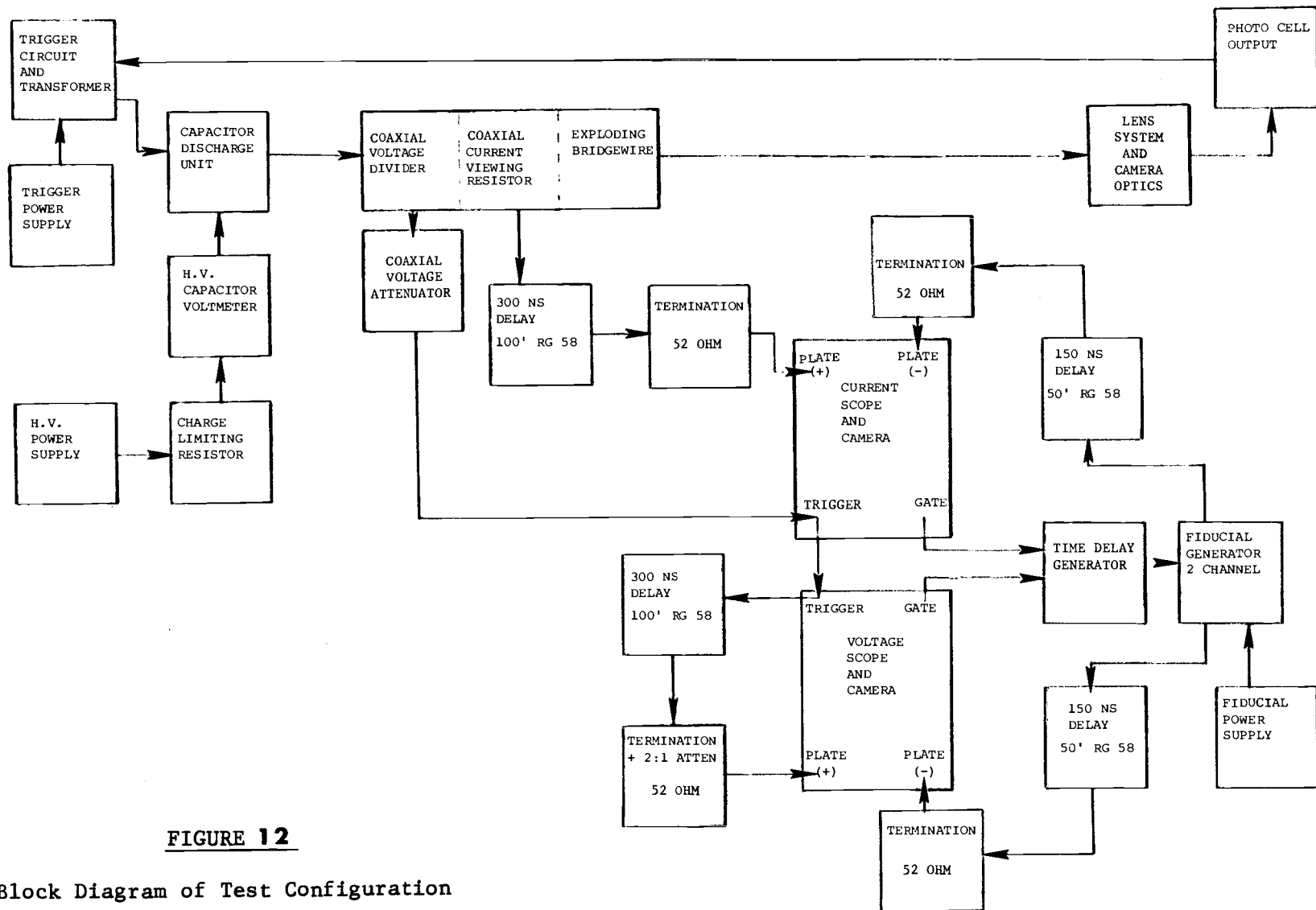


FIGURE 12

Block Diagram of Test Configuration

3.2.1 Electrical System

A charging voltage of 1.0 to 4.5 kV was provided by a Fluke model 408 regulated high voltage power supply. The standard Sandia Laboratories capacitor discharge firing unit (discussed in Appendix II and shown in Figures 28 and 29) stored the charge in a 1.02 microfarad, oil-filled, low inductance capacitor. The firing unit contained a gas-discharge, high voltage spark gap, which transferred the energy from the capacitor to the discharge circuit when triggered by the trigger circuit.

The high voltage power supply was capable of charging the capacitor to six kV, but the spark gap was limited to slightly less than five kV. Thus, the maximum charging voltage used in the tests was 4500 volts.

The initial current into the wire was limited only by the total circuit inductance, which for these tests ranged from 230 nanohenrys to 1950 nanohenrys. The maximum initial rate of electrical current discharged through the exploding wire ranged up to approximately 10^4 amperes per microsecond.

The current from the high voltage power supply charging the capacitor was limited by a one megohm, one watt, carbon resistor in the output of the charging circuit. This resistor prevented the discharge circuit from receiving additional current during the extremely fast discharge.

An Electronics Measurements, Inc., model 220 AM, low voltage power supply was used as the 16 volt source for the discharge trigger

circuit. The trigger circuit contained a pulse transformer which stepped the firing pulse up to 160 volts. The one microsecond wide pulse used to trigger the firing unit was automatically timed by a Cordin model 41-019 B camera controller which received a signal from the drive mechanism of the streaking camera. The timing was controlled for turbine speed, mirror period, and synchronizing time delay so that the image would be located centrally on the film.

Electrical recording equipment was chosen to measure the voltage and current at the exploding wire as directly as possible. A CVR (current viewing resistor) with a built-in voltage divider which was placed immediately adjacent to the detonator header in the discharge circuit.

3. 2. 2 Optical System

The optical system for this study consisted of an arrangement of three lens assemblies and a spectrograph-streaking camera used to focus the radiation from the exploding wire onto the film. The lens system was set up on and aligned with the camera on a Beck model 22-965 precision optical bench. The exploding wire detonator header was mounted in a fixed position at one end in a special adapter at a definite dimension above the optical bench.

The objective lens was a 50 millimeter lens that viewed the exploding wire as a point source at an object distance of 207 millimeters through a light limiting aperture. The optical system is as shown in Figure 13.

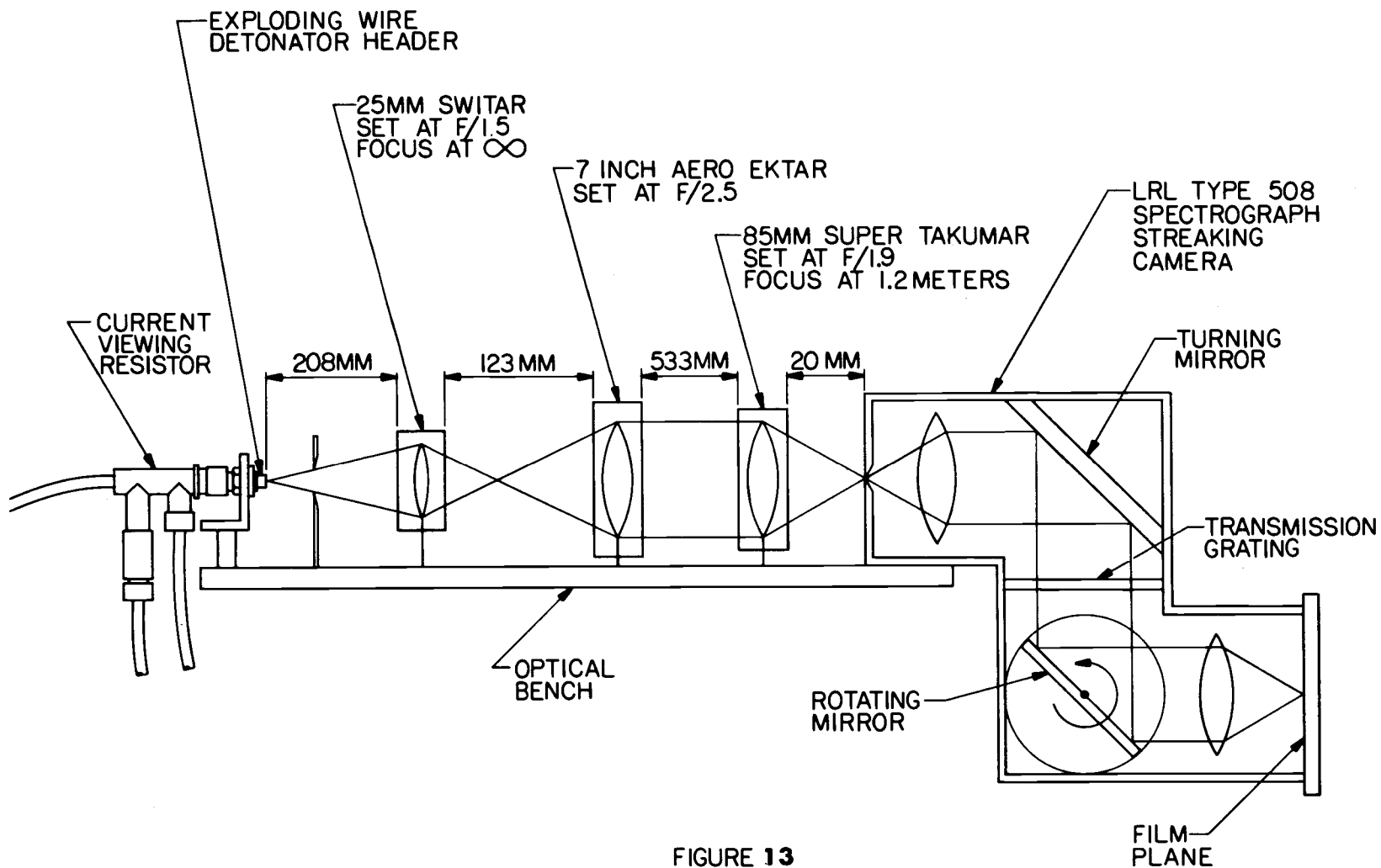


FIGURE 13
LENS SYSTEM

The spectrograph-streaking camera used in this study to record the radiant energy of the exploding wire was an LLL model 508 streaking camera with a spectrograph attachment. The time-resolved spectrograph provides a normal, first order spectrum over the range of wavelengths from 4000 to 6800 angstrom units.

Alignment was assured for all optical elements by the use of an Optics Technology Inc., model 195, helium-neon laser. The laser produced a 4.0 milliwatt beam of 1.5 millimeters diameter with a divergence half-angle of 0.7 milliradian. The laser radiated at $6328 \text{ \AA} \pm \text{one } \text{\AA}$. The laser was first leveled and placed so as to define the optical axis of the spectrograph. When the beam had been centered on the lens inside the spectrograph, the transmission grating, and the spectrograph slit; the external lenses were positioned by centering the beam on each component and tilting the lens so that the small reflected beam from the front surface of the lens would coincide with the incident beam. This process insured that the optical components were as nearly perpendicular to the optical axis as possible.

The detonator header was positioned by reversing the position of the laser to find the point on the optical axis ahead of the objective lens where the beam diameter was least. The adapter was then fixed in the location so as to keep the wire on the front face of the detonator header in this position.

The laser was also used in calibration of wavelength on the film. By illuminating the face of detonator header with the laser beam and re-exposing the film, a line was defined on the film record at $6328 \text{ \AA}$.

In a similar manner, using a Spectroline Corp. cadmium source, other lines were defined at 4678, 4799.9, and 5085 Å. These widely divided lines made possible the calculation of the dispersion of the spectrograph transmission grating, which was 37.8 Å per millimeter.

Spectrographic dispersion in the camera was accomplished with a Bausch and Lomb 600 groove/mm transmission grating. Time-resolved recording of the image on the film was accomplished by an air turbine driving a rotating mirror. Pressurized dry nitrogen was used to power the turbine at a nominal 400 revolutions per second for all tests. The camera accepted either four x five inch hard film holders or Polaroid film holders. Both were used. Polaroid shots were made during set up and dry runs, and then the data records were made using Eastman Kodak Royal-X Pan film.

3.3 Experimental Procedure

Essentially, the experiment consisted of serial firing of exploding wires with a charged electrical source. Oscilloscope records of the voltage and current traces were photographed during the firing. A lens system collected a small portion of the radiation emitted by the exploding wire, which was focused into the entry aperture of a spectrograph-streaking camera. The camera recorded the time-resolved visible spectrum of the radiation on a calibrated film.

Each series of firings of identical wires was designed to cover the range of initial stored energy from one to ten joules. Two discharge circuits were used to show the effect of load variation on radiation. The wires were varied in diameter and length.

3.3.1 Preparation and Inspection of Samples

Initially, the wire chosen for the tests was procured.* These wire materials were sent to Reynolds Industries Incorporated, of Los Angeles, California, where the wire was cut to the correct length and soldered to the electrodes of standard type SE-1 detonator headers (shown in Figure 6). A resistance check was made of each finished assembly to assure electrical uniformity of the product (see Table I).

TABLE I. DC RESISTANCE OF ASSEMBLED
GOLD EXPLODING WIRE DETONATOR HEADERS

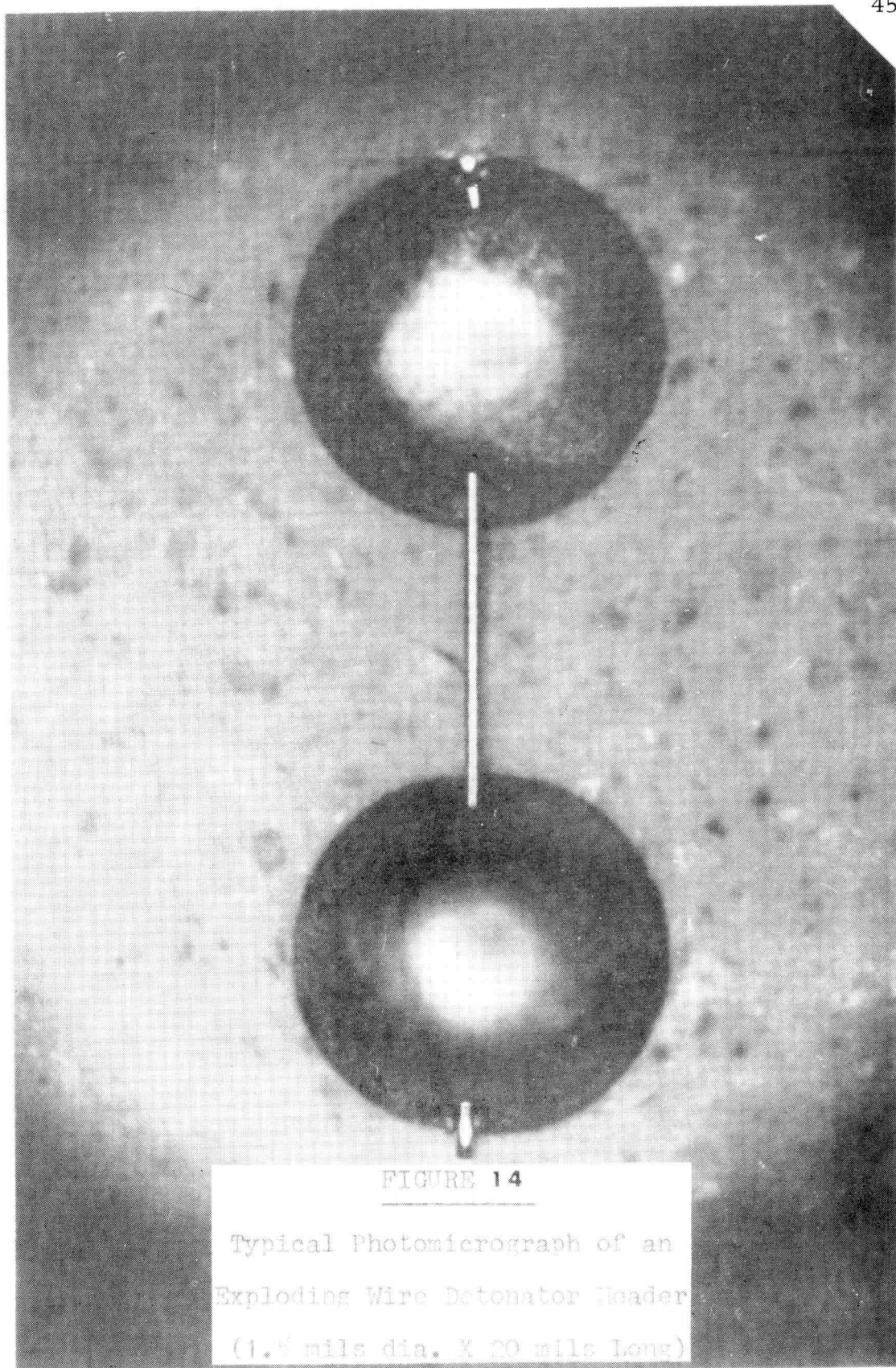
<u>Series</u>	<u>Diameter x Length (mils)</u>	<u>Average DC Resistance (ohms)</u>
3 and 6	1.5 x 20	.014 ± .002
4	1.5 x 40	.031 ± .0035
5	1.4 x 40	.040 ± .0032

The finished exploding wire detonator headers were received and were individually photomicrographed to search for scratched wires or variations in attachment. At this time, each detonator header was assigned a unique serial number. A typical photomicrograph is shown in Figure 14.

3.3.2 Data Collection

The actual performance of the tests was a three-man operation. One man operated the streaking camera turbine controls; a second

*The two sources of fine drawn wire are: Driver-Harris Company, Harrison, New Jersey, and Sigmund Cohn Corp., Mount Vernon, New York.



man recorded the test data, loaded the next test sample, and reset the electronic recording equipment; the third man handled the setting of the streaking camera shutter and the changing of film.

After several dry-run shots with Polaroid film in the spectrograph were made, to assure that the camera control of firing system timing was producing an image centered on the film, a test series of 12 to 24 shots was started. The first shot was a wavelength calibration shot made at nominal firing conditions. After the calibration film had been exposed to the radiation of the exploding wire, the system subsequently exposed the film to the laser and to the cadmium calibration standards.

For each data shot of the series, the identifying numbers were recorded on a standard test record form. The important data recorded were:

Series and shot number

Wire dimensions and material

Test sample serial number

Firing set charge voltage

Discharge cable inductance and resistance

Turbine speed at firing (~400 rps)

The series and shot numbers were also marked on the oscilloscope pictures and on the streaking camera film holder for each shot.

During the course of the experiment, each of the three test personnel would perform his pretest functions; then, on a verbal "OK," indicating that recording of data, installation of a new test sample, resetting of the electronic equipment, and the insertion of

new film in the cameras were completed, the lights were turned off and the turbine started. As the turbine approached the required speed of 400 rps, the shutters were manually opened on the streaking camera and the oscilloscope cameras. When the turbine had stabilized at the required speed, the operator pressed a switch that enabled the camera control, which discharged the firing set at the proper instant.

After the shot, the turbine was run down, and the streaking camera film cover was replaced in the film holder before the lights were again turned on.

3.3.3 Data Reduction

Because of the magnitude of data and the fact that computations for the individual steps were deterministic, digital data processing techniques were employed. A resume of the significant steps in the analysis follows.

3.3.3.1 Reduction of the Input Electrical Data. The reduction of the electrical input parameters to computerized, time-resolved voltage and current histories required the development of an entirely new facility at the Sandia Livermore Laboratories. The Sandia Image Digitizer (SID) was in existence at the Sandia Laboratories, New Mexico Installation (Ref. 12). This system permitted the direct digitizing, in engineering units, of Polaroid oscilloscope photos. The development and electronic interface conversion of this system to the existing Livermore computer were accomplished at Livermore.

The SID system made possible the immediate reduction of a large mass of data to magnetic tape records for subsequent analysis into power, energy, and resistance.

3. 3. 3. 2 Reduction of the Spectrographic Data. Each experimental shot was recorded in time-resolved density/wavelength exposures on photographic film as shown in Figure 15. These negatives were analyzed in the Beckman Tech/Ops model NT-35 isodensitracer, a recording microdensitometer which reads the density and location of a data bit on the exposure record and digitizes it on magnetic tape. These data gave density versus time and wavelength. A curve of isodensitracer output number versus density is given in Figure 23.

The isodensitracer was operated on an interagency contract with Lawrence Livermore Laboratory (LLL). This instrument was used in both the data analysis and the film calibration.

The isodensitracer contains an internal light source of calibrated radiance which was collimated and limited to square spot of 125 microns on each side. A photocell which had previously been zeroed on clear glass was positioned directly under the film carrier. A drive mechanism caused the film carrier to raster the film between the light source and the photocell so that each sweep across the film would read from the lowest end of the wavelength band to the highest for a specific interval of time. Then the film carrier would traverse back to the start again, step up to the next interval of time and make the next sweep across the film. The spot size was chosen as the smallest that would not cause exceptional signal to noise problems,

and the raster was set so that no overlapping in the samples, either in the wavelength or the time direction, was allowed.

The 125 micron square spot gave a minimum wavelength step of $4.08 \text{ \AA}$ and time interval of .052 microsecond, which were a satisfactory length for computation.

Associated with the isodensitracer was a Beckman & Whitley model 1100 laboratory data collector, which performed the function of coding and recording the isodensitracer output on magnetic computer tape. The x position (wavelength), y position (time), and the density at that position were encoded in binary coded decimal on new reels of Dupont Crolyn magnetic tape. Approximately five shots were recorded on each 1200 foot long reel.

3.3.4 Reduction of the Narrow Bandwidth Filter Curves

The narrow bandwidth optical filters were analyzed by use of the Bausch and Lomb spectroradiometer in the LLL Optical Standards Laboratory. The calibration was subsequently digitized at Sandia Laboratories on the Gerber large area digitizer. This provided the $G_{nb}(\lambda)$ used in equation (3) (Section 3.4.4.1).

3.4 System Calibration

The experimental system components were, in as much as possible, calibrated independently against absolute values. In the case of components in line in the system, a transfer characteristic was formulated. Because the exploding wire is the experimental source,

all other components of the experiment had to be known in order to determine the amount of power emitted by the exploding wire.

Figure 16 shows the schematic diagram of the optical portion of the experiment. Each block shown was calibrated separately.

3.4.1 Lens System Calibration

The lens system is the first in-line component that affects the transmission of the radiation of the exploding wire in transit to the recording film. The optical components are characterized by an attenuation in amplitude at various wavelengths of the incident light. In addition, there is a reduction in area which limits the viewing angle of the objective lens so that reflected radiation does not enter the optical system. A standard tungsten light source was used as the illumination and an EG&G model 580 radiometer detector head, which measures the radiant power level at a specific wavelength, was used as the sensor. The radiometer measured the source power transmitted, both with lens system in place (subscript 2, below) and with it removed (subscript 1).

The transfer characteristic was computed for each wavelength by:

$$G_l(\lambda) = \frac{\text{power transmitted}}{\text{power incident}} = \frac{P_2}{P_1}$$

where: G_l = Transmission of the lens system

P = Power transduced in the radiometer, watts

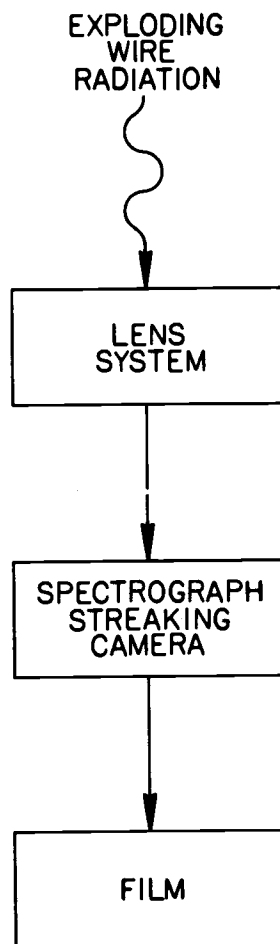


FIGURE 16
SCHEMATIC DIAGRAM OF
THE OPTICAL PORTION
OF THE EXPERIMENT

The calibration setup is shown in Figure 17, and the lens transfer function is shown in Figure 18.

3.4.2 Spectrograph-Streaking Camera Calibration

The LLL model 508 spectrograph-streaking camera unit was an in-line component which received the incident radiation from the lens system and transmitted it to the film. This unit provided time resolution by sweeping the image through an angle by use of a high-speed turbine driven mirror after the radiation had been separated into its component wavelengths by a spectrographic transmission grating.

The unit is characterized by an attenuation in amplitude of the incident radiation at the various wavelengths in the spectrum of interest. The spectrograph transfer function was calibrated at the Optical Standards Laboratory of the Lawrence Livermore Laboratory using a tungsten light source and a Bausch and Lomb transmission monochromator on the spectrograph input and an EG&G sensitive radiometer at the output (film) plane. The spectrograph transfer function is shown in Figure 19.

It is also important to know the dispersion, which is the dimensional separation of known wavelengths on the film plane per revolution of the turbine. The dispersion of the spectrograph was checked with film during the operation of the experiment, before each series. An Optics Technology, Inc., model 195 CW gas laser radiating a coherent beam of $6328 \text{ \AA}$, and a standard cadmium source of the three discrete wavelengths, $4678 \text{ \AA}$, $4799 \text{ \AA}$, and $5085 \text{ \AA}$, was used. These sources record as widely separated lines on the film, which permits

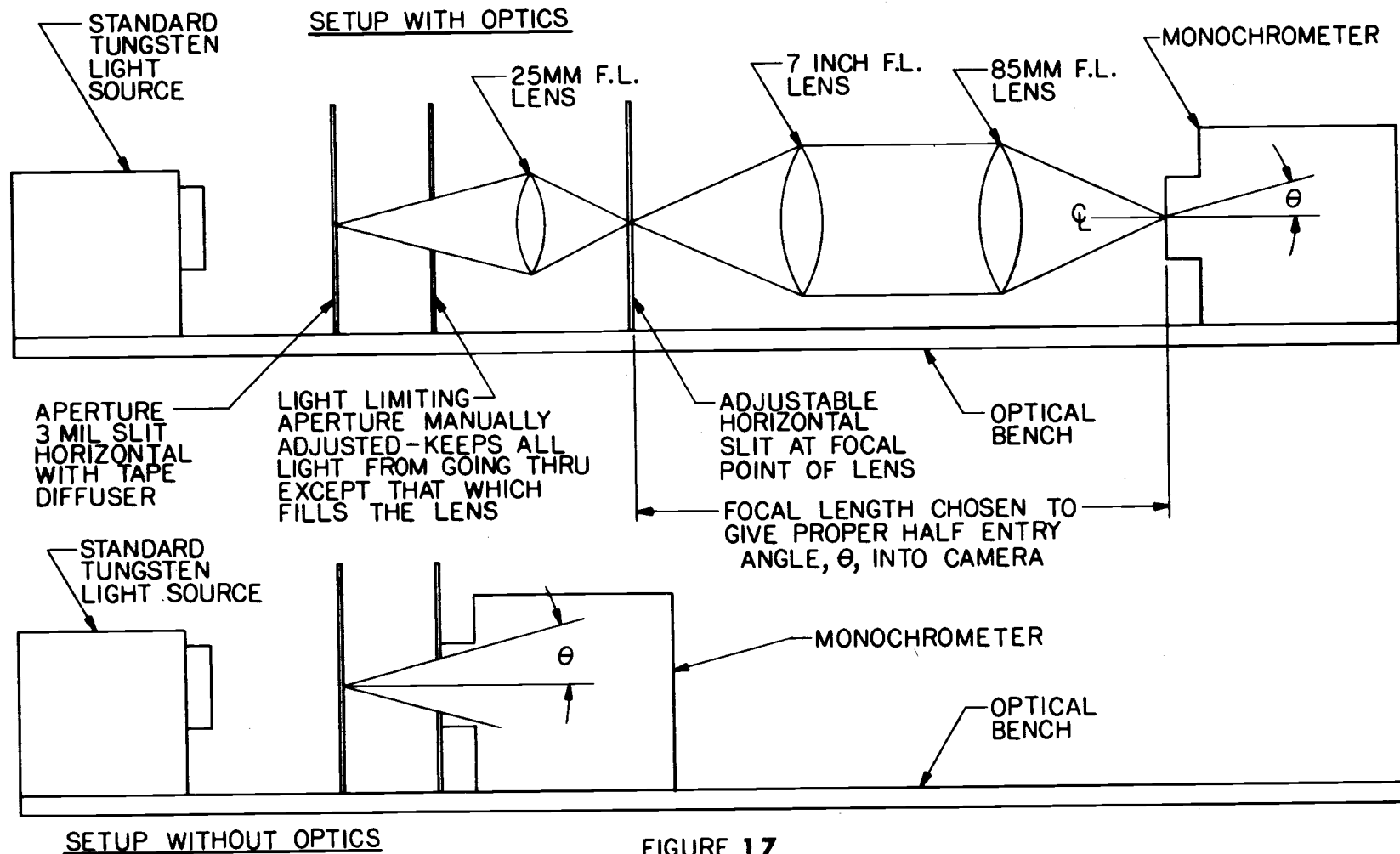


FIGURE 17
LENS SYSTEM CALIBRATION SETUP

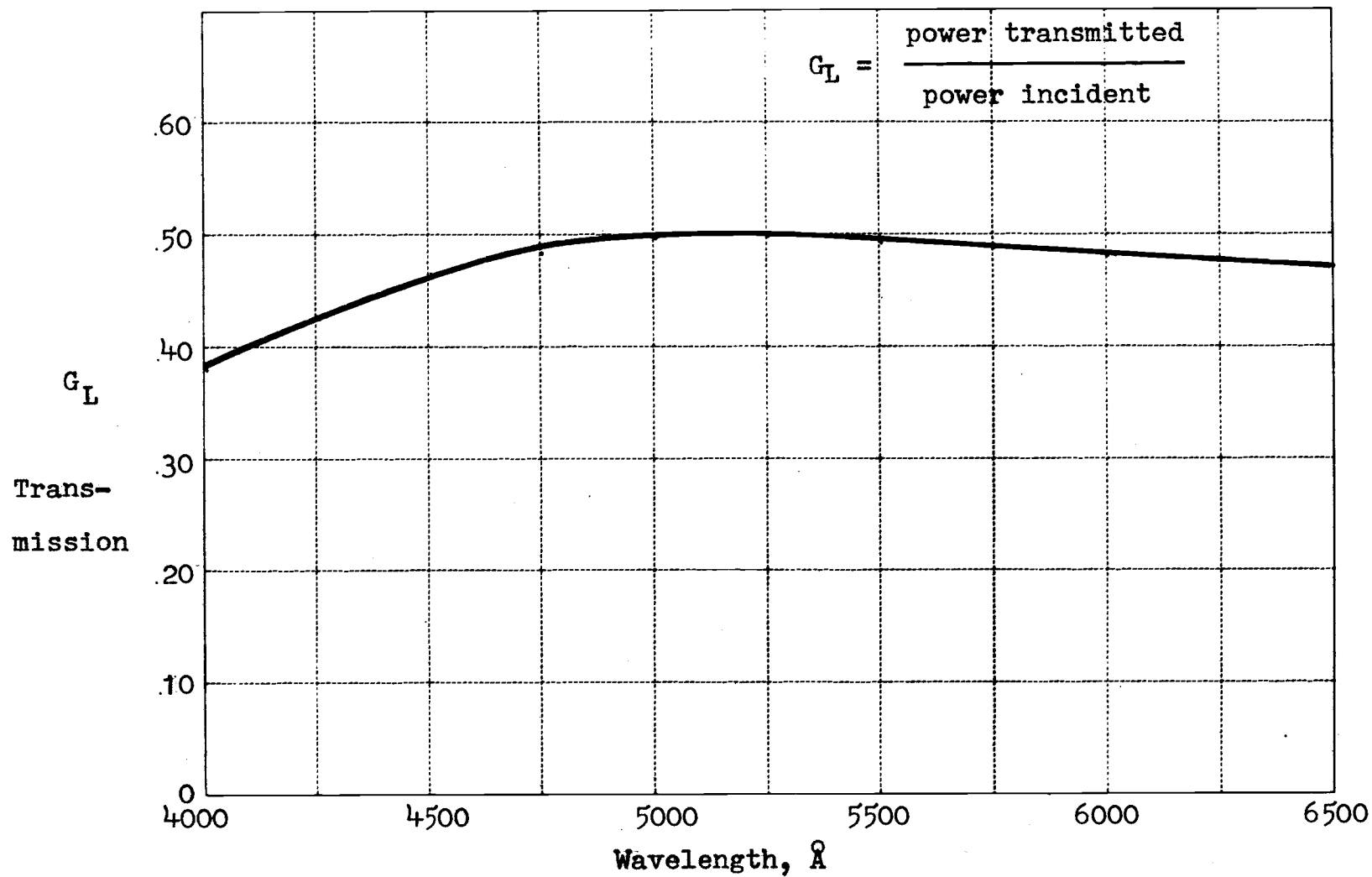


FIGURE 18

Lens System Transfer Function

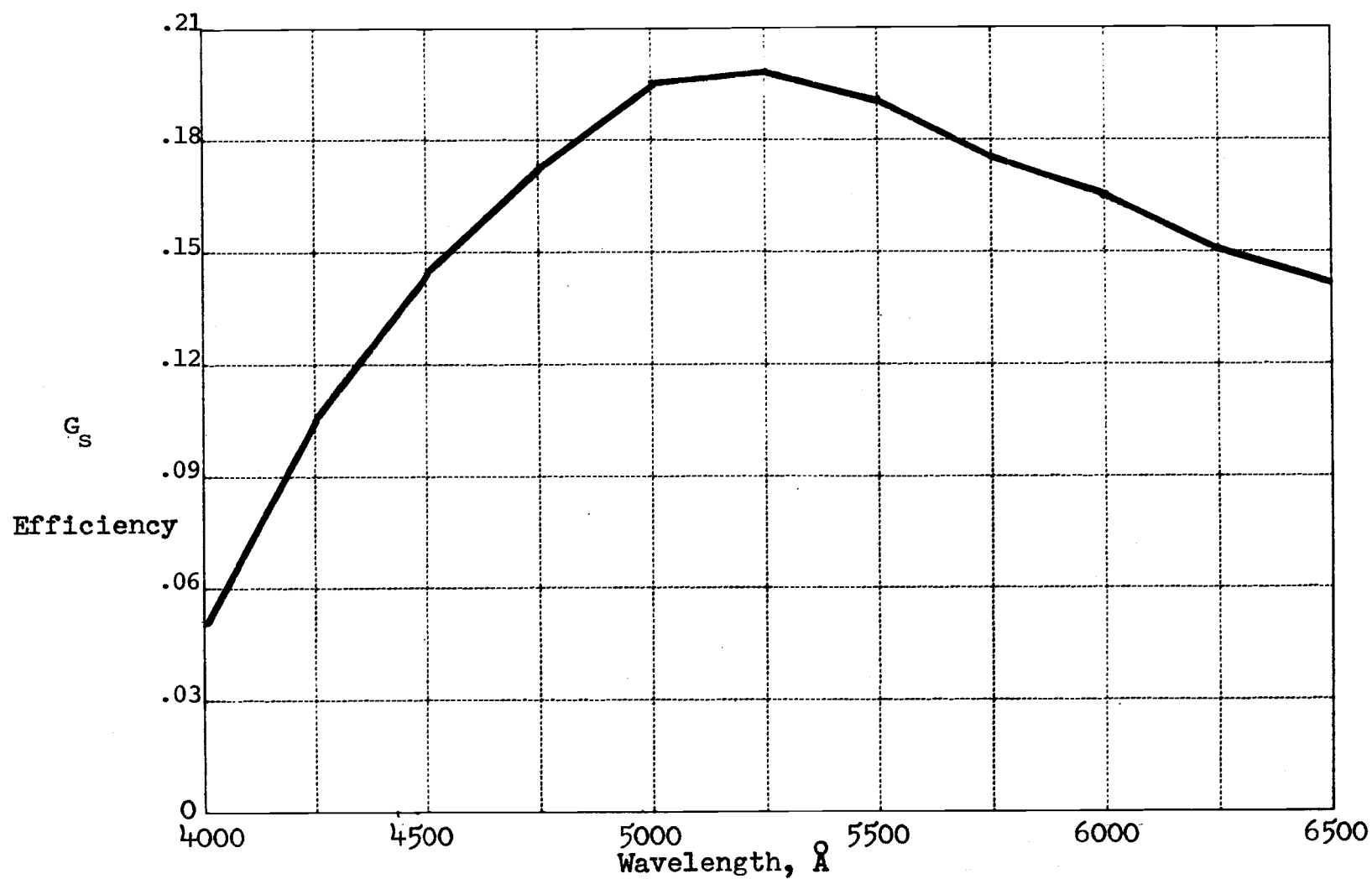


FIGURE 19

Spectrograph - Streaking Camera Transfer Characteristic

measurement by use of an optical comparator. The dispersion of the spectrograph at the film plane was found to be $32.7 \text{ \AA/mm}$.

Time is measured orthogonal to wavelength on the film record. The writing rate is dependent upon the (fixed) geometry of the camera and the controlled angular velocity of the turbine. The camera was determined to have a writing rate of $.006 \text{ mm/(\mu sec-rps)}$. The experiments were made using a constant camera speed of 400 rps, which corresponded to a trace speed of $2.4 \text{ mm/\mu sec}$ on the film.

3.4.3 Sensitometer Calibration

The EG&G model PH-11 xenon flashtube sensitometer was sent to the EG&G Inc., Bedford Division, Laboratories at Bedford, Massachusetts, for calibration of the spectral energy output. Calibration was accomplished by use of a spectroradiometer, a device that collects all of the source energy at the film plane in the same way that it would be received by photographic film. The light energy then enters a monochromator which permits only an extremely narrow bandwidth to be transmitted. The bandpass of the monochromator is on the order of $100 \text{ \AA}$, and the center wavelength can be adjusted throughout the entire spectrum of interest. After passing through the monochromator, the light energy at the chosen wavelength enters the detector head, which transduces it to a voltage signal for display and recording on an oscilloscope and a digitizer. In repeated shots, the energy output of the sensitometer was determined for all wavelengths from $3500 \text{ \AA}$ through $7400 \text{ \AA}$ by increasing the monochromator setting

in 100 Å steps for each shot. The results are shown in Figure 20 and Ref. 15.

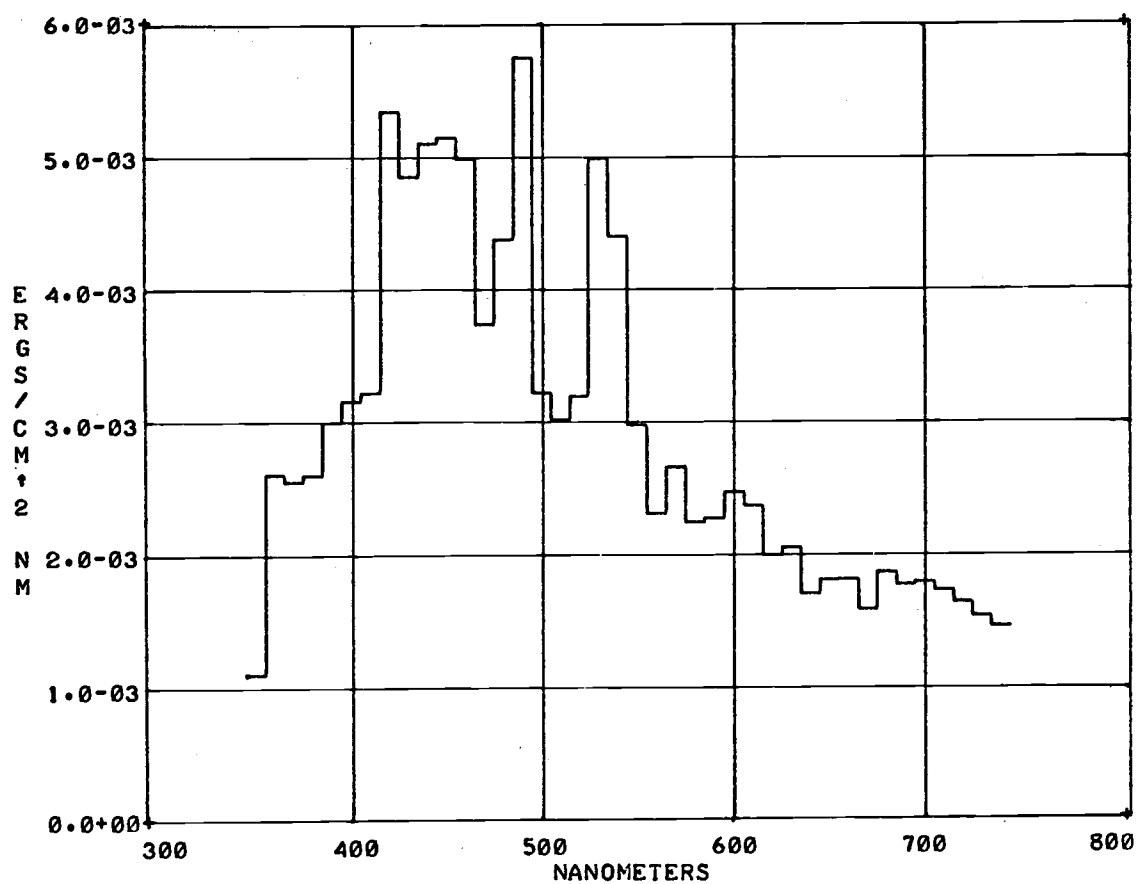
Additional tests were made at EG&G to determine the time history of energy output of the sensitometer, integrated overall wavelengths, the evenness of illumination at the film plane, and the shot-to-shot uniformity of sensitometer output. The results of these additional tests are also given in Ref. 15.

3.4.4 Film Calibration

The recording medium, photographic film, represents the most dense form of permanent memory that is known. However, if it is to be used to record the intensity of the incident radiation, it must be subjected to calibration of its non-linear frequency and amplitude response. This is a non-trivial problem for most researchers, and it is recommended that an unexposed portion of the batch of film to be used in an experiment be returned to the manufacturer for calibration in his labs rather than attempt the calibration for oneself. However, the calibration was done by the author in this study, and what follows is the method used for calibration of Eastman Kodak Royal-X Pan film in the visible spectrum for microsecond exposures.

The film chosen for this experiment was Kodak Royal-X Pan film in four x five inch sheets, all from the same lot. This is a large grain, very fast film which has a high "gamma" (change in density per unit incident energy). The dynamic response of photographic film in the visible range is characterized by a non-linear density function with increasing energy density and at different wavelengths. The

SENSI: MK VII (PH-11) S/N: 475 CKT: 10-6 CALIB DATE: 03 APR 70
 SPHERE APERTURE: 0.5"X0.9" FACTOR= 60:200 10-3 COMP.
 K FACTOR FILE USED: K23FE0 STD. IRRAD.: S-36 DIST: 50 CM



400NM-700NM 9.83-01 ERGS/CM²
 350NM-700NM 1.10+00 ERGS/CM²

MCS= .22
 C.C.T.=13600 DEG.K

FIGURE 20

Sensitometer Output

Calibration Curve

Exerpt from Reference 14

determination of the amount of energy per unit area at all density levels from perfectly clear to completely black and for all wavelengths of the spectrum of interest is called the "film calibration."

3.4.4.1 Design of the Calibration Experiment. The film calibration requires that the film be exposed to a known energy (per unit area, wavelength, and attenuation step) so that the actual incident specific energy at each wavelength is known. This is characterized by the equation:

$$E_f = G_{nd}(\text{step}) \sum_{\lambda_1}^{\lambda_2} G_{nb}(\lambda) E_s(\lambda) \Delta\lambda \quad (3)$$

where:

- E_f = Energy density incident on the film, ergs cm^{-2}
- $G_{nd}(\text{step})$ = Fractional transmission of the gray scale step wedge (21 steps of increasing density)
- $G_{nb}(\lambda)$ = Fractional transmission of the narrow band filters (see Section 3.3.4)
- $E_s(\lambda)$ = Specific spectrograph source energy, ergs cm^{-2} per unit wavelength
- λ = Wavelength, $\text{\AA}$
- $\Delta\lambda$ = Wavelength step associated with spectrograph calibration = 100 $\text{\AA}$

3.3.4.2 Procedure. As the above equation denotes, the film was exposed from a calibrated source, the EG&G sensitometer, radiating

through a narrow bandwidth optical filter, and through a gray scale step wedge (a neutral density filter, not wavelength variable, but graduated in logarithmic density steps). Sixteen narrow bandwidth filters were used to isolate specific wavelength bands in the visible spectrum. Each filter had a bandpass of about one percent of the nominal wavelength (i. e., the filter having a peak transmission at 4000 Å would have a bandpass window of 40 Å or less at the half-peak level). Sufficient exposures were made with each filter so that a density versus log energy density ($D \log E_f$) curve could be made by reading the density of the film at each step of the gray scale step wedge and computing the energy density on the film for the particular wavelength.

The $D \log E_f$ curves for all wavelengths were then used to formulate a spectral sensitivity plot. This plot pictures the entire film response for all wavelengths and incident energy densities. The ordinate is log sensitivity ($\log_{10} S$):

$$\log_{10} S = \log_{10} \frac{1}{E_f} = -\log_{10} E_f$$

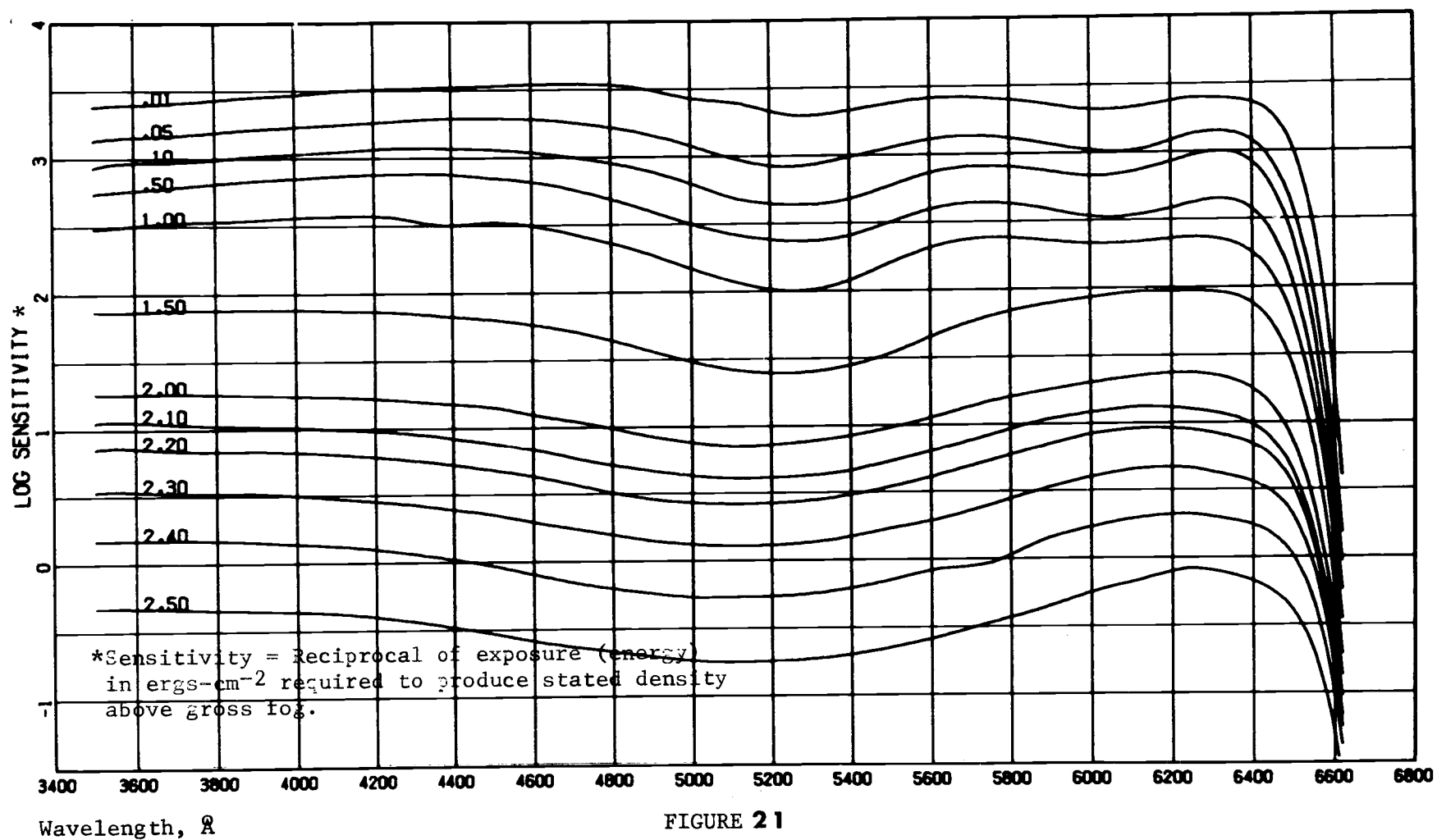
and the abscissa is wavelength, λ , in angstrom units. The implicit parameter for the family of curves is density, D , or darkening of the film. Density is defined:

$$D = \log_{10} \frac{1}{T_f}$$

where: T_f = transmittance through the developed emulsion

$$T_f = \frac{\text{transmitted power}}{\text{incident power}}$$

The log sensitivity curves represent the response of the Royal-X Pan film over the visible spectrum as shown in Figure 21.



Spectral Sensitivity of Royal - X Pan Film

IV. COMPUTATION

4.0 Analysis

The design of the experiments, the collection of experimental data, and the modes of data reduction used in this study were done in anticipation that the majority of the data handling would be done on a large digital computer. We were very fortunate in having the use of the CDC 3600 and 6600 computers at Sandia Labs and extremely competent programming aid and advice. Each of the tasks remaining at the end of the experimental study and the data reduction work were computational problems of some magnitude in themselves. They were:

1. Preparation of programs to relate all the reduced data to absolute engineering units at the exploding wire source.
2. Preparation of programs to determine the exploding wire response function and plot the response surface.
3. Determination of the system predictive model.

The first and second items were accomplished in a computer program called WIRE, and the last task was done using the program IDENT. A flow chart for the computation done in this study is given in Figure 22.

Because the actual programs used in this analysis comprised so large a volume by themselves, they were not included in the appendices of this thesis. The programs will be printed in an unclassified Sandia Laboratories memorandum, and will be available from the author at a future date.

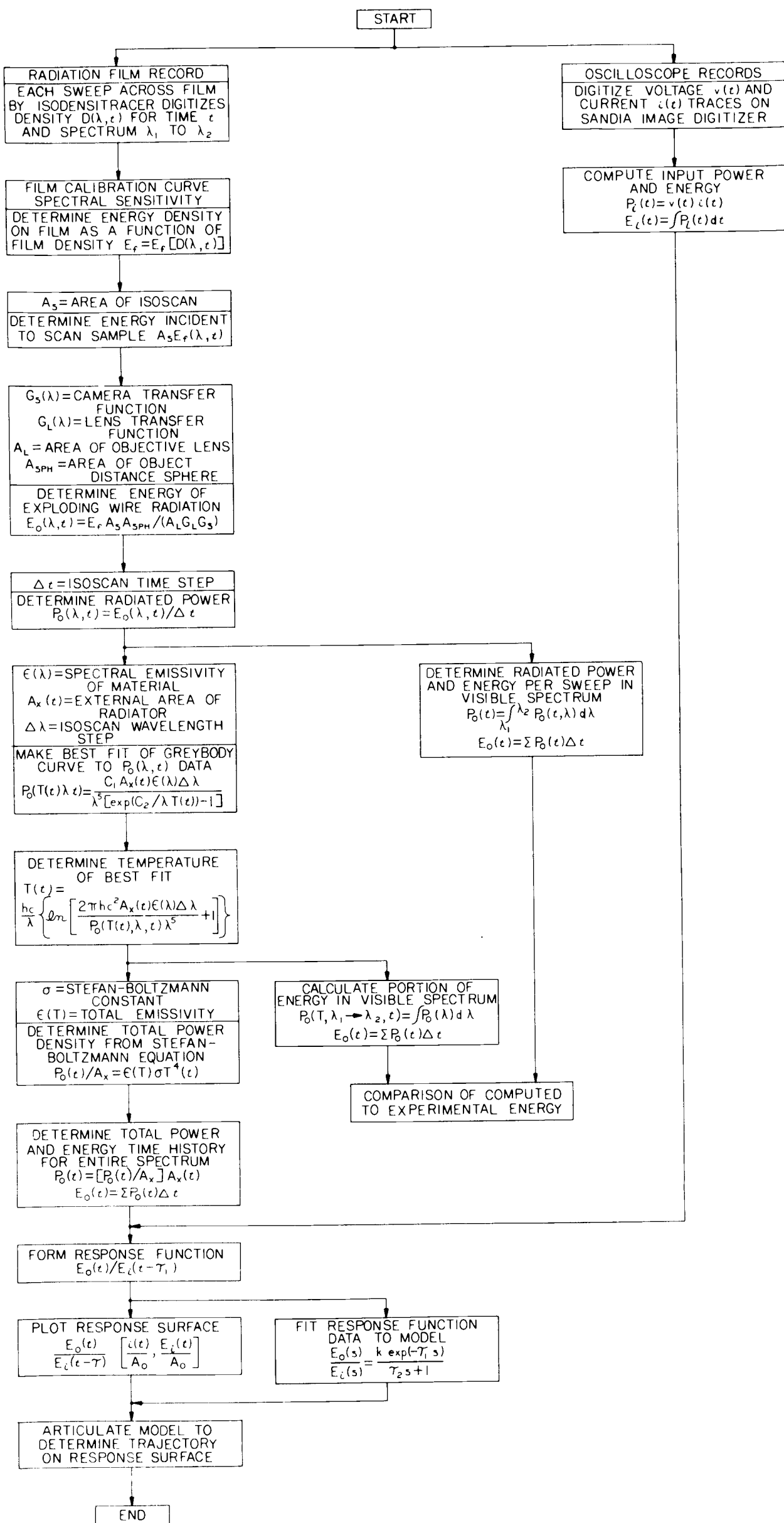


FIGURE 22
FLOW CHART FOR
COMPUTATION

4.1 Program WIRE

Program WIRE was a general supervisory algorithm designed to maintain bookkeeping as the data was processed and operated in the four major subprograms. WIRE contains and shuttles information through the following subprograms:

Program SID - decodes and processes the electrical input data.

Program INTENsity - decodes and processes the radiation output data.

Program FIT - applies blackbody theory to the output data and compares theory to experiment.

Program MESH - determines the radiation response function time history.

4.2 Program SID

The purpose of the program SID was to prepare the electrical input data for interaction with the radiation output data. Each exploding wire shot had associated current and voltage time-history traces on oscilloscope photos. The photos were automatically digitized on the Sandia image digitizer (SID) system, and the data stored on magnetic tape. The SDS 930 data processing computer that received the information from the digitizer, transformed it into engineering units, and stored it on tape, did so in a format peculiar to that machine.

Thus the first task of program SID was to identify the series and shot (Hollerith statements) and then to transform the numerical information into a format compatible with the CDC 6600. For this purpose,

subroutines CONVERT, CRACK, and JOIN were used. The converted data was then returned to WIRE.

4.2.1 Identification of the Series and Shot

Each group of electrical data on the magnetic tape was preceded by a Hollerith identification code. Subroutine CONVERT was used to convert the identification code to CDC 6600 language.

4.2.2 Data Transformation

Subroutines CRACK and JOIN were used to transform the numerical electrical values of current, voltage, and time from the SDS 930 format to the CDC 6600 format.

4.3 Program INTENsity

The purpose of program INTEN was to receive and process all the reduced radiation data. A detailed discussion of the process of program INTEN follows.

The information used in the program was stored on magnetic tapes produced by the isodensitracer. The isodensitracer scanned the film in a fixed raster pattern, reading the density of a 125 micron square spot on the film and coding it in BCD (binary coded decimal) on the tape. The 125 micron size corresponded to a square with approximately four $\text{\AA}$ and .052 microsecond on the sides. The motion of the reader head was constrained to read across the film so that all of the data at a single time and for all the wavelengths in increasing magnitude were measured in a single sweep across the film.

Approximately 800 readings were made for each sweep across the film. The reader head was then advanced by one spot width and the process repeated for the next time increment. Thus, at a given position on the spectrographic record of the exploding wire burst, corresponding to a particular wavelength and to a particular instant of time, a certain density value was read out by the isodensitracer and was coded and addressed on the tape. A precise knowledge of location was necessary in both the wavelength and time directions as the film was read. The primary determination of wavelength position on the film was the calibration lines on the initial shot of each series. These were used to determine the dispersion of the spectrograph and the locations of persistent, late time emission lines from the exploding wire.

Several subroutines were used in INTEN to accomplish specific portions of the computation. They were called CRACK, JOIN, BITS, SCAN, DENSITY, ALIGN, ENERGY, FACTORS, STORE, LAGRANG, and the function NUMREC.

4. 3. 1 Wavelength Determination

Location and identification of the spectrograph dispersion was made for each series of exploding wire shots by a calibration shot at the beginning of each series. A uniform dispersion of $32.7 \text{ \AA/mm}$ on the film plane was recorded throughout the tests. The calibration photographs had four discrete wavelengths superimposed on the exploding wire record: three cadmium lines at $4676 \text{ \AA}$, $4799 \text{ \AA}$, and $5085 \text{ \AA}$, and a laser line at $6328 \text{ \AA}$. Using these lines, persistent

late-time lines in the calibration photographs were identified. These late-time lines were used for the balance of data shots to locate and identify specific wavelengths. It is important to note that the persistent late-time spectrographic lines at $4488 \text{ \AA}$ were specific to the gold exploding wire material and that they were exactly reproducible from shot to shot throughout the entire series. The $4488 \text{ \AA}$ gold line was persistent to beyond 15 microseconds for all gold exploding wires. Most of the other emissive lines had disappeared after the first few microseconds, so that the persistent line was clearly visible.

Using this information, the precise wavelength of all the photographic information was addressed, and the exact wavelength of the isodensitometer readout was known.

The isodensitracer was programmed to read increasing time starting at some time before the burst. Thus the first few sweeps of the scanner would record no radiation data but would give information on the fog level of the unexposed film. The fog level may vary slightly across the film, depending on processing. The density of the fog level was subtracted from the density of the data at each wavelength position. In this way, the variation due to processing was removed from the radiation data.

The data was converted from the encoder language by the use of the subroutines CRACK and JOIN. Program INTEN then recognized the wavelength of each data bit.

4.3.2 Time Determination

The first indication of increasing density in the film emulsion was treated as the time of exploding wire burst by the computer program. This time corresponds to t_p and the time of peak voltage in the electrical data.

Time-resolved recording of the spectrographic data was handled with the stated time calibration of the spectrograph, 2.4 mm/ μ sec at 400 rps of the turbine. Each shot was made at this nominal speed, but small variations from 397 to 403 rps were recorded, so that the program accepted the recorded speed for each shot and computed time accordingly.

The data was handled as described in the preceding section by subprograms CRACK and JOIN, so that INTEN would recognize the time for each data bit.

4.3.3 Density Determination

For each specific position in time and wavelength, the isodensitracer encoded the film density in a BCD number which represented the density according to Figure 23. The BCD numbers were decoded in subprograms CRACK and JOIN.

The subprogram BITS then checked the data for encoding errors due to noise in the isoscan encoder and set to zero any data values that were obviously out of range. Subprogram SCAN then checked the data array for zero values and assigned an isodensitometer number

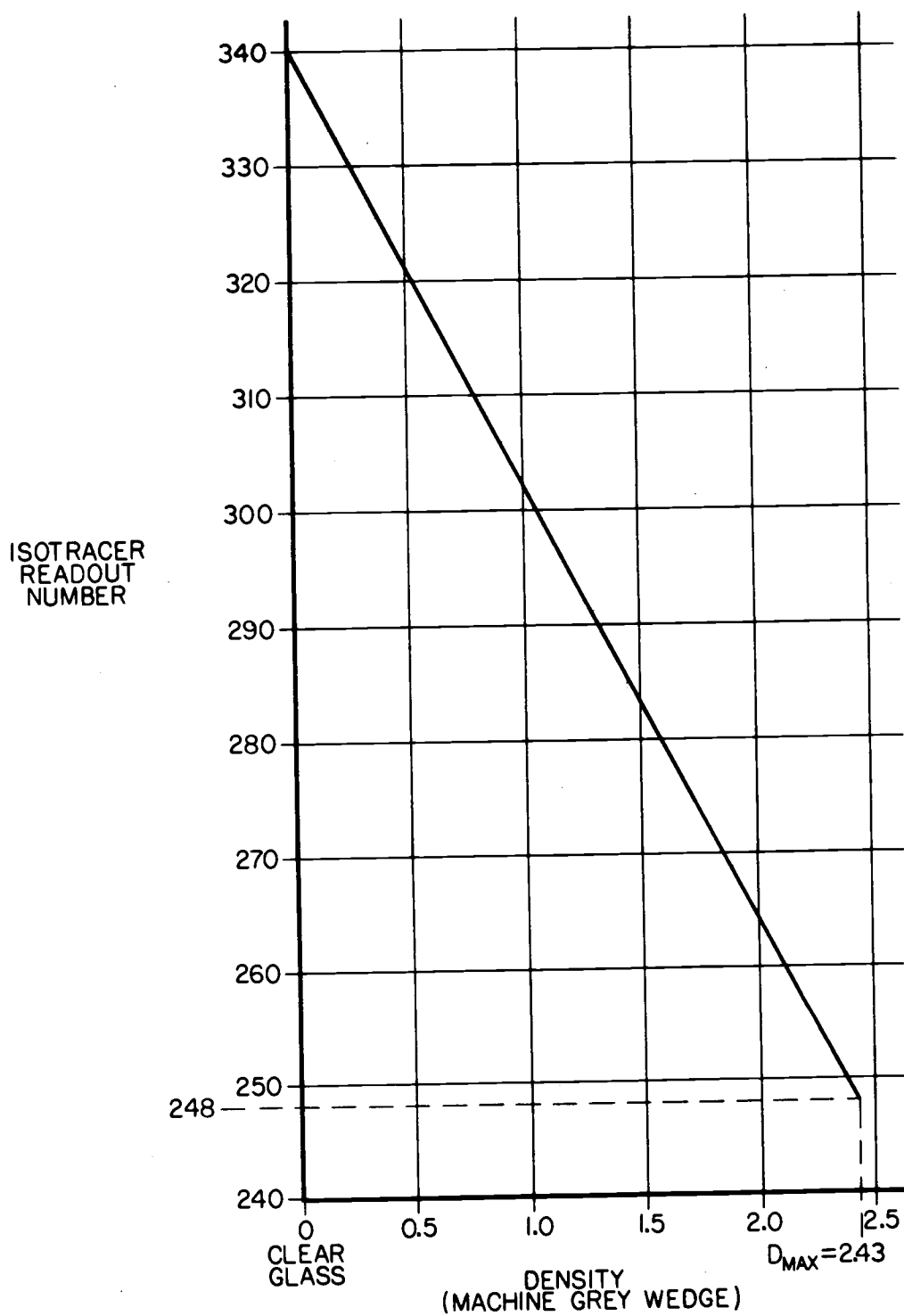


FIGURE 23
TECH/OPS ISODENSITRACER
READOUT NUMBER VERSUS
FILM DENSITY

based on the nearest non-zero value. The isodensitometer numbers were then converted to density in the subprogram DENsity.

4. 3. 4 Incident Energy Determination

Given the density of the emulsion at a particular point and the wavelength of the sample, the energy density incident upon the film was uniquely determined by the spectral sensitivity curves (Figure 26) which defined the film calibration.

The spectral sensitivity data was held in the computer memory as a matrix of data, so that at a specific wavelength, the density value defined an energy density, $E_f(\lambda)$.

This was done in subroutine ENERGY by interpolating for the value of energy density using the nearest six known values of density versus wavelength. ENERGY called another subroutine, LAGRANG to do the actual interpolation.

Each value of energy density incident on the film was then multiplied by the incremental value of the isodensitracer scanner area to give the total energy received by the film at the sample time and wavelength. This array of energy information was then returned to the INTEN program for determination of the output energy of the exploding wire.

4. 3. 5 Energy Output Determination

The energy output, $E_0(\lambda, t)$, from the exploding wire was computed for each sample by the following equation.

$$E_0(\lambda, t) = E_f A_s A_{\text{sph}} / (A_\ell G_\ell G_s)$$

where:

- E_f = Energy density incident to the film
- A_s = Area of the ISOSCAN sample
- A_{sph} = Area of the sphere of radiation at the objective lens coordinate
- A_ℓ = Area of the objective lens aperture
- G_ℓ = Lens system transfer function at the sample wavelength
- G_s = Spectrograph-streaking camera transfer function at the sample wavelength

The above equation gave the total energy (not energy density) of the exploding wire after the spectrograph-streaking camera attenuation, $G_s(\lambda)$ (see Figure 24), the lens system transfer function, $G_\ell(\lambda)$ (see Figure 23), and the objective lens area reduction, A_ℓ/A_{sph} , had been accounted for. The product, $E_f A_s$, was the energy of the exploding wire incident on the film derived from subprogram ENERGY as discussed in the previous section.

It is to be noted that the exploding wire was assumed to be a point source, radiating spherically, so that the objective lens received the sample in proportion to the area of the objective lens as a portion of the total spherical radiation about the point source. The value A_ℓ/A_{sph} was a constant for the entire experiment:

$$\begin{aligned} \frac{A_\ell}{A_{\text{sph}}} &= \frac{\text{Area of the objective lens aperture}}{\text{Area of a sphere with radius equal to the object distance.}} \\ &= 1.88 \times 10^{-4} \end{aligned}$$

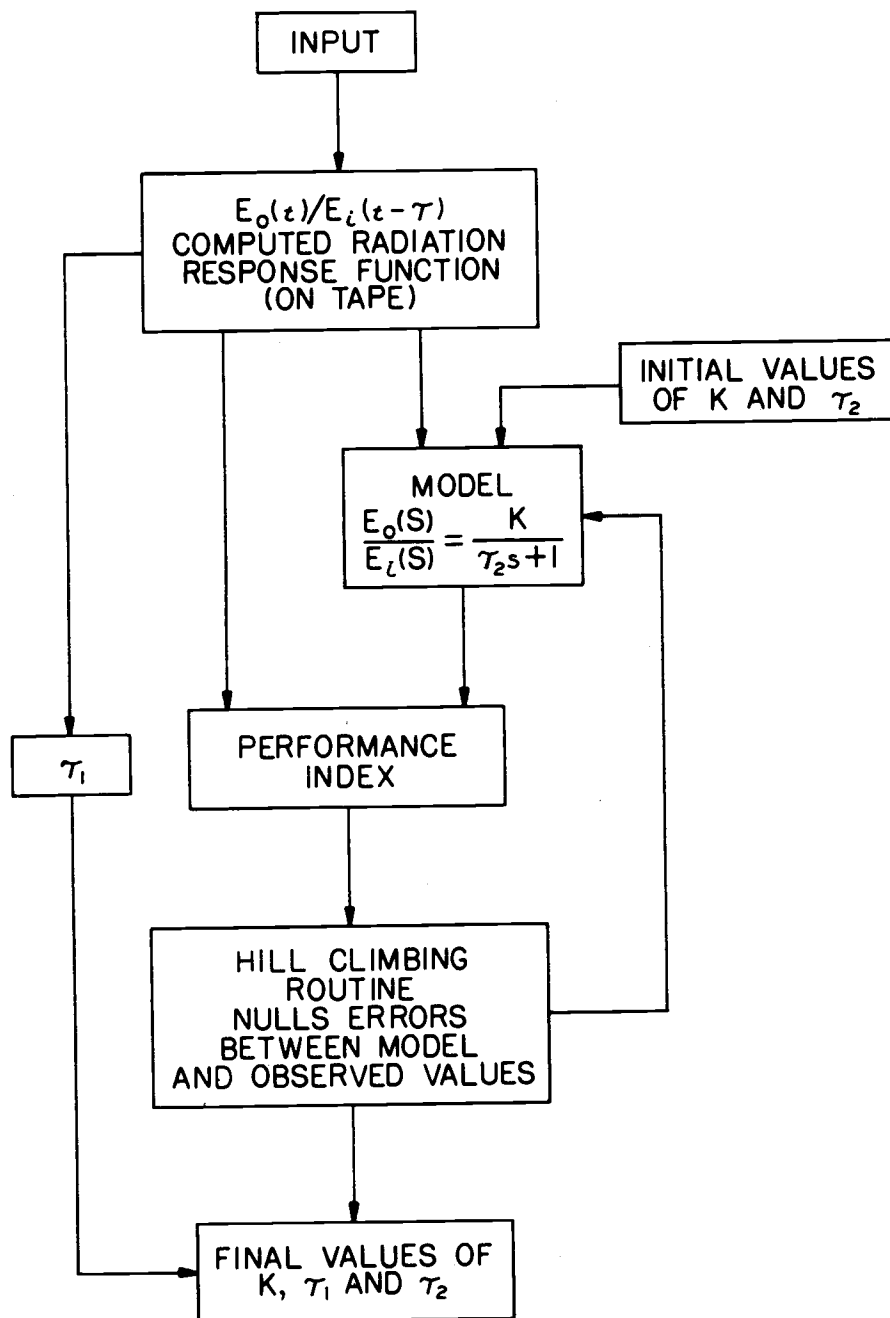


FIGURE 24
BLOCK DIAGRAM OF
THE MODELING PROGRAM

The output energy of the exploding wire, E_0 , was computed in subroutine FACTORS which successively multiplied the energy on the film, $E_f A_s$, the inverse of each of the attenuation factors.

4.3.6 Determination of Output Power

The incremental value of output energy, ΔE_0 , for a particular wavelength and time, was used to determine the power, P_0 , in subroutine STORE according to:

$$P_0(\lambda, t) = \Delta E_0(\lambda, t) / \Delta t$$

where Δt = the isodensitracer time step, .052 microsecond per step. The code contained a conversion factor to correct the units, so that the power was determined in watts, even though the energy was given in ergs. Subprogram STORE also computed the integrated power over the visible spectrum for later comparison with the theoretically derived visible spectrum power.

The array of output radiation power values was then returned from INTEN to program WIRE and stored.

4.4 Program FIT

The purpose of program FIT was to apply Planck's equation to the data to find the plasma temperature, and using the temperature, determine the radiated power over the entire spectrum.

4.4.1 Temperature Determination

The array of experimental visible spectrum power data was fitted to the graybody equation in subprogram MARQ:

$$P_0(\lambda, t, T) = \frac{C_1 A_x \epsilon(\lambda) \Delta \lambda}{\lambda^5 (\exp(C_2/\lambda T) - 1)}$$

where $P_0(\lambda, t, T)$ = The output power of exploding wire at a given wavelength and time and at a temperature to be determined

$$C_1 = 2\pi^5 h^2 C^2$$

$$A_x = \text{External area of the radiating plasma}$$

$$\epsilon(\lambda) = \text{Spectral emissivity of the radiating material}$$

$$\Delta \lambda = \text{Wavelength step} = 4.192 \text{ \AA}$$

$$C_2 = hc/k$$

$$T = \text{Absolute temperature of the plasma}$$

Subprogram MARQ was a nonlinear least square curve fitting code (Ref. 18) that finds the temperature value, T , for the closest approximation of the visible spectrum data to a graybody curve for each interval of time.

As the area of the exploding wire, A_x , was increasing at each interval throughout the time period of interest, it was necessary to measure the diameter of the plasma envelope as a function of time. This was done by photographing the exploding wires with a streaking camera and then measuring the diameter directly (Figure 10).

4.4.2 Theoretical Power and Energy Determination

In program FIT, the temperature was used two ways. First, a visible spectrum power was computed, based on the temperature T , according to:

$$P_{0(\text{visible})}(t, T) = \int_{\lambda=4000 \text{ \AA}}^{\lambda=6500 \text{ \AA}} P_0(\lambda, t, T) d\lambda$$

This yielded a time-history of visible spectrum radiation power, which was again integrated with respect to time to obtain the visible spectrum energy.

$$E_{0(\text{visible})}(t, T) = \int_0^t P_{0(\text{visible})}(t, T) dt$$

This output energy based on the fit to a theoretical blackbody curve, was then compared to the visible spectrum output energy derived directly from the experimental data. The comparison is shown in Figure 3.

Second, the temperature was used again in the Stefan-Boltzmann equation to compute the total spectrum power density for each interval of time.

$$\frac{P_0(t)}{A_x} = \epsilon(T) \sigma T^4(t)$$

where: $\frac{P_0(t)}{A_x}$ = Radiant power density over the entire wavelength
for each Δt .

$\epsilon(T)$ = Emissivity

σ = Stefan-Boltzmann constant

$T(t)$ = Absolute temperature of the plasma

The emissivity, $\epsilon(T)$, was interpolated for each value of temperature (Figure 8) in a subprogram named EMISS.

The total power output was integrated over the time-history to give the output energy time-history.

$$E_0(t) = \sum_{t=0}^{t_{\text{final}}} \frac{P_0(t)}{A_x} A_x(t) \Delta t$$

All of these data were then returned and stored in program WIRE.

4.5 Program MESH

Program MESH calculated the exploding wire response function, which is written:

$$\frac{E_0(t)}{E_i(t - \tau_1)}$$

The response function was defined here as the ratio of the prompt radiation output energy and the input electrical energy, delayed by the time to burst.

The output energy, $E_0(t)$, has been determined as a function of time from the analysis of the spectrographic records. The input

electrical energy, $E_i(t - \tau_1)$, was determined as the time integral of the product of the voltage and current from the digitized output of the Sandia image digitizer (SID) as a function of time from the oscilloscope records.

Time for these two phenomena was related by the fact that recordable burst radiation started at the instant of maximum input voltage, which corresponded to the exploding wire burst time, t_b . The input electrical power started at switch closure, t_0 , which occurred exactly τ_1 microseconds earlier. The spectrographic output data was then associated with the input electrical data through a time delay, τ_1 .

The logarithm of the response function was represented as a three-dimensional surface plotted against the current density, $J(t)$, and the input energy density, $E_i(t)/A_0$, of the exploding wire, in both cases based on the initial cross sectional area of the wire. This representation of the response function as a three dimensional surface proceeded directly from the work of Blackburn (Ref. 1), in which the exploding wire detonator resistance was also plotted against current density and input energy density. The validity of the response surface was shown by the fact that each exploding wire response described a time-trajectory that lay very nearly on the response surface for a given wire material. This is true of all exploding wires in the length and diameters studied for that particular material, when the wire length and diameter had been normalized.

4.6 Program SURFACE

The purpose of program SURFACE was to make a three-dimensional computer plot of the exploding wire radiation response for a group of response function trajectories from several shots. As discussed in the previous sections, each firing of an exploding wire was instrumented so that the following time functions were determined:

$$\log_{10} \frac{E_0(t)}{E_i(t - \tau_1)} = \text{Radiation response function (plotted along the ordinate)}$$

$$J(t) = \text{Input current density (plotted along the x-axis)}$$

$$E_i(t)/A_0 = \text{Input energy density (plotted along the y-axis)}$$

These data were input to SURFACE from a storage tape. SURFACE then read the number of trajectories to be used, the identifying series and shot number, the number of points in each trajectory, and the time data mentioned previously.

The program then scanned the data to find the maxima of all the values of the abscissas, $J(t)$ on the x-axis and $E_i(t)/A_0$ on the y-axis. The maxima for all shots in the group used were determined, and an appropriate value was chosen that was larger than the greatest current or input energy density value in any response trajectory recorded.

Each response trajectory in the group was plotted separately on the same set of three-dimensional axes. The points of equal time in each curve were connected, so that the plotted isotonic lines between the equal time points and the trajectories themselves formed a radiation response surface.

In addition, the SURFACE program made a tabular listing of the data for each trajectory. This listing is given in Table IV. A limitation in the plotting routine was discovered when it was found that only 15 trajectories could be combined into a single surface. It was also found necessary to use linear interpolation rather than polynomial curve fitting for the isotonic lines due to extremely long running times.

4.7 Program IDENT

Upon determining the character of the exploding wire response function, it was apparent that the ability to predict system radiation would be useful. A block diagram of the system, shown in Figure 24, gives the relation of the essential elements.

The problem is: What is the exploding wire system model for radiation that will fit the surface? The form of the linear model for the radiation response of the exploding wire system has been defined in Section 2.5.4 as:

$$\frac{E_0(s)}{E_1(s)} = \frac{Ke^{-\tau_1 s}}{\tau_2 s + 1}$$

The experimental data was used in the previous sections to form the radiation response function $E_0(t)/E_1(t - \tau_1)$. The logarithm of this function has been represented as a radiation response surface versus the input variables, current density, and input energy density.

The IDENT program and its subroutines were used to identify the unknown values of K and τ_2 in the mathematical model. The value of

Thus, the absolute value of the time delay, τ_1 , error, and the integral square error sensitivity of K and τ_2 were used. The CLIMB subroutine found the values of the parameters for which the best fit of the data and minimum performance criteria occurred. CLIMB did this by Brewer's hill climbing method (Ref. 16). The program varied the unknown parameters until the performance indices no longer decreased, then reoriented the parameters to the new value at which the criteria were least, and performed another search. The process terminated when there was no improvement in any direction of change of all parameters for a specified (very small) threshold of variation.

4.8 Articulation of the Model

The mathematical model for the radiation response of an exploding wire was determined in the previous sections. The use of the model was then shown by the equation:

$$E_0(t) = \frac{K}{\tau_2} e^{-t/\tau_2} \int_0^t e^{\zeta/\tau_2} E_i(\zeta - \tau_1) d\zeta$$

where the delayed energy input, E_i , was the forcing function for the output, E_0 .

The values of K , τ_1 , and τ_2 were determined by the previous analysis and from examination of experimental data. The energy input time history must be determined by experiment or computer analysis.

The resulting solution for radiation energy output is found by a single IDENT run.

4.9 Error Analysis

A vital part of this study is the reduction of radiation phenomena to absolute engineering units. This is primarily a problem in applied radiometry, a science which is fraught with possibilities of error at all levels in the flow of measurable amounts of radiation.

The sources of error in this experiment and the associated data analysis are listed here with estimates of the worst case random variations expected. For each item listed the source of the random error estimate is given for functional variations. Every effort was made to reduce systematic variations (bias) during the course of the experiment.

Because two different forms of information were handled in this experiment, the analysis was broken down first into separate areas to differentiate the attainable accuracy for each. They are:

Radiation data

Electrical data

These areas were further broken down into:

Calibration errors

Recording errors

Reduction errors

Analytical errors

The maximum percentage error in radiation data was:

$$\left[(7.3)^2 + (3.0)^2 + (2.01)^2 \right]^{1/2} = 8.1\%$$

The maximum error in electrical data was:

$$\left[(10.83)^2 + (1.2)^2 + (.5)^2 \right]^{1/2} = 10.9\%$$

The maximum error in the combined value of the radiation response function was:

$$\left[(8.1)^2 + (10.9)^2 \right]^{1/2} = 13.6\%$$

The balance of this section gives a listing of the sources of these errors.

4.9.1 Radiation Data

4.9.1.1 Calibration Errors.

<u>Item</u>	<u>% Variation</u>	<u>Source</u>
Sensitometer	3.3	EG&G (Ref. 15)
Gray scale step wedge	0	calibrated
Narrow band filters	1.0	LLL
Film-manufacturing	1.0	SLL
aging	1.0	SLL
development	1.0	SLL
	<u>7.3</u>	

4.9.1.2 Recording Errors.

Lens focusing	~0	SLL
Stray light	~0	SLL
Film-manufacturing	1.0	SLL
aging	1.0	SLL
development	1.0	SLL
	<u>3.0</u>	

4. 9. 1. 3 Reduction Errors.

<u>Item</u>	<u>% Variation</u>	<u>Source</u>
Film calibration (manual)	2.0	SLL
Isodensitracer	.01	LLL
Tape recorder	~0	LLL
	<u>2.01</u>	

4. 9. 1. 4 Analytical Errors.

Computation	0	SLL
-------------	---	-----

4. 9. 2 Electrical Data

Ambient temperature control during the experiment was maintained. No variation in electrical instrumentation due to thermal excursion was assumed.

4. 9. 2. 1 Calibration Errors.

Exploding wire diameter	1.0	Sigmund Cohn, Inc.
Resistivity	1.0	Sigmund Cohn, Inc.
Detonator header resistance	8.82	Mound Labs
Scope viewing resistor	.01	SLL Std Lab Calibration
Current viewing resistor	~0	" " "
Cables	~0	" " "
Voltage attenuators	~0	" " "
Oscilloscope	~0	" " "
Time base generator	<u>10 PPM</u>	" " "
	10.83	

4. 9. 2. 2 Recording Errors.

Power supply dial setting	1.0	SLL
Oscilloscope linearity	.2	SLL
	<u>1.2</u>	

4. 9. 2. 3 Reduction Errors.

<u>Item</u>	<u>% Variation</u>	<u>Source</u>
Sandia Image Digitizer	. 5	SLL

4. 9. 2. 4 Analysis Errors.

Computation	0	SLL
-------------	---	-----

V. CONCLUSIONS

5.0 Results

The radiant output energy of small gold exploding wires mounted on detonator headers has been measured as a function of time. The energy determination was made with the assumption that the exploding wire radiates as a black body in local thermodynamic equilibrium during the early time, or continuum, period after the burst.

The output energy has been compared with the input electrical energy for each of the exploding wire shots. For the range of conditions studied, the maximum ratio of radiant output energy to input electrical energy varies in the range, $10^{-4} < E_0/E_i < 10^{-2}$, in the first microsecond after the burst.

A radiation response function has been defined as $E_0(t)/E_i(t - \tau_1)$ for each of the exploding wire shots. The response function was presented as the ordinate of a three-dimensional trajectory plotted versus current density and input energy density (Figure 25). Time was an implicit variable measured along the trajectory. Each trajectory characterized the response of a single gold exploding wire experiment.

Taken together, a large number of radiation response function trajectories defined a three-dimensional surface. The surface has been called the radiation response surface. Because of the range of the response values, the surface was plotted as the logarithm of response function. The radiation response surface characterizes the response of the general case of the configuration tested. Thus a

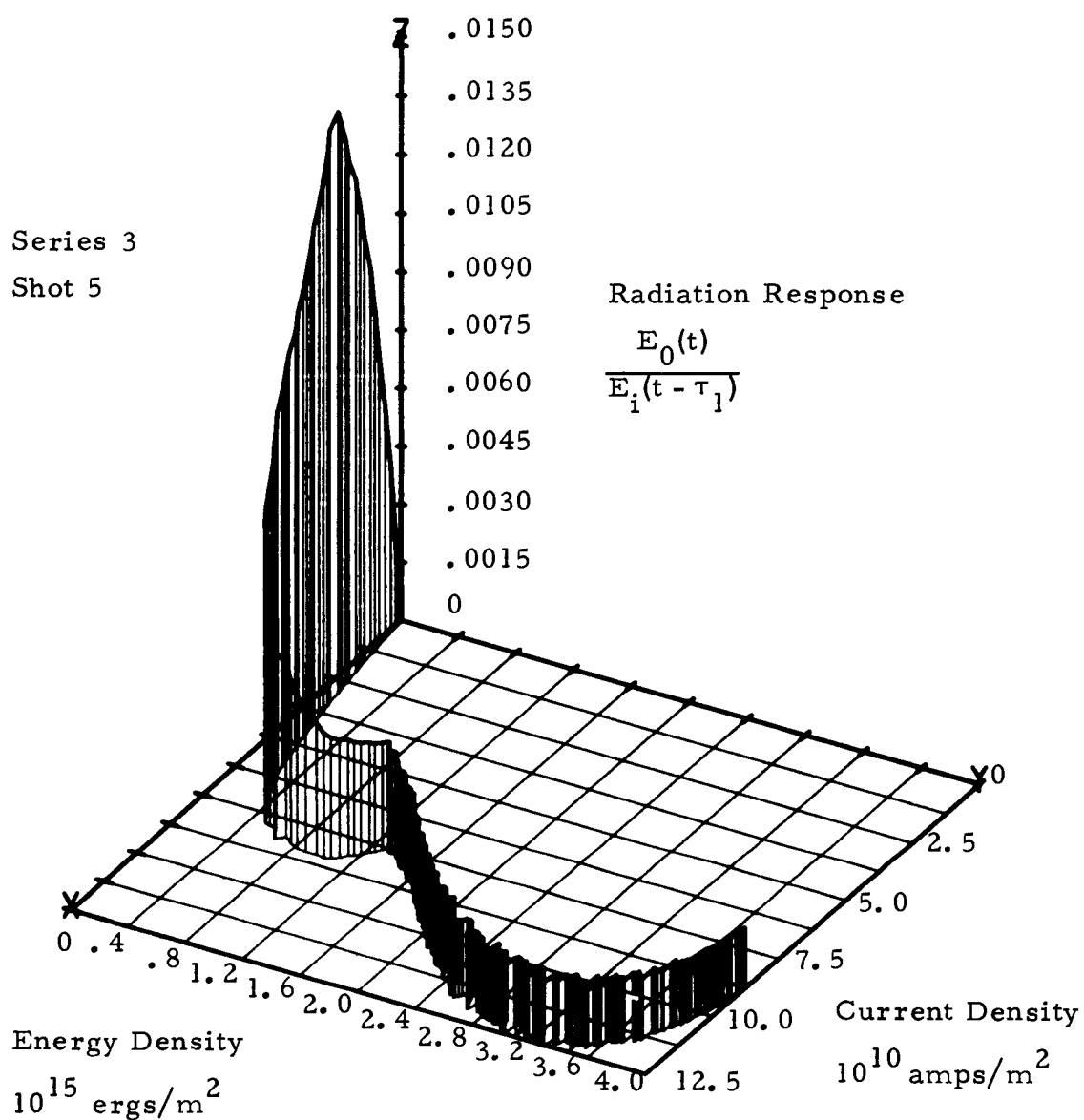


Figure 25. Time Trajectory of the Radiation Response Function of a Single Exploding Wire Shot

similar gold wire, subjected to similar input conditions would also have a response function whose time-trajectory lies on the surface.

Examination of the response surface for Series 3 (Figure 4) shows a uniform response for the six trajectories comprising the surface. The six 1.5-mil diameter by 20-mil long exploding wire shots represented by these trajectories were fired with differing conditions. In general, the radiation response showed an early-time peak as the input charging voltage was increased from 1.0 to 2.5 kV. The peak radiation response was thereafter lower as the charging voltage was further increased. Figure 4 is also interesting because, of the six shots shown, the four trajectories closest to the origin were fired with a low inductance discharge circuit, and the two outermost trajectories were fired with the high inductance discharge circuit. All six trajectories approximate a smooth surface. This uniformity of radiation response for gold exploding wire trajectories representing the different firing conditions tested may be a significant characteristic of exploding wires in general.

Figure 26 shows the radiation response surface for a group of seven Series 4 trajectories. This surface also shows that the 1.5-mil diameter by 40-mil long exploding wires approximate a smooth surface as the initial charging voltage increases. All seven shots were done with the low inductance discharge cable.

Figure 27 shows the radiation response surface formed by the combination of the 13 trajectories of Series 3 and Series 4 discussed above. Some divergence from a smooth surface exists between the trajectories of wires of different lengths. This variation in radiation

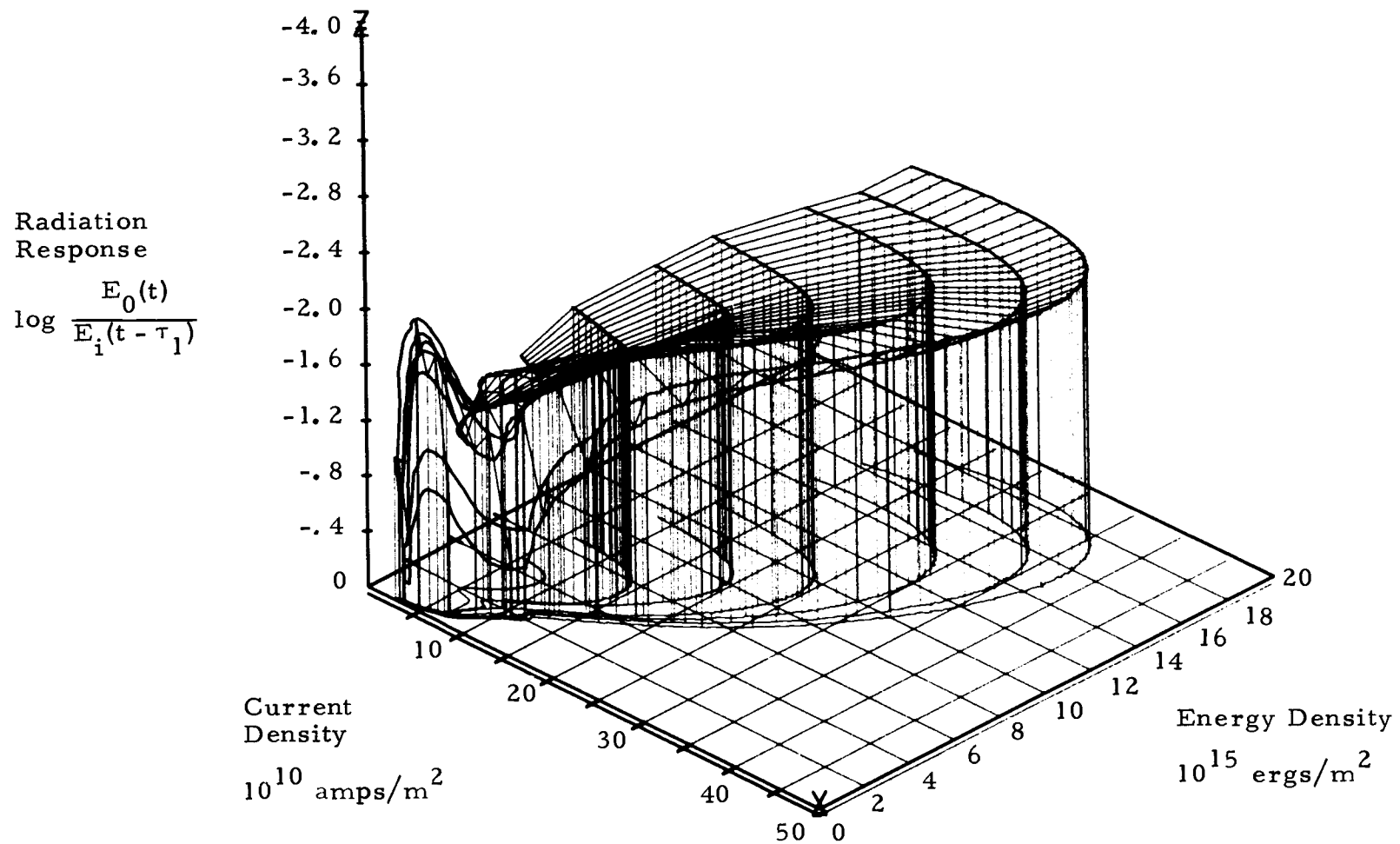


Figure 26. Radiation Response for Gold Exploding Wires - Series 4

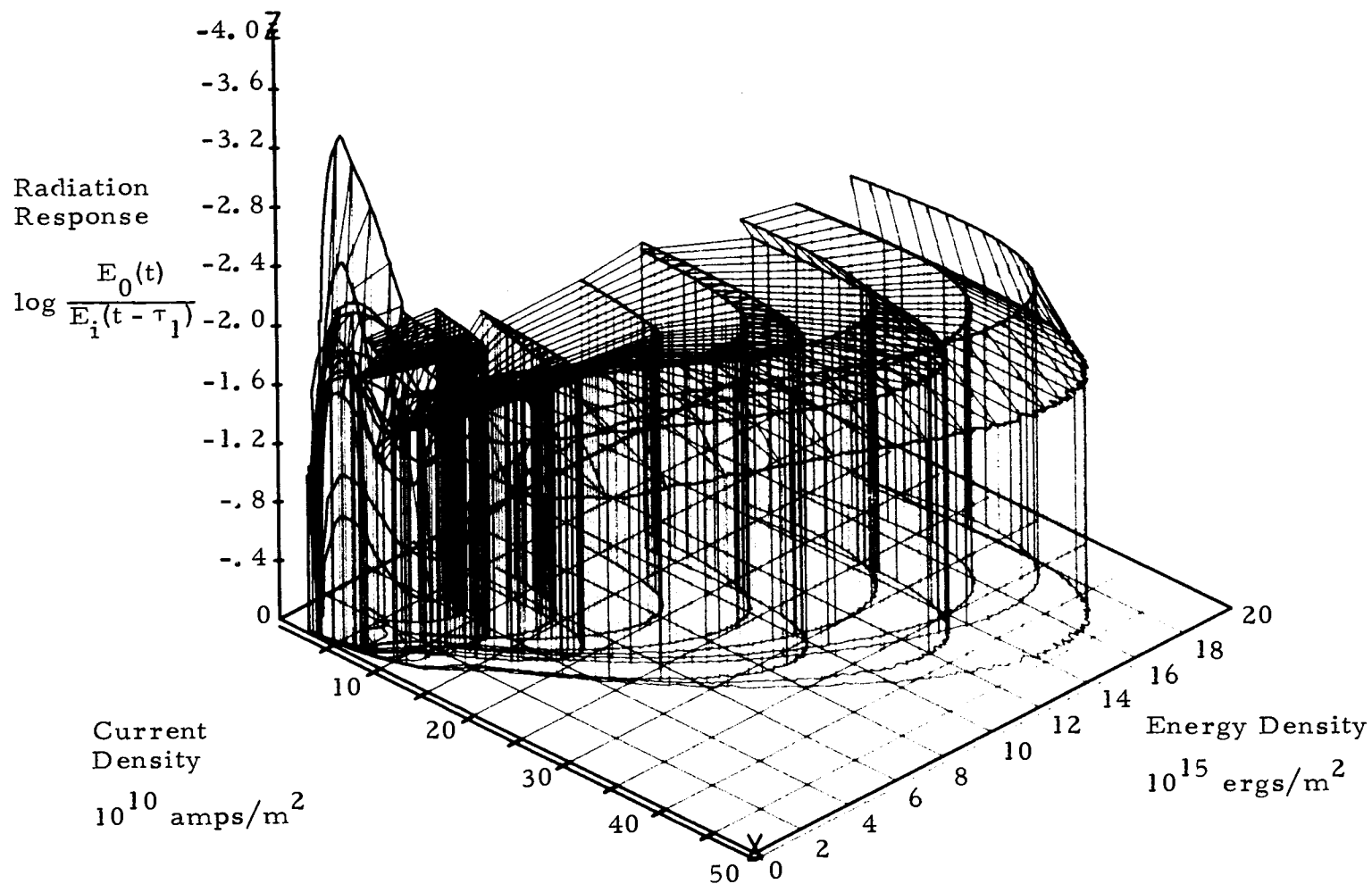


Figure 27. Radiation Response Surface for Gold Exploding Wires
Series 3 and Series 4 Combined

response is attributed to the increased dynamic resistance of the longer gold wires and the radiant plasma absorbing a lower proportion of input energy in the observed time period.

A first order mathematical model was fitted to the exploding wire response function data and the values for the constants of the model were determined. The Laplace form of the mathematical model was:

$$\frac{E_0(s)}{E_i(s)} = \frac{K e^{-\tau_1 s}}{\tau_2 s + 1}$$

where: K , the system attenuation, ranged from $10^{-4} < K < 10^{-2}$
 τ_1 , the time delay, ranged from $.14 < \tau_1 < 1.50$ micro-seconds
 τ_2 , the time constant, ranged from $.01 < \tau_2 < .40$ microsecond

The average values of these constants yield a model for the gold exploding wire radiation response:

$$\frac{E_0(s)}{E_i(s)} = \frac{.00138 e^{-.488 s}}{.1549 s + 1}$$

A more meaningful use of the data would be to compute the values of the constants for an exploding wire shot or for a group of shots of very similar conditions to predict the radiation response for a small variation in input energy. For instance, the average values for the six shots included in Figure 4 yield a model:

$$\frac{E_0(s)}{E_i(s)} = \frac{.00146 e^{-.257 s}}{.0698 s + 1}$$

The errors in this analysis were based in the simplifying assumptions used in the blackbody analysis of the data and in random instrumental errors.

Certain instrumental techniques were developed and proved useful for this type of experiment. They were: the use of a spectrograph-streaking camera with a wide capability in the visible spectrum, the direct digitizing of the radiation data by a recording microdensitometer, and the direct digitizing of the electrical oscilloscope records by an image digitizer. The use of all of the above items, first used at Sandia and Lawrence Livermore Laboratories for this experiment, has led to an improved or soon-to-be expanded capability at the laboratories.

5.1 Recommendations

The methods used in this study are useful in determining the total or spectral power and energy radiated by an exploding wire. The results themselves should be used with great care if the specific configuration of the experiment is not the same as in this study. This is also true for extrapolation of the gold data beyond the range studied here, or to attempt to fit this data to other experimental wire materials. The experimental methods and the mathematics used in this study are quite adaptable to other configurations and are not limited to a particular bandwidth or form of radiation.

5.2 Further Research

Several directions exist for the extension of this research with regard to exploding wire and associated detonator systems.

A similar study of the pressure and temperature outputs from the exploding wire would complete the output energy balance triad. The study of these phenomena interacting with radiation may lead to a more complete understanding of the initiation process of high explosive.

Sensitizing, or the effect of prompt radiation on high explosive, making it more subject to initiation, may be the subject of a further study. The central problem would be to determine the best match of the wire material, the electrical system, and the absorption spectrum of the explosive.

Expansion of this radiation research to cover other physical systems configurations, environments, or test materials may lead to a wider application of the exploding wire phenomena. The effects of vacuum, high pressure or chemical environments interact with the explosion to cause variations in the total and spectral radiation. The radiation response function appears to be much different for wire materials other than gold.

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APPENDICES

APPENDIX I. TEMPERATURE, POWER, AND ENERGY ANALYSIS

The basis for this analysis of the radiation of the exploding wire is that the plasma emits radiation as a blackbody during the continuum, or early time period, after the burst. The blackbody analysis carries with it two assumptions:

1. Local Thermodynamic Equilibrium - the radiant source can be characterized as being in complete thermodynamic equilibrium. The mass of the plasma is homogeneous, and has a uniform temperature throughout its physical dimensions at any instant in time.

2. Optically Thick - the radiant source is one in which the intensity of emitted radiation is independent of the thickness of the plasma.

The impact of these two assumptions is that the exploding wire, which actually is radiating at a variety of temperatures and is partially optically thick-optically thin during the initial burst period, is represented by an approximation, or an equivalent blackbody source in the following calculations.

Planck's law for a blackbody radiator at local thermal equilibrium is stated:

$$\frac{P_0(\nu)}{A_x} d\nu = \frac{2\pi h}{c} \frac{\nu^3 d\nu}{e^{h\nu/kT} - 1} \quad \text{erg sec}^{-1} \text{m}^{-2}$$

where: $\frac{P_0(\nu)}{A_x} d\nu$ = The emitted power per unit area in the frequency range $d\nu$

ν = Frequency

h = Planck's constant

c = Velocity of light

k = Boltzmann's constant

T = Absolute temperature

In terms of wavelength, λ , the law is stated:

$$\frac{P_0(\nu)}{A_x} d\nu = \frac{-P_0(\lambda)}{A_x} d\lambda = -2\pi hc^2 \frac{\lambda^{-5} d\lambda}{e^{\frac{hc}{\lambda kT}} - 1} \quad \text{erg sec}^{-1} \text{m}^{-2}$$

where: $\nu = \frac{C}{\lambda}, \quad d\nu = -\frac{C}{\lambda^2} d\lambda$

Wien's approximation to Planck's law states:

$$\frac{P_0(\lambda)}{A_x} d\lambda = 2\pi hc^2 \frac{\lambda^{-5} d\lambda}{e^{\frac{hc}{\lambda kT}}} \quad \text{erg sec}^{-1} \text{m}^{-2}$$

This approximation holds when:

$$e^{\frac{hc}{\lambda kT}} \gg 1, \text{ or,}$$

$$\frac{hc}{kT} \gg 0$$

$$\lambda T \ll \frac{hc}{k} = 1.44 \times 10^{-2}$$

or for values of λ less than $10000 \text{ \AA}$. In particular, Wien's approximation has been found to be true in the visible range, from 4000 to $7000 \text{ \AA}$, the range of this experiment.

The ratio of two instantaneous radiated power densities is taken at different wavelengths, λ_1 and λ_2 .

$$\frac{P_{01}(\lambda_1, t_1)/A_x}{P_{02}(\lambda_2, t_1)/A_x} = \frac{\left(2\pi hc^2/\lambda_1^5\right) \exp(hc/\lambda_2 kT)}{\left(2\pi hc^2/\lambda_2^5\right) \exp(hc/\lambda_1 kT)}$$

and is solved for absolute temperature, T , at time, t_1 :

$$\frac{P_{01}\lambda_1^5}{P_{02}\lambda_2^5} = \frac{\exp(hc/\lambda_2 kT)}{\exp(hc/\lambda_1 kT)} = \exp\left[hc(1/\lambda_2 - 1/\lambda_1) kT\right]$$

$$\ln\left(\frac{P_{01}\lambda_1^5}{P_{02}\lambda_2^5}\right) = \frac{hc}{kT} \left(\frac{1}{\lambda_2} - \frac{1}{\lambda_1}\right)$$

$$T(t_1) = \frac{hc}{k} \frac{(1/\lambda_2 - 1/\lambda_1)}{\ln(P_{01}\lambda_1^5/P_{02}\lambda_2^5)} \quad (4)$$

Thus, the temperature of the assumed blackbody source can be computed at the time t_1 . This analysis was carried out in detail for one of the experimental shots and is reported in the work of Pierce (Ref. 9). It was found that the particular sample of gold exploding wire studied had an average temperature in the 3000 to 6000° Kelvin range during the continuum period. As may be expected, the data did

diverge at later times. The total power emitted by a real material at time t_1 does not exactly equal the power of a blackbody at the same temperature. The real material, in this case gold, is attenuated by the emissivity, ϵ , which is defined:

$$\epsilon(T) = \frac{P_0(\text{graybody})}{P_0(\text{blackbody})}$$

and the real material, or graybody source, has a power output:

$$P_{0(\text{GB})}(\lambda) = \epsilon(\lambda) P_{0(\text{BB})}(\lambda)$$

$$P_{0(\text{GB})}(t_1) = \int_{\lambda_1}^{\lambda_2} \epsilon(\lambda) P_{0(\text{BB})}(\lambda, t_1) d\lambda$$

$$P_{0(\text{GB})}(t_1) = 2\pi hc^2 \int_{\lambda_1}^{\lambda_2} \frac{\epsilon(\lambda) d\lambda}{\lambda^5 \left(e^{hc/\lambda kT} - 1 \right)}$$

This equation has been solved for total power density so that:

$$P_{\text{TOT}}(t_1) = \epsilon(T) \sigma T^4(t_1) \quad \text{erg sec}^{-1} \text{m}^{-2}$$

where: σ = Stefan-Boltzmann constant

$\epsilon(T)$ = Emissivity of the material radiating

The emissivity, $\epsilon(T)$, is determined from the spectral emissivity, $\epsilon(\lambda)$, by:

$$\epsilon(T) = \frac{2\pi hc^2}{\sigma T^4} \int_0^\infty \frac{\epsilon(\lambda) d\lambda}{\lambda^5 \left(e^{hc/\lambda kT} - 1 \right)}$$

Returning to the temperature equation (Equation 4) if the power ratio, $P_{01}(\lambda_1, t_1)/P_{02}(\lambda_2, t_1)$, has been determined as a function of time, then the temperature also is determined as a function of time. This leads to the determination of the power density emitted as a time function by the Stefan-Boltzmann equation.

The dimensions of the exploding wire radiator and its density yield:

$$\text{Area} = A_x(t) = \pi d(t) \ell \quad m^2$$

$$\text{Mass} = M = \rho \frac{\pi d^2}{4} \ell \quad gm$$

The plasma diameter has been measured during the early time period (see Figure 10), so the instantaneous area of the radiator is known. The total power output for the entire spectrum is given by:

$$P_{TOT}(t) = \frac{P_{TOT}(t)}{A_x} \cdot A_x(t) \quad \text{erg sec}^{-1}$$

Similarly, total power and energy output per unit mass is given by:

$$\frac{P_{TOT}(t)}{M} = \frac{P_{TOT}(t)}{A_x} \cdot \frac{A_x(t)}{M} \quad \text{erg sec}^{-1} \text{ gm}^{-1}$$

$$\frac{E_0(t)}{M} = \frac{1}{M} \int_0^t P_{TOT}(t) A_x(t) dt \quad \text{erg gm}^{-1}$$

APPENDIX II.

EXPERIMENTAL CONDITIONS AND EQUIPMENT

A discussion of the experimental study was given in Chapter III. In this appendix, a resume of the experiments performed, as well as a discussion of some additional items of equipment used in the study, will be discussed in detail.

As listed in the resume of experiments, Table II*, four series of gold exploding wire shots were fired. Each series was a parametric study in which the firing conditions and wire size were varied throughout the range of interest. The series numbers used run from Series 3 through Series 6. Series 1 and 2 were dry runs used for checking the test setup and system calibration, and were not used for data. Table II is preceded by a list of definitions used in the resume.

Series 3 consisted of 24 data shots and two calibration shots. The gold exploding wire size tested was 1.5 mils diameter by 20 mils long. The load cable inductances were 120 and 1815 nanohenrys. Charging voltage on the capacitor was varied from 1.0 to 4.3 kV. Eight of the data shots were not used because of human and instrumental errors in recording.

Series 4 consisted of 19 data shots and two calibration shots. The gold exploding wire size tested was 1.5 mils diameter by 40 mils long. Load cable inductances were the same as in Series 3, as was the range of charging voltage on the capacitor. Three of the data shots did not supply useful data.

*Located at the end of Appendix II.

Series 5 consisted of 12 data shots. Because Series 5 was done subsequent to Series 4, on the same day, the Series 4 calibration was used for both. The gold exploding wire size tested was 1.4 mils diameter by 40 mils long. The same load cables were used as in previous series, and also the same capacitor charging voltage range. Two of the data shots were no good.

Series 6 consisted of ten data shots, all of which were good, and two calibration shots. The gold exploding wire size tested as the same as Series 3, 1.5 mils diameter by 20 mils long. The load cables and the range of capacitor charging voltages were the same as all the previous series.

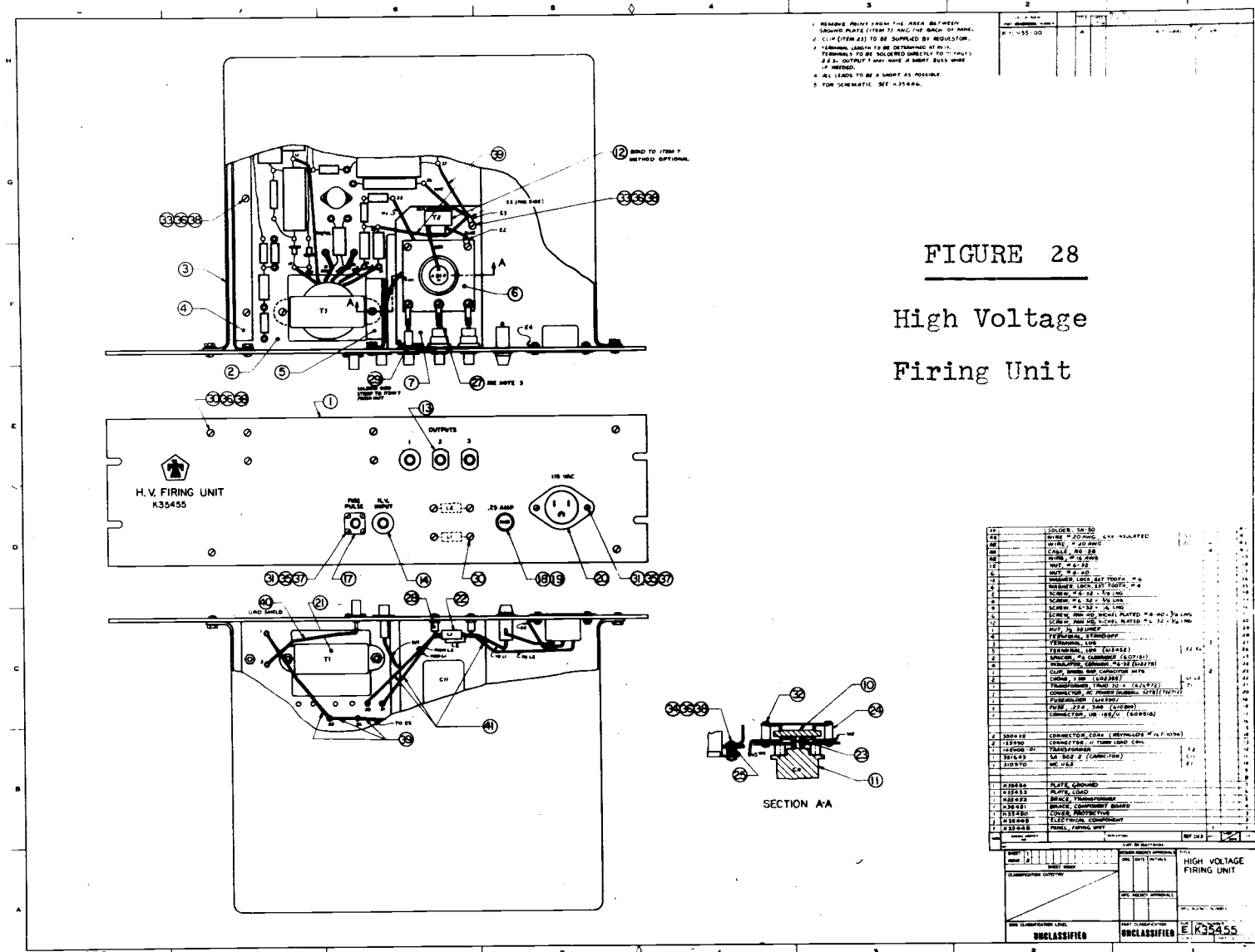
The total number of data shots in the four reported series was 65, of which 13 shots were not usable, and 19 shots were lost in data reduction. The remaining 33 shots are discussed in Appendix III.

The Firing Set

The Sandia Laboratories standard laboratory capacitor discharge firing unit is shown in Figures 28 and 29. This unit stored energy from a calibrated DC high voltage power supply. The stored energy was then discharged into the load circuit as shown in Figure 5.

The firing set contained a 1.02 microfarad, 3000 volt rated, oil-filled, low inductance capacitor of type SA 502-2.* This capacitor, when charged, was interrupted by a gas-discharge, high voltage, type MC 1163* triggered spark gap. Upon a 16 volt signal to the ten to one

*"SA" and "MC" are designators for equipment manufactured by various firms to specifications of Sandia Laboratories, Inc.



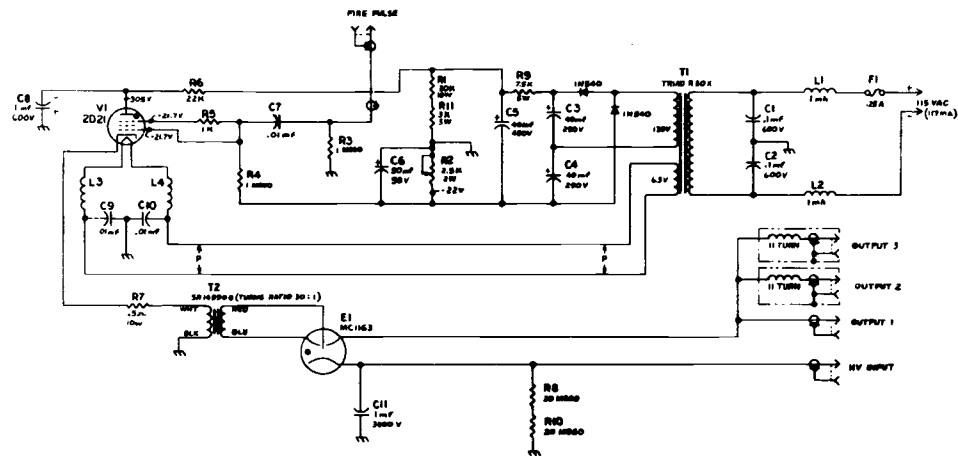


FIGURE 29

Firing Unit Schematic

FIRING CHARACTERISTICS
LOW - 900 VOLTS
HIGH - 4300 VOLTS
TRANSIENT TIME - 1.28 MICRO SEC. (AVERAGE)
JITTER - 100 NANO SEC.

DESIGN AGENCY	DESIGN NUMBER	REVISION	DESCRIPTION	PREPARED BY	DATE	CHKD	ENGR
K35446-000		A		PRITCHARD	1/19/64		

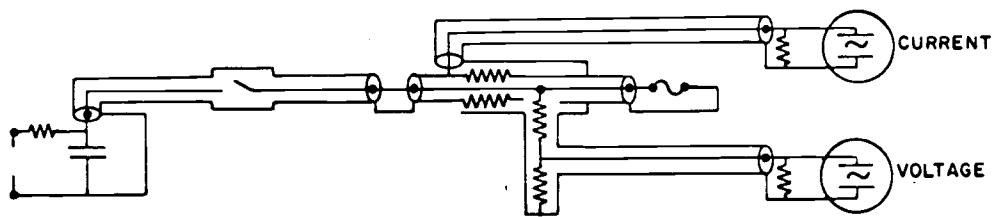
SHEET	1	OF	1	TITLE	SCHEMATIC, FIRING UNIT
REVISION	A	DATE	INITIALS	DATE	INITIALS
CLASSIFICATION CATEGORY	UNCLASSIFIED	DATE	INITIALS	DATE	INITIALS
DESIGN CLASSIFICATION LEVEL	UNCLASSIFIED	DATE	INITIALS	DATE	INITIALS
DESIGN NUMBER	D K35446	DATE	INITIALS	DATE	INITIALS
SCALE		SHEET	1	OF	1

step-up trigger transformer, the spark gap transferred the energy into the load circuit containing the exploding wire.

The Current Viewing Resistor (CVR)

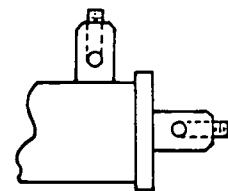
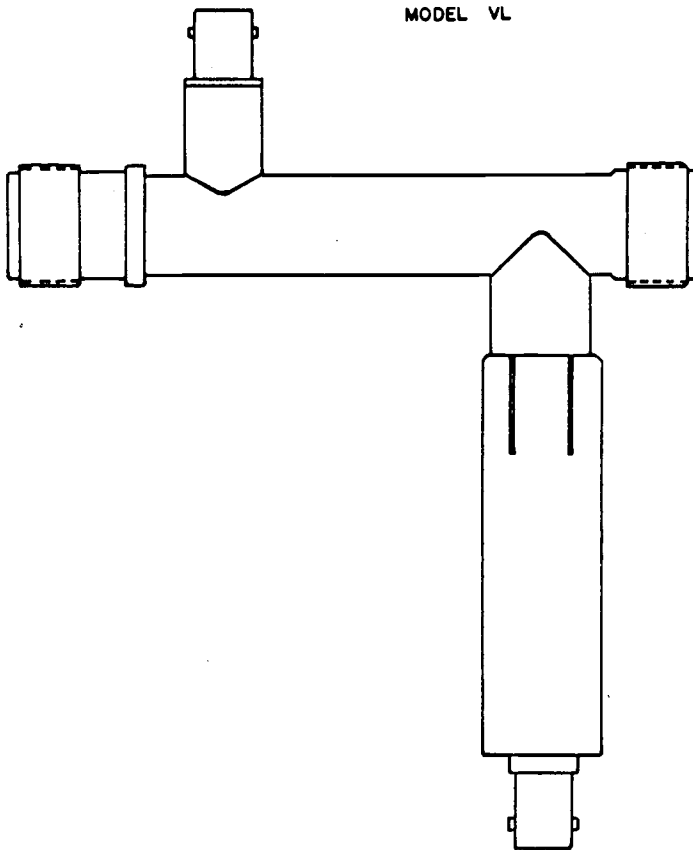
All exploding wire samples were fired with the detonator header plugged into the output end of a T&M Research Products, Inc. Series VL inline CVR with built-in voltage divider shown in Figure 30. The use of this device permitted simultaneous sensing of the current through and voltage across the exploding wire load.

Current through the CVR was measured as the voltage drop across its in-line resistance. In this study, both 0.01 and 0.05 ohm CVR's were used. This resistance was small in comparison to the rest of the circuit, which was 0.43 ohm for the lowest resistance configuration. The voltage measured with the built-in divider was the voltage of the exploding wire. For purposes of handling the large voltages measured across the wire, 20 to one and 50 to one attenuators were attached to the CVR's. The rise time of the T&M CVR was tested in an independent test and found to be approximately one nanosecond. The CVR's and attenuators were calibrated in the Sandia standards laboratory.



MECHANICAL

MODEL VL



PIGTAIL CONNECTOR



VOLTAGE DIVIDER

FIGURE 30

Current Viewing Resistor

TABLE 2- RESUME OF EXPERIMENTS

DEFINITION OF ABBREVIATIONS USED IN RESUME OF EXPERIMENTS

WIRE S/N = SERIAL NUMBER ASSIGNED TO DETONATOR HEADER ASSEMBLY

L NH = DISCHARGE CABLE INDUCTANCE IN NANOHENRIES

R OHM = DISCHARGE CABLE RESISANCE IN OHMS

VO KV = CAPACITOR CHARGE VOLTAGE IN KILOVOLTS

VOLT ATTN = VOLTAGE ATTENUATION USED WITH CURRENT VIEWING RESISTOR

USEC/CM = OSCILLOSCOPE SWEEP SPEED

CVR/OHM = RESISTANCE OF CURRENT VIEWING RESISTOR (CVR)

CAMERA RPS = INSTRUMENTAL ROTATING MIRROR SPEED IN REVOLUTIONS/SECOND

COMMENT = OK FOR GOOD TEST
 NG FOR REASON SPECIFIED

TABLE 2- RESUME OF EXPERIMENTS- CONTINUED

SERIES NUMBER 3 - 1.5 X 20 GOLD EXPLODING WIRE TEST DATE 6/16/69

1.02 UF CAPACITOR--SCOPE 1 CURRENT--SCOPE 2 VOLTAGE

SHOT NO.	L NH	R OHM	VO KV	VOLT ATTN	USEC /CM	CVR OHM	USEC /CM	CAMERA RPS	COMMENT
(CAL) 030	-----	-----	-----	-----	-----	-----	-----	-----	OK
(CAL) 0300	-----	-----	-----	-----	-----	-----	-----	-----	OK
1	120	.0254	1.0	20/1	.2	.01015	.2	400	NG-CURRENT TRACE LOW
2	120	.0254	1.0	20/1	.2	.0511	.2	400	OK
3	120	.0254	1.5	20/1	.2	.0511	.2	401	NG-NO CURRENT RECORD
4	120	.0254	1.5	20/1	.2	.0511	.2	401	NG-NO CURRENT RECORD
5	120	.0254	1.5	20/1	.2	.0511	.2	400	OK
6	120	.0254	2.0	20/1	.2	.01015	.2	400	OK
7	120	.0254	2.5	20/1	.2	.01015	.2	400	NG-NO FIDUCIAL
8	120	.0254	2.5	20/1	.2	.01015	.2	400	OK
9	120	.0254	3.0	20/1	.2	.01015	.2	401	OK
10	120	.0254	3.5	20/1	.2	.01015	.2	400	NG-LIGHT VOLTAGE TRACE
11	120	.0254	3.5	20/1	.2	.01015	.2	400	NG-LIGHT VOLTAGE TRACE
12	120	.0254	3.5	20/1	.2	.01015	.2	400	OK
13	120	.0254	4.0	20/1	.2	.01015	.2	401	OK
14	120	.0254	4.3	20/1	.2	.01015	.2	402	OK
15	1815	.504	1.0	20/1	.5	.0511	.5	400	NG-NO CURRENT TRACE
16	1815	.504	1.0	20/1	.5	.0511	.5	399	NG-NO CURRENT TRACE
17	1815	.504	2.0	20/1	.5	.0511	.5	400	OK
18	1815	.504	1.0	20/1	.5	.0511	.5	400	OK
19	1815	.504	1.5	20/1	.5	.0511	.5	401	OK
20	1815	.504	2.5	20/1	.5	.0511	.5	400	OK
21	1815	.504	3.0	20/1	.5	.0511	.5	400	OK
22	1815	.504	3.5	20/1	.5	.0511	.5	401	OK
23	1815	.504	4.0	20/1	.5	.0511	.5	400	OK
24	1815	.504	4.3	20/1	.5	.0511	.5	400	OK

TABLE 2- RESUME OF EXPERIMENTS- CONTINUED

SERIES NUMBER 4 - 1.5 X 40 GOLD EXPLODING WIRE TEST DATE 6/17/69

1.02 UF CAPACITOR--SCOPE 1 CURRENT--SCOPE 2 VOLTAGE

SHOT NO.	L NH	R OHM	VO KV	VOLT ATTN	USEC /CM	CVR OHM	USEC /CM	CAMERA RPS	COMMENT
(CAL) 040	-----	-----	-----	-----	-----	-----	-----	-----	OK-CALS ALSO USED
(CAL) 0400	-----	-----	-----	-----	-----	-----	-----	-----	OK-FOR SERIES FIVE
1	120	.0254	1.0	20/1	.2	.0511	.2	401	OK
2	120	.0254	1.5	20/1	.2	.0511	.2	400	OK
3	120	.0254	2.0	50/1	.2	.0511	.2	400	NG-CURRENT OFF SCALE
4	120	.0254	2.0	50/1	.2	.01015	.2	400	OK
5	120	.0254	2.5	50/1	.2	.01015	.2	400	OK
6	120	.0254	3.0	50/1	.2	.01015	.2	400	OK
7	120	.0254	3.5	50/1	.2	.01015	.2	399	OK
8	120	.0254	4.0	50/1	.2	.01015	.2	400	OK
9	120	.0254	4.3	50/1	.2	.01015	.2	400	OK
10	1815	.504	1.0	20/1	.5	.0511	.5	401	OK
11	1815	.504	1.5	20/1	.5	.0511	.5	400	NG-NO VOLTAGE TRACE
12	1815	.504	1.5	20/1	.5	.0511	.5	400	OK
13	1815	.504	2.0	20/1	.5	.0511	.5	400	OK
14	1815	.504	2.5	20/1	.5	.0511	.5	400	OK
15	1815	.504	3.0	20/1	.5	.0511	.5	400	OK
16	1815	.504	3.5	20/1	.5	.01015	.5	400	OK
17	1815	.504	4.0	20/1	.5	.01015	.5	400	OK
18	1815	.504	4.3	20/1	.5	.01015	.5	400	NG-NOISY
19	1815	.504	4.3	20/1	.5	.01015	.5	400	OK

TABLE 2- RESUME OF EXPERIMENTS- CONTINUED

SERIES NUMBER 5 - 1.4 X 40 GOLD EXPLODING WIRE TEST DATE 6/17/69

1.02 UF CAPACITOR--SCOPE 1 CURRENT--SCOPE 2 VOLTAGE
SAME CALS AS SERIES 4

SHOT NO.	L NH	R OHM	VO KV	VOLT ATTN	USEC /CM	CVR OHM	USEC /CM	CAMERA RPS	COMMENT
1	1815	.504	4.3	50/1	.5	.01015	.5	400	OK
2	1815	.504	4.0	50/1	.5	.01015	.5	400	OK
3	1815	.504	3.0	50/1	.5	.0511	.5	400	OK
4	1815	.504	2.0	50/1	.5	.0511	.5	401	OK
5	1815	.504	1.0	20/1	.5	.0511	.5	400	OK
6	120	.0254	1.0	20/1	.2	.0511	.2	400	OK
7	120	.0254	2.0	20/1	.2	.0511	.2	400	NG-VOLT/CRNT OFF SCALE
8	120	.0254	2.0	100/1	.2	.01015	.2	400	NG-VOLTAGE TOO LOW
9	120	.0254	2.0	50/1	.2	.01015	.2	400	OK
10	120	.0254	3.0	50/1	.2	.01015	.2	402	OK
11	120	.0254	4.0	50/1	.2	.01015	.2	402	OK
12	120	.0254	4.3	50/1	.2	.01015	.2	400	OK

TABLE 2- RESUME OF EXPERIMENTS- CONTINUED

SERIES NUMBER 6 - 1.5 X 20 GOLD EXPLODING WIRE TEST DATE 6/18/69

1.02 UF CAPACITOR--SCOPE 1 CURRENT--SCOPE 2 VOLTAGE

WIRE S/N	SHOT NO.	L NH	R OHM	VO KV	VOLT ATTN	USEC /CM	CVR OHM	USEC /CM	CAMERA RPS	COMMENT
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(CAL)	060	-----								OK
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(CAL)	0600	-----								OK
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1000	1	120	.0254	4.3	50/1	.2	.01015	.2	400	OK
1001	2	120	.0254	4.0	50/1	.2	.01015	.2	400	OK
1002	3	120	.0254	3.0	50/1	.2	.01015	.2	399	OK
1003	4	120	.0254	2.0	50/1	.2	.01015	.2	400	OK
1004	5	120	.0254	1.0	20/1	.2	.0511	.2	400	OK
1005	6	1815	.504	1.0	20/1	.5	.0511	.5	401	OK
1006	7	1815	.504	2.0	20/1	.5	.0511	.5	400	OK
1007	8	1815	.504	3.0	20/1	.5	.01015	.5	401	OK
1008	9	1815	.504	4.0	20/1	.5	.01015	.5	398	OK
1009	10	1815	.504	4.3	20/1	.5	.01015	.5	400	OK

APPENDIX III. THE EXPLODING WIRE RESPONSE SURFACE

The radiation response surface for a representative set of gold exploding wires has been shown in Figure 4. The surface shows, in three dimensions, the variation in the ratio of output radiation energy to input electrical energy versus the two time functions, current density and input energy density.

These data were derived from experimentally observed explosions of gold wires. Each exploding wire shot was instrumented to record the electrical parameters, voltage and current (Figures 1 and 2), from which the input energy was computed. The radiation from the burst was recorded on film (Figure 15), which was later digitized for analysis into output energy.

These data for an individual shot were brought together to form the radiation response function, which was defined as the ratio of output radiation energy to the input electrical energy, delayed by the time from switch closure to burst, τ_1 .

$$\frac{E_0(t)}{E_i(t - \tau_1)} = \text{Radiation Response Function}$$

The trajectory of the radiation response function for an individual gold exploding wire shot is shown in Figure 25.

The exploding wire radiation response surface was formed by the trajectories from a number of individual shots. As such, the surface forms a qualitative pictorial characterization of the radiation output

from an exploding gold wire. Surfaces for groups of exploding wires are shown in Figures 4, 26, and 27.

A more quantitative characterization of the radiation response surface is given in Table III, a listing of the matrix of values for all of the trajectories for which data could be reduced. The listing gives time, radiation response function, current density, and input energy density for 33 trajectories.

The data for the individual trajectories was again used in the IDENTification program, which employs the MIMIC code, an analog simulator. This process determined the constants K and τ_2 in the first order-linear model of the radiation response function in Laplace notation:

$$\frac{E_0(s)}{E_i(s)} = \frac{Ke^{-\tau_1 s}}{\tau_2 s + 1}$$

The value of τ_1 was determined directly from the electrical data as the time from switch closure to wire burst, which was taken to be at the time of peak voltage.

The values for the constants K , τ_1 , and τ_2 are tabulated in Table III. The values for all 33 trajectories were then averaged to give the model:

$$\frac{E_0(s)}{E_i(s)} = \frac{.00138 e^{-.488s}}{.1549 s + 1}$$

TABLE 3 - TABULATION OF THE VALUES OF THE CONSTANTS
DETERMINED BY THE MIMIC PROGRAM .

$$EO(S)/EI(S) = K \cdot \exp((\text{TAU } 1) \cdot S) / ((\text{TAU } 2) \cdot S + 1)$$

SERIES	K	TAU 1	TAU 2
- SHOT	ATTEN	USEC	USEC
3-02	.00119	.460	.0548
3-05	.00151	.315	.2280
3-06	.00142	.260	.0139
3-08	.06141*	.220	.2636
3-09	.00197	.196	.0255
3-12	.00152	.165	.0367
3-13	.00115	.145	.0600
3-14	.04263*	.145	.1906
3-17	.00091	.850	.3031
3-18	.00279	.900	.0294
3-19	.00128	.960	.3328
3-20	.00160	.690	.3658
3-21	.03403*	.570	.3510
3-22	.00114	.530	.2224
3-23	.00236	.450	.3852
3-24	.00288	.500	.4135
* BAD DATA DUE TO NOISE - NOT USED IN AVERAGE VALUE CALCULATION .			
4-01	.00055	.465	.2397
4-02	.00076	.345	.0733
4-04	.00103	.255	.0240
4-05	.00138	.235	.0038
4-06	.00159	.185	.0257
4-07	.00159	.170	.0084
4-08	.00158	.155	.0813
4-09	.00182	.150	.0631
4-10	.00121	1.530	.3820
4-12	.00073	1.240	.1071
4-14	.00064	.710	.0972
4-16	.00097	.530	.0449
4-19	.00118	.410	.2239
6-07	.00085	.740	.1419
6-08	.00099	.520	.1034
6-09	.00145	.560	.1910
6-10	.00141	.560	.0249
AVERAGE VALUES*	.00138	.488	.1549

This model, based on the averages of all 33 data shots, was only a rough approximation of the radiant response of a specific exploding wire. The equations shown in Section 5.0 represent a closer approach to the response of the particular wire size and firing conditions.

Table 4 is a tabulation of the basic data derived from this study. It is a listing of the time histories of the exploding wire response function, the current density, the input energy density, and the time for each data point. These data can be used to construct the trajectories as shown in Figure 25.

TABLE 4- TABULATION OF TRAJECTORIES COMPRISING THE EXPLODING
WIRE RESPONSE

DEFINITION OF HEADINGS USED IN TABLE 4

TIME(MICROSEC)= TIME IN MICROSECONDS FOR EACH DATA POINT ,
ZERO STARTS AT BURST TIME .

CDEN(AMP/M2)= CURRENT DENSITY THROUGH WIRE IN AMPERES/SQ.METER ,
BASED ON ORIGINAL CROSS-SECTIONAL AREA OF WIRE .

EDEN(ERGS/M2)= INPUT ENERGY DENSITY INTO WIRE IN ERGS/SQ.METER .
BASED ON ORIGINAL CROSS-SECTIONAL AREA OF WIRE .

ENERGY RATIO(E0/EI)= RATIO OF RADIANT OUTPUT ENERGY AS A FUNCTION
OF TIME TO ELECTRICAL INPUT ENERGY AS A
FUNCTION OF TIME SHIFTED BY TAU 1,THE BURST
DELAY .

LOG 10(E0/EI)= BASE 10 LOGARITHM OF THE ENERGY RATIO .

TIME(MICROSEC)	CDEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
0.	4.34065E+11	8.78742E+13	0.	-3.41937E+00
3.90926E-03	4.36478E+11	9.16185E+13	3.80738E-04	-3.41937E+00
7.81853E-03	4.40315E+11	9.52795E+13	7.32225E-04	-3.13536E+00
1.17279E-02	4.58406E+11	9.91435E+13	1.05552E-03	-2.97653E+00
1.56371E-02	4.69974E+11	1.02993E+14	1.35489E-03	-2.86910E+00
1.95463E-02	4.77703E+11	1.06881E+14	1.63184E-03	-2.78732E+00
2.34556E-02	4.89215E+11	1.10957E+14	1.88628E-03	-2.72439E+00
2.73648E-02	4.93310E+11	1.14972E+14	2.12390E-03	-2.67289E+00
3.12741E-02	5.04620E+11	1.19169E+14	2.34172E-03	-2.63047E+00
3.51834E-02	5.12350E+11	1.23519E+14	2.54166E-03	-2.59498E+00
3.90926E-02	5.20024E+11	1.27740E+14	2.73075E-03	-2.56372E+00
4.30019E-02	5.27754E+11	1.32213E+14	2.90221E-03	-2.53727E+00
4.69112E-02	5.35429E+11	1.36878E+14	3.05914E-03	-2.51454E+00
5.08204E-02	5.46995E+11	1.41393E+14	3.20720E-03	-2.49387E+00
5.47297E-02	5.54726E+11	1.45929E+14	3.34654E-03	-2.47540E+00
5.86389E-02	5.62400E+11	1.50607E+14	3.47420E-03	-2.45915E+00
6.25482E-02	5.69309E+11	1.55407E+14	3.59137E-03	-2.44474E+00
6.64575E-02	5.75995E+11	1.60196E+14	3.70175E-03	-2.43159E+00
7.03667E-02	5.78737E+11	1.65116E+14	3.80271E-03	-2.41991E+00
7.42760E-02	5.98275E+11	1.70109E+14	3.89614E-03	-2.40937E+00
7.81853E-02	6.03461E+11	1.75495E+14	3.97533E-03	-2.40063E+00
8.20945E-02	6.11025E+11	1.80882E+14	4.04990E-03	-2.39257E+00
8.60038E-02	6.18645E+11	1.86041E+14	4.12498E-03	-2.38458E+00
8.99130E-02	6.29994E+11	1.91689E+14	4.18544E-03	-2.37926E+00
9.38223E-02	6.27955E+11	1.97264E+14	4.24397E-03	-2.37223E+00
9.77316E-02	6.48961E+11	2.03073E+14	4.29434E-03	-2.36710E+00
1.01641E-01	6.48961E+11	2.09307E+14	4.33310E-03	-2.36320E+00
1.05550E-01	6.59281E+11	2.15494E+14	4.32876E-03	-2.36364E+00
1.09459E-01	6.60364E+11	2.22023E+14	4.25625E-03	-2.37037E+00
1.13369E-01	6.71767E+11	2.29278E+14	4.17463E-03	-2.37939E+00
1.17278E-01	6.79332E+11	2.36650E+14	4.09598E-03	-2.39764E+00
1.21187E-01	6.93311E+11	2.44070E+14	4.02130E-03	-2.39553E+00
1.25096E-01	6.94517E+11	2.51982E+14	3.94487E-03	-2.40397E+00
1.29006E-01	6.99395E+11	2.59987E+14	3.86968E-03	-2.41244E+00
1.32915E-01	7.02082E+11	2.68599E+14	3.78993E-03	-2.42137E+00
1.36824E-01	7.13495E+11	2.77399E+14	3.71369E-03	-2.43019E+00
1.40733E-01	7.19090E+11	2.86484E+14	3.63925E-03	-2.43911E+00
1.44643E-01	7.28670E+11	2.95927E+14	3.56446E-03	-2.44801E+00
1.48552E-01	7.32453E+11	3.05823E+14	3.48773E-03	-2.45746E+00
1.52461E-01	7.47639E+11	3.26993E+14	3.33596E-03	-2.47678E+00
1.56371E-01	7.32453E+11	3.16125E+14	3.41255E-03	-2.46692E+00
1.60280E-01	7.51420E+11	3.39379E+14	3.25597E-03	-2.48732E+00
1.64189E-01	7.51749E+11	3.50092E+14	3.17830E-03	-2.49781E+00
1.68098E-01	7.62987E+11	3.62503E+14	3.09950E-03	-2.50971E+00
1.72008E-01	7.66605E+11	3.75621E+14	3.02031E-03	-2.51995E+00
1.75917E-01	7.70389E+11	3.89949E+14	2.93732E-03	-2.53205E+00
1.79826E-01	7.70389E+11	4.05180E+14	2.85394E-03	-2.54457E+00
1.83735E-01	7.74171E+11	4.21199E+14	2.77121E-03	-2.55733E+00
1.87645E-01	7.70389E+11	4.39350E+14	2.69768E-03	-2.57062E+00
1.91554E-01	7.74171E+11	4.59293E+14	2.59454E-03	-2.58594E+00
1.95463E-01	7.81791E+11	4.78958E+14	2.50590E-03	-2.60104E+00
1.99372E-01	7.91791E+11	5.02682E+14	2.40985E-03	-2.61919E+00
2.03282E-01	7.91791E+11	5.29766E+14	2.30630E-03	-2.63708E+00
2.07191E-01	7.95573E+11	5.60582E+14	2.19899E-03	-2.65778E+00
2.11100E-01	7.93139E+11	5.93860E+14	2.09210E-03	-2.67942E+00
2.15009E-01	7.99355E+11	6.30435E+14	1.98562E-03	-2.70210E+00
2.18919E-01	7.99356E+11	6.70235E+14	1.88171E-03	-2.72545E+00
2.22828E-01	7.99356E+11	7.11992E+14	1.78453E-03	-2.74848E+00
2.26737E-01	7.93139E+11	7.56401E+14	1.69217E-03	-2.77156E+00
2.30647E-01	7.81791E+11	7.99943E+14	1.61180E-03	-2.79269E+00
2.34556E-01	7.77953E+11	8.40711E+14	1.54480E-03	-2.81113E+00
2.38465E-01	7.66715E+11	8.78015E+14	1.48986E-03	-2.82695E+00
2.42374E-01	7.55477E+11	9.11755E+14	1.44502E-03	-2.84013E+00
2.46284E-01	7.47639E+11	9.41977E+14	1.40863E-03	-2.85120E+00
2.50193E-01	7.33056E+11	9.69173E+14	1.37878E-03	-2.86051E+00
2.54102E-01	7.21917E+11	9.93615E+14	1.35431E-03	-2.86828E+00
2.58011E-01	7.09702E+11	1.01454E+15	1.33563E-03	-2.87431E+00
2.61921E-01	6.99300E+11	1.03315E+15	1.32035E-03	-2.87931E+00
2.65830E-01	6.84430E+11	1.04961E+15	1.30796E-03	-2.88341E+00
2.69739E-01	6.71767E+11	1.06475E+15	1.29756E-03	-2.88687E+00
2.73648E-01	6.62502E+11	1.07948E+15	1.28915E-03	-2.88997E+00
2.77558E-01	6.48961E+11	1.09140E+15	1.28189E-03	-2.89215E+00
2.81467E-01	6.39597E+11	1.10389E+15	1.27530E-03	-2.89439E+00
2.85376E-01	6.26211E+11	1.11579E+15	1.26953E-03	-2.89636E+00
2.89285E-01	6.14908E+11	1.12722E+15	1.26440E-03	-2.89812E+00
2.93195E-01	6.02200E+11	1.13920E+15	1.25998E-03	-2.89967E+00
2.97104E-01	5.92059E+11	1.14884E+15	1.25582E-03	-2.90107E+00
3.01013E-01	5.92059E+11	1.15911E+15	1.25223E-03	-2.90232E+00
3.04923E-01	5.92059E+11	1.16941E+15	1.24866E-03	-2.90356E+00
3.08832E-01	5.90710E+11	1.17947E+15	1.24542E-03	-2.90469E+00

TABLE 4 (continued)

SHOT 3- 2

343 POINTS

120

TIME (MICROSEC)	CDEN (A4P/M2)	EDEN (ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
3.12741E-01	5.76973E+11	1.18933E+15	1.24245E-03	-2.90572E+00
3.16650E-01	5.83503E+11	1.19920E+15	1.23955E-03	-2.90674E+00
3.20560E-01	5.75995E+11	1.20869E+15	1.23707E-03	-2.90761E+00
3.24469E-01	5.76873E+11	1.21932E+15	1.23451E-03	-2.90951E+00
3.29378E-01	5.73090E+11	1.22775E+15	1.23218E-03	-2.90933E+00
3.32287E-01	5.75995E+11	1.23713E+15	1.22993E-03	-2.91012E+00
3.36197E-01	5.75173E+11	1.24644E+15	1.22779E-03	-2.91088E+00
3.40106E-01	5.75995E+11	1.25530E+15	1.22612E-03	-2.91147E+00
3.44015E-01	5.76873E+11	1.26402E+15	1.22460E-03	-2.91201E+00
3.47924E-01	5.73090E+11	1.27273E+15	1.22313E-03	-2.91253E+00
3.51934E-01	5.73090E+11	1.28132E+15	1.22178E-03	-2.91301E+00
3.55743E-01	5.70130E+11	1.29007E+15	1.22030E-03	-2.91353E+00
3.59652E-01	5.76873E+11	1.29982E+15	1.21884E-03	-2.91405E+00
3.63561E-01	5.73967E+11	1.30744E+15	1.21752E-03	-2.91452E+00
3.67471E-01	5.76873E+11	1.31589E+15	1.21605E-03	-2.91505E+00
3.71380E-01	5.75995E+11	1.32448E+15	1.21441E-03	-2.91563E+00
3.75289E-01	5.71501E+11	1.33291E+15	1.21295E-03	-2.91616E+00
3.79199E-01	5.78845E+11	1.34136E+15	1.21151E-03	-2.91667E+00
3.83108E-01	5.78845E+11	1.34966E+15	1.21018E-03	-2.91715E+00
3.87017E-01	5.83505E+11	1.35790E+15	1.20894E-03	-2.91760E+00
3.90926E-01	5.84493E+11	1.36614E+15	1.20772E-03	-2.91803E+00
3.94836E-01	5.81642E+11	1.37474E+15	1.20619E-03	-2.91858E+00
3.98745E-01	5.83505E+11	1.38295E+15	1.20502E-03	-2.91901E+00
4.02654E-01	5.83505E+11	1.39136E+15	1.20370E-03	-2.91948E+00
4.06563E-01	5.75995E+11	1.39961E+15	1.20252E-03	-2.91991E+00
4.10473E-01	5.84493E+11	1.40770E+15	1.20150E-03	-2.92028E+00
4.14382E-01	5.83505E+11	1.41591E+15	1.20039E-03	-2.92068E+00
4.18291E-01	5.95841E+11	1.42410E+15	1.19916E-03	-2.92112E+00
4.22200E-01	5.95841E+11	1.43246E+15	1.19771E-03	-2.92165E+00
4.26110E-01	5.95841E+11	1.44032E+15	1.19670E-03	-2.92201E+00
4.30019E-01	5.99578E+11	1.44843E+15	1.19549E-03	-2.92245E+00
4.33928E-01	5.99678E+11	1.45635E+15	1.19445E-03	-2.92283E+00
4.37837E-01	5.95841E+11	1.46412E+15	1.19355E-03	-2.92316E+00
4.41747E-01	5.97266E+11	1.47192E+15	1.19263E-03	-2.92349E+00
4.45656E-01	6.07243E+11	1.47972E+15	1.19171E-03	-2.92383E+00
4.49565E-01	5.99678E+11	1.48774E+15	1.19063E-03	-2.92422E+00
4.53474E-01	6.03461E+11	1.49557E+15	1.18972E-03	-2.92456E+00
4.57384E-01	6.04667E+11	1.50343E+15	1.18879E-03	-2.92489E+00
4.61293E-01	6.08340E+11	1.51104E+15	1.18806E-03	-2.92516E+00
4.65202E-01	6.11025E+11	1.51869E+15	1.18731E-03	-2.92544E+00
4.69112E-01	6.11025E+11	1.52543E+15	1.18650E-03	-2.92573E+00
4.73021E-01	6.11025E+11	1.53413E+15	1.18572E-03	-2.92602E+00
4.76930E-01	6.12451E+11	1.54184E+15	1.18494E-03	-2.92630E+00
4.80839E-01	6.13383E+11	1.54940E+15	1.18429E-03	-2.92654E+00
4.84749E-01	6.15685E+11	1.55716E+15	1.18348E-03	-2.92684E+00
4.88658E-01	6.12013E+11	1.56495E+15	1.18267E-03	-2.92714E+00
4.92567E-01	6.15686E+11	1.57256E+15	1.18199E-03	-2.92739E+00
4.96476E-01	6.22428E+11	1.58013E+15	1.18135E-03	-2.92762E+00
5.00386E-01	6.19413E+11	1.58729E+15	1.18102E-03	-2.92774E+00
5.04295E-01	6.20893E+11	1.59470E+15	1.18051E-03	-2.92793E+00
5.08204E-01	6.24621E+11	1.60207E+15	1.18004E-03	-2.92810E+00
5.12113E-01	6.24621E+11	1.60929E+15	1.17968E-03	-2.92824E+00
5.16023E-01	6.26211E+11	1.61645E+15	1.17936E-03	-2.92835E+00
5.19932E-01	6.29994E+11	1.62388E+15	1.17895E-03	-2.92854E+00
5.23841E-01	6.26759E+11	1.63109E+15	1.17827E-03	-2.92876E+00
5.27750E-01	6.26759E+11	1.63817E+15	1.17779E-03	-2.92893E+00
5.31660E-01	6.29994E+11	1.64537E+15	1.17722E-03	-2.92914E+00
5.35569E-01	6.26759E+11	1.65237E+15	1.17680E-03	-2.92930E+00
5.39478E-01	6.32132E+11	1.65958E+15	1.17623E-03	-2.92951E+00
5.43388E-01	6.27955E+11	1.66660E+15	1.17591E-03	-2.92966E+00
5.47297E-01	6.31693E+11	1.67361E+15	1.17539E-03	-2.92982E+00
5.51206E-01	6.31693E+11	1.68004E+15	1.17510E-03	-2.92993E+00
5.55115E-01	6.39423E+11	1.68706E+15	1.17496E-03	-2.92998E+00
5.59025E-01	6.31693E+11	1.69410E+15	1.17454E-03	-2.93013E+00
5.62934E-01	6.32132E+11	1.70094E+15	1.17425E-03	-2.93024E+00
5.66843E-01	6.32132E+11	1.70779E+15	1.17396E-03	-2.93035E+00
5.70752E-01	6.33831E+11	1.71463E+15	1.17368E-03	-2.93045E+00
5.74662E-01	6.33831E+11	1.72107E+15	1.17372E-03	-2.93044E+00
5.78571E-01	6.37614E+11	1.72796E+15	1.17348E-03	-2.93052E+00
5.82480E-01	6.37833E+11	1.73464E+15	1.17339E-03	-2.93056E+00
5.86389E-01	6.35953E+11	1.74107E+15	1.17346E-03	-2.93053E+00
5.90299E-01	6.39587E+11	1.74776E+15	1.17335E-03	-2.93057E+00
5.94208E-01	5.39587E+11	1.75423E+15	1.17340E-03	-2.93055E+00
5.98117E-01	6.37833E+11	1.76044E+15	1.17361E-03	-2.93049E+00
6.02026E-01	6.41505E+11	1.76669E+15	1.17381E-03	-2.93040E+00
6.05936E-01	6.43315E+11	1.77313E+15	1.17397E-03	-2.93038E+00
6.09845E-01	6.43260E+11	1.77918E+15	1.17419E-03	-2.93026E+00
6.13754E-01	6.41395E+11	1.78535E+15	1.17443E-03	-2.93017E+00
6.17664E-01	6.45179E+11	1.79160E+15	1.17462E-03	-2.93010E+00
6.21573E-01	6.45179E+11	1.79767E+15	1.17492E-03	-2.92999E+00

TIME(MICROSEC)	CDEN (A4P/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
6.25482E-01	6.41395E+11	1.80395E+15	1.17500E-03	-2.92996E+00
6.29391E-01	6.41395E+11	1.81016E+15	1.17502E-03	-2.92995E+00
6.33301E-01	6.41395E+11	1.81617E+15	1.17516E-03	-2.92990E+00
6.37210E-01	6.43260E+11	1.82211E+15	1.17535E-03	-2.92993E+00
6.41119E-01	6.37833E+11	1.82789E+15	1.17564E-03	-2.92973E+00
6.45028E-01	6.45179E+11	1.83398E+15	1.17579E-03	-2.92967E+00
6.48938E-01	6.45179E+11	1.83990E+15	1.17592E-03	-2.92962E+00
6.52847E-01	6.48961E+11	1.84587E+15	1.17609E-03	-2.92956E+00
6.56756E-01	6.45179E+11	1.85167E+15	1.17636E-03	-2.92946E+00
6.60665E-01	6.41396E+11	1.85771E+15	1.17647E-03	-2.92942E+00
6.64575E-01	6.43315E+11	1.86353E+15	1.17673E-03	-2.92932E+00
6.68484E-01	6.35859E+11	1.86954E+15	1.17686E-03	-2.92928E+00
6.72393E-01	6.43315E+11	1.87515E+15	1.17725E-03	-2.92913E+00
6.76302E-01	6.41505E+11	1.88076E+15	1.17761E-03	-2.92900E+00
6.80212E-01	6.45179E+11	1.88634E+15	1.17772E-03	-2.92896E+00
6.84121E-01	6.39587E+11	1.89196E+15	1.17780E-03	-2.92893E+00
6.88030E-01	6.45179E+11	1.89754E+15	1.17791E-03	-2.92889E+00
6.91940E-01	6.47043E+11	1.90314E+15	1.17801E-03	-2.92885E+00
6.95849E-01	6.47043E+11	1.90851E+15	1.17825E-03	-2.92876E+00
6.99758E-01	6.48961E+11	1.91385E+15	1.17850E-03	-2.92867E+00
7.03667E-01	6.48961E+11	1.91945E+15	1.17859E-03	-2.92864E+00
7.07577E-01	6.48852E+11	1.92484E+15	1.17881E-03	-2.92856E+00
7.11486E-01	6.45179E+11	1.93024E+15	1.17902E-03	-2.92848E+00
7.15395E-01	6.50770E+11	1.93582E+15	1.17913E-03	-2.92844E+00
7.19304E-01	6.45179E+11	1.94122E+15	1.17934E-03	-2.92836E+00
7.23214E-01	6.47043E+11	1.94637E+15	1.17970E-03	-2.92823E+00
7.27123E-01	6.47098E+11	1.95143E+15	1.18012E-03	-2.92807E+00
7.31032E-01	6.43260E+11	1.95559E+15	1.18052E-03	-2.92793E+00
7.34941E-01	6.48961E+11	1.96148E+15	1.18109E-03	-2.92772E+00
7.38851E-01	6.48961E+11	1.96654E+15	1.18156E-03	-2.92754E+00
7.42760E-01	6.50990E+11	1.97148E+15	1.18211E-03	-2.92734E+00
7.46669E-01	6.45179E+11	1.97637E+15	1.18267E-03	-2.92714E+00
7.50578E-01	6.50770E+11	1.98150E+15	1.18309E-03	-2.92699E+00
7.54488E-01	6.47043E+11	1.98619E+15	1.18378E-03	-2.92673E+00
7.58397E-01	6.45179E+11	1.99087E+15	1.18446E-03	-2.92648E+00
7.62306E-01	6.48961E+11	1.99578E+15	1.18500E-03	-2.92629E+00
7.66216E-01	6.43315E+11	2.00042E+15	1.18570E-03	-2.92603E+00
7.70125E-01	6.45179E+11	2.00529E+15	1.18627E-03	-2.92582E+00
7.74034E-01	6.48961E+11	2.01006E+15	1.18689E-03	-2.92559E+00
7.77943E-01	6.43370E+11	2.01451E+15	1.18769E-03	-2.92530E+00
7.81853E-01	6.45179E+11	2.01918E+15	1.18839E-03	-2.92504E+00
7.85762E-01	6.45179E+11	2.02387E+15	1.18912E-03	-2.92477E+00
7.89671E-01	6.45179E+11	2.02830E+15	1.18999E-03	-2.92446E+00
7.93580E-01	6.45179E+11	2.03295E+15	1.19073E-03	-2.92419E+00
7.97490E-01	6.39587E+11	2.03753E+15	1.19151E-03	-2.92390E+00
8.01399E-01	6.39587E+11	2.04196E+15	1.19237E-03	-2.92359E+00
8.05308E-01	6.45179E+11	2.04635E+15	1.19325E-03	-2.92327E+00
8.09217E-01	6.43315E+11	2.05053E+15	1.19425E-03	-2.92290E+00
8.13127E-01	6.43315E+11	2.05468E+15	1.19526E-03	-2.92254E+00
8.17036E-01	6.45179E+11	2.05885E+15	1.19627E-03	-2.92217E+00
8.20945E-01	6.41396E+11	2.06277E+15	1.19740E-03	-2.92176E+00
8.24854E-01	6.39587E+11	2.06691E+15	1.19841E-03	-2.92139E+00
8.28764E-01	6.43315E+11	2.07080E+15	1.19956E-03	-2.92098E+00
8.32673E-01	6.39587E+11	2.07492E+15	1.20056E-03	-2.92052E+00
8.36582E-01	5.35559E+11	2.07879E+15	1.20164E-03	-2.92023E+00
8.40492E-01	6.35559E+11	2.08253E+15	1.20279E-03	-2.91981E+00
8.44401E-01	6.31593E+11	2.08625E+15	1.20396E-03	-2.91939E+00
8.48310E-01	6.27855E+11	2.08997E+15	1.20517E-03	-2.91895E+00
8.52219E-01	5.33831E+11	2.09328E+15	1.20651E-03	-2.91847E+00
8.56129E-01	6.29994E+11	2.09566E+15	1.20785E-03	-2.91799E+00
8.60038E-01	6.29994E+11	2.10025E+15	1.20907E-03	-2.91755E+00
8.63947E-01	6.26211E+11	2.10382E+15	1.21030E-03	-2.91711E+00
8.67856E-01	6.26211E+11	2.10716E+15	1.21166E-03	-2.91652E+00
8.71766E-01	6.22428E+11	2.11031E+15	1.21312E-03	-2.91610E+00
8.75675E-01	6.18645E+11	2.11366E+15	1.21446E-03	-2.91562E+00
8.79584E-01	5.14808E+11	2.11697E+15	1.21582E-03	-2.91513E+00
8.83493E-01	6.16299E+11	2.11998E+15	1.21735E-03	-2.91458E+00
8.87403E-01	6.16299E+11	2.12299E+15	1.21888E-03	-2.91404E+00
8.91312E-01	6.11026E+11	2.12578E+15	1.22040E-03	-2.91350E+00
8.95221E-01	6.11026E+11	2.12877E+15	1.22187E-03	-2.91297E+00
8.99130E-01	6.06092E+11	2.13145E+15	1.22350E-03	-2.91240E+00
9.03040E-01	6.04775E+11	2.13431E+15	1.22503E-03	-2.91185E+00
9.06949E-01	6.07243E+11	2.13717E+15	1.22655E-03	-2.91131E+00
9.10858E-01	6.04775E+11	2.13961E+15	1.22832E-03	-2.91069E+00
9.14768E-01	5.99679E+11	2.14246E+15	1.22984E-03	-2.91015E+00
9.18677E-01	5.03461E+11	2.14509E+15	1.23149E-03	-2.90957E+00
9.22586E-01	5.99679E+11	2.14751E+15	1.23325E-03	-2.90895E+00
9.26495E-01	5.97265E+11	2.15011E+15	1.23490E-03	-2.90837E+00
9.30405E-01	5.93593E+11	2.15271E+15	1.23655E-03	-2.90779E+00
9.34314E-01	5.95841E+11	2.15516E+15	1.23828E-03	-2.90718E+00

TABLE 4 (continued)

SHOT 3- 2

343 POINTS

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TIME(MICROSEC)	CDEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
9.39223E-01	5.92059E+11	2.15762E+15	1.23999E-03	-2.90652E+00
9.42132E-01	5.90962E+11	2.15998E+15	1.24146E-03	-2.90607E+00
9.46042E-01	5.88275E+11	2.16213E+15	1.24315E-03	-2.90548E+00
9.49951E-01	5.88273E+11	2.16430E+15	1.24482E-03	-2.90489E+00
9.53860E-01	5.84493E+11	2.16647E+15	1.24649E-03	-2.90431E+00
9.57769E-01	5.84493E+11	2.16882E+15	1.24806E-03	-2.90376E+00
9.61679E-01	5.77805E+11	2.17098E+15	1.24973E-03	-2.90318E+00
9.65588E-01	5.77805E+11	2.17316E+15	1.25139E-03	-2.90251E+00
9.69497E-01	5.73967E+11	2.17531E+15	1.25305E-03	-2.90203E+00
9.73406E-01	5.73967E+11	2.17746E+15	1.25472E-03	-2.90145E+00
9.77316E-01	5.70130E+11	2.17961E+15	1.25638E-03	-2.90088E+00
9.81225E-01	5.66239E+11	2.18163E+15	1.25812E-03	-2.90028E+00
9.85134E-01	5.70130E+11	2.18354E+15	1.25991E-03	-2.89966E+00
9.89044E-01	5.70130E+11	2.18543E+15	1.26166E-03	-2.89906E+00
9.92953E-01	5.66239E+11	2.18753E+15	1.26317E-03	-2.89854E+00
9.96862E-01	5.66239E+11	2.18924E+15	1.26490E-03	-2.89794E+00
1.00077E+00	5.73967E+11	2.19096E+15	1.26662E-03	-2.89735E+00
1.00468E+00	5.64912E+11	2.19265E+15	1.26836E-03	-2.89676E+00
1.00859E+00	5.65525E+11	2.19413E+15	1.27021E-03	-2.89612E+00
1.01250E+00	5.66239E+11	2.19598E+15	1.27185E-03	-2.89556E+00
1.01641E+00	5.65525E+11	2.19766E+15	1.27358E-03	-2.89497E+00
1.02032E+00	5.54122E+11	2.19952E+15	1.27520E-03	-2.89442E+00
1.02423E+00	5.46996E+11	2.20117E+15	1.27695E-03	-2.89383E+00
1.02814E+00	5.50833E+11	2.20290E+15	1.27870E-03	-2.89323E+00
1.03205E+00	5.50833E+11	2.20443E+15	1.28045E-03	-2.89264E+00
1.03595E+00	5.43159E+11	2.20597E+15	1.28231E-03	-2.89201E+00
1.03986E+00	5.50833E+11	2.20749E+15	1.28406E-03	-2.89141E+00
1.04377E+00	5.43159E+11	2.20892E+15	1.28595E-03	-2.89078E+00
1.04768E+00	5.35429E+11	2.21036E+15	1.28784E-03	-2.89014E+00
1.05159E+00	5.35429E+11	2.21181E+15	1.28972E-03	-2.88950E+00
1.05550E+00	5.39321E+11	2.21324E+15	1.29161E-03	-2.88887E+00
1.05941E+00	5.38937E+11	2.21463E+15	1.29353E-03	-2.88822E+00
1.06332E+00	5.31372E+11	2.21605E+15	1.29541E-03	-2.88759E+00
1.06723E+00	5.23807E+11	2.21763E+15	1.29721E-03	-2.88699E+00
1.07114E+00	5.23907E+11	2.21886E+15	1.29920E-03	-2.88632E+00
1.07505E+00	5.19970E+11	2.22026E+15	1.30110E-03	-2.88569E+00
1.07896E+00	5.19970E+11	2.22131E+15	1.30320E-03	-2.88499E+00
1.08287E+00	5.19970E+11	2.22265E+15	1.30512E-03	-2.88435E+00
1.08678E+00	5.19970E+11	2.22395E+15	1.30713E-03	-2.88368E+00
1.09068E+00	5.23907E+11	2.22488E+15	1.30923E-03	-2.88298E+00
1.09459E+00	5.16197E+11	2.22624E+15	1.31115E-03	-2.88235E+00
1.09850E+00	5.16197E+11	2.22742E+15	1.31317E-03	-2.88168E+00
1.10241E+00	5.16197E+11	2.22878E+15	1.31510E-03	-2.88104E+00
1.10632E+00	5.09512E+11	2.22996E+15	1.31712E-03	-2.88037E+00
1.11023E+00	5.08512E+11	2.23113E+15	1.31914E-03	-2.87971E+00
1.11414E+00	5.04620E+11	2.23230E+15	1.32117E-03	-2.87904E+00
1.11805E+00	5.04620E+11	2.23345E+15	1.32320E-03	-2.87837E+00
1.12196E+00	5.00782E+11	2.23459E+15	1.32524E-03	-2.87771E+00
1.12587E+00	4.93109E+11	2.23557E+15	1.32736E-03	-2.87701E+00
1.12978E+00	4.96945E+11	2.23652E+15	1.32951E-03	-2.87631E+00
1.13369E+00	4.93108E+11	2.23761E+15	1.33157E-03	-2.87564E+00
1.13760E+00	4.89215E+11	2.23874E+15	1.33361E-03	-2.87497E+00
1.14150E+00	4.89215E+11	2.23954E+15	1.33584E-03	-2.87425E+00
1.14541E+00	4.89215E+11	2.24051E+15	1.33792E-03	-2.87357E+00
1.14932E+00	4.85378E+11	2.24147E+15	1.33992E-03	-2.87292E+00
1.15323E+00	4.81541E+11	2.24241E+15	1.34193E-03	-2.87227E+00
1.15714E+00	4.77703E+11	2.24352E+15	1.34383E-03	-2.87166E+00
1.16105E+00	4.69974E+11	2.24463E+15	1.34574E-03	-2.87104E+00
1.16496E+00	4.73811E+11	2.24572E+15	1.34765E-03	-2.87042E+00
1.16887E+00	4.69974E+11	2.24681E+15	1.34956E-03	-2.86981E+00
1.17278E+00	4.62293E+11	2.24789E+15	1.35148E-03	-2.86919E+00
1.17669E+00	4.66135E+11	2.24913E+15	1.35330E-03	-2.86861E+00
1.18060E+00	4.66135E+11	2.25037E+15	1.35512E-03	-2.86802E+00
1.18451E+00	4.66135E+11	2.25144E+15	1.35703E-03	-2.86741E+00
1.18842E+00	4.62293E+11	2.25264E+15	1.35887E-03	-2.86682E+00
1.19233E+00	4.54569E+11	2.25383E+15	1.36071E-03	-2.86623E+00
1.19623E+00	4.58405E+11	2.25499E+15	1.36261E-03	-2.86563E+00
1.20014E+00	4.58405E+11	2.25608E+15	1.36442E-03	-2.86511E+00
1.20405E+00	4.50732E+11	2.25712E+15	1.36594E-03	-2.86457E+00
1.20796E+00	4.50732E+11	2.25817E+15	1.36764E-03	-2.86403E+00
1.21187E+00	4.46994E+11	2.25935E+15	1.36926E-03	-2.86351E+00
1.21578E+00	4.49745E+11	2.26049E+15	1.37091E-03	-2.86299E+00
1.21969E+00	4.45793E+11	2.26161E+15	1.37256E-03	-2.86247E+00
1.22360E+00	4.41905E+11	2.26279E+15	1.37417E-03	-2.86196E+00
1.22751E+00	4.45793E+11	2.26379E+15	1.37590E-03	-2.86141E+00
1.23142E+00	4.45793E+11	2.26480E+15	1.37761E-03	-2.86087E+00
1.23533E+00	4.30174E+11	2.26579E+15	1.37934E-03	-2.86033E+00
1.23924E+00	4.39013E+11	2.26690E+15	1.38099E-03	-2.85981E+00
1.24315E+00	4.30174E+11	2.26788E+15	1.38272E-03	-2.85927E+00
1.24705E+00	4.30174E+11	2.26886E+15	1.38445E-03	-2.85872E+00

TIME(MICROSEC)	CDEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
1.25096E+00	4.34065E+11	2.26983E+15	1.38603E-03	-2.95823E+00
1.25487E+00	4.26282E+11	2.27080E+15	1.38755E-03	-2.95775E+00
1.25878E+00	4.22335E+11	2.27164E+15	1.38916E-03	-2.95725E+00
1.26269E+00	4.18443E+11	2.27259E+15	1.39070E-03	-2.95677E+00
1.26660E+00	4.26282E+11	2.27356E+15	1.39222E-03	-2.95629E+00
1.27051E+00	4.14550E+11	2.27450E+15	1.39376E-03	-2.95581E+00
1.27442E+00	4.18443E+11	2.27541E+15	1.39532E-03	-2.95533E+00
1.27833E+00	4.06711E+11	2.27635E+15	1.39686E-03	-2.95485E+00
1.28224E+00	4.02819E+11	2.27727E+15	1.39841E-03	-2.95437E+00
1.28615E+00	4.02819E+11	2.27819E+15	1.39996E-03	-2.95388E+00
1.29006E+00	4.06711E+11	2.27911E+15	1.40151E-03	-2.95340E+00
1.29397E+00	3.98872E+11	2.28002E+15	1.40306E-03	-2.95292E+00
1.29788E+00	4.02819E+11	2.28079E+15	1.40469E-03	-2.95242E+00
1.30178E+00	4.02819E+11	2.28158E+15	1.40631E-03	-2.95192E+00
1.30569E+00	3.94973E+11	2.28234E+15	1.40795E-03	-2.95141E+00
1.30960E+00	3.98872E+11	2.28310E+15	1.40958E-03	-2.95091E+00
1.31351E+00	3.91087E+11	2.28389E+15	1.41120E-03	-2.95041E+00
1.31742E+00	3.87140E+11	2.28464E+15	1.41283E-03	-2.94991E+00
1.32133E+00	3.87140E+11	2.28553E+15	1.41438E-03	-2.94943E+00
1.32524E+00	3.93248E+11	2.28627E+15	1.41602E-03	-2.94893E+00
1.32915E+00	3.79355E+11	2.28700E+15	1.41767E-03	-2.94842E+00
1.33306E+00	3.79356E+11	2.28762E+15	1.41939E-03	-2.94790E+00
1.33697E+00	3.75463E+11	2.28846E+15	1.42096E-03	-2.94742E+00

EOF

TABLE 4 (continued)

SHOT 3-5

367 POINTS

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TIME(MICROSEC)	CDEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
0.	4.34066E+11	9.22579E+13	J.	-2.64607E+00
3.93926E-03	4.50732E+11	9.87320E+13	2.25906E-03	-2.64607E+00
7.81853E-03	4.66135E+11	1.05630E+14	4.22307E-03	-2.37437E+00
1.17279E-02	4.85378E+11	1.12717E+14	5.93631E-03	-2.22648E+00
1.56371E-02	5.04455E+11	1.19792E+14	7.44763E-03	-2.12798E+00
1.95463E-02	5.19970E+11	1.27339E+14	8.75776E-03	-2.05761E+00
2.34556E-02	5.34881E+11	1.34827E+14	9.92564E-03	-2.00324E+00
2.73649E-02	5.54122E+11	1.42705E+14	1.09407E-02	-1.96035E+00
3.12741E-02	5.69303E+11	1.50760E+14	1.19356E-02	-1.92691E+00
3.51834E-02	5.84493E+11	1.59375E+14	1.25953E-02	-1.89979E+00
3.90926E-02	6.07243E+11	1.67878E+14	1.32859E-02	-1.87661E+00
4.30019E-02	6.18646E+11	1.76571E+14	1.38950E-02	-1.85714E+00
4.69112E-02	6.33831E+11	1.85464E+14	1.44314E-02	-1.84059E+00
5.08204E-02	6.47043E+11	1.94836E+14	1.48819E-02	-1.82734E+00
5.47297E-02	6.73247E+11	2.04338E+14	1.46165E-02	-1.83516E+00
5.86389E-02	6.83114E+11	2.14052E+14	1.40860E-02	-1.85121E+00
6.25482E-02	6.98300E+11	2.23958E+14	1.35899E-02	-1.86678E+00
6.64575E-02	7.14362E+11	2.34103E+14	1.31224E-02	-1.88199E+00
7.03667E-02	7.32453E+11	2.44403E+14	1.26857E-02	-1.89669E+00
7.42760E-02	7.44294E+11	2.55263E+14	1.22575E-02	-1.91160E+00
7.81853E-02	7.59205E+11	2.66300E+14	1.18562E-02	-1.92605E+00
8.20945E-02	7.74171E+11	2.77867E+14	1.14650E-02	-1.94063E+00
8.60038E-02	7.92864E+11	2.89962E+14	1.10849E-02	-1.95527E+00
8.99130E-02	8.04980E+11	3.02513E+14	1.07189E-02	-1.96985E+00
9.38223E-02	8.28881E+11	3.16109E+14	1.03479E-02	-1.98515E+00
9.77316E-02	8.42477E+11	3.30793E+14	9.97448E-03	-2.00111E+00
1.01641E-01	8.57662E+11	3.45759E+14	9.62499E-03	-2.01660E+00
1.05550E-01	8.78165E+11	3.61748E+14	9.26536E-03	-2.03314E+00
1.09459E-01	8.99677E+11	3.79751E+14	8.89363E-03	-2.05092E+00
1.13369E-01	8.99390E+11	3.96398E+14	8.53995E-03	-2.06854E+00
1.17278E-01	9.10783E+11	4.15054E+14	8.19643E-03	-2.08638E+00
1.21187E-01	9.28215E+11	4.35255E+14	7.85448E-03	-2.10488E+00
1.25096E-01	9.43620E+11	4.56445E+14	7.52653E-03	-2.12341E+00
1.29006E-01	9.55132E+11	4.79413E+14	7.20086E-03	-2.14262E+00
1.32915E-01	9.62862E+11	5.04379E+14	6.87763E-03	-2.16256E+00
1.36824E-01	9.74423E+11	5.32689E+14	6.54354E-03	-2.18419E+00
1.40733E-01	9.85941E+11	5.63688E+14	6.21339E-03	-2.20667E+00
1.44643E-01	1.00135E+12	5.99759E+14	5.86763E-03	-2.23154E+00
1.48552E-01	1.00562E+12	6.41377E+14	5.51299E-03	-2.25851E+00
1.52461E-01	1.00601E+12	6.88118E+14	5.16285E-03	-2.28711E+00
1.56371E-01	1.03215E+12	7.40163E+14	4.82291E-03	-2.31669E+00
1.60280E-01	1.02081E+12	7.97740E+14	4.50045E-03	-2.34674E+00
1.64189E-01	1.03215E+12	8.59274E+14	4.20196E-03	-2.37655E+00
1.68098E-01	1.03977E+12	9.25347E+14	3.92402E-03	-2.40627E+00
1.72008E-01	1.04355E+12	9.97330E+14	3.66130E-03	-2.43636E+00
1.75917E-01	1.04355E+12	1.07524E+15	3.41503E-03	-2.46651E+00
1.79826E-01	1.04755E+12	1.13512E+15	3.25288E-03	-2.49773E+00
1.83735E-01	1.04355E+12	1.17746E+15	3.15328E-03	-2.50124E+00
1.87645E-01	1.03594E+12	1.21852E+15	3.06381E-03	-2.51374E+00
1.91554E-01	1.02470E+12	1.24911E+15	3.00513E-03	-2.52214E+00
1.95463E-01	1.02081E+12	1.28048E+15	2.94748E-03	-2.53055E+00
1.99372E-01	1.01319E+12	1.31218E+15	2.89187E-03	-2.53882E+00
2.03282E-01	1.00194E+12	1.34312E+15	2.84046E-03	-2.54665E+00
2.07191E-01	9.97508E+11	1.36952E+15	2.80064E-03	-2.55274E+00
2.11100E-01	9.86654E+11	1.39658E+15	2.76311E-03	-2.55950E+00
2.15009E-01	9.76074E+11	1.42319E+15	2.72837E-03	-2.56410E+00
2.18919E-01	9.30436E+11	1.44807E+15	2.69815E-03	-2.56893E+00
2.22828E-01	9.30435E+11	1.47305E+15	2.66977E-03	-2.57369E+00
2.26737E-01	9.87312E+11	1.49793E+15	2.64053E-03	-2.57931E+00
2.30647E-01	9.98002E+11	1.52203E+15	2.61458E-03	-2.58260E+00
2.34556E-01	1.00184E+12	1.54525E+15	2.59088E-03	-2.58555E+00
2.38465E-01	1.00940E+12	1.56865E+15	2.56760E-03	-2.59047E+00
2.42374E-01	1.01697E+12	1.59179E+15	2.54543E-03	-2.59424E+00
2.46284E-01	1.02081E+12	1.61422E+15	2.52500E-03	-2.59774E+00
2.50193E-01	1.01713E+12	1.63681E+15	2.50487E-03	-2.60121E+00
2.54102E-01	1.02470E+12	1.65905E+15	2.48593E-03	-2.60453E+00
2.58011E-01	1.03215E+12	1.68146E+15	2.46704E-03	-2.60782E+00
2.61921E-01	1.03977E+12	1.70403E+15	2.44905E-03	-2.61100E+00
2.65830E-01	1.04355E+12	1.72604E+15	2.43289E-03	-2.61388E+00
2.69739E-01	1.04339E+12	1.74791E+15	2.41732E-03	-2.61667E+00
2.73648E-01	1.05112E+12	1.76994E+15	2.40192E-03	-2.61944E+00
2.77558E-01	1.05085E+12	1.79196E+15	2.38690E-03	-2.62217E+00
2.81467E-01	1.06252E+12	1.81385E+15	2.37243E-03	-2.62491E+00
2.85376E-01	1.07003E+12	1.83536E+15	2.35878E-03	-2.62731E+00
2.89285E-01	1.07397E+12	1.85710E+15	2.34517E-03	-2.62983E+00
2.93195E-01	1.08529E+12	1.87860E+15	2.33216E-03	-2.63224E+00
2.97104E-01	1.09290E+12	1.90025E+15	2.31926E-03	-2.63465E+00
3.01013E-01	1.09290E+12	1.92127E+15	2.30742E-03	-2.63687E+00
3.04923E-01	1.10424E+12	1.94258E+15	2.29548E-03	-2.63913E+00
3.08832E-01	1.10424E+12	1.96375E+15	2.28397E-03	-2.64131E+00

TIME(MICROSEC)	COEN (A4P/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
3.12741E-01	1.11565E+12	1.98489E+15	2.27265E-03	-2.64347E+00
3.16650E-01	1.12321E+12	2.00572E+15	2.26154E-03	-2.64560E+00
3.20560E-01	1.13083E+12	2.02585E+15	2.25033E-03	-2.64775E+00
3.24469E-01	1.12562E+12	2.04005E+15	2.23926E-03	-2.64990E+00
3.28378E-01	1.13313E+12	2.06875E+15	2.22896E-03	-2.65190E+00
3.32287E-01	1.14595E+12	2.08990E+15	2.21839E-03	-2.65396E+00
3.36197E-01	1.14432E+12	2.11089E+15	2.20820E-03	-2.65596E+00
3.40106E-01	1.14910E+12	2.13204E+15	2.19805E-03	-2.65796E+00
3.44015E-01	1.16495E+12	2.15298E+15	2.18831E-03	-2.65989E+00
3.47924E-01	1.16877E+12	2.17359E+15	2.17908E-03	-2.66173E+00
3.51834E-01	1.16301E+12	2.19409E+15	2.17014E-03	-2.66351E+00
3.55743E-01	1.17633E+12	2.21523E+15	2.16074E-03	-2.66540E+00
3.59652E-01	1.19004E+12	2.23576E+15	2.15211E-03	-2.66714E+00
3.63561E-01	1.18773E+12	2.25675E+15	2.14319E-03	-2.66894E+00
3.67471E-01	1.18549E+12	2.27752E+15	2.13281E-03	-2.67105E+00
3.71380E-01	1.19908E+12	2.29817E+15	2.12250E-03	-2.67315E+00
3.75289E-01	1.20292E+12	2.31830E+15	2.11285E-03	-2.67513E+00
3.79199E-01	1.19667E+12	2.33808E+15	2.10368E-03	-2.67702E+00
3.83109E-01	1.21049E+12	2.35821E+15	2.09436E-03	-2.67895E+00
3.87017E-01	1.22189E+12	2.37795E+15	2.08550E-03	-2.68079E+00
3.90926E-01	1.22567E+12	2.39816E+15	2.07644E-03	-2.68268E+00
3.94836E-01	1.22567E+12	2.41807E+15	2.06776E-03	-2.68450E+00
3.98745E-01	1.22945E+12	2.43784E+15	2.05933E-03	-2.68627E+00
4.02654E-01	1.22287E+12	2.45786E+15	2.05085E-03	-2.68807E+00
4.06563E-01	1.22660E+12	2.47744E+15	2.04285E-03	-2.68976E+00
4.10473E-01	1.24842E+12	2.49745E+15	2.03463E-03	-2.69151E+00
4.14382E-01	1.25220E+12	2.51732E+15	2.02665E-03	-2.69322E+00
4.18291E-01	1.24157E+12	2.53708E+15	2.01783E-03	-2.69512E+00
4.22200E-01	1.23488E+12	2.55658E+15	2.00859E-03	-2.69711E+00
4.26110E-01	1.25275E+12	2.57554E+15	1.99992E-03	-2.69899E+00
4.30019E-01	1.26739E+12	2.59444E+15	1.99142E-03	-2.70084E+00
4.33928E-01	1.26739E+12	2.61324E+15	1.98313E-03	-2.70265E+00
4.37837E-01	1.26739E+12	2.63193E+15	1.97503E-03	-2.70443E+00
4.41747E-01	1.28630E+12	2.65072E+15	1.96696E-03	-2.70620E+00
4.45656E-01	1.27879E+12	2.66974E+15	1.95885E-03	-2.70800E+00
4.49565E-01	1.29014E+12	2.68854E+15	1.95101E-03	-2.70974E+00
4.53474E-01	1.28257E+12	2.70701E+15	1.94352E-03	-2.71141E+00
4.57384E-01	1.27595E+12	2.72521E+15	1.93631E-03	-2.71303E+00
4.61293E-01	1.27172E+12	2.74385E+15	1.92890E-03	-2.71469E+00
4.65202E-01	1.27172E+12	2.76215E+15	1.92182E-03	-2.71629E+00
4.69112E-01	1.27172E+12	2.78062E+15	1.91438E-03	-2.71797E+00
4.73021E-01	1.29641E+12	2.79849E+15	1.90659E-03	-2.71974E+00
4.76930E-01	1.30154E+12	2.81614E+15	1.89905E-03	-2.72146E+00
4.80839E-01	1.30944E+12	2.83422E+15	1.89132E-03	-2.72323E+00
4.84749E-01	1.29014E+12	2.85191E+15	1.88394E-03	-2.72493E+00
4.88658E-01	1.29014E+12	2.87005E+15	1.87636E-03	-2.72668E+00
4.92567E-01	1.29765E+12	2.88779E+15	1.86913E-03	-2.72836E+00
4.96476E-01	1.30911E+12	2.90914E+15	1.86224E-03	-2.72996E+00
5.00386E-01	1.29765E+12	2.92214E+15	1.85565E-03	-2.73150E+00
5.04295E-01	1.31294E+12	2.93944E+15	1.84896E-03	-2.73307E+00
5.08204E-01	1.31294E+12	2.95679E+15	1.84231E-03	-2.73464E+00
5.12113E-01	1.31673E+12	2.97325E+15	1.83628E-03	-2.73606E+00
5.16023E-01	1.31673E+12	2.98996E+15	1.83018E-03	-2.73751E+00
5.19932E-01	1.32051E+12	3.00622E+15	1.82441E-03	-2.73888E+00
5.23841E-01	1.32051E+12	3.02233E+15	1.81811E-03	-2.74038E+00
5.27750E-01	1.29754E+12	3.03839E+15	1.81190E-03	-2.74187E+00
5.31660E-01	1.32429E+12	3.05465E+15	1.80563E-03	-2.74337E+00
5.35569E-01	1.32429E+12	3.07101E+15	1.79937E-03	-2.74488E+00
5.39478E-01	1.32429E+12	3.08640E+15	1.79375E-03	-2.74624E+00
5.43388E-01	1.30856E+12	3.10182E+15	1.78816E-03	-2.74759E+00
5.47297E-01	1.30855E+12	3.11680E+15	1.78287E-03	-2.74888E+00
5.51206E-01	1.33191E+12	3.13206E+15	1.77749E-03	-2.75019E+00
5.55115E-01	1.32807E+12	3.14749E+15	1.77205E-03	-2.75152E+00
5.59025E-01	1.33191E+12	3.16305E+15	1.76660E-03	-2.75286E+00
5.62934E-01	1.34408E+12	3.17866E+15	1.76117E-03	-2.75420E+00
5.66843E-01	1.31634E+12	3.19335E+15	1.75630E-03	-2.75540E+00
5.70752E-01	1.30855E+12	3.20863E+15	1.75115E-03	-2.75658E+00
5.74662E-01	1.31223E+12	3.22388E+15	1.74590E-03	-2.75798E+00
5.78571E-01	1.31223E+12	3.23890E+15	1.74074E-03	-2.75927E+00
5.82480E-01	1.33563E+12	3.25342E+15	1.73589E-03	-2.76048E+00
5.86389E-01	1.31223E+12	3.26782E+15	1.73114E-03	-2.76167E+00
5.90299E-01	1.32380E+12	3.28234E+15	1.72638E-03	-2.76286E+00
5.94208E-01	1.32753E+12	3.29657E+15	1.72181E-03	-2.76401E+00
5.98117E-01	1.32753E+12	3.31102E+15	1.71716E-03	-2.76519E+00
6.02026E-01	1.33949E+12	3.32497E+15	1.71282E-03	-2.76629E+00
6.05936E-01	1.33563E+12	3.33933E+15	1.70830E-03	-2.76744E+00
6.09845E-01	1.31595E+12	3.35374E+15	1.70379E-03	-2.76858E+00
6.13754E-01	1.31223E+12	3.36769E+15	1.69956E-03	-2.76966E+00
6.17664E-01	1.33943E+12	3.38138E+15	1.69548E-03	-2.77071E+00
6.21573E-01	1.31223E+12	3.39462E+15	1.69167E-03	-2.77168E+00

TABLE 4 (continued)

SHOT 3-5

367 POINTS

126

TIME (MICROSEC)	CDEN (AMP/M2)	EDEN (ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
6.25482E-01	1.32753E+12	3.40798E+15	1.68779E-03	-2.77268E+00
6.29391E-01	1.34408E+12	3.42176E+15	1.68363E-03	-2.77375E+00
6.33301E-01	1.34408E+12	3.43508E+15	1.67974E-03	-2.77476E+00
6.37210E-01	1.34408E+12	3.44775E+15	1.67620E-03	-2.77567E+00
6.41119E-01	1.34408E+12	3.46004E+15	1.67297E-03	-2.77654E+00
6.45028E-01	1.34408E+12	3.47328E+15	1.66911E-03	-2.77752E+00
6.48938E-01	1.32007E+12	3.48637E+15	1.66544E-03	-2.77847E+00
6.52847E-01	1.32007E+12	3.49901E+15	1.66202E-03	-2.77936E+00
6.56756E-01	1.33191E+12	3.51115E+15	1.65895E-03	-2.78019E+00
6.60665E-01	1.32807E+12	3.52296E+15	1.65587E-03	-2.78097E+00
6.64575E-01	1.32907E+12	3.53540E+15	1.65261E-03	-2.78193E+00
6.68484E-01	1.30956E+12	3.54769E+15	1.64944E-03	-2.78266E+00
6.72393E-01	1.31634E+12	3.56002E+15	1.64628E-03	-2.78350E+00
6.76302E-01	1.32007E+12	3.57228E+15	1.64316E-03	-2.78432E+00
6.80212E-01	1.31261E+12	3.58457E+15	1.63992E-03	-2.78519E+00
6.84121E-01	1.30489E+12	3.59592E+15	1.63713E-03	-2.78592E+00
6.88030E-01	1.30121E+12	3.60735E+15	1.63432E-03	-2.78666E+00
6.91940E-01	1.31261E+12	3.61923E+15	1.63133E-03	-2.78746E+00
6.95849E-01	1.33251E+12	3.63003E+15	1.62884E-03	-2.78812E+00
6.99758E-01	1.31673E+12	3.64132E+15	1.62615E-03	-2.78884E+00
7.03667E-01	1.32051E+12	3.65219E+15	1.62367E-03	-2.78950E+00
7.07577E-01	1.31294E+12	3.66314E+15	1.62115E-03	-2.79018E+00
7.11486E-01	1.31673E+12	3.67398E+15	1.61871E-03	-2.79083E+00
7.15395E-01	1.31294E+12	3.68468E+15	1.61634E-03	-2.79147E+00
7.19304E-01	1.30911E+12	3.69536E+15	1.61399E-03	-2.79210E+00
7.23214E-01	1.32095E+12	3.70604E+15	1.61166E-03	-2.79273E+00
7.27123E-01	1.28647E+12	3.71659E+15	1.60939E-03	-2.79334E+00
7.31032E-01	1.30532E+12	3.72685E+15	1.60720E-03	-2.79393E+00
7.34941E-01	1.30911E+12	3.73700E+15	1.60506E-03	-2.79451E+00
7.38851E-01	1.30532E+12	3.74723E+15	1.60290E-03	-2.79509E+00
7.42760E-01	1.30532E+12	3.75737E+15	1.60078E-03	-2.79567E+00
7.46669E-01	1.30154E+12	3.76748E+15	1.59869E-03	-2.79624E+00
7.50578E-01	1.29014E+12	3.77768E+15	1.59657E-03	-2.79681E+00
7.54488E-01	1.28641E+12	3.78770E+15	1.59454E-03	-2.79736E+00
7.58397E-01	1.28641E+12	3.79724E+15	1.59272E-03	-2.79786E+00
7.62306E-01	1.27172E+12	3.80677E+15	1.59092E-03	-2.79835E+00
7.66216E-01	1.29014E+12	3.81636E+15	1.58909E-03	-2.79885E+00
7.70125E-01	1.27523E+12	3.82541E+15	1.58751E-03	-2.79929E+00
7.74034E-01	1.28635E+12	3.83453E+15	1.58590E-03	-2.79972E+00
7.77943E-01	1.27523E+12	3.84376E+15	1.58425E-03	-2.80019E+00
7.81853E-01	1.27144E+12	3.85296E+15	1.58256E-03	-2.80064E+00
7.85762E-01	1.28257E+12	3.86165E+15	1.58103E-03	-2.80106E+00
7.89671E-01	1.27879E+12	3.87077E+15	1.57932E-03	-2.80153E+00
7.93580E-01	1.25330E+12	3.87951E+15	1.57778E-03	-2.80195E+00
7.97490E-01	1.25330E+12	3.88800E+15	1.57635E-03	-2.80235E+00
8.01399E-01	1.26026E+12	3.89656E+15	1.57489E-03	-2.80275E+00
8.05308E-01	1.24595E+12	3.90467E+15	1.57362E-03	-2.80310E+00
8.09217E-01	1.25545E+12	3.91323E+15	1.57218E-03	-2.80350E+00
8.13127E-01	1.27090E+12	3.92158E+15	1.57093E-03	-2.80387E+00
8.17036E-01	1.26705E+12	3.92961E+15	1.56961E-03	-2.80421E+00
8.20945E-01	1.25599E+12	3.93766E+15	1.56838E-03	-2.80455E+00
8.24854E-01	1.25599E+12	3.94552E+15	1.56724E-03	-2.80486E+00
8.28764E-01	1.26322E+12	3.95294E+15	1.56628E-03	-2.80513E+00
8.32673E-01	1.22749E+12	3.96084E+15	1.56514E-03	-2.80545E+00
8.36582E-01	1.23784E+12	3.96924E+15	1.56386E-03	-2.80580E+00
8.40492E-01	1.23405E+12	3.97635E+15	1.56309E-03	-2.80602E+00
8.44401E-01	1.23702E+12	3.98386E+15	1.56217E-03	-2.80627E+00
8.48310E-01	1.23324E+12	3.99170E+15	1.56112E-03	-2.80656E+00
8.52219E-01	1.22297E+12	3.99910E+15	1.56025E-03	-2.80681E+00
8.56129E-01	1.22567E+12	4.00698E+15	1.55919E-03	-2.80710E+00
8.60038E-01	1.22567E+12	4.01415E+15	1.55842E-03	-2.80732E+00
8.63947E-01	1.19207E+12	4.02068E+15	1.55789E-03	-2.80746E+00
8.67856E-01	1.20171E+12	4.02807E+15	1.55703E-03	-2.80770E+00
8.71766E-01	1.21427E+12	4.03542E+15	1.55619E-03	-2.80794E+00
8.75675E-01	1.21049E+12	4.04189E+15	1.55570E-03	-2.80807E+00
8.79584E-01	1.20670E+12	4.04875E+15	1.55505E-03	-2.80826E+00
8.83493E-01	1.19294E+12	4.05536E+15	1.55451E-03	-2.80841E+00
8.87403E-01	1.18921E+12	4.06171E+15	1.55425E-03	-2.80849E+00
8.91312E-01	1.19909E+12	4.06904E+15	1.55404E-03	-2.80854E+00
8.95221E-01	1.18549E+12	4.07403E+15	1.55396E-03	-2.80856E+00
8.99130E-01	1.18170E+12	4.07999E+15	1.55389E-03	-2.80858E+00
9.03040E-01	1.18773E+12	4.08589E+15	1.55383E-03	-2.80860E+00
9.06949E-01	1.18011E+12	4.09137E+15	1.55395E-03	-2.80856E+00
9.10858E-01	1.17052E+12	4.09721E+15	1.55392E-03	-2.80857E+00
9.14768E-01	1.16679E+12	4.10265E+15	1.55405E-03	-2.80854E+00
9.18677E-01	1.15929E+12	4.10843E+15	1.55404E-03	-2.80854E+00
9.22586E-01	1.14810E+12	4.11390E+15	1.55419E-03	-2.80850E+00
9.26495E-01	1.14432E+12	4.11899E+15	1.55441E-03	-2.80843E+00
9.30405E-01	1.15539E+12	4.12419E+15	1.55463E-03	-2.80837E+00
9.34314E-01	1.14765E+12	4.12914E+15	1.55493E-03	-2.80829E+00

TABLE 4 (continued)

SHOT 3-5

367 POINTS

127

TIME (MICROSEC)	COEN (A4P/M2)	EDEN (ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
9.39223E-01	1.14219E+12	4.13366E+15	1.55539E-03	-2.90916E+00
9.42132E-01	1.13840E+12	4.13815E+15	1.55593E-03	-2.90904E+00
9.46042E-01	1.13093E+12	4.14305E+15	1.55611E-03	-2.90796E+00
9.49351E-01	1.12699E+12	4.14790E+15	1.55642E-03	-2.90787E+00
9.53860E-01	1.12321E+12	4.15234E+15	1.55698E-03	-2.90774E+00
9.57769E-01	1.11565E+12	4.15641E+15	1.55747E-03	-2.90758E+00
9.61679E-01	1.10903E+12	4.16090E+15	1.55795E-03	-2.90745E+00
9.65588E-01	1.10424E+12	4.16518E+15	1.55843E-03	-2.90731E+00
9.69497E-01	1.10534E+12	4.16892E+15	1.55914E-03	-2.90711E+00
9.73406E-01	1.10150E+12	4.17249E+15	1.55992E-03	-2.90690E+00
9.77316E-01	1.08905E+12	4.17604E+15	1.56071E-03	-2.90659E+00
9.81225E-01	1.08149E+12	4.17986E+15	1.56139E-03	-2.90649E+00
9.85134E-01	1.09081E+12	4.18307E+15	1.56230E-03	-2.90624E+00
9.89044E-01	1.07937E+12	4.18659E+15	1.56303E-03	-2.90603E+00
9.92953E-01	1.07009E+12	4.19012E+15	1.56361E-03	-2.90597E+00
9.96862E-01	1.07069E+12	4.19327E+15	1.56432E-03	-2.90567E+00
1.00077E+00	1.05974E+12	4.19676E+15	1.56491E-03	-2.90551E+00
1.00468E+00	1.05495E+12	4.19990E+15	1.56562E-03	-2.90531E+00
1.00859E+00	1.05112E+12	4.20268E+15	1.56647E-03	-2.90509E+00
1.01250E+00	1.03215E+12	4.20578E+15	1.56720E-03	-2.90499E+00
1.01641E+00	1.02491E+12	4.20887E+15	1.56793E-03	-2.90467E+00
1.02032E+00	1.03594E+12	4.21134E+15	1.56889E-03	-2.90441E+00
1.02423E+00	1.03215E+12	4.21379E+15	1.56985E-03	-2.90414E+00
1.02814E+00	1.01719E+12	4.21650E+15	1.57072E-03	-2.90390E+00
1.03205E+00	1.02081E+12	4.21895E+15	1.57173E-03	-2.90362E+00
1.03595E+00	1.01319E+12	4.22085E+15	1.57286E-03	-2.90331E+00
1.03986E+00	1.00940E+12	4.22285E+15	1.57399E-03	-2.90300E+00
1.04377E+00	1.00940E+12	4.22549E+15	1.57474E-03	-2.90279E+00
1.04768E+00	1.00518E+12	4.22779E+15	1.57561E-03	-2.90255E+00
1.05159E+00	9.97508E+11	4.23005E+15	1.57650E-03	-2.90231E+00
1.05550E+00	9.93671E+11	4.23231E+15	1.57738E-03	-2.90206E+00
1.05941E+00	9.89833E+11	4.23457E+15	1.57827E-03	-2.90182E+00
1.06332E+00	9.82104E+11	4.23650E+15	1.57928E-03	-2.90154E+00
1.06723E+00	9.78265E+11	4.23814E+15	1.58039E-03	-2.90124E+00
1.07114E+00	9.70537E+11	4.24005E+15	1.58140E-03	-2.90096E+00
1.07505E+00	9.66599E+11	4.24162E+15	1.58254E-03	-2.90065E+00
1.07896E+00	9.62862E+11	4.24351E+15	1.58356E-03	-2.90037E+00
1.08287E+00	9.55132E+11	4.24507E+15	1.58470E-03	-2.90005E+00
1.08678E+00	9.51295E+11	4.24660E+15	1.58585E-03	-2.89974E+00
1.09068E+00	9.34958E+11	4.24813E+15	1.58700E-03	-2.89942E+00
1.09459E+00	9.33533E+11	4.24935E+15	1.58819E-03	-2.89910E+00
1.09850E+00	9.35890E+11	4.25086E+15	1.58923E-03	-2.89881E+00
1.10241E+00	9.25913E+11	4.25205E+15	1.59038E-03	-2.89850E+00
1.10632E+00	9.22130E+11	4.25354E+15	1.59143E-03	-2.89821E+00
1.11023E+00	9.20485E+11	4.25502E+15	1.59247E-03	-2.89793E+00
1.11414E+00	9.12811E+11	4.25649E+15	1.59352E-03	-2.89764E+00
1.11805E+00	9.08919E+11	4.25795E+15	1.59458E-03	-2.89735E+00
1.12196E+00	9.01244E+11	4.25940E+15	1.59563E-03	-2.89707E+00
1.12587E+00	8.97407E+11	4.26055E+15	1.59680E-03	-2.89675E+00
1.12978E+00	8.89677E+11	4.26169E+15	1.59797E-03	-2.89643E+00
1.13369E+00	8.85939E+11	4.26282E+15	1.59914E-03	-2.89611E+00
1.13760E+00	8.78165E+11	4.26395E+15	1.60032E-03	-2.89579E+00
1.14150E+00	8.74272E+11	4.26507E+15	1.60149E-03	-2.89548E+00
1.14541E+00	8.65227E+11	4.26616E+15	1.60271E-03	-2.89515E+00
1.14932E+00	8.61444E+11	4.26726E+15	1.60396E-03	-2.89481E+00
1.15323E+00	8.53924E+11	4.26837E+15	1.60522E-03	-2.89447E+00
1.15714E+00	8.50042E+11	4.26891E+15	1.60669E-03	-2.89407E+00
1.16105E+00	8.46259E+11	4.26973E+15	1.60805E-03	-2.89370E+00
1.16496E+00	8.38694E+11	4.27027E+15	1.60952E-03	-2.89330E+00
1.16887E+00	8.31074E+11	4.27105E+15	1.61099E-03	-2.89293E+00
1.17278E+00	8.27292E+11	4.27158E+15	1.61236E-03	-2.89254E+00
1.17669E+00	8.19726E+11	4.27184E+15	1.61393E-03	-2.89212E+00
1.18060E+00	8.15389E+11	4.27237E+15	1.61540E-03	-2.89172E+00
1.18451E+00	8.12106E+11	4.27289E+15	1.61688E-03	-2.89132E+00
1.18842E+00	8.04541E+11	4.27366E+15	1.61825E-03	-2.89095E+00
1.19233E+00	8.00704E+11	4.27417E+15	1.61973E-03	-2.89056E+00
1.19623E+00	7.96921E+11	4.27493E+15	1.62111E-03	-2.89019E+00
1.20014E+00	7.93139E+11	4.27569E+15	1.62247E-03	-2.88982E+00
1.20405E+00	7.89573E+11	4.27618E+15	1.62393E-03	-2.88943E+00
1.20796E+00	7.81791E+11	4.27668E+15	1.62540E-03	-2.88904E+00
1.21187E+00	7.74171E+11	4.27593E+15	1.62695E-03	-2.88863E+00
1.21578E+00	7.66605E+11	4.27740E+15	1.62842E-03	-2.88823E+00
1.21969E+00	7.66605E+11	4.27787E+15	1.62990E-03	-2.88784E+00
1.22360E+00	7.58985E+11	4.27935E+15	1.63136E-03	-2.88745E+00
1.22751E+00	7.51420E+11	4.27959E+15	1.63292E-03	-2.88704E+00
1.23142E+00	7.43855E+11	4.27983E+15	1.63448E-03	-2.88662E+00
1.23533E+00	7.40018E+11	4.27883E+15	1.63613E-03	-2.88618E+00
1.23924E+00	7.36235E+11	4.27906E+15	1.63769E-03	-2.88577E+00
1.24315E+00	7.28670E+11	4.27953E+15	1.63917E-03	-2.88538E+00
1.24705E+00	7.21050E+11	4.27999E+15	1.64064E-03	-2.88499E+00

TABLE 4 (continued)

SHOT 3-5

367 POINTS

128

TIME(MICROSEC)	COEN (A4P/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
1.25096E+00	7.17267E+11	4.28045E+15	1.64200E-03	-2.78463E+00
1.25487E+00	7.13485E+11	4.28090E+15	1.64333E-03	-2.78429E+00
1.25878E+00	7.09702E+11	4.28135E+15	1.64467E-03	-2.78392E+00
1.26269E+00	7.02082E+11	4.28180E+15	1.64600E-03	-2.78357E+00
1.26660E+00	6.94517E+11	4.28225E+15	1.64733E-03	-2.78322E+00
1.27051E+00	6.90734E+11	4.28269E+15	1.64867E-03	-2.78287E+00
1.27442E+00	6.86952E+11	4.28311E+15	1.65001E-03	-2.78251E+00
1.27833E+00	6.83114E+11	4.28355E+15	1.65134E-03	-2.78216E+00
1.28224E+00	6.75549E+11	4.28376E+15	1.65277E-03	-2.78179E+00
1.28615E+00	6.71767E+11	4.28440E+15	1.65402E-03	-2.78146E+00
1.29006E+00	6.67929E+11	4.28503E+15	1.65528E-03	-2.78113E+00
1.29397E+00	6.64147E+11	4.28545E+15	1.65662E-03	-2.78079E+00
1.29788E+00	6.56581E+11	4.28587E+15	1.65796E-03	-2.78043E+00
1.30178E+00	6.52799E+11	4.28647E+15	1.65926E-03	-2.78009E+00
1.30569E+00	6.48961E+11	4.28707E+15	1.66058E-03	-2.77974E+00
1.30960E+00	6.45179E+11	4.28767E+15	1.66189E-03	-2.77940E+00
1.31351E+00	6.41395E+11	4.28807E+15	1.66329E-03	-2.77903E+00
1.31742E+00	6.37614E+11	4.28847E+15	1.66468E-03	-2.77867E+00
1.32133E+00	6.33831E+11	4.28886E+15	1.66608E-03	-2.77830E+00
1.32524E+00	6.22428E+11	4.28925E+15	1.66747E-03	-2.77794E+00
1.32915E+00	6.22428E+11	4.28964E+15	1.66887E-03	-2.77758E+00
1.33306E+00	6.18646E+11	4.28993E+15	1.67035E-03	-2.77719E+00
1.33697E+00	6.11025E+11	4.29021E+15	1.67175E-03	-2.77683E+00
1.34088E+00	6.07243E+11	4.29058E+15	1.67315E-03	-2.77647E+00
1.34479E+00	6.03461E+11	4.29096E+15	1.67455E-03	-2.77610E+00
1.34870E+00	5.99678E+11	4.29114E+15	1.67603E-03	-2.77572E+00
1.35260E+00	5.98275E+11	4.29151E+15	1.67751E-03	-2.77533E+00
1.35651E+00	5.94493E+11	4.29169E+15	1.67945E-03	-2.77483E+00
1.36042E+00	5.76973E+11	4.29205E+15	1.68134E-03	-2.77434E+00
1.36433E+00	5.73090E+11	4.29222E+15	1.68329E-03	-2.77384E+00
1.36824E+00	5.69308E+11	4.29240E+15	1.68524E-03	-2.77334E+00
1.37215E+00	5.65525E+11	4.29257E+15	1.68719E-03	-2.77284E+00
1.37606E+00	5.57905E+11	4.29292E+15	1.68907E-03	-2.77235E+00
1.37997E+00	5.54122E+11	4.29309E+15	1.69102E-03	-2.77185E+00
1.38388E+00	5.50340E+11	4.29326E+15	1.69297E-03	-2.77135E+00
1.38779E+00	5.42775E+11	4.29344E+15	1.69492E-03	-2.77085E+00
1.39170E+00	5.38937E+11	4.29360E+15	1.69688E-03	-2.77035E+00
1.39561E+00	5.38937E+11	4.29393E+15	1.69877E-03	-2.76987E+00
1.39952E+00	5.35155E+11	4.29409E+15	1.70072E-03	-2.76937E+00
1.40343E+00	5.27590E+11	4.29425E+15	1.70268E-03	-2.76887E+00
1.40733E+00	5.23907E+11	4.29441E+15	1.70511E-03	-2.76825E+00
1.41124E+00	5.16197E+11	4.29457E+15	1.70763E-03	-2.76761E+00
1.41515E+00	5.08348E+11	4.29473E+15	1.71015E-03	-2.76697E+00
1.41906E+00	5.08348E+11	4.29488E+15	1.71267E-03	-2.76633E+00
1.42297E+00	5.04455E+11	4.29518E+15	1.71513E-03	-2.76570E+00
1.42688E+00	4.96671E+11	4.29549E+15	1.71759E-03	-2.76508E+00
1.43079E+00	4.92724E+11	4.29564E+15	1.72011E-03	-2.76444E+00

EOF

TABLE 4 (continued)

SHOT 3-6

375 POINTS

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TIME (MICROSEC)	CDEN (AMP/M2)	EDEN (ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
0.	3.99530E+11	9.08339E+13	0.	-3.27750E+00
3.90926E-03	4.39977E+11	9.89173E+13	5.27933E-04	-3.27750E+00
7.91953E-03	4.39977E+11	1.07375E+14	9.72513E-04	-3.01210E+00
1.17278E-02	4.79795E+11	1.15750E+14	1.35322E-03	-2.86963E+00
1.56371E-02	4.99522E+11	1.24847E+14	1.67283E-03	-2.77655E+00
1.95463E-02	4.99522E+11	1.35005E+14	1.93369E-03	-2.71361E+00
2.34556E-02	5.31537E+11	1.44878E+14	2.16231E-03	-2.66509E+00
2.73648E-02	5.59605E+11	1.55879E+14	2.34465E-03	-2.62992E+00
3.12741E-02	5.99514E+11	1.67005E+14	2.50109E-03	-2.60197E+00
3.51834E-02	5.79779E+11	1.78600E+14	2.63106E-03	-2.57997E+00
3.90926E-02	6.29774E+11	1.90211E+14	2.74494E-03	-2.56147E+00
4.30019E-02	6.59597E+11	2.02699E+14	2.93341E-03	-2.54769E+00
4.59112E-02	6.99505E+11	2.15477E+14	2.90770E-03	-2.53645E+00
5.08204E-02	6.79770E+11	2.28555E+14	2.96976E-03	-2.52728E+00
5.47297E-02	7.39953E+11	2.42152E+14	3.01962E-03	-2.52019E+00
5.86389E-02	7.48185E+11	2.56144E+14	3.05756E-03	-2.51463E+00
6.25482E-02	7.79762E+11	2.70976E+14	3.08289E-03	-2.51104E+00
6.64575E-02	7.99498E+11	2.86336E+14	3.09985E-03	-2.50866E+00
7.03667E-02	9.39945E+11	3.02677E+14	3.10499E-03	-2.50794E+00
7.42760E-02	9.39945E+11	3.20735E+14	3.09297E-03	-2.50526E+00
7.81953E-02	9.59581E+11	3.40511E+14	3.06667E-03	-2.51333E+00
8.20945E-02	9.99490E+11	3.60695E+14	3.03982E-03	-2.51715E+00
8.60038E-02	9.19664E+11	3.82749E+14	3.00107E-03	-2.52272E+00
8.99130E-02	9.39399E+11	4.07118E+14	2.94969E-03	-2.53022E+00
9.38223E-02	9.45100E+11	4.33041E+14	2.89368E-03	-2.53855E+00
9.77316E-02	9.84571E+11	4.60715E+14	2.83319E-03	-2.54772E+00
1.01641E-01	1.00431E+12	4.91379E+14	2.76264E-03	-2.55868E+00
1.05550E-01	1.03993E+12	5.26074E+14	2.66719E-03	-2.57395E+00
1.09459E-01	1.02404E+12	5.70051E+14	2.52391E-03	-2.59793E+00
1.13369E-01	1.06337E+12	6.22920E+14	2.36688E-03	-2.62582E+00
1.17278E-01	1.08281E+12	6.83833E+14	2.20798E-03	-2.65600E+00
1.21187E-01	1.10254E+12	7.53978E+14	2.04995E-03	-2.68926E+00
1.25096E-01	1.10254E+12	8.32294E+14	1.89986E-03	-2.72128E+00
1.29006E-01	1.12228E+12	9.18933E+14	1.75969E-03	-2.75456E+00
1.32915E-01	1.16175E+12	1.01598E+15	1.62648E-03	-2.79875E+00
1.36824E-01	1.17973E+12	1.11386E+15	1.51555E-03	-2.81943E+00
1.40733E-01	1.19947E+12	1.21018E+15	1.42435E-03	-2.84638E+00
1.44643E-01	1.19947E+12	1.28498E+15	1.36916E-03	-2.86355E+00
1.48552E-01	1.19947E+12	1.33863E+15	1.34090E-03	-2.87260E+00
1.52461E-01	1.19947E+12	1.38601E+15	1.32075E-03	-2.87918E+00
1.56371E-01	1.19947E+12	1.42714E+15	1.30861E-03	-2.89319E+00
1.60280E-01	1.21964E+12	1.46933E+15	1.30504E-03	-2.89438E+00
1.64189E-01	1.19947E+12	1.51114E+15	1.30200E-03	-2.89539E+00
1.68098E-01	1.19947E+12	1.54716E+15	1.30399E-03	-2.89473E+00
1.72008E-01	1.19947E+12	1.58320E+15	1.30587E-03	-2.89410E+00
1.75917E-01	1.19947E+12	1.62039E+15	1.30674E-03	-2.89391E+00
1.79826E-01	1.19947E+12	1.65642E+15	1.30849E-03	-2.89323E+00
1.83735E-01	1.19947E+12	1.69057E+15	1.31162E-03	-2.88219E+00
1.87645E-01	1.21964E+12	1.72484E+15	1.31453E-03	-2.89123E+00
1.91554E-01	1.21964E+12	1.75919E+15	1.31727E-03	-2.89033E+00
1.95463E-01	1.23937E+12	1.79144E+15	1.32145E-03	-2.87895E+00
1.99372E-01	1.24025E+12	1.82413E+15	1.32516E-03	-2.87773E+00
2.03282E-01	1.27972E+12	1.85732E+15	1.32839E-03	-2.87667E+00
2.07191E-01	1.25999E+12	1.88926E+15	1.33238E-03	-2.87537E+00
2.11100E-01	1.27972E+12	1.92164E+15	1.33813E-03	-2.87350E+00
2.15009E-01	1.29946E+12	1.95447E+15	1.34392E-03	-2.87163E+00
2.18919E-01	1.31975E+12	1.98729E+15	1.34954E-03	-2.86981E+00
2.22828E-01	1.29946E+12	2.02005E+15	1.35501E-03	-2.86806E+00
2.26737E-01	1.31919E+12	2.05235E+15	1.36061E-03	-2.86627E+00
2.30647E-01	1.33849E+12	2.08417E+15	1.36636E-03	-2.86443E+00
2.34556E-01	1.33993E+12	2.11542E+15	1.37165E-03	-2.86276E+00
2.38465E-01	1.35865E+12	2.14818E+15	1.37710E-03	-2.86103E+00
2.42374E-01	1.37709E+12	2.17987E+15	1.38243E-03	-2.85936E+00
2.46284E-01	1.39638E+12	2.21240E+15	1.38709E-03	-2.85790E+00
2.50193E-01	1.41612E+12	2.24483E+15	1.39167E-03	-2.85646E+00
2.54102E-01	1.43541E+12	2.27736E+15	1.39606E-03	-2.85510E+00
2.58011E-01	1.43541E+12	2.30968E+15	1.40045E-03	-2.85373E+00
2.61921E-01	1.43541E+12	2.34200E+15	1.40471E-03	-2.85241E+00
2.65830E-01	1.45471E+12	2.37379E+15	1.40916E-03	-2.85104E+00
2.69739E-01	1.45471E+12	2.40598E+15	1.41326E-03	-2.84978E+00
2.73648E-01	1.47401E+12	2.43764E+15	1.41756E-03	-2.84846E+00
2.77558E-01	1.49330E+12	2.46961E+15	1.42157E-03	-2.84723E+00
2.81467E-01	1.51304E+12	2.50142E+15	1.42557E-03	-2.84601E+00
2.85376E-01	1.51304E+12	2.53294E+15	1.42963E-03	-2.84478E+00
2.89285E-01	1.53233E+12	2.56430E+15	1.43368E-03	-2.84355E+00
2.93195E-01	1.53233E+12	2.59603E+15	1.43743E-03	-2.84241E+00
2.97104E-01	1.55163E+12	2.62721E+15	1.44139E-03	-2.84122E+00
3.01013E-01	1.57093E+12	2.65977E+15	1.44505E-03	-2.84012E+00
3.04923E-01	1.57093E+12	2.69033E+15	1.44862E-03	-2.83905E+00
3.08832E-01	1.58628E+12	2.72190E+15	1.45211E-03	-2.83800E+00

TIME (MICROSEC)	CDEN (A/P/M2)	EDEN (ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
3.12741E-01	1.60514E+12	2.75291E+15	1.45563E-03	-2.93695E+00
3.16656E-01	1.59022E+12	2.78465E+15	1.45799E-03	-2.93628E+00
3.20560E-01	1.60995E+12	2.81618E+15	1.46022E-03	-2.93558E+00
3.24469E-01	1.60995E+12	2.84715E+15	1.46279E-03	-2.93492E+00
3.28378E-01	1.60995E+12	2.87911E+15	1.46530E-03	-2.93407E+00
3.32297E-01	1.54855E+12	2.90942E+15	1.46758E-03	-2.93340E+00
3.36197E-01	1.54855E+12	2.93986E+15	1.47025E-03	-2.93251E+00
3.40106E-01	1.64855E+12	2.97035E+15	1.47284E-03	-2.93194E+00
3.44015E-01	1.54855E+12	3.00084E+15	1.47537E-03	-2.93110E+00
3.47924E-01	1.69759E+12	3.03107E+15	1.47798E-03	-2.93033E+00
3.51834E-01	1.70699E+12	3.06190E+15	1.48025E-03	-2.92966E+00
3.55743E-01	1.70699E+12	3.09154E+15	1.48305E-03	-2.92994E+00
3.59652E-01	1.70589E+12	3.12177E+15	1.48551E-03	-2.92912E+00
3.63561E-01	1.72619E+12	3.15102E+15	1.48839E-03	-2.92728E+00
3.67471E-01	1.72619E+12	3.18094E+15	1.48939E-03	-2.92699E+00
3.71380E-01	1.74547E+12	3.21009E+15	1.49045E-03	-2.92668E+00
3.75289E-01	1.74547E+12	3.23978E+15	1.49128E-03	-2.92644E+00
3.79199E-01	1.76477E+12	3.26986E+15	1.49237E-03	-2.92612E+00
3.83108E-01	1.76477E+12	3.29734E+15	1.49372E-03	-2.92573E+00
3.87017E-01	1.76477E+12	3.32543E+15	1.49477E-03	-2.92543E+00
3.90926E-01	1.76477E+12	3.35552E+15	1.49590E-03	-2.92513E+00
3.94836E-01	1.77705E+12	3.38337E+15	1.49737E-03	-2.92467E+00
3.98745E-01	1.79635E+12	3.41184E+15	1.49863E-03	-2.92431E+00
4.02654E-01	1.79152E+12	3.43987E+15	1.50007E-03	-2.92399E+00
4.06563E-01	1.80380E+12	3.46801E+15	1.50143E-03	-2.92349E+00
4.10473E-01	1.80380E+12	3.49645E+15	1.50265E-03	-2.92314E+00
4.14382E-01	1.80380E+12	3.52426E+15	1.50411E-03	-2.92272E+00
4.18291E-01	1.80380E+12	3.55144E+15	1.50470E-03	-2.92255E+00
4.22200E-01	1.84240E+12	3.57861E+15	1.50450E-03	-2.92261E+00
4.26110E-01	1.84240E+12	3.60556E+15	1.50439E-03	-2.92264E+00
4.30019E-01	1.84240E+12	3.63238E+15	1.50434E-03	-2.92265E+00
4.33928E-01	1.84240E+12	3.66011E+15	1.50392E-03	-2.92279E+00
4.37837E-01	1.84240E+12	3.68707E+15	1.50391E-03	-2.92291E+00
4.41747E-01	1.86163E+12	3.71301E+15	1.50413E-03	-2.92271E+00
4.45656E-01	1.88143E+12	3.73972E+15	1.50412E-03	-2.92272E+00
4.49565E-01	1.88143E+12	3.76630E+15	1.50417E-03	-2.92270E+00
4.53474E-01	1.88143E+12	3.79301E+15	1.50417E-03	-2.92270E+00
4.57384E-01	1.88143E+12	3.81933E+15	1.50432E-03	-2.92266E+00
4.61293E-01	1.90073E+12	3.84499E+15	1.50472E-03	-2.92254E+00
4.65202E-01	1.90073E+12	3.86999E+15	1.50538E-03	-2.92235E+00
4.69112E-01	1.92002E+12	3.89500E+15	1.50549E-03	-2.92232E+00
4.73021E-01	1.91081E+12	3.92058E+15	1.50406E-03	-2.92273E+00
4.76930E-01	1.93011E+12	3.94584E+15	1.50277E-03	-2.92311E+00
4.80839E-01	1.93932E+12	3.97097E+15	1.50154E-03	-2.92346E+00
4.84749E-01	1.93011E+12	3.99543E+15	1.50058E-03	-2.92374E+00
4.88658E-01	1.93932E+12	4.01924E+15	1.49988E-03	-2.92394E+00
4.92567E-01	1.95862E+12	4.04370E+15	1.49894E-03	-2.92422E+00
4.96476E-01	1.95862E+12	4.06750E+15	1.49825E-03	-2.92442E+00
5.00386E-01	1.95862E+12	4.09131E+15	1.49757E-03	-2.92461E+00
5.04295E-01	1.95862E+12	4.11534E+15	1.49682E-03	-2.92483E+00
5.08204E-01	1.95862E+12	4.13902E+15	1.49656E-03	-2.92491E+00
5.12113E-01	1.97935E+12	4.16049E+15	1.49639E-03	-2.92496E+00
5.16023E-01	1.96825E+12	4.18395E+15	1.49590E-03	-2.92510E+00
5.19932E-01	1.96925E+12	4.20563E+15	1.49597E-03	-2.92508E+00
5.23841E-01	1.96925E+12	4.22730E+15	1.49459E-03	-2.92548E+00
5.27750E-01	1.96925E+12	4.24988E+15	1.49287E-03	-2.92598E+00
5.31660E-01	1.96825E+12	4.27088E+15	1.49173E-03	-2.92631E+00
5.35569E-01	1.96825E+12	4.29277E+15	1.49029E-03	-2.92673E+00
5.39478E-01	1.98712E+12	4.31392E+15	1.48912E-03	-2.92707E+00
5.43388E-01	1.98712E+12	4.33527E+15	1.48789E-03	-2.92743E+00
5.47297E-01	1.96825E+12	4.35599E+15	1.48688E-03	-2.92772E+00
5.51206E-01	1.98712E+12	4.37741E+15	1.48566E-03	-2.92808E+00
5.55115E-01	1.96825E+12	4.39725E+15	1.48497E-03	-2.92828E+00
5.59025E-01	1.95862E+12	4.41709E+15	1.48429E-03	-2.92848E+00
5.62934E-01	1.97935E+12	4.43721E+15	1.48352E-03	-2.92871E+00
5.66843E-01	1.95862E+12	4.45724E+15	1.48280E-03	-2.92892E+00
5.70752E-01	1.97935E+12	4.47726E+15	1.48208E-03	-2.92913E+00
5.74662E-01	1.97935E+12	4.49659E+15	1.48076E-03	-2.92952E+00
5.78571E-01	1.99765E+12	4.51602E+15	1.47903E-03	-2.93002E+00
5.82480E-01	1.99765E+12	4.53545E+15	1.47731E-03	-2.93053E+00
5.86389E-01	1.99765E+12	4.55432E+15	1.47579E-03	-2.93098E+00
5.90299E-01	1.97935E+12	4.57375E+15	1.47410E-03	-2.93147E+00
5.94208E-01	1.97935E+12	4.59317E+15	1.47243E-03	-2.93197E+00
5.98117E-01	1.99533E+12	4.61252E+15	1.47079E-03	-2.93245E+00
6.02026E-01	1.99533E+12	4.63049E+15	1.46961E-03	-2.93290E+00
6.05936E-01	1.99633E+12	4.64913E+15	1.46822E-03	-2.93321E+00
6.09845E-01	1.99633E+12	4.66709E+15	1.46706E-03	-2.93355E+00
6.13754E-01	1.99633E+12	4.68505E+15	1.46591E-03	-2.93389E+00
6.17664E-01	2.00642E+12	4.70301E+15	1.46476E-03	-2.93423E+00
6.21573E-01	2.00642E+12	4.72046E+15	1.46379E-03	-2.93452E+00

TABLE 4 (continued)

SHOT 3-6

375 POINTS

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TIME (MICROSEC)	CDEN (AMP/M2)	EDEN (ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
6.25482E-01	2.00642E+12	4.73764E+15	1.46251E-03	-2.93490E+00
6.29391E-01	2.00642E+12	4.75329E+15	1.46108E-03	-2.93533E+00
6.33301E-01	2.00642E+12	4.76931E+15	1.45954E-03	-2.93578E+00
6.37210E-01	1.99765E+12	4.78581E+15	1.45787E-03	-2.93628E+00
6.41119E-01	1.99765E+12	4.80194E+15	1.45632E-03	-2.93674E+00
6.45028E-01	1.99765E+12	4.81759E+15	1.45492E-03	-2.93716E+00
6.48938E-01	1.99765E+12	4.83257E+15	1.45374E-03	-2.93751E+00
6.52847E-01	1.99765E+12	4.84822E+15	1.45236E-03	-2.93793E+00
6.56756E-01	1.99765E+12	4.86319E+15	1.45119E-03	-2.93828E+00
6.60665E-01	1.99765E+12	4.87825E+15	1.45001E-03	-2.93863E+00
6.64575E-01	1.98712E+12	4.89330E+15	1.44883E-03	-2.93898E+00
6.68484E-01	1.96925E+12	4.90903E+15	1.44746E-03	-2.93939E+00
6.72393E-01	1.98712E+12	4.92408E+15	1.44630E-03	-2.93974E+00
6.76302E-01	1.98712E+12	4.93845E+15	1.44528E-03	-2.94005E+00
6.80212E-01	1.96825E+12	4.95267E+15	1.44355E-03	-2.94057E+00
6.84121E-01	1.96825E+12	4.96663E+15	1.44190E-03	-2.94106E+00
6.88030E-01	1.96825E+12	4.98085E+15	1.44019E-03	-2.94158E+00
6.91940E-01	1.96825E+12	4.99501E+15	1.43850E-03	-2.94209E+00
6.95849E-01	1.96825E+12	5.00836E+15	1.43706E-03	-2.94253E+00
6.99758E-01	1.97835E+12	5.02184E+15	1.43559E-03	-2.94297E+00
7.03667E-01	1.97835E+12	5.03532E+15	1.43412E-03	-2.94341E+00
7.07577E-01	1.97835E+12	5.04867E+15	1.43270E-03	-2.94384E+00
7.11486E-01	1.97835E+12	5.06202E+15	1.43129E-03	-2.94427E+00
7.15395E-01	1.97835E+12	5.07470E+15	1.43007E-03	-2.94464E+00
7.19304E-01	1.95862E+12	5.08671E+15	1.42905E-03	-2.94495E+00
7.23214E-01	1.95862E+12	5.09903E+15	1.42794E-03	-2.94529E+00
7.27123E-01	1.95862E+12	5.11158E+15	1.42678E-03	-2.94564E+00
7.31032E-01	1.94897E+12	5.12319E+15	1.42550E-03	-2.94603E+00
7.34941E-01	1.93011E+12	5.13581E+15	1.42394E-03	-2.94654E+00
7.38851E-01	1.94897E+12	5.14710E+15	1.42256E-03	-2.94693E+00
7.42760E-01	1.94897E+12	5.15859E+15	1.42122E-03	-2.94734E+00
7.46669E-01	1.93011E+12	5.17042E+15	1.41980E-03	-2.94777E+00
7.50578E-01	1.93011E+12	5.18231E+15	1.41837E-03	-2.94821E+00
7.54488E-01	1.93011E+12	5.19420E+15	1.41694E-03	-2.94865E+00
7.58397E-01	1.93011E+12	5.20532E+15	1.41573E-03	-2.94902E+00
7.62306E-01	1.93011E+12	5.21633E+15	1.41456E-03	-2.94938E+00
7.66216E-01	1.91081E+12	5.22723E+15	1.41342E-03	-2.94973E+00
7.70125E-01	1.92002E+12	5.23817E+15	1.41228E-03	-2.95008E+00
7.74034E-01	1.92002E+12	5.24912E+15	1.41113E-03	-2.95043E+00
7.77943E-01	1.92002E+12	5.25947E+15	1.41015E-03	-2.95073E+00
7.81853E-01	1.90073E+12	5.26973E+15	1.40909E-03	-2.95106E+00
7.85762E-01	1.90073E+12	5.27998E+15	1.40789E-03	-2.95143E+00
7.89671E-01	1.91081E+12	5.29055E+15	1.40662E-03	-2.95182E+00
7.93580E-01	1.91081E+12	5.30011E+15	1.40562E-03	-2.95213E+00
7.97490E-01	1.91081E+12	5.30966E+15	1.40463E-03	-2.95244E+00
8.01399E-01	1.89195E+12	5.31912E+15	1.40366E-03	-2.95274E+00
8.05308E-01	1.87265E+12	5.32860E+15	1.40269E-03	-2.95304E+00
8.09217E-01	1.85380E+12	5.33807E+15	1.40173E-03	-2.95334E+00
8.13127E-01	1.86169E+12	5.34749E+15	1.40079E-03	-2.95363E+00
8.17036E-01	1.86169E+12	5.35627E+15	1.40001E-03	-2.95397E+00
8.20945E-01	1.87265E+12	5.36569E+15	1.39907E-03	-2.95416E+00
8.24854E-01	1.85380E+12	5.37510E+15	1.39814E-03	-2.95445E+00
8.28764E-01	1.85380E+12	5.38383E+15	1.39738E-03	-2.95469E+00
8.32673E-01	1.85380E+12	5.39194E+15	1.39677E-03	-2.95488E+00
8.36582E-01	1.84240E+12	5.40120E+15	1.39576E-03	-2.95519E+00
8.40492E-01	1.84240E+12	5.40928E+15	1.39506E-03	-2.95541E+00
8.44401E-01	1.82310E+12	5.41789E+15	1.39423E-03	-2.95557E+00
8.48310E-01	1.82661E+12	5.42539E+15	1.39368E-03	-2.95584E+00
8.52219E-01	1.82661E+12	5.43272E+15	1.39318E-03	-2.95599E+00
8.56129E-01	1.81521E+12	5.43996E+15	1.39270E-03	-2.95614E+00
8.60038E-01	1.81521E+12	5.44750E+15	1.39214E-03	-2.95632E+00
8.63947E-01	1.81521E+12	5.45472E+15	1.39167E-03	-2.95646E+00
8.67856E-01	1.81521E+12	5.46193E+15	1.39120E-03	-2.95661E+00
8.71766E-01	1.80380E+12	5.46966E+15	1.39060E-03	-2.95680E+00
8.75675E-01	1.80380E+12	5.47616E+15	1.39032E-03	-2.95689E+00
8.79584E-01	1.78451E+12	5.48265E+15	1.39004E-03	-2.95697E+00
8.83493E-01	1.79635E+12	5.48973E+15	1.38961E-03	-2.95711E+00
8.87403E-01	1.77705E+12	5.49563E+15	1.38949E-03	-2.95714E+00
8.91312E-01	1.75819E+12	5.50213E+15	1.38923E-03	-2.95723E+00
8.95221E-01	1.76477E+12	5.50893E+15	1.38889E-03	-2.95733E+00
8.99130E-01	1.74547E+12	5.51474E+15	1.38880E-03	-2.95736E+00
9.03040E-01	1.76477E+12	5.52116E+15	1.38856E-03	-2.95744E+00
9.06949E-01	1.73890E+12	5.52751E+15	1.38834E-03	-2.95750E+00
9.10858E-01	1.73890E+12	5.53327E+15	1.38826E-03	-2.95753E+00
9.14768E-01	1.72004E+12	5.53955E+15	1.38806E-03	-2.95759E+00
9.18677E-01	1.70688E+12	5.54477E+15	1.38812E-03	-2.95757E+00
9.22586E-01	1.70688E+12	5.55032E+15	1.38809E-03	-2.95758E+00
9.26495E-01	1.70688E+12	5.55542E+15	1.38793E-03	-2.95753E+00
9.30405E-01	1.70538E+12	5.56143E+15	1.38805E-03	-2.95759E+00
9.34314E-01	1.70688E+12	5.56638E+15	1.38817E-03	-2.95756E+00

TABLE 4 (continued)

SHOT 3-6

375 POINTS

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TIME (MICROSECS)	CDEN (A4P/M2)	EDEN (ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
9.39223E-01	1.59753E+12	5.57079E+15	1.39939E-03	-2.95749E+00
9.42132E-01	1.59144E+12	5.57512E+15	1.38858E-03	-2.95743E+00
9.46042E-01	1.58759E+12	5.57995E+15	1.39965E-03	-2.95741E+00
9.49951E-01	1.56795E+12	5.58423E+15	1.38886E-03	-2.95734E+00
9.53860E-01	1.66795E+12	5.58841E+15	1.3909E-03	-2.95727E+00
9.57769E-01	1.54955E+12	5.59264E+15	1.39931E-03	-2.95720E+00
9.61679E-01	1.52926E+12	5.59570E+15	1.39957E-03	-2.95712E+00
9.65589E-01	1.60514E+12	5.60076E+15	1.39983E-03	-2.95704E+00
9.69497E-01	1.60514E+12	5.60432E+15	1.39021E-03	-2.95692E+00
9.73406E-01	1.60995E+12	5.60737E+15	1.39072E-03	-2.95676E+00
9.77316E-01	1.59022E+12	5.61039E+15	1.39124E-03	-2.95660E+00
9.81225E-01	1.59022E+12	5.61395E+15	1.39162E-03	-2.95648E+00
9.85134E-01	1.57093E+12	5.61742E+15	1.39203E-03	-2.95635E+00
9.89044E-01	1.57093E+12	5.62040E+15	1.39254E-03	-2.95619E+00
9.92953E-01	1.55163E+12	5.62288E+15	1.39312E-03	-2.95601E+00
9.96862E-01	1.54912E+12	5.62596E+15	1.39358E-03	-2.95587E+00
1.00077E+00	1.51304E+12	5.62880E+15	1.39405E-03	-2.95572E+00
1.00468E+00	1.52933E+12	5.63132E+15	1.39463E-03	-2.95554E+00
1.00859E+00	1.50953E+12	5.63325E+15	1.39535E-03	-2.95532E+00
1.01250E+00	1.50953E+12	5.63518E+15	1.39607E-03	-2.95509E+00
1.01641E+00	1.47401E+12	5.63749E+15	1.39669E-03	-2.95490E+00
1.02032E+00	1.47137E+12	5.63940E+15	1.39741E-03	-2.95468E+00
1.02423E+00	1.45252E+12	5.64127E+15	1.39814E-03	-2.95445E+00
1.02814E+00	1.47401E+12	5.64315E+15	1.39887E-03	-2.95422E+00
1.03205E+00	1.43541E+12	5.64546E+15	1.39973E-03	-2.95396E+00
1.03595E+00	1.43541E+12	5.64639E+15	1.40046E-03	-2.95373E+00
1.03986E+00	1.43541E+12	5.64777E+15	1.40131E-03	-2.95347E+00
1.04377E+00	1.43541E+12	5.64869E+15	1.40230E-03	-2.95316E+00
1.04768E+00	1.41612E+12	5.65005E+15	1.40318E-03	-2.95299E+00
1.05159E+00	1.41612E+12	5.65140E+15	1.40406E-03	-2.95261E+00
1.05550E+00	1.39639E+12	5.65231E+15	1.40506E-03	-2.95231E+00
1.05941E+00	1.39639E+12	5.65322E+15	1.40605E-03	-2.95200E+00
1.06332E+00	1.37708E+12	5.65410E+15	1.40704E-03	-2.95159E+00
1.06723E+00	1.37708E+12	5.65497E+15	1.40804E-03	-2.95139E+00
1.07114E+00	1.35773E+12	5.65541E+15	1.40915E-03	-2.95104E+00
1.07505E+00	1.35773E+12	5.65583E+15	1.41026E-03	-2.95070E+00
1.07896E+00	1.33843E+12	5.65668E+15	1.41127E-03	-2.95039E+00
1.08287E+00	1.33761E+12	5.65752E+15	1.41227E-03	-2.95008E+00
1.08678E+00	1.33761E+12	5.65836E+15	1.41328E-03	-2.94977E+00
1.09068E+00	1.31875E+12	5.65878E+15	1.41439E-03	-2.94943E+00
1.09459E+00	1.31875E+12	5.65919E+15	1.41544E-03	-2.94911E+00
1.09850E+00	1.29945E+12	5.66001E+15	1.41635E-03	-2.94883E+00
1.10241E+00	1.27972E+12	5.66001E+15	1.41747E-03	-2.94849E+00
1.10632E+00	1.27972E+12	5.66040E+15	1.41848E-03	-2.94818E+00
1.11023E+00	1.27972E+12	5.66040E+15	1.41960E-03	-2.94783E+00
1.11414E+00	1.25999E+12	5.66119E+15	1.42052E-03	-2.94755E+00
1.11805E+00	1.25999E+12	5.66119E+15	1.42164E-03	-2.94721E+00
1.12196E+00	1.24025E+12	5.66119E+15	1.42275E-03	-2.94687E+00
1.12587E+00	1.21964E+12	5.66157E+15	1.42377E-03	-2.94656E+00
1.12978E+00	1.21964E+12	5.66195E+15	1.42479E-03	-2.94625E+00
1.13369E+00	1.21964E+12	5.66233E+15	1.42582E-03	-2.94594E+00
1.13760E+00	1.19947E+12	5.66270E+15	1.42684E-03	-2.94562E+00
1.14150E+00	1.19947E+12	5.66307E+15	1.42786E-03	-2.94531E+00
1.14541E+00	1.18149E+12	5.66381E+15	1.42877E-03	-2.94504E+00
1.14932E+00	1.16175E+12	5.66417E+15	1.42975E-03	-2.94474E+00
1.15323E+00	1.14201E+12	5.66454E+15	1.43072E-03	-2.94445E+00
1.15714E+00	1.14201E+12	5.66489E+15	1.43170E-03	-2.94415E+00
1.16105E+00	1.14201E+12	5.66561E+15	1.43258E-03	-2.94388E+00
1.16496E+00	1.12223E+12	5.66596E+15	1.43356E-03	-2.94358E+00
1.16887E+00	1.10254E+12	5.66665E+15	1.43445E-03	-2.94331E+00
1.17278E+00	1.10254E+12	5.66735E+15	1.43534E-03	-2.94305E+00
1.17669E+00	1.10254E+12	5.66804E+15	1.43623E-03	-2.94278E+00
1.18060E+00	1.09947E+12	5.66870E+15	1.43713E-03	-2.94250E+00
1.18451E+00	1.09947E+12	5.66936E+15	1.43803E-03	-2.94223E+00
1.18842E+00	1.07974E+12	5.67002E+15	1.43893E-03	-2.94196E+00
1.19233E+00	1.07974E+12	5.67035E+15	1.43991E-03	-2.94166E+00
1.19623E+00	1.05955E+12	5.67101E+15	1.44081E-03	-2.94139E+00
1.20014E+00	1.05955E+12	5.67101E+15	1.44198E-03	-2.94104E+00
1.20405E+00	1.05955E+12	5.67132E+15	1.44307E-03	-2.94071E+00
1.20796E+00	1.03993E+12	5.67132E+15	1.44423E-03	-2.94036E+00
1.21187E+00	1.03993E+12	5.67132E+15	1.44540E-03	-2.94001E+00
1.21578E+00	1.01965E+12	5.67163E+15	1.44649E-03	-2.93968E+00
1.21969E+00	9.99492E+11	5.67193E+15	1.44758E-03	-2.93936E+00
1.22360E+00	9.99492E+11	5.67223E+15	1.44867E-03	-2.93903E+00
1.22751E+00	9.99492E+11	5.67252E+15	1.44976E-03	-2.93870E+00
1.23142E+00	9.79745E+11	5.67292E+15	1.45085E-03	-2.93838E+00
1.23533E+00	9.59573E+11	5.67311E+15	1.45195E-03	-2.93805E+00
1.23924E+00	9.59573E+11	5.67340E+15	1.45304E-03	-2.93772E+00
1.24315E+00	9.39399E+11	5.67368E+15	1.45413E-03	-2.93740E+00
1.24705E+00	9.39399E+11	5.67368E+15	1.45530E-03	-2.93705E+00

TABLE 4 (continued)

SHOT 3-6

375 POINTS

133

TIME (MICROSEC)	CDEN (AMP/M2)	EOEN (ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
1.25096E+00	9.39393E+11	5.67396E+15	1.45641E-03	-2.93672E+00
1.25487E+00	9.39393E+11	5.67423E+15	1.45753E-03	-2.93638E+00
1.25378E+00	9.19564E+11	5.67450E+15	1.45964E-03	-2.93605E+00
1.26269E+00	8.99490E+11	5.67450E+15	1.45983E-03	-2.93570E+00
1.26660E+00	8.79754E+11	5.67450E+15	1.46101E-03	-2.93535E+00
1.27051E+00	8.79754E+11	5.67450E+15	1.46220E-03	-2.93499E+00
1.27442E+00	8.59581E+11	5.67450E+15	1.46339E-03	-2.93464E+00
1.27833E+00	8.59581E+11	5.67478E+15	1.46450E-03	-2.93431E+00
1.28224E+00	8.59581E+11	5.67504E+15	1.46562E-03	-2.93398E+00
1.28615E+00	8.39345E+11	5.67530E+15	1.46674E-03	-2.93365E+00
1.29006E+00	8.39345E+11	5.67555E+15	1.46786E-03	-2.93332E+00
1.29397E+00	8.19672E+11	5.67580E+15	1.46898E-03	-2.93298E+00
1.29788E+00	8.27127E+11	5.67605E+15	1.47010E-03	-2.93265E+00
1.30178E+00	8.27127E+11	5.67630E+15	1.47119E-03	-2.93233E+00
1.30569E+00	8.07392E+11	5.67630E+15	1.47230E-03	-2.93200E+00
1.30960E+00	8.07392E+11	5.67654E+15	1.47335E-03	-2.93169E+00
1.31351E+00	8.07392E+11	5.67678E+15	1.47440E-03	-2.93138E+00
1.31742E+00	7.87657E+11	5.67678E+15	1.47551E-03	-2.93106E+00
1.32133E+00	7.87657E+11	5.67578E+15	1.47663E-03	-2.93073E+00
1.32524E+00	7.67921E+11	5.67678E+15	1.47774E-03	-2.93040E+00
1.32915E+00	7.67921E+11	5.67655E+15	1.47891E-03	-2.93006E+00
1.33306E+00	7.67921E+11	5.67655E+15	1.48002E-03	-2.92973E+00
1.33697E+00	7.48135E+11	5.67655E+15	1.48114E-03	-2.92940E+00
1.34088E+00	7.28451E+11	5.67655E+15	1.48225E-03	-2.92909E+00
1.34479E+00	7.28451E+11	5.67655E+15	1.48336E-03	-2.92875E+00
1.34870E+00	7.28451E+11	5.67655E+15	1.48447E-03	-2.92843E+00
1.35260E+00	7.28451E+11	5.67655E+15	1.48559E-03	-2.92810E+00
1.35651E+00	7.08715E+11	5.67655E+15	1.48671E-03	-2.92777E+00
1.36042E+00	7.08715E+11	5.67655E+15	1.48784E-03	-2.92744E+00
1.36433E+00	7.08715E+11	5.67655E+15	1.48896E-03	-2.92712E+00
1.36824E+00	6.99505E+11	5.67655E+15	1.49009E-03	-2.92679E+00
1.37215E+00	6.79770E+11	5.67655E+15	1.49121E-03	-2.92646E+00
1.37606E+00	6.79770E+11	5.67655E+15	1.49234E-03	-2.92613E+00
1.37997E+00	6.79770E+11	5.67655E+15	1.49346E-03	-2.92581E+00
1.38388E+00	6.59597E+11	5.67655E+15	1.49459E-03	-2.92548E+00
1.38779E+00	6.59597E+11	5.67655E+15	1.49571E-03	-2.92515E+00
1.39170E+00	6.59597E+11	5.67655E+15	1.49684E-03	-2.92482E+00
1.39561E+00	6.59597E+11	5.67655E+15	1.49796E-03	-2.92450E+00
1.39952E+00	6.39861E+11	5.67655E+15	1.49909E-03	-2.92417E+00
1.40343E+00	6.39861E+11	5.67655E+15	1.50021E-03	-2.92385E+00
1.40733E+00	6.19687E+11	5.67655E+15	1.50155E-03	-2.92346E+00
1.41124E+00	6.19687E+11	5.67655E+15	1.50292E-03	-2.92306E+00
1.41515E+00	5.99514E+11	5.67655E+15	1.50429E-03	-2.92267E+00
1.41906E+00	5.99514E+11	5.67655E+15	1.50567E-03	-2.92227E+00
1.42297E+00	5.99514E+11	5.67655E+15	1.50704E-03	-2.92188E+00
1.42688E+00	5.79778E+11	5.67655E+15	1.50841E-03	-2.92148E+00
1.43079E+00	5.79778E+11	5.67655E+15	1.50979E-03	-2.92109E+00
1.43470E+00	5.79778E+11	5.67655E+15	1.51116E-03	-2.92069E+00
1.43861E+00	5.59605E+11	5.67655E+15	1.51253E-03	-2.92030E+00
1.44252E+00	5.59605E+11	5.67639E+15	1.51395E-03	-2.91999E+00
1.44643E+00	5.59605E+11	5.67623E+15	1.51537E-03	-2.91948E+00
1.45034E+00	5.39869E+11	5.67607E+15	1.51678E-03	-2.91909E+00
1.45425E+00	5.39869E+11	5.67592E+15	1.51819E-03	-2.91867E+00
1.45816E+00	5.39869E+11	5.67592E+15	1.51960E-03	-2.91827E+00
1.46206E+00	5.39869E+11	5.67592E+15	1.52103E-03	-2.91786E+00

EOF

TABLE 4 (continued)

SHOT 3-8

379 POINTS

134

TIME(MICROSEC)	CDEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
0.	3.59620E+11	9.41721E+13	0.	-8.31520E-01
3.90926E-03	3.99530E+11	1.04997E+14	1.47394E-01	-8.31520E-01
7.81853E-03	4.13564E+11	1.16191E+14	2.66387E-01	-5.74497E-01
1.17278E-02	4.52596E+11	1.28139E+14	3.62325E-01	-4.40902E-01
1.56371E-02	4.79785E+11	1.40454E+14	4.40740E-01	-3.55818E-01
1.95463E-02	4.99522E+11	1.53319E+14	5.04699E-01	-2.96968E-01
2.34556E-02	5.39863E+11	1.66857E+14	5.56500E-01	-2.54535E-01
2.73648E-02	5.79779E+11	1.81262E+14	5.97654E-01	-2.23550E-01
3.12741E-02	5.99514E+11	1.96449E+14	6.30227E-01	-2.00503E-01
3.51834E-02	6.39861E+11	2.12619E+14	6.55086E-01	-1.83702E-01
3.90926E-02	6.59597E+11	2.29654E+14	6.73882E-01	-1.71416E-01
4.30019E-02	6.88980E+11	2.47071E+14	6.89016E-01	-1.61771E-01
4.69112E-02	7.19679E+11	2.65260E+14	7.00111E-01	-1.54833E-01
5.08204E-02	7.59589E+11	2.84277E+14	7.07716E-01	-1.50141E-01
5.47297E-02	7.79762E+11	3.03977E+14	7.12763E-01	-1.47055E-01
5.86389E-02	8.07392E+11	3.24779E+14	7.14760E-01	-1.45840E-01
6.25482E-02	8.59581E+11	3.47129E+14	7.13324E-01	-1.46713E-01
6.64575E-02	8.79754E+11	3.70943E+14	7.09249E-01	-1.49201E-01
7.03667E-02	9.99490E+11	3.96794E+14	7.02045E-01	-1.53635E-01
7.42760E-02	9.39393E+11	4.24699E+14	6.92356E-01	-1.59671E-01
7.81853E-02	9.64835E+11	4.54611E+14	6.80843E-01	-1.66953E-01
8.20945E-02	9.99482E+11	4.87903E+14	6.66105E-01	-1.76457E-01
8.50038E-02	1.01965E+12	5.23014E+14	6.50979E-01	-1.86433E-01
8.99130E-02	1.05356E+12	5.62084E+14	6.33263E-01	-1.98416E-01
9.38223E-02	1.05955E+12	6.09363E+14	6.09527E-01	-2.15007E-01
9.77316E-02	1.09947E+12	6.67020E+14	5.80041E-01	-2.36541E-01
1.01641E-01	1.13938E+12	7.33031E+14	5.48919E-01	-2.60492E-01
1.05550E-01	1.15955E+12	8.08970E+14	5.08948E-01	-2.93327E-01
1.09459E-01	1.19947E+12	8.93392E+14	4.60881E-01	-3.36411E-01
1.13369E-01	1.20122E+12	9.86416E+14	4.17442E-01	-3.79404E-01
1.17278E-01	1.22096E+12	1.08921E+15	3.78417E-01	-4.22029E-01
1.21187E-01	1.24025E+12	1.19795E+15	3.43770E-01	-4.63732E-01
1.25096E-01	1.27972E+12	1.31181E+15	3.13951E-01	-5.03138E-01
1.29006E-01	1.27972E+12	1.37933E+15	2.98707E-01	-5.24755E-01
1.32915E-01	1.29945E+12	1.44488E+15	2.85069E-01	-5.45050E-01
1.36824E-01	1.29945E+12	1.49456E+15	2.75609E-01	-5.59707E-01
1.40733E-01	1.31913E+12	1.54745E+15	2.66205E-01	-5.74784E-01
1.44643E-01	1.31875E+12	1.60247E+15	2.57030E-01	-5.89932E-01
1.48552E-01	1.31875E+12	1.64653E+15	2.50215E-01	-6.01637E-01
1.52461E-01	1.35779E+12	1.69514E+15	2.43055E-01	-6.14295E-01
1.56371E-01	1.35779E+12	1.74414E+15	2.36239E-01	-6.26648E-01
1.60280E-01	1.35779E+12	1.79388E+15	2.29701E-01	-6.38837E-01
1.64189E-01	1.39638E+12	1.83841E+15	2.24148E-01	-6.49465E-01
1.68098E-01	1.39638E+12	1.88544E+15	2.18568E-01	-6.60413E-01
1.72008E-01	1.41612E+12	1.93357E+15	2.13138E-01	-6.71339E-01
1.75917E-01	1.43541E+12	1.97978E+15	2.08173E-01	-6.81576E-01
1.79826E-01	1.47401E+12	2.02572E+15	2.03463E-01	-6.91515E-01
1.83735E-01	1.47401E+12	2.07276E+15	1.98856E-01	-7.01461E-01
1.87645E-01	1.49330E+12	2.11877E+15	1.94547E-01	-7.10975E-01
1.91554E-01	1.53233E+12	2.16465E+15	1.90433E-01	-7.20258E-01
1.95463E-01	1.53233E+12	2.21149E+15	1.86409E-01	-7.29533E-01
1.99372E-01	1.55163E+12	2.25828E+15	1.82556E-01	-7.38604E-01
2.03282E-01	1.59022E+12	2.30401E+15	1.78942E-01	-7.47288E-01
2.07191E-01	1.59022E+12	2.35010E+15	1.75441E-01	-7.55869E-01
2.11100E-01	1.60075E+12	2.39724E+15	1.72011E-01	-7.64469E-01
2.15009E-01	1.61961E+12	2.44302E+15	1.68786E-01	-7.72658E-01
2.18919E-01	1.63408E+12	2.49008E+15	1.65608E-01	-7.80919E-01
2.22828E-01	1.66785E+12	2.53784E+15	1.62501E-01	-7.89144E-01
2.26737E-01	1.67355E+12	2.58398E+15	1.59609E-01	-7.96943E-01
2.30647E-01	1.69329E+12	2.63163E+15	1.56729E-01	-8.04951E-01
2.34556E-01	1.70688E+12	2.68029E+15	1.53893E-01	-8.12781E-01
2.38465E-01	1.74547E+12	2.72821E+15	1.51199E-01	-8.20451E-01
2.42374E-01	1.74547E+12	2.77592E+15	1.48609E-01	-8.27955E-01
2.46284E-01	1.75249E+12	2.82419E+15	1.46077E-01	-8.35418E-01
2.50193E-01	1.78451E+12	2.87232E+15	1.43638E-01	-8.42731E-01
2.54102E-01	1.81125E+12	2.91982E+15	1.41310E-01	-8.49827E-01
2.58011E-01	1.81125E+12	2.96762E+15	1.39042E-01	-8.56854E-01
2.61921E-01	1.84240E+12	3.01607E+15	1.36817E-01	-8.63860E-01
2.65830E-01	1.88143E+12	3.06495E+15	1.34644E-01	-8.70813E-01
2.69739E-01	1.88143E+12	3.11365E+15	1.32547E-01	-8.77630E-01
2.73648E-01	1.90073E+12	3.16282E+15	1.30495E-01	-8.84406E-01
2.77558E-01	1.92002E+12	3.21181E+15	1.28513E-01	-8.91053E-01
2.81467E-01	1.93932E+12	3.26080E+15	1.26591E-01	-8.97597E-01
2.85376E-01	1.93932E+12	3.30890E+15	1.24759E-01	-9.03928E-01
2.89285E-01	1.97935E+12	3.35674E+15	1.22989E-01	-9.10134E-01
2.93195E-01	1.97835E+12	3.40502E+15	1.21253E-01	-9.16308E-01
2.97104E-01	1.99765E+12	3.45303E+15	1.19576E-01	-9.22356E-01
3.01013E-01	2.01694E+12	3.50076E+15	1.17953E-01	-9.28291E-01
3.04923E-01	2.03624E+12	3.54834E+15	1.16379E-01	-9.34125E-01
3.08832E-01	2.05598E+12	3.59562E+15	1.14857E-01	-9.39843E-01

TABLE 4 (continued)

SHOT 3-9

379 POINTS

135

TIME (MICROSEC)	COEN (AMP/M2)	EDEN (ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
3.12741E-01	2.05598E+12	3.64445E+15	1.13326E-01	-9.45670E-01
3.16650E-01	2.07527E+12	3.69251E+15	1.11858E-01	-9.51333E-01
3.20560E-01	2.09457E+12	3.74036E+15	1.10435E-01	-9.56893E-01
3.24469E-01	2.11387E+12	3.79747E+15	1.09069E-01	-9.62299E-01
3.28378E-01	2.10203E+12	3.83574E+15	1.07703E-01	-9.67772E-01
3.32237E-01	2.12088E+12	3.88293E+15	1.06402E-01	-9.73050E-01
3.36197E-01	2.11387E+12	3.93054E+15	1.05120E-01	-9.78315E-01
3.40106E-01	2.13315E+12	3.97739E+15	1.03889E-01	-9.83430E-01
3.44015E-01	2.17220E+12	4.02541E+15	1.02657E-01	-9.88611E-01
3.47924E-01	2.17220E+12	4.07306E+15	1.01463E-01	-9.93692E-01
3.51934E-01	2.19143E+12	4.11995E+15	1.00315E-01	-9.98634E-01
3.55743E-01	2.19143E+12	4.16703E+15	9.91885E-02	-1.00354E+00
3.59652E-01	2.21079E+12	4.21354E+15	9.81003E-02	-1.00931E+00
3.63561E-01	2.23009E+12	4.26045E+15	9.70269E-02	-1.01311E+00
3.67471E-01	2.24982E+12	4.30696E+15	9.59599E-02	-1.01779E+00
3.71380E-01	2.24982E+12	4.35268E+15	9.49842E-02	-1.02235E+00
3.75289E-01	2.26912E+12	4.39878E+15	9.39953E-02	-1.02699E+00
3.79199E-01	2.28841E+12	4.44450E+15	9.30349E-02	-1.03135E+00
3.83108E-01	2.28841E+12	4.49007E+15	9.21175E-02	-1.03566E+00
3.87017E-01	2.30771E+12	4.53414E+15	9.12082E-02	-1.03997E+00
3.90926E-01	2.30771E+12	4.57885E+15	9.03238E-02	-1.04420E+00
3.94836E-01	2.32745E+12	4.62408E+15	8.94465E-02	-1.04844E+00
3.98745E-01	2.34674E+12	4.66851E+15	8.86015E-02	-1.05256E+00
4.02654E-01	2.34674E+12	4.71248E+15	8.77808E-02	-1.05660E+00
4.06563E-01	2.36604E+12	4.75681E+15	8.69689E-02	-1.06064E+00
4.10473E-01	2.34674E+12	4.80113E+15	8.61719E-02	-1.06463E+00
4.14382E-01	2.36955E+12	4.84382E+15	8.54185E-02	-1.06845E+00
4.18291E-01	2.36955E+12	4.88766E+15	8.46579E-02	-1.07233E+00
4.22200E-01	2.40200E+12	4.92991E+15	8.39379E-02	-1.07604E+00
4.26110E-01	2.38534E+12	4.97293E+15	8.32172E-02	-1.07979E+00
4.30019E-01	2.40463E+12	5.01546E+15	8.25170E-02	-1.08346E+00
4.33928E-01	2.40463E+12	5.05715E+15	8.18421E-02	-1.08702E+00
4.37837E-01	2.42437E+12	5.09832E+15	8.11864E-02	-1.09052E+00
4.41747E-01	2.44365E+12	5.13950E+15	8.05412E-02	-1.09398E+00
4.45656E-01	2.44365E+12	5.18048E+15	7.99094E-02	-1.09740E+00
4.49565E-01	2.44365E+12	5.22198E+15	7.92795E-02	-1.10084E+00
4.53474E-01	2.46295E+12	5.26263E+15	7.86722E-02	-1.10418E+00
4.57384E-01	2.44365E+12	5.30330E+15	7.80740E-02	-1.10749E+00
4.61293E-01	2.46295E+12	5.34227E+15	7.75096E-02	-1.11054E+00
4.65202E-01	2.48225E+12	5.38238E+15	7.69370E-02	-1.11386E+00
4.69112E-01	2.48225E+12	5.42165E+15	7.63845E-02	-1.11699E+00
4.73021E-01	2.50155E+12	5.46120E+15	7.59357E-02	-1.12013E+00
4.76930E-01	2.50155E+12	5.49990E+15	7.53066E-02	-1.12317E+00
4.80839E-01	2.52123E+12	5.53773E+15	7.47964E-02	-1.12612E+00
4.84749E-01	2.52123E+12	5.57557E+15	7.42932E-02	-1.12905E+00
4.88658E-01	2.52123E+12	5.61254E+15	7.38081E-02	-1.13190E+00
4.92567E-01	2.52217E+12	5.64960E+15	7.33282E-02	-1.13473E+00
4.96476E-01	2.52217E+12	5.68686E+15	7.29521E-02	-1.13756E+00
5.00386E-01	2.54059E+12	5.72384E+15	7.23856E-02	-1.14035E+00
5.04295E-01	2.54146E+12	5.75911E+15	7.19466E-02	-1.14299E+00
5.08204E-01	2.55988E+12	5.79463E+15	7.15096E-02	-1.14564E+00
5.12113E-01	2.55988E+12	5.83016E+15	7.10780E-02	-1.14826E+00
5.16023E-01	2.55988E+12	5.86569E+15	7.06516E-02	-1.15088E+00
5.19932E-01	2.55988E+12	5.90036E+15	7.02406E-02	-1.15341E+00
5.23841E-01	2.55988E+12	5.93502E+15	6.98341E-02	-1.15593E+00
5.27750E-01	2.57918E+12	5.96882E+15	6.94423E-02	-1.15838E+00
5.31660E-01	2.57918E+12	6.00199E+15	6.90622E-02	-1.16076E+00
5.35569E-01	2.56032E+12	6.03516E+15	6.86862E-02	-1.16313E+00
5.39478E-01	2.56032E+12	6.06809E+15	6.83171E-02	-1.16547E+00
5.43388E-01	2.57962E+12	6.10127E+15	6.79492E-02	-1.16782E+00
5.47297E-01	2.57962E+12	6.13444E+15	6.75854E-02	-1.17015E+00
5.51206E-01	2.57962E+12	6.16589E+15	6.72442E-02	-1.17235E+00
5.55115E-01	2.57962E+12	6.19819E+15	6.68974E-02	-1.17459E+00
5.59025E-01	2.57962E+12	6.23044E+15	6.65546E-02	-1.17682E+00
5.62934E-01	2.57962E+12	6.26210E+15	6.62217E-02	-1.17900E+00
5.66843E-01	2.59848E+12	6.29175E+15	6.59130E-02	-1.18103E+00
5.70752E-01	2.59848E+12	6.32253E+15	6.55957E-02	-1.18312E+00
5.74662E-01	2.57962E+12	6.35218E+15	6.52925E-02	-1.18514E+00
5.78571E-01	2.59848E+12	6.38072E+15	6.50034E-02	-1.18706E+00
5.82480E-01	2.59848E+12	6.40953E+15	6.47142E-02	-1.18900E+00
5.86389E-01	2.59848E+12	6.43828E+15	6.44281E-02	-1.19092E+00
5.90299E-01	2.59848E+12	6.46773E+15	6.41376E-02	-1.19289E+00
5.94208E-01	2.59848E+12	6.49559E+15	6.38654E-02	-1.19473E+00
5.98117E-01	2.61734E+12	6.52274E+15	6.36024E-02	-1.19653E+00
6.02026E-01	2.59848E+12	6.55080E+15	6.33328E-02	-1.19837E+00
6.05936E-01	2.61777E+12	6.57699E+15	6.30835E-02	-1.20008E+00
6.09845E-01	2.59848E+12	6.60485E+15	6.28202E-02	-1.20190E+00
6.13754E-01	2.57918E+12	6.63191E+15	6.25677E-02	-1.20355E+00
6.17664E-01	2.59005E+12	6.65877E+15	6.23172E-02	-1.20539E+00
6.21573E-01	2.59848E+12	6.68393E+15	6.20854E-02	-1.20701E+00

TABLE 4 (continued)

SHOT 3-8

379 POINTS

136

TIME (MICROSEC)	COEN (AMP/M2)	EDEN (ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
5.25482E-01	2.59949E+12	6.70999E+15	6.19468E-02	-1.20959E+00
6.29391E-01	2.58005E+12	6.73515E+15	6.16191E-02	-1.21029E+00
5.33301E-01	2.59848E+12	6.76121E+15	6.13829E-02	-1.21195E+00
6.37210E-01	2.61777E+12	6.78519E+15	6.11592E-02	-1.21354E+00
6.41119E-01	2.61734E+12	6.80958E+15	6.09513E-02	-1.21502E+00
5.45028E-01	2.59848E+12	6.83348E+15	6.07403E-02	-1.21652E+00
6.48938E-01	2.59848E+12	6.85738E+15	6.05309E-02	-1.21802E+00
5.52847E-01	2.59848E+12	6.88060E+15	6.03289E-02	-1.21948E+00
6.56756E-01	2.59848E+12	6.90273E+15	6.01376E-02	-1.22085E+00
5.60665E-01	2.59848E+12	6.92537E+15	5.99432E-02	-1.22226E+00
5.64575E-01	2.59848E+12	6.94823E+15	5.97482E-02	-1.22368E+00
6.68484E-01	2.59848E+12	6.97020E+15	5.95621E-02	-1.22503E+00
6.72393E-01	2.59848E+12	6.99216E+15	5.93771E-02	-1.22638E+00
6.76302E-01	2.57919E+12	7.01326E+15	5.92007E-02	-1.22767E+00
6.80212E-01	2.57919E+12	7.03450E+15	5.90237E-02	-1.22897E+00
6.84121E-01	2.56032E+12	7.05575E+15	5.88478E-02	-1.23027E+00
6.88030E-01	2.56032E+12	7.07700E+15	5.86730E-02	-1.23156E+00
6.91940E-01	2.56032E+12	7.09808E+15	5.85005E-02	-1.23284E+00
6.95849E-01	2.56032E+12	7.11741E+15	5.83435E-02	-1.23401E+00
6.99758E-01	2.54145E+12	7.13762E+15	5.81801E-02	-1.23523E+00
7.03667E-01	2.54145E+12	7.15753E+15	5.80201E-02	-1.23642E+00
7.07577E-01	2.54145E+12	7.17758E+15	5.78598E-02	-1.23762E+00
7.11486E-01	2.54145E+12	7.19663E+15	5.77095E-02	-1.23876E+00
7.15395E-01	2.54145E+12	7.21467E+15	5.75660E-02	-1.23993E+00
7.19304E-01	2.55988E+12	7.23371E+15	5.74162E-02	-1.24097E+00
7.23214E-01	2.55988E+12	7.25175E+15	5.72752E-02	-1.24203E+00
7.27123E-01	2.55988E+12	7.26979E+15	5.71349E-02	-1.24310E+00
7.31032E-01	2.54059E+12	7.28769E+15	5.69961E-02	-1.24415E+00
7.34941E-01	2.54059E+12	7.30559E+15	5.68579E-02	-1.24521E+00
7.38851E-01	2.54059E+12	7.32166E+15	5.67345E-02	-1.24615E+00
7.42760E-01	2.54059E+12	7.33809E+15	5.66099E-02	-1.24712E+00
7.46669E-01	2.52129E+12	7.35501E+15	5.64802E-02	-1.24810E+00
7.50578E-01	2.50331E+12	7.37156E+15	5.63548E-02	-1.24907E+00
7.54488E-01	2.48401E+12	7.38762E+15	5.62338E-02	-1.25000E+00
7.58397E-01	2.50331E+12	7.40292E+15	5.61197E-02	-1.25088E+00
7.62306E-01	2.48401E+12	7.41842E+15	5.60031E-02	-1.25179E+00
7.66216E-01	2.48401E+12	7.43436E+15	5.58945E-02	-1.25271E+00
7.70125E-01	2.46515E+12	7.44946E+15	5.57726E-02	-1.25358E+00
7.74034E-01	2.46515E+12	7.46444E+15	5.56621E-02	-1.25444E+00
7.77943E-01	2.44585E+12	7.47931E+15	5.55529E-02	-1.25529E+00
7.81853E-01	2.44585E+12	7.49417E+15	5.54440E-02	-1.25615E+00
7.85762E-01	2.44585E+12	7.50821E+15	5.53415E-02	-1.25695E+00
7.89671E-01	2.46295E+12	7.52223E+15	5.52395E-02	-1.25775E+00
7.93580E-01	2.44365E+12	7.53526E+15	5.51379E-02	-1.25855E+00
7.97490E-01	2.44365E+12	7.55030E+15	5.50365E-02	-1.25935E+00
8.01399E-01	2.44365E+12	7.56340E+15	5.49423E-02	-1.26009E+00
8.05308E-01	2.44365E+12	7.57540E+15	5.48491E-02	-1.26083E+00
8.09217E-01	2.42655E+12	7.58896E+15	5.47595E-02	-1.26154E+00
8.13127E-01	2.42655E+12	7.60194E+15	5.46671E-02	-1.26227E+00
8.17036E-01	2.40770E+12	7.61412E+15	5.45809E-02	-1.26296E+00
8.20945E-01	2.38841E+12	7.62599E+15	5.44899E-02	-1.26369E+00
8.24854E-01	2.38841E+12	7.63901E+15	5.44053E-02	-1.26436E+00
8.28764E-01	2.38841E+12	7.65013E+15	5.43274E-02	-1.26498E+00
8.32673E-01	2.38534E+12	7.66123E+15	5.42498E-02	-1.26550E+00
8.36582E-01	2.38534E+12	7.67322E+15	5.41660E-02	-1.26627E+00
8.40492E-01	2.38841E+12	7.68432E+15	5.40888E-02	-1.26699E+00
8.44401E-01	2.36955E+12	7.69533E+15	5.40124E-02	-1.26751E+00
8.48310E-01	2.35025E+12	7.70561E+15	5.39413E-02	-1.26808E+00
8.52219E-01	2.35025E+12	7.71560E+15	5.38655E-02	-1.26869E+00
8.56129E-01	2.34674E+12	7.72749E+15	5.37906E-02	-1.26929E+00
8.60038E-01	2.34674E+12	7.73754E+15	5.37217E-02	-1.26985E+00
8.63947E-01	2.32745E+12	7.74836E+15	5.36476E-02	-1.27045E+00
8.67856E-01	2.31648E+12	7.75971E+15	5.35770E-02	-1.27102E+00
8.71766E-01	2.29762E+12	7.76796E+15	5.35142E-02	-1.27153E+00
8.75675E-01	2.29324E+12	7.77722E+15	5.34515E-02	-1.27204E+00
8.79584E-01	2.31210E+12	7.79567E+15	5.33876E-02	-1.27256E+00
8.83493E-01	2.29324E+12	7.79579E+15	5.33262E-02	-1.27306E+00
8.87403E-01	2.27394E+12	7.80407E+15	5.32705E-02	-1.27351E+00
8.91312E-01	2.28841E+12	7.81311E+15	5.32099E-02	-1.27401E+00
8.95221E-01	2.26912E+12	7.82130E+15	5.31551E-02	-1.27446E+00
8.99130E-01	2.24982E+12	7.82974E+15	5.31056E-02	-1.27496E+00
9.03040E-01	2.23579E+12	7.83767E+15	5.30460E-02	-1.27535E+00
9.06949E-01	2.23579E+12	7.84512E+15	5.29967E-02	-1.27575E+00
9.10858E-01	2.23579E+12	7.85323E+15	5.29429E-02	-1.27619E+00
9.14768E-01	2.23009E+12	7.86040E+15	5.28956E-02	-1.27659E+00
9.18677E-01	2.23009E+12	7.86694E+15	5.28526E-02	-1.27693E+00
9.22586E-01	2.21079E+12	7.87498E+15	5.27996E-02	-1.27737E+00
9.26495E-01	2.19763E+12	7.88295E+15	5.27471E-02	-1.27780E+00
9.30405E-01	2.17834E+12	7.88946E+15	5.27045E-02	-1.27815E+00
9.34314E-01	2.17834E+12	7.89596E+15	5.26528E-02	-1.27850E+00

TABLE 4 (continued)

SHOT 3-8

379 POINTS

137

TIME(MICROSEC)	COEN (A4P/M2)	EOEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
9.38223E-01	2.15290E+12	7.90166E+15	5.26251E-02	-1.27891E+00
9.42132E-01	2.15290E+12	7.90721E+15	5.25892E-02	-1.27910E+00
9.46042E-01	2.15290E+12	7.91270E+15	5.25536E-02	-1.27940E+00
9.49951E-01	2.15290E+12	7.91758E+15	5.25223E-02	-1.27966E+00
9.53860E-01	2.13315E+12	7.92241E+15	5.24912E-02	-1.27991E+00
9.57769E-01	2.13315E+12	7.92720E+15	5.24605E-02	-1.28017E+00
9.61679E-01	2.10203E+12	7.93194E+15	5.24301E-02	-1.28042E+00
9.65588E-01	2.11387E+12	7.93735E+15	5.23953E-02	-1.28071E+00
9.69497E-01	2.09457E+12	7.94136E+15	5.23699E-02	-1.28092E+00
9.73406E-01	2.09457E+12	7.94595E+15	5.23406E-02	-1.28116E+00
9.77316E-01	2.05598E+12	7.95058E+15	5.23111E-02	-1.28141E+00
9.81225E-01	2.03624E+12	7.95502E+15	5.22829E-02	-1.28154E+00
9.85134E-01	2.00642E+12	7.95947E+15	5.22547E-02	-1.28187E+00
9.89044E-01	1.98712E+12	7.96269E+15	5.22345E-02	-1.28204E+00
9.92953E-01	2.01594E+12	7.96586E+15	5.22147E-02	-1.28221E+00
9.96862E-01	1.99765E+12	7.96902E+15	5.21949E-02	-1.28237E+00
1.00077E+00	1.99765E+12	7.97295E+15	5.21709E-02	-1.28257E+00
1.00468E+00	1.97935E+12	7.97659E+15	5.21473E-02	-1.28277E+00
1.00859E+00	1.95862E+12	7.98033E+15	5.21238E-02	-1.28296E+00
1.01250E+00	1.95862E+12	7.98292E+15	5.21085E-02	-1.28309E+00
1.01641E+00	1.93011E+12	7.98594E+15	5.20891E-02	-1.28325E+00
1.02032E+00	1.90073E+12	7.98902E+15	5.20699E-02	-1.28341E+00
1.02423E+00	1.91081E+12	7.99154E+15	5.20545E-02	-1.28354E+00
1.02814E+00	1.89195E+12	7.99398E+15	5.20396E-02	-1.28367E+00
1.03205E+00	1.89195E+12	7.99639E+15	5.20248E-02	-1.28379E+00
1.03595E+00	1.86169E+12	7.99871E+15	5.20107E-02	-1.28391E+00
1.03986E+00	1.83450E+12	8.00050E+15	5.20000E-02	-1.28400E+00
1.04377E+00	1.83450E+12	8.00286E+15	5.19856E-02	-1.28412E+00
1.04768E+00	1.84240E+12	8.00522E+15	5.19712E-02	-1.28424E+00
1.05159E+00	1.80380E+12	8.00697E+15	5.19608E-02	-1.28432E+00
1.05550E+00	1.80380E+12	8.00927E+15	5.19468E-02	-1.28444E+00
1.05941E+00	1.80380E+12	8.01097E+15	5.19366E-02	-1.28453E+00
1.06332E+00	1.80380E+12	8.01211E+15	5.19302E-02	-1.28458E+00
1.06723E+00	1.78451E+12	8.01379E+15	5.19202E-02	-1.28466E+00
1.07114E+00	1.76477E+12	8.01545E+15	5.19104E-02	-1.28475E+00
1.07505E+00	1.76477E+12	8.01659E+15	5.19039E-02	-1.28480E+00
1.07896E+00	1.74547E+12	8.01716E+15	5.19011E-02	-1.28482E+00
1.08287E+00	1.72619E+12	8.01826E+15	5.18949E-02	-1.28488E+00
1.08678E+00	1.72619E+12	8.01880E+15	5.18924E-02	-1.28490E+00
1.09068E+00	1.70688E+12	8.01934E+15	5.18898E-02	-1.28492E+00
1.09459E+00	1.70688E+12	8.01987E+15	5.18874E-02	-1.28494E+00
1.09850E+00	1.68758E+12	8.02093E+15	5.18817E-02	-1.28499E+00
1.10241E+00	1.56259E+12	8.02146E+15	5.18796E-02	-1.28501E+00
1.10632E+00	1.54329E+12	8.02198E+15	5.18771E-02	-1.28502E+00
1.11023E+00	1.54329E+12	8.02249E+15	5.18749E-02	-1.28504E+00
1.11414E+00	1.62443E+12	8.02301E+15	5.18727E-02	-1.28506E+00
1.11805E+00	1.50514E+12	8.02351E+15	5.18705E-02	-1.28508E+00
1.12196E+00	1.50514E+12	8.02351E+15	5.18716E-02	-1.28507E+00
1.12587E+00	1.50514E+12	8.02351E+15	5.18728E-02	-1.28506E+00
1.12978E+00	1.58629E+12	8.02302E+15	5.18771E-02	-1.28502E+00
1.13369E+00	1.56598E+12	8.02302E+15	5.18782E-02	-1.28502E+00
1.13760E+00	1.56698E+12	8.02253E+15	5.18824E-02	-1.28499E+00
1.14150E+00	1.54812E+12	8.02205E+15	5.18867E-02	-1.28494E+00
1.14541E+00	1.53233E+12	8.02158E+15	5.18910E-02	-1.28491E+00
1.14932E+00	1.52983E+12	8.02084E+15	5.18997E-02	-1.28494E+00
1.15323E+00	1.50953E+12	8.02017E+15	5.19034E-02	-1.28480E+00
1.15714E+00	1.49330E+12	8.01970E+15	5.19081E-02	-1.28476E+00
1.16105E+00	1.49330E+12	8.01924E+15	5.19127E-02	-1.28473E+00
1.16496E+00	1.47401E+12	8.01878E+15	5.19173E-02	-1.28459E+00
1.16887E+00	1.45471E+12	8.01787E+15	5.19249E-02	-1.28452E+00
1.17278E+00	1.43541E+12	8.01697E+15	5.19324E-02	-1.28456E+00
1.17669E+00	1.43541E+12	8.01608E+15	5.19398E-02	-1.28450E+00
1.18060E+00	1.41612E+12	8.01519E+15	5.19472E-02	-1.28444E+00
1.18451E+00	1.41612E+12	8.01430E+15	5.19546E-02	-1.28438E+00
1.18842E+00	1.39538E+12	8.01343E+15	5.19619E-02	-1.28431E+00
1.19233E+00	1.37709E+12	8.01212E+15	5.19720E-02	-1.28423E+00
1.19623E+00	1.35779E+12	8.01083E+15	5.19820E-02	-1.28415E+00
1.20014E+00	1.35779E+12	8.00958E+15	5.19921E-02	-1.28406E+00
1.20405E+00	1.35779E+12	8.00832E+15	5.20023E-02	-1.28398E+00
1.20796E+00	1.33849E+12	8.00707E+15	5.20124E-02	-1.28389E+00
1.21187E+00	1.33849E+12	8.00541E+15	5.20252E-02	-1.28379E+00
1.21578E+00	1.31875E+12	8.00380E+15	5.20377E-02	-1.28368E+00
1.21969E+00	1.31875E+12	8.00140E+15	5.20527E-02	-1.28356E+00
1.22360E+00	1.29946E+12	8.00024E+15	5.20649E-02	-1.28345E+00
1.22751E+00	1.27972E+12	7.99823E+15	5.20799E-02	-1.28333E+00
1.23142E+00	1.27972E+12	7.99530E+15	5.20945E-02	-1.28321E+00
1.23533E+00	1.27972E+12	7.99439E+15	5.21089E-02	-1.28309E+00
1.23924E+00	1.25955E+12	7.99253E+15	5.21231E-02	-1.28297E+00
1.24315E+00	1.25955E+12	7.99069E+15	5.21371E-02	-1.28285E+00
1.24705E+00	1.23937E+12	7.98886E+15	5.21510E-02	-1.28274E+00

TABLE 4 (continued)

SHOT 3-8

379 POINTS

138

TIME(MICROSEC)	CDEN (A4P/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
1.25096E+00	1.23337E+12	7.98703E+15	5.21658E-02	-1.28261E+00
1.25487E+00	1.21964E+12	7.98523E+15	5.21805E-02	-1.28249E+00
1.25878E+00	1.19947E+12	7.98343E+15	5.21953E-02	-1.28237E+00
1.26269E+00	1.19947E+12	7.98163E+15	5.22101E-02	-1.28225E+00
1.26660E+00	1.15956E+12	7.97915E+15	5.22294E-02	-1.28208E+00
1.27051E+00	1.15955E+12	7.97713E+15	5.22456E-02	-1.28195E+00
1.27442E+00	1.15955E+12	7.97510E+15	5.22619E-02	-1.28181E+00
1.27833E+00	1.15955E+12	7.97340E+15	5.22761E-02	-1.28170E+00
1.28224E+00	1.11965E+12	7.97106E+15	5.22945E-02	-1.28154E+00
1.28615E+00	1.09947E+12	7.96873E+15	5.23128E-02	-1.28139E+00
1.29006E+00	1.07974E+12	7.96672E+15	5.23290E-02	-1.28126E+00
1.29397E+00	1.05955E+12	7.96476E+15	5.23449E-02	-1.28113E+00
1.29788E+00	1.05955E+12	7.96280E+15	5.23609E-02	-1.28099E+00
1.30178E+00	1.05955E+12	7.96088E+15	5.23770E-02	-1.28086E+00
1.30569E+00	1.03983E+12	7.95900E+15	5.23934E-02	-1.28072E+00
1.30960E+00	1.03983E+12	7.95743E+15	5.24077E-02	-1.28060E+00
1.31351E+00	1.03983E+12	7.95590E+15	5.24217E-02	-1.28049E+00
1.31742E+00	1.02404E+12	7.95436E+15	5.24358E-02	-1.28037E+00
1.32133E+00	1.00431E+12	7.95256E+15	5.24517E-02	-1.28024E+00
1.32524E+00	1.00431E+12	7.95110E+15	5.24653E-02	-1.28013E+00
1.32915E+00	9.84571E+11	7.94968E+15	5.24787E-02	-1.28002E+00
1.33306E+00	9.64835E+11	7.94851E+15	5.24904E-02	-1.27992E+00
1.33697E+00	9.54835E+11	7.94677E+15	5.25059E-02	-1.27979E+00
1.34088E+00	9.64835E+11	7.94563E+15	5.25174E-02	-1.27970E+00
1.34479E+00	9.45100E+11	7.94450E+15	5.25289E-02	-1.27960E+00
1.34870E+00	9.45100E+11	7.94308E+15	5.25422E-02	-1.27949E+00
1.35260E+00	9.25365E+11	7.94200E+15	5.25534E-02	-1.27940E+00
1.35651E+00	9.05630E+11	7.94093E+15	5.25649E-02	-1.27930E+00
1.36042E+00	8.85894E+11	7.93988E+15	5.25761E-02	-1.27921E+00
1.36433E+00	8.85894E+11	7.93853E+15	5.25894E-02	-1.27910E+00
1.36824E+00	8.85894E+11	7.93722E+15	5.26024E-02	-1.27899E+00
1.37215E+00	8.66159E+11	7.93616E+15	5.26137E-02	-1.27890E+00
1.37606E+00	8.66159E+11	7.93488E+15	5.26265E-02	-1.27880E+00
1.37997E+00	8.46424E+11	7.93360E+15	5.26393E-02	-1.27869E+00
1.38388E+00	8.46424E+11	7.93236E+15	5.26518E-02	-1.27859E+00
1.38779E+00	8.39845E+11	7.93115E+15	5.26642E-02	-1.27848E+00
1.39170E+00	8.39845E+11	7.92994E+15	5.26766E-02	-1.27838E+00
1.39561E+00	8.19672E+11	7.92876E+15	5.26887E-02	-1.27828E+00
1.39952E+00	8.19672E+11	7.92759E+15	5.27008E-02	-1.27818E+00
1.40343E+00	8.19672E+11	7.92618E+15	5.27145E-02	-1.27807E+00
1.40733E+00	7.79762E+11	7.92503E+15	5.27277E-02	-1.27796E+00
1.41124E+00	7.79762E+11	7.92399E+15	5.27411E-02	-1.27785E+00
1.41515E+00	7.79762E+11	7.92278E+15	5.27542E-02	-1.27774E+00
1.41906E+00	7.79762E+11	7.92168E+15	5.27674E-02	-1.27763E+00
1.42297E+00	7.59589E+11	7.92057E+15	5.27806E-02	-1.27753E+00
1.42688E+00	7.59589E+11	7.91950E+15	5.27935E-02	-1.27742E+00
1.43079E+00	7.39853E+11	7.91843E+15	5.28064E-02	-1.27731E+00
1.43470E+00	7.39853E+11	7.91739E+15	5.28191E-02	-1.27721E+00
1.43861E+00	7.19579E+11	7.91635E+15	5.28318E-02	-1.27710E+00
1.44252E+00	6.99505E+11	7.91528E+15	5.28448E-02	-1.27700E+00
1.44643E+00	6.99505E+11	7.91431E+15	5.28571E-02	-1.27690E+00
1.45034E+00	6.79770E+11	7.91315E+15	5.28706E-02	-1.27679E+00
1.45425E+00	6.79770E+11	7.91218E+15	5.28829E-02	-1.27668E+00
1.45816E+00	6.79770E+11	7.91124E+15	5.28972E-02	-1.27657E+00
1.46206E+00	6.59597E+11	7.91031E+15	5.29134E-02	-1.27643E+00
1.46597E+00	6.59597E+11	7.90941E+15	5.29294E-02	-1.27630E+00
1.46988E+00	6.59597E+11	7.90851E+15	5.29454E-02	-1.27617E+00
1.47379E+00	6.39861E+11	7.90743E+15	5.29625E-02	-1.27603E+00
1.47770E+00	6.39861E+11	7.90574E+15	5.29771E-02	-1.27591E+00

EOF

TABLE 4 (continued)

SHOT 3-9

393 POINTS

139

TIME (MICROSEC)	CDEN (A4P/M2)	EDEN (ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
0.	3.79794E+11	9.66292E+13	0.	-3.16315E+00
3.90926E-03	3.99530E+11	1.10575E+14	6.86833E-04	-3.16315E+00
7.81853E-03	4.39377E+11	1.25400E+14	1.21127E-03	-2.91676E+00
1.17278E-02	4.79786E+11	1.41122E+14	1.61449E-03	-2.79196E+00
1.56371E-02	5.11801E+11	1.57751E+14	1.92574E-03	-2.71540E+00
1.95463E-02	5.51272E+11	1.75546E+14	2.16317E-03	-2.66491E+00
2.34556E-02	5.79773E+11	1.94251E+14	2.34584E-03	-2.62970E+00
2.73648E-02	6.19587E+11	2.13126E+14	2.49443E-03	-2.60303E+00
3.12741E-02	6.59597E+11	2.33369E+14	2.60349E-03	-2.58444E+00
3.51834E-02	6.99505E+11	2.54825E+14	2.69232E-03	-2.57149E+00
3.90926E-02	7.39853E+11	2.76741E+14	2.74432E-03	-2.56157E+00
4.30019E-02	7.79782E+11	3.00013E+14	2.79455E-03	-2.55524E+00
4.69112E-02	8.19672E+11	3.24466E+14	2.80880E-03	-2.55148E+00
5.08204E-02	8.27127E+11	3.50557E+14	2.81640E-03	-2.55031E+00
5.47297E-02	8.99490E+11	3.77842E+14	2.81402E-03	-2.55067E+00
5.86389E-02	9.39339E+11	4.08511E+14	2.78867E-03	-2.55460E+00
6.25482E-02	9.59573E+11	4.41588E+14	2.75115E-03	-2.56049E+00
6.64575E-02	1.00431E+12	4.77531E+14	2.70369E-03	-2.56504E+00
7.03567E-02	1.03983E+12	5.16346E+14	2.64753E-03	-2.57716E+00
7.42760E-02	1.07974E+12	5.58548E+14	2.59346E-03	-2.58780E+00
7.81853E-02	1.09947E+12	6.05542E+14	2.50798E-03	-2.60068E+00
8.20945E-02	1.15955E+12	6.57208E+14	2.42675E-03	-2.61497E+00
8.60038E-02	1.18148E+12	7.14757E+14	2.33762E-03	-2.63123E+00
8.99130E-02	1.21964E+12	7.80863E+14	2.23698E-03	-2.65034E+00
9.38223E-02	1.25955E+12	8.57881E+14	2.12468E-03	-2.67271E+00
9.77316E-02	1.27972E+12	9.46292E+14	2.00643E-03	-2.69758E+00
1.01641E-01	1.29946E+12	1.04357E+15	1.89217E-03	-2.72304E+00
1.05550E-01	1.33849E+12	1.15430E+15	1.78992E-03	-2.74717E+00
1.09459E-01	1.37708E+12	1.27893E+15	1.70552E-03	-2.76814E+00
1.13369E-01	1.39638E+12	1.41535E+15	1.62248E-03	-2.78982E+00
1.17278E-01	1.41787E+12	1.49296E+15	1.61524E-03	-2.79176E+00
1.21187E-01	1.41787E+12	1.57291E+15	1.60634E-03	-2.79416E+00
1.25096E-01	1.41787E+12	1.65390E+15	1.59730E-03	-2.79661E+00
1.29006E-01	1.43717E+12	1.71930E+15	1.60350E-03	-2.79493E+00
1.32915E-01	1.47401E+12	1.78601E+15	1.60808E-03	-2.79359E+00
1.36824E-01	1.47664E+12	1.85683E+15	1.60875E-03	-2.79351E+00
1.40733E-01	1.47664E+12	1.92734E+15	1.63963E-03	-2.79327E+00
1.44643E-01	1.51611E+12	1.98986E+15	1.61692E-03	-2.79131E+00
1.48552E-01	1.53594E+12	2.05450E+15	1.62208E-03	-2.78993E+00
1.52461E-01	1.54812E+12	2.11859E+15	1.62735E-03	-2.78952E+00
1.56371E-01	1.56698E+12	2.17900E+15	1.63739E-03	-2.78585E+00
1.60280E-01	1.50995E+12	2.24193E+15	1.66657E-03	-2.77818E+00
1.64189E-01	1.54855E+12	2.30425E+15	1.69459E-03	-2.77094E+00
1.68098E-01	1.66735E+12	2.36497E+15	1.72231E-03	-2.76389E+00
1.72008E-01	1.70688E+12	2.42633E+15	1.74818E-03	-2.75741E+00
1.75917E-01	1.70638E+12	2.48899E+15	1.77184E-03	-2.75158E+00
1.79826E-01	1.74547E+12	2.55043E+15	1.79520E-03	-2.74589E+00
1.83735E-01	1.78451E+12	2.61187E+15	1.81746E-03	-2.74054E+00
1.87645E-01	1.78451E+12	2.67499E+15	1.83755E-03	-2.73576E+00
1.91554E-01	1.82311E+12	2.73827E+15	1.85660E-03	-2.73128E+00
1.95463E-01	1.84240E+12	2.80078E+15	1.87530E-03	-2.72633E+00
1.99372E-01	1.88143E+12	2.86369E+15	1.89293E-03	-2.72287E+00
2.03282E-01	1.90073E+12	2.92806E+15	1.90884E-03	-2.71923E+00
2.07191E-01	1.92002E+12	2.99105E+15	1.92495E-03	-2.71558E+00
2.11100E-01	1.95862E+12	3.05463E+15	1.94355E-03	-2.71140E+00
2.15009E-01	1.97835E+12	3.11901E+15	1.96178E-03	-2.70735E+00
2.18919E-01	1.97747E+12	3.18388E+15	1.97897E-03	-2.70356E+00
2.22828E-01	2.01513E+12	3.24829E+15	1.99577E-03	-2.69989E+00
2.26737E-01	2.02791E+12	3.31274E+15	2.01188E-03	-2.69640E+00
2.30647E-01	2.07527E+12	3.37736E+15	2.02727E-03	-2.69309E+00
2.34556E-01	2.08711E+12	3.44243E+15	2.04182E-03	-2.68998E+00
2.38465E-01	2.10641E+12	3.50707E+15	2.05608E-03	-2.68696E+00
2.42374E-01	2.13315E+12	3.57294E+15	2.06911E-03	-2.68422E+00
2.46284E-01	2.17220E+12	3.63906E+15	2.08153E-03	-2.68162E+00
2.50193E-01	2.19149E+12	3.70542E+15	2.09337E-03	-2.67915E+00
2.54102E-01	2.20509E+12	3.77109E+15	2.10518E-03	-2.67671E+00
2.58011E-01	2.21073E+12	3.83705E+15	2.11642E-03	-2.67440E+00
2.61921E-01	2.26429E+12	3.90434E+15	2.12529E-03	-2.67258E+00
2.65830E-01	2.26429E+12	3.97004E+15	2.13340E-03	-2.67093E+00
2.69739E-01	2.30771E+12	4.03548E+15	2.14139E-03	-2.66930E+00
2.73648E-01	2.32745E+12	4.10251E+15	2.14829E-03	-2.66791E+00
2.77558E-01	2.34674E+12	4.16955E+15	2.15497E-03	-2.66656E+00
2.81467E-01	2.36504E+12	4.23603E+15	2.16172E-03	-2.66520E+00
2.85376E-01	2.40463E+12	4.30303E+15	2.16800E-03	-2.66394E+00
2.89285E-01	2.42437E+12	4.37003E+15	2.17409E-03	-2.66272E+00
2.93195E-01	2.42437E+12	4.43606E+15	2.18046E-03	-2.66145E+00
2.97104E-01	2.44365E+12	4.50176E+15	2.18682E-03	-2.66019E+00
3.01013E-01	2.48225E+12	4.56844E+15	2.19252E-03	-2.65906E+00
3.04923E-01	2.48225E+12	4.63510E+15	2.19806E-03	-2.65796E+00
3.08832E-01	2.52129E+12	4.70081E+15	2.20390E-03	-2.65681E+00

TABLE 4 (continued)

SHOT 3-9

383 POINTS

140

TIME(MICROSEC)	COEN (A4P/M2)	EOEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
3.12741E-01	2.54459E+12	4.76598E+15	2.20858E-03	-2.65589E+00
3.16650E-01	2.54059E+12	4.83195E+15	2.21038E-03	-2.65553E+00
3.20560E-01	2.55989E+12	4.89825E+15	2.21154E-03	-2.65531E+00
3.24469E-01	2.57318E+12	4.96423E+15	2.21281E-03	-2.65506E+00
3.28378E-01	2.61777E+12	5.02980E+15	2.21423E-03	-2.65478E+00
3.32287E-01	2.61734E+12	5.09582E+15	2.21541E-03	-2.65455E+00
3.36197E-01	2.61777E+12	5.16006E+15	2.21733E-03	-2.65417E+00
3.40106E-01	2.63619E+12	5.22475E+15	2.21901E-03	-2.65384E+00
3.44015E-01	2.65593E+12	5.28990E+15	2.22046E-03	-2.65356E+00
3.47924E-01	2.67523E+12	5.35501E+15	2.22199E-03	-2.65328E+00
3.51834E-01	2.69408E+12	5.41959E+15	2.22350E-03	-2.65296E+00
3.55743E-01	2.71339E+12	5.48418E+15	2.22507E-03	-2.65266E+00
3.59652E-01	2.73224E+12	5.54818E+15	2.22685E-03	-2.65231E+00
3.63561E-01	2.73224E+12	5.61151E+15	2.22884E-03	-2.65192E+00
3.67471E-01	2.75154E+12	5.67547E+15	2.22737E-03	-2.65221E+00
3.71380E-01	2.77083E+12	5.73837E+15	2.22594E-03	-2.65249E+00
3.75289E-01	2.80999E+12	5.80122E+15	2.22457E-03	-2.65275E+00
3.79199E-01	2.82784E+12	5.86406E+15	2.22323E-03	-2.65302E+00
3.83108E-01	2.82784E+12	5.92622E+15	2.22217E-03	-2.65322E+00
3.87017E-01	2.84363E+12	5.98849E+15	2.22110E-03	-2.65343E+00
3.90926E-01	2.86205E+12	6.04928E+15	2.22059E-03	-2.65353E+00
3.94836E-01	2.88530E+12	6.11072E+15	2.21985E-03	-2.65369E+00
3.98745E-01	2.88991E+12	6.17134E+15	2.21942E-03	-2.65376E+00
4.02654E-01	2.88091E+12	6.23242E+15	2.21884E-03	-2.65387E+00
4.06563E-01	2.92345E+12	6.29150E+15	2.21898E-03	-2.65385E+00
4.10473E-01	2.92345E+12	6.34983E+15	2.21937E-03	-2.65377E+00
4.14382E-01	2.93749E+12	6.40966E+15	2.21924E-03	-2.65380E+00
4.18291E-01	2.94275E+12	6.47024E+15	2.21670E-03	-2.65429E+00
4.22200E-01	2.96687E+12	6.52878E+15	2.21340E-03	-2.65494E+00
4.26110E-01	2.96161E+12	6.58731E+15	2.21016E-03	-2.65558E+00
4.30019E-01	2.99405E+12	6.64545E+15	2.20711E-03	-2.65618E+00
4.33928E-01	2.98090E+12	6.70284E+15	2.20436E-03	-2.65672E+00
4.37837E-01	2.98090E+12	6.75954E+15	2.20187E-03	-2.65721E+00
4.41747E-01	2.99405E+12	6.81569E+15	2.19961E-03	-2.65765E+00
4.45656E-01	3.01905E+12	6.87079E+15	2.19772E-03	-2.65803E+00
4.49565E-01	3.05721E+12	6.92506E+15	2.19613E-03	-2.65834E+00
4.53474E-01	3.05721E+12	6.98005E+15	2.19433E-03	-2.65870E+00
4.57384E-01	3.05721E+12	7.03465E+15	2.19268E-03	-2.65902E+00
4.61293E-01	3.05721E+12	7.08938E+15	2.19102E-03	-2.65935E+00
4.65202E-01	3.05063E+12	7.14339E+15	2.18960E-03	-2.65964E+00
4.69112E-01	3.06949E+12	7.19602E+15	2.18763E-03	-2.66003E+00
4.73021E-01	3.09537E+12	7.24911E+15	2.18307E-03	-2.66093E+00
4.76930E-01	3.09537E+12	7.30238E+15	2.17853E-03	-2.66184E+00
4.80839E-01	3.10677E+12	7.35546E+15	2.17410E-03	-2.66272E+00
4.84749E-01	3.11917E+12	7.40767E+15	2.17000E-03	-2.66354E+00
4.88658E-01	3.12563E+12	7.45761E+15	2.16661E-03	-2.66422E+00
4.92567E-01	3.13352E+12	7.50772E+15	2.16321E-03	-2.66490E+00
4.96476E-01	3.15282E+12	7.55783E+15	2.15987E-03	-2.66557E+00
5.00386E-01	3.13352E+12	7.60759E+15	2.15666E-03	-2.66622E+00
5.04295E-01	3.16071E+12	7.65676E+15	2.15367E-03	-2.66682E+00
5.08204E-01	3.17168E+12	7.70635E+15	2.15059E-03	-2.66744E+00
5.12113E-01	3.16071E+12	7.75472E+15	2.14789E-03	-2.66799E+00
5.16023E-01	3.17168E+12	7.80175E+15	2.14559E-03	-2.66845E+00
5.19932E-01	3.16334E+12	7.84986E+15	2.14303E-03	-2.66887E+00
5.23841E-01	3.17387E+12	7.89589E+15	2.13962E-03	-2.66987E+00
5.27750E-01	3.17387E+12	7.94433E+15	2.13410E-03	-2.67079E+00
5.31650E-01	3.17387E+12	7.99164E+15	2.12968E-03	-2.67189E+00
5.35569E-01	3.18220E+12	8.03592E+15	2.12585E-03	-2.67247E+00
5.39478E-01	3.20983E+12	8.08220E+15	2.12205E-03	-2.67324E+00
5.43388E-01	3.19974E+12	8.12749E+15	2.11830E-03	-2.67401E+00
5.47297E-01	3.18220E+12	8.17170E+15	2.11487E-03	-2.67472E+00
5.51206E-01	3.18220E+12	8.21617E+15	2.11141E-03	-2.67543E+00
5.55115E-01	3.18220E+12	8.26164E+15	2.10799E-03	-2.67613E+00
5.59025E-01	3.20983E+12	8.30308E+15	2.10512E-03	-2.67672E+00
5.62934E-01	3.20106E+12	8.34647E+15	2.10203E-03	-2.67736E+00
5.66843E-01	3.20983E+12	8.38866E+15	2.09929E-03	-2.67793E+00
5.70752E-01	3.20983E+12	8.43072E+15	2.09659E-03	-2.67849E+00
5.74662E-01	3.20983E+12	8.47195E+15	2.09308E-03	-2.67921E+00
5.78571E-01	3.20983E+12	8.51342E+15	2.08905E-03	-2.68005E+00
5.82480E-01	3.22913E+12	8.55355E+15	2.08538E-03	-2.68081E+00
5.86389E-01	3.22913E+12	8.59237E+15	2.08206E-03	-2.68151E+00
5.90299E-01	3.21115E+12	8.63154E+15	2.07870E-03	-2.68221E+00
5.94208E-01	3.22913E+12	8.66940E+15	2.07567E-03	-2.68294E+00
5.98117E-01	3.22913E+12	8.70723E+15	2.07244E-03	-2.68352E+00
6.02026E-01	3.22913E+12	8.74466E+15	2.06981E-03	-2.68407E+00
6.05936E-01	3.21115E+12	8.78131E+15	2.06714E-03	-2.68463E+00
6.09845E-01	3.22957E+12	8.81704E+15	2.06472E-03	-2.68514E+00
6.13754E-01	3.24799E+12	8.85264E+15	2.06234E-03	-2.68564E+00
6.17664E-01	3.22913E+12	8.88939E+15	2.05972E-03	-2.68619E+00
6.21573E-01	3.20983E+12	8.92523E+15	2.05733E-03	-2.68670E+00

TABLE 4 (continued)

SHOT 3-9

393 POINTS

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TIME (MICROSEC)	CJEN (A*P/M2)	EDEN (ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
6.25482E-01	3.23934E+12	8.96086E+15	2.05447E-03	-2.68730E+00
6.29391E-01	3.21992E+12	8.99527E+15	2.05105E-03	-2.68802E+00
6.33301E-01	3.21115E+12	9.02989E+15	2.04760E-03	-2.68875E+00
6.37210E-01	3.19229E+12	9.06301E+15	2.04452E-03	-2.68941E+00
6.41119E-01	3.21115E+12	9.09723E+15	2.04121E-03	-2.69011E+00
6.45028E-01	3.22913E+12	9.13053E+15	2.03814E-03	-2.69077E+00
6.48938E-01	3.21115E+12	9.16145E+15	2.03562E-03	-2.69130E+00
6.52847E-01	3.21992E+12	9.19446E+15	2.03265E-03	-2.69194E+00
6.56756E-01	3.23878E+12	9.22526E+15	2.03019E-03	-2.69246E+00
6.60665E-01	3.21992E+12	9.25518E+15	2.02793E-03	-2.69295E+00
6.64575E-01	3.20993E+12	9.28597E+15	2.02550E-03	-2.69347E+00
6.68484E-01	3.22913E+12	9.31657E+15	2.02314E-03	-2.69397E+00
6.72393E-01	3.19229E+12	9.34736E+15	2.02074E-03	-2.69449E+00
6.76302E-01	3.19229E+12	9.37563E+15	2.01893E-03	-2.69490E+00
6.80212E-01	3.20983E+12	9.40499E+15	2.01583E-03	-2.69555E+00
6.84121E-01	3.17387E+12	9.43334E+15	2.01306E-03	-2.69614E+00
6.88030E-01	3.18220E+12	9.46169E+15	2.01031E-03	-2.69674E+00
6.91940E-01	3.18045E+12	9.49003E+15	2.00757E-03	-2.69733E+00
6.95849E-01	3.18045E+12	9.51824E+15	2.00488E-03	-2.69791E+00
6.99758E-01	3.18045E+12	9.54651E+15	2.00220E-03	-2.69849E+00
7.03667E-01	3.18045E+12	9.57245E+15	2.00001E-03	-2.69897E+00
7.07577E-01	3.18045E+12	9.59947E+15	1.99762E-03	-2.69949E+00
7.11486E-01	3.14449E+12	9.62502E+15	1.99554E-03	-2.69994E+00
7.15395E-01	3.14449E+12	9.65090E+15	1.99340E-03	-2.70041E+00
7.19304E-01	3.15282E+12	9.67669E+15	1.99130E-03	-2.70086E+00
7.23214E-01	3.15282E+12	9.70137E+15	1.98943E-03	-2.70127E+00
7.27123E-01	3.15282E+12	9.72593E+15	1.98762E-03	-2.70167E+00
7.31032E-01	3.13659E+12	9.75045E+15	1.98530E-03	-2.70217E+00
7.34941E-01	3.14449E+12	9.77395E+15	1.98311E-03	-2.70255E+00
7.38851E-01	3.12563E+12	9.79711E+15	1.98095E-03	-2.70313E+00
7.42760E-01	3.12563E+12	9.82023E+15	1.97893E-03	-2.70359E+00
7.46669E-01	3.11917E+12	9.84128E+15	1.97714E-03	-2.70396E+00
7.50578E-01	3.11917E+12	9.86263E+15	1.97540E-03	-2.70434E+00
7.54488E-01	3.10677E+12	9.88455E+15	1.97354E-03	-2.70475E+00
7.58397E-01	3.10292E+12	9.90496E+15	1.97200E-03	-2.70509E+00
7.62306E-01	3.07607E+12	9.92584E+15	1.97037E-03	-2.70545E+00
7.66216E-01	3.09537E+12	9.9463E+15	1.96916E-03	-2.70572E+00
7.70125E-01	3.07607E+12	9.96492E+15	1.96766E-03	-2.70605E+00
7.74034E-01	3.05721E+12	9.98459E+15	1.96629E-03	-2.70635E+00
7.77943E-01	3.05721E+12	1.00052E+16	1.96474E-03	-2.70669E+00
7.81853E-01	3.03792E+12	1.00237E+16	1.96339E-03	-2.70700E+00
7.85762E-01	3.04449E+12	1.00043E+16	1.96157E-03	-2.70740E+00
7.89671E-01	3.02564E+12	1.00615E+16	1.96000E-03	-2.70774E+00
7.93580E-01	3.01905E+12	1.00798E+16	1.95845E-03	-2.70809E+00
7.97490E-01	3.03792E+12	1.00981E+16	1.95689E-03	-2.70843E+00
8.01399E-01	3.01305E+12	1.01164E+16	1.95534E-03	-2.70878E+00
8.05308E-01	3.01905E+12	1.01336E+16	1.95400E-03	-2.70908E+00
8.09217E-01	3.01905E+12	1.01508E+16	1.95268E-03	-2.70937E+00
8.13127E-01	2.99408E+12	1.01679E+16	1.95138E-03	-2.70966E+00
8.17036E-01	2.97520E+12	1.01854E+16	1.95000E-03	-2.70997E+00
8.20945E-01	2.97520E+12	1.02014E+16	1.94893E-03	-2.71020E+00
8.24854E-01	2.96994E+12	1.02173E+16	1.94786E-03	-2.71044E+00
8.28764E-01	2.94275E+12	1.02331E+16	1.94682E-03	-2.71067E+00
8.32673E-01	2.93749E+12	1.02480E+16	1.94591E-03	-2.71088E+00
8.36582E-01	2.94275E+12	1.02626E+16	1.94479E-03	-2.71113E+00
8.40492E-01	2.93749E+12	1.02763E+16	1.94388E-03	-2.71133E+00
8.44401E-01	2.93749E+12	1.02899E+16	1.94295E-03	-2.71154E+00
8.48310E-01	2.92345E+12	1.03036E+16	1.94202E-03	-2.71175E+00
8.52219E-01	2.90415E+12	1.03182E+16	1.94093E-03	-2.71199E+00
8.56129E-01	2.89582E+12	1.03307E+16	1.94023E-03	-2.71215E+00
8.60038E-01	2.87696E+12	1.03433E+16	1.93952E-03	-2.71231E+00
8.63947E-01	2.88091E+12	1.03568E+16	1.93864E-03	-2.71250E+00
8.67856E-01	2.85854E+12	1.03693E+16	1.93796E-03	-2.71266E+00
8.71766E-01	2.86205E+12	1.03817E+16	1.93729E-03	-2.71281E+00
8.75675E-01	2.83135E+12	1.03933E+16	1.93676E-03	-2.71292E+00
8.79584E-01	2.81205E+12	1.04047E+16	1.93629E-03	-2.71303E+00
8.83493E-01	2.82784E+12	1.04160E+16	1.93582E-03	-2.71314E+00
8.87403E-01	2.82784E+12	1.04267E+16	1.93526E-03	-2.71326E+00
8.91312E-01	2.81205E+12	1.04370E+16	1.93475E-03	-2.71338E+00
8.95221E-01	2.78443E+12	1.04472E+16	1.93424E-03	-2.71349E+00
8.99130E-01	2.80592E+12	1.04593E+16	1.93358E-03	-2.71364E+00
9.03040E-01	2.79705E+12	1.04595E+16	1.93309E-03	-2.71375E+00
9.06949E-01	2.77093E+12	1.04777E+16	1.93279E-03	-2.71392E+00
9.10858E-01	2.75154E+12	1.04877E+16	1.93233E-03	-2.71392E+00
9.14768E-01	2.73049E+12	1.04969E+16	1.93204E-03	-2.71398E+00
9.18677E-01	2.73224E+12	1.05068E+16	1.93159E-03	-2.71409E+00
9.22586E-01	2.73224E+12	1.05147E+16	1.93153E-03	-2.71410E+00
9.26495E-01	2.72654E+12	1.05218E+16	1.93161E-03	-2.71408E+00
9.30405E-01	2.70987E+12	1.05289E+16	1.93169E-03	-2.71406E+00
9.34314E-01	2.69409E+12	1.05359E+16	1.93178E-03	-2.71404E+00

TABLE 4 (continued)

SHOT 3-9

393 POINTS

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TIME (MICROSEC)	CDEN (AMP/M2)	EDEN (ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
9.38223E-01	2.67523E+12	1.05420E+16	1.93193E-03	-2.71401E+00
9.42132E-01	2.67523E+12	1.05489E+16	1.93184E-03	-2.71403E+00
9.46042E-01	2.55505E+12	1.05551E+16	1.93188E-03	-2.71402E+00
9.49951E-01	2.63619E+12	1.05601E+16	1.93212E-03	-2.71397E+00
9.53860E-01	2.63707E+12	1.05660E+16	1.93222E-03	-2.71394E+00
9.57769E-01	2.51734E+12	1.05711E+16	1.93247E-03	-2.71399E+00
9.61679E-01	2.59848E+12	1.05761E+16	1.93271E-03	-2.71393E+00
9.65588E-01	2.57918E+12	1.05812E+16	1.93296E-03	-2.71378E+00
9.69497E-01	2.54146E+12	1.05862E+16	1.93322E-03	-2.71372E+00
9.73406E-01	2.55988E+12	1.05911E+16	1.93348E-03	-2.71366E+00
9.77316E-01	2.54059E+12	1.05952E+16	1.93390E-03	-2.71357E+00
9.81225E-01	2.52123E+12	1.06001E+16	1.93418E-03	-2.71350E+00
9.85134E-01	2.48225E+12	1.06049E+16	1.93446E-03	-2.71344E+00
9.89044E-01	2.48225E+12	1.06096E+16	1.93474E-03	-2.71338E+00
9.92953E-01	2.44535E+12	1.06134E+16	1.93505E-03	-2.71331E+00
9.96862E-01	2.42655E+12	1.06166E+16	1.93548E-03	-2.71321E+00
1.00077E+00	2.44365E+12	1.06197E+16	1.93592E-03	-2.71311E+00
1.00468E+00	2.44365E+12	1.06228E+16	1.93637E-03	-2.71301E+00
1.00859E+00	2.42437E+12	1.06266E+16	1.93668E-03	-2.71294E+00
1.01250E+00	2.40463E+12	1.06305E+16	1.93699E-03	-2.71287E+00
1.01641E+00	2.38534E+12	1.06336E+16	1.93744E-03	-2.71277E+00
1.02032E+00	2.36604E+12	1.06358E+16	1.93804E-03	-2.71254E+00
1.02423E+00	2.35025E+12	1.06399E+16	1.93850E-03	-2.71253E+00
1.02814E+00	2.32745E+12	1.06419E+16	1.93895E-03	-2.71243E+00
1.03205E+00	2.31210E+12	1.06442E+16	1.93954E-03	-2.71230E+00
1.03595E+00	2.29324E+12	1.06457E+16	1.94028E-03	-2.71214E+00
1.03986E+00	2.29324E+12	1.06472E+16	1.94101E-03	-2.71197E+00
1.04377E+00	2.26912E+12	1.06493E+16	1.94151E-03	-2.71186E+00
1.04768E+00	2.23579E+12	1.06508E+16	1.94212E-03	-2.71172E+00
1.05159E+00	2.21643E+12	1.06530E+16	1.94260E-03	-2.71162E+00
1.05550E+00	2.24982E+12	1.06544E+16	1.94322E-03	-2.71148E+00
1.05941E+00	2.21079E+12	1.06552E+16	1.94396E-03	-2.71131E+00
1.06332E+00	2.19143E+12	1.06566E+16	1.94458E-03	-2.71117E+00
1.06723E+00	2.19143E+12	1.06580E+16	1.94520E-03	-2.71104E+00
1.07114E+00	2.19143E+12	1.06587E+16	1.94596E-03	-2.71087E+00
1.07505E+00	2.17220E+12	1.06601E+16	1.94658E-03	-2.71073E+00
1.07896E+00	2.17220E+12	1.06607E+16	1.94733E-03	-2.71056E+00
1.08287E+00	2.15290E+12	1.06607E+16	1.94821E-03	-2.71036E+00
1.08678E+00	2.11397E+12	1.06607E+16	1.94909E-03	-2.71017E+00
1.09068E+00	2.13315E+12	1.06614E+16	1.94984E-03	-2.71000E+00
1.09459E+00	2.09457E+12	1.06614E+16	1.95066E-03	-2.70982E+00
1.09850E+00	2.09457E+12	1.06608E+16	1.95156E-03	-2.70962E+00
1.10241E+00	2.07527E+12	1.06601E+16	1.95246E-03	-2.70942E+00
1.10632E+00	2.05598E+12	1.06601E+16	1.95325E-03	-2.70924E+00
1.11023E+00	2.02572E+12	1.06601E+16	1.95403E-03	-2.70907E+00
1.11414E+00	2.02572E+12	1.06601E+16	1.95481E-03	-2.70890E+00
1.11805E+00	2.00642E+12	1.06601E+16	1.95559E-03	-2.70872E+00
1.12196E+00	1.98712E+12	1.06595E+16	1.95649E-03	-2.70852E+00
1.12587E+00	1.96825E+12	1.06588E+16	1.95739E-03	-2.70832E+00
1.12978E+00	1.94897E+12	1.06576E+16	1.95840E-03	-2.70810E+00
1.13369E+00	1.94897E+12	1.06570E+16	1.95930E-03	-2.70790E+00
1.13760E+00	1.93011E+12	1.06558E+16	1.96030E-03	-2.70768E+00
1.14150E+00	1.91081E+12	1.06546E+16	1.96130E-03	-2.70746E+00
1.14541E+00	1.89195E+12	1.06528E+16	1.96239E-03	-2.70721E+00
1.14932E+00	1.89195E+12	1.06510E+16	1.96343E-03	-2.70698E+00
1.15323E+00	1.88143E+12	1.06499E+16	1.96447E-03	-2.70678E+00
1.15714E+00	1.85380E+12	1.06481E+16	1.96540E-03	-2.70655E+00
1.16105E+00	1.83450E+12	1.06470E+16	1.96634E-03	-2.70634E+00
1.16496E+00	1.82310E+12	1.06452E+16	1.96737E-03	-2.70611E+00
1.16887E+00	1.82310E+12	1.06435E+16	1.96841E-03	-2.70588E+00
1.17278E+00	1.78451E+12	1.06418E+16	1.96944E-03	-2.70566E+00
1.17669E+00	1.76477E+12	1.06401E+16	1.97047E-03	-2.70543E+00
1.18060E+00	1.74547E+12	1.06385E+16	1.97149E-03	-2.70521E+00
1.18451E+00	1.74547E+12	1.06362E+16	1.97263E-03	-2.70495E+00
1.18842E+00	1.72618E+12	1.06340E+16	1.97375E-03	-2.70471E+00
1.19233E+00	1.72618E+12	1.06319E+16	1.97488E-03	-2.70446E+00
1.19623E+00	1.68758E+12	1.06297E+16	1.97599E-03	-2.70422E+00
1.20014E+00	1.68758E+12	1.06276E+16	1.97705E-03	-2.70398E+00
1.20405E+00	1.66785E+12	1.06250E+16	1.97821E-03	-2.70373E+00
1.20796E+00	1.66785E+12	1.06224E+16	1.97935E-03	-2.70348E+00
1.21187E+00	1.66785E+12	1.06198E+16	1.98050E-03	-2.70323E+00
1.21578E+00	1.64855E+12	1.06173E+16	1.98164E-03	-2.70298E+00
1.21969E+00	1.62925E+12	1.06142E+16	1.98288E-03	-2.70270E+00
1.22360E+00	1.60995E+12	1.06117E+16	1.98402E-03	-2.70245E+00
1.22751E+00	1.60995E+12	1.06082E+16	1.98534E-03	-2.70217E+00
1.23142E+00	1.60995E+12	1.06054E+16	1.98655E-03	-2.70190E+00
1.23533E+00	1.59022E+12	1.06019E+16	1.98786E-03	-2.70161E+00
1.23924E+00	1.57093E+12	1.05985E+16	1.98917E-03	-2.70133E+00
1.24315E+00	1.53233E+12	1.05957E+16	1.99037E-03	-2.70107E+00
1.24705E+00	1.55163E+12	1.05924E+16	1.99166E-03	-2.70078E+00

TABLE 4 (continued)

SHOT 3-9

393 POINTS

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TIME(MICROSEC)	COEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
1.25096E+00	1.51304E+12	1.05896E+16	1.99292E-03	-2.7053E+00
1.25487E+00	1.51304E+12	1.05864E+16	1.99406E-03	-2.70026E+00
1.25878E+00	1.49330E+12	1.05832E+16	1.99529E-03	-2.69999E+00
1.26269E+00	1.47401E+12	1.05800E+16	1.99653E-03	-2.69972E+00
1.26660E+00	1.47401E+12	1.05769E+16	1.99775E-03	-2.69946E+00
1.27051E+00	1.45471E+12	1.05738E+16	1.99897E-03	-2.69919E+00
1.27442E+00	1.43541E+12	1.05703E+16	2.00026E-03	-2.69891E+00
1.27833E+00	1.43541E+12	1.05673E+16	2.00146E-03	-2.69865E+00
1.28224E+00	1.41612E+12	1.05644E+16	2.00265E-03	-2.69839E+00
1.28615E+00	1.39638E+12	1.05614E+16	2.00385E-03	-2.69813E+00
1.29006E+00	1.37708E+12	1.05580E+16	2.00513E-03	-2.69786E+00
1.29397E+00	1.35779E+12	1.05546E+16	2.00641E-03	-2.69758E+00
1.29788E+00	1.33849E+12	1.05513E+16	2.00767E-03	-2.69731E+00
1.30178E+00	1.31975E+12	1.05484E+16	2.00885E-03	-2.69705E+00
1.30569E+00	1.31975E+12	1.05460E+16	2.00996E-03	-2.69681E+00
1.30960E+00	1.31975E+12	1.05436E+16	2.01105E-03	-2.69658E+00
1.31351E+00	1.29946E+12	1.05408E+16	2.01221E-03	-2.69633E+00
1.31742E+00	1.27972E+12	1.05385E+16	2.01329E-03	-2.69609E+00
1.32133E+00	1.25955E+12	1.05362E+16	2.01438E-03	-2.69585E+00
1.32524E+00	1.25999E+12	1.05339E+16	2.01545E-03	-2.69563E+00
1.32915E+00	1.25999E+12	1.05313E+16	2.01659E-03	-2.69538E+00
1.33306E+00	1.24025E+12	1.05286E+16	2.01773E-03	-2.69514E+00
1.33697E+00	1.22096E+12	1.05265E+16	2.01878E-03	-2.69491E+00
1.34088E+00	1.22096E+12	1.05243E+16	2.01985E-03	-2.69468E+00
1.34479E+00	1.20122E+12	1.05218E+16	2.02097E-03	-2.69444E+00
1.34870E+00	1.20122E+12	1.05197E+16	2.02201E-03	-2.69422E+00
1.35260E+00	1.18148E+12	1.05172E+16	2.02313E-03	-2.69398E+00
1.35651E+00	1.18148E+12	1.05144E+16	2.02429E-03	-2.69373E+00
1.36042E+00	1.16175E+12	1.05120E+16	2.02538E-03	-2.69349E+00
1.36433E+00	1.12228E+12	1.05097E+16	2.02646E-03	-2.69326E+00
1.36824E+00	1.12228E+12	1.05074E+16	2.02753E-03	-2.69303E+00
1.37215E+00	1.12228E+12	1.05051E+16	2.02861E-03	-2.69280E+00
1.37606E+00	1.10254E+12	1.05027E+16	2.02969E-03	-2.69257E+00
1.37997E+00	1.08281E+12	1.05005E+16	2.03076E-03	-2.69234E+00
1.38388E+00	1.08281E+12	1.04982E+16	2.03182E-03	-2.69211E+00
1.38779E+00	1.06307E+12	1.04961E+16	2.03288E-03	-2.69189E+00
1.39170E+00	1.06307E+12	1.04939E+16	2.03392E-03	-2.69167E+00
1.39561E+00	1.03983E+12	1.04918E+16	2.03497E-03	-2.69144E+00
1.39952E+00	1.01965E+12	1.04897E+16	2.03601E-03	-2.69122E+00
1.40343E+00	1.01965E+12	1.04876E+16	2.03704E-03	-2.69100E+00
1.40733E+00	9.99482E+11	1.04855E+16	2.03803E-03	-2.69079E+00
1.41124E+00	9.99482E+11	1.04835E+16	2.03900E-03	-2.69058E+00
1.41515E+00	9.79745E+11	1.04812E+16	2.04001E-03	-2.69037E+00
1.41906E+00	9.79746E+11	1.04789E+16	2.04103E-03	-2.69015E+00
1.42297E+00	9.59573E+11	1.04768E+16	2.04202E-03	-2.68994E+00
1.42688E+00	9.59573E+11	1.04749E+16	2.04297E-03	-2.68974E+00
1.43079E+00	9.39393E+11	1.04727E+16	2.04397E-03	-2.68953E+00
1.43470E+00	9.19664E+11	1.04706E+16	2.04495E-03	-2.68932E+00
1.43861E+00	8.99490E+11	1.04685E+16	2.04594E-03	-2.68911E+00
1.44252E+00	8.79754E+11	1.04667E+16	2.04686E-03	-2.68891E+00
1.44643E+00	8.99490E+11	1.04647E+16	2.04782E-03	-2.68871E+00
1.45034E+00	8.59581E+11	1.04627E+16	2.04880E-03	-2.68850E+00
1.45425E+00	8.59581E+11	1.04608E+16	2.04974E-03	-2.68830E+00
1.45816E+00	8.59581E+11	1.04588E+16	2.05071E-03	-2.68810E+00
1.46206E+00	8.39845E+11	1.04569E+16	2.05164E-03	-2.68790E+00
1.46597E+00	8.19672E+11	1.04550E+16	2.05258E-03	-2.68770E+00
1.46988E+00	8.19672E+11	1.04532E+16	2.05351E-03	-2.68750E+00
1.47379E+00	7.99498E+11	1.04514E+16	2.05444E-03	-2.68731E+00
1.47770E+00	7.99498E+11	1.04495E+16	2.05537E-03	-2.68711E+00
1.48161E+00	7.79762E+11	1.04478E+16	2.05629E-03	-2.68692E+00
1.48552E+00	7.59589E+11	1.04463E+16	2.05715E-03	-2.68673E+00
1.48943E+00	7.59589E+11	1.04448E+16	2.05802E-03	-2.68655E+00
1.49334E+00	7.39953E+11	1.04433E+16	2.05887E-03	-2.68637E+00

EOF

TABLE 4 (continued)

SHOT 3-12

384 POINTS

144

TIME (MICROSEC)	CDEN (AMP/M2)	EDEN (ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
0.	2.99539E+11	9.93408E+13	0.	-3.29631E+00
3.90926E-03	3.39885E+11	1.15393E+14	5.05468E-04	-3.29631E+00
7.91853E-03	3.79794E+11	1.31939E+14	8.84159E-04	-3.05347E+00
1.17278E-02	3.99530E+11	1.50147E+14	1.16541E-03	-2.93352E+00
1.56371E-02	4.59612E+11	1.69727E+14	1.37463E-03	-2.86191E+00
1.95463E-02	4.99522E+11	1.91202E+14	1.52529E-03	-2.81665E+00
2.34556E-02	5.59605E+11	2.13952E+14	1.63572E-03	-2.78629E+00
2.73648E-02	5.99514E+11	2.37529E+14	1.71892E-03	-2.76474E+00
3.12741E-02	5.10479E+11	2.62302E+14	1.77995E-03	-2.74994E+00
3.51834E-02	6.69245E+11	2.88681E+14	1.81844E-03	-2.74030E+00
3.90926E-02	7.19679E+11	3.16625E+14	1.94217E-03	-2.73467E+00
4.30019E-02	7.79762E+11	3.45581E+14	1.95660E-03	-2.73128E+00
4.69112E-02	8.19672E+11	3.76254E+14	1.96026E-03	-2.73043E+00
5.08204E-02	8.59581E+11	4.08595E+14	1.85577E-03	-2.73148E+00
5.47297E-02	8.99490E+11	4.42967E+14	1.84387E-03	-2.73427E+00
5.86389E-02	9.39393E+11	4.81192E+14	1.81823E-03	-2.74035E+00
6.25482E-02	9.99482E+11	5.23553E+14	1.78252E-03	-2.74997E+00
6.64575E-02	1.02404E+12	5.69373E+14	1.74151E-03	-2.75970E+00
7.03667E-02	1.07974E+12	6.19768E+14	1.69402E-03	-2.77108E+00
7.42760E-02	1.11965E+12	6.77316E+14	1.63620E-03	-2.78616E+00
7.81853E-02	1.15955E+12	7.40308E+14	1.57577E-03	-2.80251E+00
8.20945E-02	1.20122E+12	8.13414E+14	1.50585E-03	-2.82222E+00
8.60038E-02	1.25955E+12	8.90203E+14	1.44148E-03	-2.84119E+00
8.99130E-02	1.29946E+12	9.86032E+14	1.36054E-03	-2.86629E+00
9.38223E-02	1.31913E+12	1.09789E+15	1.27505E-03	-2.89447E+00
9.77316E-02	1.37708E+12	1.22858E+15	1.19690E-03	-2.92559E+00
1.01641E-01	1.39813E+12	1.37730E+15	1.10109E-03	-2.95918E+00
1.05550E-01	1.43541E+12	1.52919E+15	1.03244E-03	-2.98614E+00
1.09459E-01	1.47401E+12	1.62210E+15	1.01539E-03	-2.99337E+00
1.13369E-01	1.51304E+12	1.71935E+15	9.97667E-04	-3.00101E+00
1.17278E-01	1.51611E+12	1.81563E+15	9.92366E-04	-3.00773E+00
1.21147E-01	1.55163E+12	1.91479E+15	9.67152E-04	-3.01451E+00
1.25096E-01	1.57093E+12	2.00098E+15	9.59614E-04	-3.01790E+00
1.29006E-01	1.60995E+12	2.08968E+15	9.51552E-04	-3.02157E+00
1.32915E-01	1.51435E+12	2.17756E+15	9.44506E-04	-3.02490E+00
1.36924E-01	1.53408E+12	2.25718E+15	9.41438E-04	-3.02621E+00
1.40733E-01	1.67355E+12	2.33749E+15	9.38302E-04	-3.02756E+00
1.44643E-01	1.59329E+12	2.41892E+15	9.34976E-04	-3.02920E+00
1.48552E-01	1.74547E+12	2.50052E+15	9.31732E-04	-3.03071E+00
1.52461E-01	1.77179E+12	2.58237E+15	9.29642E-04	-3.03215E+00
1.56371E-01	1.81125E+12	2.66490E+15	9.27122E-04	-3.03286E+00
1.50280E-01	1.83093E+12	2.74710E+15	9.40440E-04	-3.02667E+00
1.64189E-01	1.87045E+12	2.82848E+15	9.53292E-04	-3.02077E+00
1.58098E-01	1.87265E+12	2.91066E+15	9.65159E-04	-3.01540E+00
1.72008E-01	1.91081E+12	2.99364E+15	9.76113E-04	-3.01050E+00
1.75917E-01	1.97935E+12	3.07564E+15	9.86471E-04	-3.00592E+00
1.79826E-01	1.99765E+12	3.15979E+15	9.96236E-04	-3.00164E+00
1.83735E-01	2.03624E+12	3.24353E+15	1.00532E-03	-2.99770E+00
1.87645E-01	2.05598E+12	3.32651E+15	1.01418E-03	-2.99388E+00
1.91554E-01	2.09457E+12	3.41014E+15	1.02240E-03	-2.99039E+00
1.95463E-01	2.13315E+12	3.49596E+15	1.02960E-03	-2.98733E+00
1.99372E-01	2.17220E+12	3.58094E+15	1.03669E-03	-2.98435E+00
2.03282E-01	2.19149E+12	3.66654E+15	1.04327E-03	-2.98160E+00
2.07191E-01	2.21079E+12	3.75153E+15	1.04973E-03	-2.97992E+00
2.11100E-01	2.24992E+12	3.83786E+15	1.06165E-03	-2.97402E+00
2.15009E-01	2.26912E+12	3.92439E+15	1.07456E-03	-2.96977E+00
2.19919E-01	2.30771E+12	4.01231E+15	1.08653E-03	-2.96396E+00
2.22828E-01	2.34674E+12	4.10013E+15	1.09802E-03	-2.95939E+00
2.26737E-01	2.36604E+12	4.18699E+15	1.10928E-03	-2.95496E+00
2.30647E-01	2.40463E+12	4.27384E+15	1.12008E-03	-2.95075E+00
2.34556E-01	2.41033E+12	4.36265E+15	1.12995E-03	-2.94694E+00
2.38465E-01	2.44805E+12	4.45023E+15	1.13974E-03	-2.94319E+00
2.42374E-01	2.50024E+12	4.53749E+15	1.14923E-03	-2.93959E+00
2.46284E-01	2.54059E+12	4.62628E+15	1.15798E-03	-2.93630E+00
2.50193E-01	2.55945E+12	4.71613E+15	1.16614E-03	-2.93325E+00
2.54102E-01	2.57919E+12	4.80546E+15	1.17412E-03	-2.93029E+00
2.58011E-01	2.57919E+12	4.89551E+15	1.18163E-03	-2.92752E+00
2.61921E-01	2.63707E+12	4.98600E+15	1.18977E-03	-2.92454E+00
2.65830E-01	2.65533E+12	5.07593E+15	1.19855E-03	-2.92134E+00
2.69739E-01	2.69277E+12	5.16737E+15	1.20712E-03	-2.91825E+00
2.73548E-01	2.71339E+12	5.25846E+15	1.21527E-03	-2.91533E+00
2.77558E-01	2.75154E+12	5.34893E+15	1.22325E-03	-2.91248E+00
2.81467E-01	2.77083E+12	5.43993E+15	1.23088E-03	-2.90979E+00
2.85376E-01	2.79275E+12	5.53132E+15	1.23813E-03	-2.90723E+00
2.89285E-01	2.82794E+12	5.62244E+15	1.24523E-03	-2.90475E+00
2.93195E-01	2.86205E+12	5.71413E+15	1.25197E-03	-2.90241E+00
2.97104E-01	2.88530E+12	5.80580E+15	1.25951E-03	-2.90014E+00
3.01013E-01	2.90415E+12	5.89705E+15	1.26493E-03	-2.89793E+00
3.04923E-01	2.91863E+12	5.98907E+15	1.27099E-03	-2.89586E+00
3.08832E-01	2.96161E+12	6.08013E+15	1.27708E-03	-2.89378E+00

TABLE 4 (continued)

SHOT 3-12

394 POINTS

145

TIME (MICROSEC)	CDEN (A4P/M2)	EDEN (ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
3.12741E-01	2.98090E+12	6.17073E+15	1.29307E-03	-2.89175E+00
3.16650E-01	3.01903E+12	6.26163E+15	1.29379E-03	-2.88992E+00
3.20560E-01	3.01905E+12	6.35228E+15	1.29441E-03	-2.88793E+00
3.24469E-01	3.03792E+12	6.44177E+15	1.30009E-03	-2.88603E+00
3.28378E-01	3.06949E+12	6.53103E+15	1.30567E-03	-2.88417E+00
3.32287E-01	3.08835E+12	6.62081E+15	1.31100E-03	-2.88240E+00
3.36197E-01	3.11423E+12	6.71216E+15	1.31587E-03	-2.88079E+00
3.40106E-01	3.13352E+12	6.80177E+15	1.32095E-03	-2.87911E+00
3.44015E-01	3.15282E+12	6.89188E+15	1.32581E-03	-2.87752E+00
3.47924E-01	3.16334E+12	6.98200E+15	1.33054E-03	-2.87597E+00
3.51834E-01	3.19097E+12	7.07152E+15	1.33525E-03	-2.87444E+00
3.55743E-01	3.20103E+12	7.16047E+15	1.33996E-03	-2.87291E+00
3.59652E-01	3.22913E+12	7.24957E+15	1.34471E-03	-2.87137E+00
3.63561E-01	3.24799E+12	7.33767E+15	1.34917E-03	-2.86993E+00
3.67471E-01	3.26729E+12	7.42618E+15	1.35298E-03	-2.86871E+00
3.71380E-01	3.26729E+12	7.51347E+15	1.35684E-03	-2.86747E+00
3.75289E-01	3.32473E+12	7.60105E+15	1.36056E-03	-2.86628E+00
3.79199E-01	3.32473E+12	7.68723E+15	1.36445E-03	-2.86504E+00
3.83108E-01	3.34359E+12	7.77481E+15	1.36800E-03	-2.86391E+00
3.87017E-01	3.36289E+12	7.86161E+15	1.37161E-03	-2.86277E+00
3.90926E-01	3.38175E+12	7.94697E+15	1.37539E-03	-2.86157E+00
3.94836E-01	3.41990E+12	8.03165E+15	1.37921E-03	-2.86037E+00
3.98745E-01	3.43920E+12	8.11719E+15	1.38280E-03	-2.85924E+00
4.02654E-01	3.44692E+12	8.20191E+15	1.38645E-03	-2.85810E+00
4.06563E-01	3.44578E+12	8.28505E+15	1.39029E-03	-2.85699E+00
4.10473E-01	3.47735E+12	8.36783E+15	1.39412E-03	-2.85570E+00
4.14382E-01	3.48349E+12	8.45004E+15	1.39797E-03	-2.85450E+00
4.18291E-01	3.50235E+12	8.53251E+15	1.40086E-03	-2.85361E+00
4.22200E-01	3.53481E+12	8.61378E+15	1.40331E-03	-2.85285E+00
4.26110E-01	3.55363E+12	8.69271E+15	1.40610E-03	-2.85198E+00
4.30019E-01	3.54007E+12	8.77361E+15	1.40851E-03	-2.85124E+00
4.33928E-01	3.55365E+12	8.85493E+15	1.41082E-03	-2.85053E+00
4.37837E-01	3.59743E+12	8.93420E+15	1.41341E-03	-2.84973E+00
4.41747E-01	3.57295E+12	9.01346E+15	1.41595E-03	-2.84895E+00
4.45656E-01	3.59620E+12	9.09124E+15	1.41868E-03	-2.84812E+00
4.49565E-01	3.61112E+12	9.16934E+15	1.42131E-03	-2.84731E+00
4.53474E-01	3.61112E+12	9.24619E+15	1.42410E-03	-2.84646E+00
4.57384E-01	3.61505E+12	9.32252E+15	1.42691E-03	-2.84560E+00
4.61293E-01	3.64927E+12	9.39800E+15	1.42981E-03	-2.84472E+00
4.65202E-01	3.66857E+12	9.47314E+15	1.43272E-03	-2.84384E+00
4.69112E-01	3.68743E+12	9.54833E+15	1.43508E-03	-2.84312E+00
4.73021E-01	3.68743E+12	9.62296E+15	1.43628E-03	-2.84276E+00
4.76930E-01	3.68743E+12	9.69667E+15	1.43759E-03	-2.84236E+00
4.80839E-01	3.69050E+12	9.77037E+15	1.43889E-03	-2.84197E+00
4.84749E-01	3.69050E+12	9.84313E+15	1.44030E-03	-2.84155E+00
4.88658E-01	3.72559E+12	9.91529E+15	1.44163E-03	-2.84115E+00
4.92567E-01	3.74499E+12	9.98815E+15	1.44314E-03	-2.84059E+00
4.96476E-01	3.72821E+12	1.00600E+16	1.44462E-03	-2.84025E+00
5.00386E-01	3.74925E+12	1.01306E+16	1.44626E-03	-2.83975E+00
5.04295E-01	3.76593E+12	1.01997E+16	1.44810E-03	-2.83920E+00
5.08204E-01	3.78303E+12	1.02574E+16	1.45010E-03	-2.83860E+00
5.12113E-01	3.78303E+12	1.03339E+16	1.45225E-03	-2.83796E+00
5.16023E-01	3.78303E+12	1.04013E+16	1.45424E-03	-2.83736E+00
5.19932E-01	3.80057E+12	1.04700E+16	1.45603E-03	-2.83683E+00
5.23841E-01	3.82119E+12	1.05374E+16	1.45637E-03	-2.83673E+00
5.27750E-01	3.81997E+12	1.06016E+16	1.45713E-03	-2.83650E+00
5.31660E-01	3.82119E+12	1.06648E+16	1.45800E-03	-2.83624E+00
5.35569E-01	3.82205E+12	1.07293E+16	1.45870E-03	-2.83603E+00
5.39478E-01	3.80495E+12	1.07941E+16	1.45934E-03	-2.83584E+00
5.43388E-01	3.80495E+12	1.08573E+16	1.46019E-03	-2.83559E+00
5.47297E-01	3.80495E+12	1.09209E+16	1.46099E-03	-2.83535E+00
5.51206E-01	3.82206E+12	1.09821E+16	1.46208E-03	-2.83503E+00
5.55115E-01	3.85934E+12	1.10430E+16	1.46320E-03	-2.83470E+00
5.59025E-01	3.85930E+12	1.11043E+16	1.46427E-03	-2.83438E+00
5.62934E-01	3.82205E+12	1.11629E+16	1.46567E-03	-2.83396E+00
5.66843E-01	3.84092E+12	1.12212E+16	1.46710E-03	-2.83354E+00
5.70752E-01	3.84092E+12	1.12806E+16	1.46837E-03	-2.83316E+00
5.74662E-01	3.85934E+12	1.13383E+16	1.46933E-03	-2.83303E+00
5.78571E-01	3.84092E+12	1.13953E+16	1.46889E-03	-2.83301E+00
5.82480E-01	3.85934E+12	1.14523E+16	1.46895E-03	-2.83299E+00
5.86389E-01	3.87864E+12	1.15094E+16	1.46901E-03	-2.83298E+00
5.90299E-01	3.85934E+12	1.15636E+16	1.46942E-03	-2.83245E+00
5.94208E-01	3.87864E+12	1.16196E+16	1.46961E-03	-2.83280E+00
5.98117E-01	3.87864E+12	1.16730E+16	1.47012E-03	-2.83265E+00
6.02026E-01	3.85934E+12	1.17262E+16	1.47065E-03	-2.83249E+00
6.05936E-01	3.84180E+12	1.17783E+16	1.47132E-03	-2.83229E+00
6.09845E-01	3.87864E+12	1.18286E+16	1.47220E-03	-2.83203E+00
6.13754E-01	3.85934E+12	1.18802E+16	1.47291E-03	-2.83182E+00
6.17664E-01	3.87864E+12	1.19290E+16	1.47396E-03	-2.83151E+00
6.21573E-01	3.86065E+12	1.19779E+16	1.47500E-03	-2.83121E+00

TABLE 4 (continued)

SHOT 3-12

384 POINTS

146

TIME (MICROSEC)	CDEN (AMP/M2)	EOEN (ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
6.25482E-01	3.84193E+12	1.20261E+16	1.47563E-03	-2.93102E+00
6.29391E-01	3.87864E+12	1.20738E+16	1.47553E-03	-2.93105E+00
6.33301E-01	3.87864E+12	1.21215E+16	1.47544E-03	-2.93108E+00
6.37210E-01	3.85934E+12	1.21693E+16	1.47534E-03	-2.93111E+00
6.41119E-01	3.87820E+12	1.22157E+16	1.47540E-03	-2.93109E+00
6.45028E-01	3.84092E+12	1.22511E+16	1.47559E-03	-2.93103E+00
6.48938E-01	3.84180E+12	1.23078E+16	1.47562E-03	-2.93103E+00
6.52847E-01	3.82338E+12	1.23527E+16	1.47586E-03	-2.93095E+00
6.56756E-01	3.82338E+12	1.23975E+16	1.47612E-03	-2.93088E+00
6.60665E-01	3.87864E+12	1.24413E+16	1.47649E-03	-2.93077E+00
6.64575E-01	3.84193E+12	1.24837E+16	1.47702E-03	-2.93061E+00
6.68484E-01	3.84092E+12	1.25259E+16	1.47757E-03	-2.93045E+00
6.72393E-01	3.84092E+12	1.25669E+16	1.47826E-03	-2.93025E+00
6.76302E-01	3.84092E+12	1.26078E+16	1.47888E-03	-2.93007E+00
6.80212E-01	3.85934E+12	1.26472E+16	1.47863E-03	-2.93014E+00
6.84121E-01	3.85934E+12	1.26878E+16	1.47824E-03	-2.93026E+00
6.88030E-01	3.82338E+12	1.27269E+16	1.47804E-03	-2.93031E+00
6.91940E-01	3.80495E+12	1.27645E+16	1.47800E-03	-2.93033E+00
6.95849E-01	3.84004E+12	1.28035E+16	1.47780E-03	-2.93038E+00
6.99758E-01	3.80495E+12	1.28398E+16	1.47792E-03	-2.93035E+00
7.03667E-01	3.82206E+12	1.28775E+16	1.47787E-03	-2.93036E+00
7.07577E-01	3.81987E+12	1.29149E+16	1.47786E-03	-2.93037E+00
7.11486E-01	3.81987E+12	1.29510E+16	1.47800E-03	-2.93033E+00
7.15395E-01	3.80057E+12	1.29871E+16	1.47814E-03	-2.93028E+00
7.19304E-01	3.80057E+12	1.30206E+16	1.47857E-03	-2.93016E+00
7.23214E-01	3.80057E+12	1.30551E+16	1.47889E-03	-2.93006E+00
7.27123E-01	3.76593E+12	1.30893E+16	1.47923E-03	-2.92996E+00
7.31032E-01	3.74707E+12	1.31227E+16	1.47998E-03	-2.93004E+00
7.34941E-01	3.76374E+12	1.31560E+16	1.47953E-03	-2.93017E+00
7.38851E-01	3.74488E+12	1.31864E+16	1.47841E-03	-2.93021E+00
7.42760E-01	3.76374E+12	1.32183E+16	1.47812E-03	-2.93029E+00
7.46669E-01	3.73040E+12	1.32500E+16	1.47786E-03	-2.93037E+00
7.50578E-01	3.72821E+12	1.32803E+16	1.47776E-03	-2.93040E+00
7.54488E-01	3.72821E+12	1.33106E+16	1.47765E-03	-2.93043E+00
7.58397E-01	3.72821E+12	1.33407E+16	1.47757E-03	-2.93045E+00
7.62306E-01	3.69357E+12	1.33697E+16	1.47761E-03	-2.93044E+00
7.66216E-01	3.69357E+12	1.33974E+16	1.47779E-03	-2.93039E+00
7.70125E-01	3.70935E+12	1.34249E+16	1.47800E-03	-2.93033E+00
7.74034E-01	3.70365E+12	1.3458E+16	1.47816E-03	-2.93028E+00
7.77943E-01	3.66857E+12	1.34803E+16	1.47836E-03	-2.93022E+00
7.81853E-01	3.68743E+12	1.35063E+16	1.47937E-03	-2.93022E+00
7.85762E-01	3.66857E+12	1.35317E+16	1.47908E-03	-2.93030E+00
7.89671E-01	3.64927E+12	1.35575E+16	1.47774E-03	-2.93040E+00
7.93580E-01	3.64927E+12	1.35834E+16	1.47739E-03	-2.93050E+00
7.97490E-01	3.62997E+12	1.36091E+16	1.47706E-03	-2.93060E+00
8.01399E-01	3.64575E+12	1.36333E+16	1.47689E-03	-2.93055E+00
8.05308E-01	3.58217E+12	1.36564E+16	1.47685E-03	-2.93066E+00
8.09217E-01	3.61112E+12	1.36793E+16	1.47683E-03	-2.93067E+00
8.13127E-01	3.61112E+12	1.37009E+16	1.47694E-03	-2.93064E+00
8.17036E-01	3.61112E+12	1.37238E+16	1.47692E-03	-2.93064E+00
8.20945E-01	3.59182E+12	1.37454E+16	1.47705E-03	-2.93060E+00
8.24854E-01	3.59182E+12	1.37658E+16	1.47729E-03	-2.93053E+00
8.28764E-01	3.55893E+12	1.37862E+16	1.47754E-03	-2.93046E+00
8.32673E-01	3.55893E+12	1.38069E+16	1.47766E-03	-2.93043E+00
8.36582E-01	3.54007E+12	1.38257E+16	1.47752E-03	-2.93047E+00
8.40492E-01	3.50905E+12	1.39446E+16	1.47738E-03	-2.93051E+00
8.44401E-01	3.51551E+12	1.39633E+16	1.47725E-03	-2.93055E+00
8.48310E-01	3.48349E+12	1.39819E+16	1.47714E-03	-2.93058E+00
8.52219E-01	3.47735E+12	1.39933E+16	1.47715E-03	-2.93058E+00
8.56129E-01	3.48349E+12	1.39168E+16	1.47716E-03	-2.93057E+00
8.60038E-01	3.46464E+12	1.39340E+16	1.47719E-03	-2.93056E+00
8.63947E-01	3.47735E+12	1.39503E+16	1.47733E-03	-2.93052E+00
8.67856E-01	3.45805E+12	1.39674E+16	1.47738E-03	-2.93051E+00
8.71766E-01	3.41508E+12	1.39822E+16	1.47767E-03	-2.93042E+00
8.75675E-01	3.41508E+12	1.39970E+16	1.47795E-03	-2.93034E+00
8.79584E-01	3.40805E+12	1.40129E+16	1.47814E-03	-2.93028E+00
8.83493E-01	3.37780E+12	1.40275E+16	1.47844E-03	-2.93020E+00
8.87403E-01	3.38920E+12	1.40421E+16	1.47838E-03	-2.93021E+00
8.91312E-01	3.37429E+12	1.40548E+16	1.47847E-03	-2.93019E+00
8.95221E-01	3.35456E+12	1.40682E+16	1.47849E-03	-2.93018E+00
8.99130E-01	3.36289E+12	1.40814E+16	1.47852E-03	-2.93017E+00
9.03040E-01	3.32473E+12	1.40939E+16	1.47862E-03	-2.93014E+00
9.06949E-01	3.35456E+12	1.41060E+16	1.47877E-03	-2.93010E+00
9.10858E-01	3.30368E+12	1.41181E+16	1.47892E-03	-2.93006E+00
9.14768E-01	3.29535E+12	1.41312E+16	1.47897E-03	-2.93004E+00
9.18677E-01	3.29535E+12	1.41420E+16	1.47925E-03	-2.92996E+00
9.22586E-01	3.26728E+12	1.41516E+16	1.47965E-03	-2.92984E+00
9.26495E-01	3.26728E+12	1.41625E+16	1.47993E-03	-2.92976E+00
9.30405E-01	3.23878E+12	1.41721E+16	1.48033E-03	-2.92964E+00
9.34314E-01	3.22913E+12	1.41828E+16	1.48063E-03	-2.92955E+00

TABLE 4 (continued)

SHOT 3-12

394 POINTS

147

TIME (MICROSEC)	COEN (AMP/M2)	EDEN (ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
9.39223E-01	3.22913E+12	1.41931E+16	1.49075E-03	-2.92952E+00
9.42132E-01	3.18395E+12	1.42015E+16	1.48993E-03	-2.92947E+00
9.46042E-01	3.19229E+12	1.42120E+16	1.48088E-03	-2.82948E+00
9.49951E-01	3.19097E+12	1.42214E+16	1.48095E-03	-2.92946E+00
9.53960E-01	3.17169E+12	1.42298E+16	1.48113E-03	-2.82941E+00
9.57769E-01	3.15292E+12	1.42390E+16	1.48121E-03	-2.92938E+00
9.61679E-01	3.12563E+12	1.42464E+16	1.48149E-03	-2.82930E+00
9.65588E-01	3.10677E+12	1.42535E+16	1.48180E-03	-2.82921E+00
9.69497E-01	3.13352E+12	1.42616E+16	1.48201E-03	-2.92915E+00
9.73406E-01	3.10677E+12	1.42677E+16	1.49242E-03	-2.92903E+00
9.77316E-01	3.09935E+12	1.42728E+16	1.48293E-03	-2.92908E+00
9.81225E-01	3.07607E+12	1.42778E+16	1.48346E-03	-2.92972E+00
9.85134E-01	3.03792E+12	1.42828E+16	1.48398E-03	-2.92957E+00
9.89044E-01	3.03179E+12	1.42888E+16	1.48434E-03	-2.92947E+00
9.92953E-01	3.03179E+12	1.42937E+16	1.48463E-03	-2.82938E+00
9.96862E-01	3.01292E+12	1.42986E+16	1.48493E-03	-2.92829E+00
1.00077E+00	2.97520E+12	1.43034E+16	1.49523E-03	-2.82921E+00
1.00469E+00	2.95534E+12	1.43081E+16	1.49555E-03	-2.82911E+00
1.00859E+00	2.94757E+12	1.43128E+16	1.48596E-03	-2.92902E+00
1.01250E+00	2.90998E+12	1.43166E+16	1.48627E-03	-2.92790E+00
1.01641E+00	2.94275E+12	1.43204E+16	1.48668E-03	-2.92779E+00
1.02032E+00	2.94275E+12	1.43232E+16	1.49719E-03	-2.92763E+00
1.02423E+00	2.90415E+12	1.43260E+16	1.49770E-03	-2.92748E+00
1.02914E+00	2.89530E+12	1.43289E+16	1.49821E-03	-2.92734E+00
1.03205E+00	2.89530E+12	1.43316E+16	1.49973E-03	-2.82718E+00
1.03595E+00	2.86600E+12	1.43335E+16	1.48934E-03	-2.92701E+00
1.03986E+00	2.82794E+12	1.43353E+16	1.49995E-03	-2.92693E+00
1.04377E+00	2.80899E+12	1.43371E+16	1.49042E-03	-2.92669E+00
1.04768E+00	2.79275E+12	1.43380E+16	1.49099E-03	-2.92653E+00
1.05159E+00	2.79275E+12	1.43389E+16	1.49153E-03	-2.92637E+00
1.05550E+00	2.75154E+12	1.43389E+16	1.49218E-03	-2.82619E+00
1.05941E+00	2.75154E+12	1.43398E+16	1.49275E-03	-2.92601E+00
1.06332E+00	2.71699E+12	1.43398E+16	1.49340E-03	-2.92592E+00
1.06723E+00	2.69594E+12	1.43406E+16	1.49396E-03	-2.82566E+00
1.07114E+00	2.71333E+12	1.43406E+16	1.49461E-03	-2.92547E+00
1.07505E+00	2.67610E+12	1.43398E+16	1.49535E-03	-2.82526E+00
1.07896E+00	2.65593E+12	1.43398E+16	1.49600E-03	-2.92507E+00
1.08287E+00	2.65593E+12	1.43398E+16	1.49665E-03	-2.92488E+00
1.08678E+00	2.63707E+12	1.43381E+16	1.49747E-03	-2.92464E+00
1.09069E+00	2.61734E+12	1.43373E+16	1.49821E-03	-2.92443E+00
1.09459E+00	2.59949E+12	1.43365E+16	1.49899E-03	-2.82423E+00
1.09850E+00	2.57919E+12	1.43348E+16	1.49962E-03	-2.92402E+00
1.10241E+00	2.55998E+12	1.43323E+16	1.50044E-03	-2.92378E+00
1.10632E+00	2.54059E+12	1.43307E+16	1.50117E-03	-2.92357E+00
1.11023E+00	2.52129E+12	1.43293E+16	1.50198E-03	-2.92334E+00
1.11414E+00	2.50155E+12	1.43259E+16	1.50279E-03	-2.92310E+00
1.11805E+00	2.48225E+12	1.43229E+16	1.50367E-03	-2.92295E+00
1.12196E+00	2.46295E+12	1.43205E+16	1.50448E-03	-2.92261E+00
1.12587E+00	2.44265E+12	1.43182E+16	1.50528E-03	-2.92238E+00
1.12978E+00	2.40770E+12	1.43159E+16	1.50608E-03	-2.92215E+00
1.13369E+00	2.38841E+12	1.43129E+16	1.50696E-03	-2.82190E+00
1.13760E+00	2.38841E+12	1.43099E+16	1.50784E-03	-2.92164E+00
1.14150E+00	2.36955E+12	1.43069E+16	1.50871E-03	-2.92139E+00
1.14541E+00	2.35025E+12	1.43031E+16	1.50966E-03	-2.92112E+00
1.14932E+00	2.33139E+12	1.42995E+16	1.51056E-03	-2.92096E+00
1.15323E+00	2.31210E+12	1.42952E+16	1.51153E-03	-2.92058E+00
1.15714E+00	2.29324E+12	1.42916E+16	1.51243E-03	-2.92032E+00
1.16105E+00	2.27394E+12	1.42874E+16	1.51340E-03	-2.92005E+00
1.16496E+00	2.25464E+12	1.42825E+16	1.51444E-03	-2.91975E+00
1.16887E+00	2.24992E+12	1.42793E+16	1.51540E-03	-2.91947E+00
1.17278E+00	2.21649E+12	1.42735E+16	1.51644E-03	-2.91917E+00
1.17669E+00	2.19763E+12	1.42693E+16	1.51740E-03	-2.91990E+00
1.18060E+00	2.19143E+12	1.42645E+16	1.51843E-03	-2.91961E+00
1.18451E+00	2.17220E+12	1.42598E+16	1.51945E-03	-2.91931E+00
1.18842E+00	2.13313E+12	1.42551E+16	1.52047E-03	-2.91802E+00
1.19233E+00	2.11397E+12	1.42505E+16	1.52149E-03	-2.91773E+00
1.19623E+00	2.09457E+12	1.42452E+16	1.52257E-03	-2.91742E+00
1.20014E+00	2.07527E+12	1.42400E+16	1.52363E-03	-2.91712E+00
1.20405E+00	2.05599E+12	1.42348E+16	1.52469E-03	-2.81692E+00
1.20796E+00	2.03624E+12	1.42297E+16	1.52574E-03	-2.91652E+00
1.21187E+00	2.03624E+12	1.42246E+16	1.52679E-03	-2.91622E+00
1.21578E+00	1.99765E+12	1.42195E+16	1.52783E-03	-2.91592E+00
1.21969E+00	1.99765E+12	1.42146E+16	1.52886E-03	-2.91553E+00
1.22360E+00	1.99765E+12	1.42099E+16	1.52999E-03	-2.91534E+00
1.22751E+00	1.97935E+12	1.42050E+16	1.53090E-03	-2.91505E+00
1.23142E+00	1.95962E+12	1.41996E+16	1.53198E-03	-2.91475E+00
1.23533E+00	1.93932E+12	1.41937E+16	1.53313E-03	-2.91442E+00
1.23924E+00	1.92002E+12	1.41879E+16	1.53426E-03	-2.91410E+00
1.24315E+00	1.90073E+12	1.41815E+16	1.53545E-03	-2.91376E+00
1.24706E+00	1.88143E+12	1.41764E+16	1.53650E-03	-2.91347E+00

TABLE 4 (continued)

SHOT 3-12

334 POINTS

148

TIME(MICROSEC)	COEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
1.25096E+00	1.88143E+12	1.41707E+16	1.53761E-03	-2.81315E+00
1.25487E+00	1.84240E+12	1.41645E+16	1.53877E-03	-2.81283E+00
1.25878E+00	1.84240E+12	1.41590E+16	1.53985E-03	-2.81252E+00
1.26269E+00	1.82310E+12	1.41541E+16	1.54088E-03	-2.81223E+00
1.26660E+00	1.78451E+12	1.41486E+16	1.54196E-03	-2.81193E+00
1.27051E+00	1.78451E+12	1.41433E+16	1.54303E-03	-2.81163E+00
1.27442E+00	1.76477E+12	1.41390E+16	1.54409E-03	-2.81133E+00
1.27833E+00	1.74547E+12	1.41327E+16	1.54516E-03	-2.81103E+00
1.28224E+00	1.72618E+12	1.41269E+16	1.54628E-03	-2.81071E+00
1.28615E+00	1.72618E+12	1.41218E+16	1.54732E-03	-2.81042E+00
1.29006E+00	1.59759E+12	1.41162E+16	1.54843E-03	-2.81011E+00
1.29397E+00	1.56785E+12	1.41113E+16	1.54945E-03	-2.80982E+00
1.29788E+00	1.66785E+12	1.41060E+16	1.55052E-03	-2.80952E+00
1.30178E+00	1.64855E+12	1.41005E+16	1.55161E-03	-2.80922E+00
1.30569E+00	1.62925E+12	1.40952E+16	1.55267E-03	-2.80892E+00
1.30960E+00	1.59022E+12	1.40899E+16	1.55373E-03	-2.80862E+00
1.31351E+00	1.59022E+12	1.40842E+16	1.55484E-03	-2.80831E+00
1.31742E+00	1.57093E+12	1.40790E+16	1.55589E-03	-2.80802E+00
1.32133E+00	1.55163E+12	1.40739E+16	1.55693E-03	-2.80773E+00
1.32524E+00	1.53233E+12	1.40688E+16	1.55798E-03	-2.80744E+00
1.32915E+00	1.53233E+12	1.40638E+16	1.55900E-03	-2.80715E+00
1.33306E+00	1.51304E+12	1.40589E+16	1.56002E-03	-2.80687E+00
1.33697E+00	1.47401E+12	1.40542E+16	1.56103E-03	-2.80659E+00
1.34088E+00	1.47401E+12	1.40494E+16	1.56204E-03	-2.80631E+00
1.34479E+00	1.45471E+12	1.40446E+16	1.56304E-03	-2.80603E+00
1.34870E+00	1.43541E+12	1.40396E+16	1.56409E-03	-2.80574E+00
1.35260E+00	1.43541E+12	1.40351E+16	1.56506E-03	-2.80547E+00
1.35651E+00	1.39639E+12	1.40306E+16	1.56604E-03	-2.80520E+00
1.36042E+00	1.39639E+12	1.40257E+16	1.56706E-03	-2.80491E+00
1.36433E+00	1.37709E+12	1.40209E+16	1.56808E-03	-2.80463E+00
1.36824E+00	1.37709E+12	1.40166E+16	1.56904E-03	-2.80437E+00
1.37215E+00	1.33849E+12	1.40118E+16	1.57005E-03	-2.80409E+00
1.37606E+00	1.33849E+12	1.40076E+16	1.57100E-03	-2.80382E+00
1.37997E+00	1.29945E+12	1.40032E+16	1.57198E-03	-2.80355E+00
1.38388E+00	1.27972E+12	1.39991E+16	1.57291E-03	-2.80330E+00
1.38779E+00	1.25999E+12	1.39954E+16	1.57381E-03	-2.80305E+00
1.39170E+00	1.25999E+12	1.39912E+16	1.57475E-03	-2.80279E+00
1.39561E+00	1.24025E+12	1.39872E+16	1.57568E-03	-2.80253E+00
1.39952E+00	1.22096E+12	1.39835E+16	1.57658E-03	-2.80228E+00
1.40343E+00	1.20122E+12	1.39799E+16	1.57746E-03	-2.80204E+00
1.40733E+00	1.18148E+12	1.39761E+16	1.57836E-03	-2.80179E+00
1.41124E+00	1.17973E+12	1.39727E+16	1.57921E-03	-2.80156E+00
1.41515E+00	1.15956E+12	1.39693E+16	1.58006E-03	-2.80133E+00
1.41906E+00	1.13938E+12	1.39659E+16	1.58091E-03	-2.80109E+00
1.42297E+00	1.13938E+12	1.39626E+16	1.58176E-03	-2.80086E+00
1.42688E+00	1.11965E+12	1.39593E+16	1.58260E-03	-2.80063E+00
1.43079E+00	1.09947E+12	1.39563E+16	1.58340E-03	-2.80041E+00
1.43470E+00	1.09947E+12	1.39534E+16	1.58420E-03	-2.80019E+00
1.43861E+00	1.07974E+12	1.39503E+16	1.58502E-03	-2.79997E+00
1.44252E+00	1.07974E+12	1.39472E+16	1.58584E-03	-2.79974E+00
1.44643E+00	1.05956E+12	1.39438E+16	1.58669E-03	-2.79951E+00
1.45034E+00	1.05956E+12	1.39404E+16	1.58754E-03	-2.79928E+00
1.45425E+00	1.03993E+12	1.39375E+16	1.58835E-03	-2.79905E+00
1.45816E+00	1.03993E+12	1.39346E+16	1.58914E-03	-2.79884E+00
1.46206E+00	9.99482E+11	1.39314E+16	1.58996E-03	-2.79861E+00
1.46597E+00	9.99482E+11	1.39281E+16	1.59078E-03	-2.79839E+00
1.46988E+00	9.79746E+11	1.39255E+16	1.59154E-03	-2.79818E+00
1.47379E+00	9.79746E+11	1.39224E+16	1.59234E-03	-2.79796E+00
1.47770E+00	9.59573E+11	1.39194E+16	1.59313E-03	-2.79775E+00
1.48161E+00	9.59573E+11	1.39166E+16	1.59391E-03	-2.79754E+00
1.48552E+00	9.39399E+11	1.39139E+16	1.59467E-03	-2.79733E+00
1.48943E+00	9.39399E+11	1.39111E+16	1.59544E-03	-2.79712E+00
1.49334E+00	9.19654E+11	1.39084E+16	1.59621E-03	-2.79691E+00
1.49725E+00	8.99490E+11	1.39057E+16	1.59697E-03	-2.79670E+00

EOF

TABLE 4 (continued)

SHOT 3-13

384 POINTS

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TIME(MICROSEC)	CDEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
0.	2.79902E+11	9.61839E+13	0.	-3.33759E+00
3.90926E-03	3.39935E+11	1.14547E+14	4.59636E-04	-3.33759E+00
7.81853E-03	3.99530E+11	1.34813E+14	7.81081E-04	-3.10730E+00
1.17278E-02	4.39977E+11	1.56968E+14	1.00625E-03	-2.99729E+00
1.56371E-02	4.79785E+11	1.80698E+14	1.16548E-03	-2.93350E+00
1.95463E-02	5.19695E+11	2.06357E+14	1.27570E-03	-2.89425E+00
2.34556E-02	5.79778E+11	2.33435E+14	1.35326E-03	-2.86952E+00
2.73648E-02	6.39861E+11	2.62805E+14	1.40237E-03	-2.85314E+00
3.12741E-02	6.99505E+11	2.94449E+14	1.43046E-03	-2.84452E+00
3.51834E-02	7.28451E+11	3.27346E+14	1.44755E-03	-2.83937E+00
3.90926E-02	7.87657E+11	3.61636E+14	1.45588E-03	-2.83687E+00
4.30019E-02	8.39845E+11	3.97963E+14	1.45528E-03	-2.83705E+00
4.69112E-02	8.99490E+11	4.35971E+14	1.44917E-03	-2.83888E+00
5.08204E-02	9.59573E+11	4.75707E+14	1.43880E-03	-2.84200E+00
5.47297E-02	9.99482E+11	5.23081E+14	1.40915E-03	-2.85104E+00
5.86389E-02	1.03993E+12	5.74454E+14	1.37478E-03	-2.86177E+00
6.25482E-02	1.09947E+12	6.28861E+14	1.33956E-03	-2.87304E+00
6.64575E-02	1.13938E+12	6.89558E+14	1.29800E-03	-2.88673E+00
7.03667E-02	1.18148E+12	7.55636E+14	1.25417E-03	-2.90164E+00
7.42760E-02	1.25955E+12	8.32152E+14	1.20212E-03	-2.92005E+00
7.81853E-02	1.31875E+12	9.18276E+14	1.14671E-03	-2.94055E+00
8.20945E-02	1.33893E+12	1.02546E+15	1.07819E-03	-2.96730E+00
8.60038E-02	1.37708E+12	1.15146E+15	1.00594E-03	-2.99743E+00
8.99130E-02	1.43541E+12	1.29739E+15	9.33370E-04	-3.02995E+00
9.38223E-02	1.47401E+12	1.46745E+15	8.61081E-04	-3.06496E+00
9.77316E-02	1.51611E+12	1.60684E+15	8.19152E-04	-3.08664E+00
1.01641E-01	1.57093E+12	1.71519E+15	7.98102E-04	-3.09794E+00
1.05550E-01	1.57531E+12	1.82802E+15	7.72449E-04	-3.11213E+00
1.09459E-01	1.62925E+12	1.94152E+15	7.42072E-04	-3.12955E+00
1.13369E-01	1.64855E+12	2.04055E+15	7.20123E-04	-3.14259E+00
1.17278E-01	1.56785E+12	2.14546E+15	6.98286E-04	-3.15597E+00
1.21187E-01	1.59329E+12	2.25025E+15	6.79520E-04	-3.16844E+00
1.25096E-01	1.74547E+12	2.35501E+15	6.60521E-04	-3.18011E+00
1.29006E-01	1.76477E+12	2.45379E+15	6.45627E-04	-3.19002E+00
1.32915E-01	1.82310E+12	2.55474E+15	6.31350E-04	-3.19973E+00
1.36824E-01	1.87046E+12	2.65598E+15	6.18087E-04	-3.20895E+00
1.40733E-01	1.89020E+12	2.75324E+15	6.06677E-04	-3.21704E+00
1.44643E-01	1.92923E+12	2.85230E+15	5.95668E-04	-3.22500E+00
1.48552E-01	1.96870E+12	2.95213E+15	5.85246E-04	-3.23266E+00
1.52461E-01	2.01694E+12	3.04930E+15	5.76008E-04	-3.23957E+00
1.56371E-01	2.04764E+12	3.15150E+15	5.67839E-04	-3.24577E+00
1.60280E-01	2.06738E+12	3.25322E+15	5.73277E-04	-3.24164E+00
1.64189E-01	2.12615E+12	3.35535E+15	5.78314E-04	-3.23784E+00
1.68098E-01	2.16562E+12	3.45898E+15	5.82900E-04	-3.23448E+00
1.72008E-01	2.19763E+12	3.56350E+15	5.86880E-04	-3.23145E+00
1.75917E-01	2.21649E+12	3.66723E+15	5.90853E-04	-3.22852E+00
1.79826E-01	2.28841E+12	3.77096E+15	5.94609E-04	-3.22577E+00
1.83735E-01	2.30771E+12	3.87756E+15	5.97721E-04	-3.22350E+00
1.87645E-01	2.34674E+12	3.98450E+15	6.00614E-04	-3.22140E+00
1.91554E-01	2.40463E+12	4.09128E+15	6.03379E-04	-3.21941E+00
1.95463E-01	2.44365E+12	4.19884E+15	6.05892E-04	-3.21760E+00
1.99372E-01	2.46296E+12	4.30799E+15	6.08056E-04	-3.21606E+00
2.03282E-01	2.50155E+12	4.41691E+15	6.10143E-04	-3.21457E+00
2.07191E-01	2.55988E+12	4.52671E+15	6.12011E-04	-3.21324E+00
2.11100E-01	2.57918E+12	4.63756E+15	6.22680E-04	-3.20574E+00
2.15009E-01	2.63751E+12	4.74693E+15	6.35349E-04	-3.19699E+00
2.18919E-01	2.65681E+12	4.85562E+15	6.47405E-04	-3.18882E+00
2.22828E-01	2.59584E+12	4.96756E+15	6.58763E-04	-3.18127E+00
2.26737E-01	2.73443E+12	5.07881E+15	6.69585E-04	-3.17419E+00
2.30647E-01	2.77083E+12	5.18960E+15	6.80002E-04	-3.16749E+00
2.34556E-01	2.80592E+12	5.30109E+15	6.89892E-04	-3.16122E+00
2.38465E-01	2.81513E+12	5.41328E+15	6.99285E-04	-3.15535E+00
2.42374E-01	2.84714E+12	5.52577E+15	7.08258E-04	-3.14981E+00
2.46284E-01	2.90415E+12	5.63619E+15	7.17136E-04	-3.14440E+00
2.50193E-01	2.94275E+12	5.74938E+15	7.25323E-04	-3.13947E+00
2.54102E-01	2.98090E+12	5.86193E+15	7.33275E-04	-3.13473E+00
2.58011E-01	2.99975E+12	5.97727E+15	7.40581E-04	-3.13043E+00
2.61921E-01	3.04449E+12	6.09398E+15	7.49774E-04	-3.12507E+00
2.65830E-01	3.07507E+12	6.21062E+15	7.61000E-04	-3.11862E+00
2.69739E-01	3.07607E+12	6.32508E+15	7.72077E-04	-3.11234E+00
2.73648E-01	3.12563E+12	6.44043E+15	7.82652E-04	-3.10643E+00
2.77558E-01	3.13352E+12	6.55682E+15	7.92730E-04	-3.10087E+00
2.81467E-01	3.20933E+12	6.67276E+15	8.02511E-04	-3.09555E+00
2.85376E-01	3.24799E+12	6.78849E+15	8.11982E-04	-3.09045E+00
2.89285E-01	3.27737E+12	6.90527E+15	8.21011E-04	-3.08565E+00
2.93195E-01	3.30544E+12	7.02063E+15	8.29908E-04	-3.08097E+00
2.97104E-01	3.33307E+12	7.13616E+15	8.38497E-04	-3.07650E+00
3.01013E-01	3.36299E+12	7.25357E+15	8.46592E-04	-3.07233E+00
3.04923E-01	3.38175E+12	7.36950E+15	8.54602E-04	-3.06824E+00
3.08832E-01	3.40805E+12	7.48504E+15	8.62294E-04	-3.06434E+00

TABLE 4 (continued)

SHOT 3-13

384 POINTS

153

TIME(MICROSEC)	CDEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
1.25096E+00	2.15290E+12	1.78421E+16	1.17528E-03	-2.92986E+00
1.25487E+00	2.15290E+12	1.78344E+16	1.17631E-03	-2.92948E+00
1.25878E+00	2.13315E+12	1.78269E+16	1.17738E-03	-2.92908E+00
1.26269E+00	2.11387E+12	1.78198E+16	1.17840E-03	-2.92871E+00
1.26660E+00	2.09457E+12	1.78128E+16	1.17942E-03	-2.92833E+00
1.27051E+00	2.07527E+12	1.78059E+16	1.18043E-03	-2.92796E+00
1.27442E+00	2.05598E+12	1.77990E+16	1.18144E-03	-2.92759E+00
1.27833E+00	2.03624E+12	1.77916E+16	1.18249E-03	-2.92720E+00
1.28224E+00	2.01694E+12	1.77849E+16	1.18349E-03	-2.92684E+00
1.28615E+00	1.97835E+12	1.77782E+16	1.18449E-03	-2.92647E+00
1.29006E+00	1.97835E+12	1.77709E+16	1.18553E-03	-2.92609E+00
1.29397E+00	1.93932E+12	1.77632E+16	1.18659E-03	-2.92570E+00
1.29788E+00	1.93932E+12	1.77570E+16	1.18757E-03	-2.92534E+00
1.30178E+00	1.92002E+12	1.77503E+16	1.18853E-03	-2.92499E+00
1.30569E+00	1.90073E+12	1.77434E+16	1.18947E-03	-2.92465E+00
1.30960E+00	1.86169E+12	1.77360E+16	1.19044E-03	-2.92429E+00
1.31351E+00	1.84240E+12	1.77287E+16	1.19141E-03	-2.92394E+00
1.31742E+00	1.82310E+12	1.77214E+16	1.19237E-03	-2.92359E+00
1.32133E+00	1.80390E+12	1.77143E+16	1.19333E-03	-2.92324E+00
1.32524E+00	1.78451E+12	1.77072E+16	1.19428E-03	-2.92289E+00
1.32915E+00	1.76477E+12	1.77008E+16	1.19519E-03	-2.92256E+00
1.33306E+00	1.76477E+12	1.76938E+16	1.19614E-03	-2.92222E+00
1.33697E+00	1.74547E+12	1.76875E+16	1.19704E-03	-2.92189E+00
1.34088E+00	1.70638E+12	1.76814E+16	1.19793E-03	-2.92157E+00
1.34479E+00	1.68759E+12	1.76748E+16	1.19885E-03	-2.92124E+00
1.34870E+00	1.66785E+12	1.76689E+16	1.19973E-03	-2.92092E+00
1.35260E+00	1.54855E+12	1.76620E+16	1.20067E-03	-2.92058E+00
1.35651E+00	1.54855E+12	1.76558E+16	1.20151E-03	-2.92027E+00
1.36042E+00	1.52925E+12	1.76499E+16	1.20233E-03	-2.91998E+00
1.36433E+00	1.50996E+12	1.76432E+16	1.20321E-03	-2.91966E+00
1.36824E+00	1.59022E+12	1.76371E+16	1.20405E-03	-2.91936E+00
1.37215E+00	1.57093E+12	1.76316E+16	1.20485E-03	-2.91907E+00
1.37606E+00	1.55163E+12	1.76252E+16	1.20571E-03	-2.91876E+00
1.37997E+00	1.55163E+12	1.76192E+16	1.20654E-03	-2.91846E+00
1.38388E+00	1.51611E+12	1.76136E+16	1.20736E-03	-2.91816E+00
1.38779E+00	1.47664E+12	1.76079E+16	1.20817E-03	-2.91787E+00
1.39170E+00	1.45690E+12	1.76027E+16	1.20895E-03	-2.91759E+00
1.39561E+00	1.43717E+12	1.75970E+16	1.20977E-03	-2.91730E+00
1.39952E+00	1.41787E+12	1.75919E+16	1.21054E-03	-2.91702E+00
1.40343E+00	1.41787E+12	1.75868E+16	1.21132E-03	-2.91674E+00
1.40733E+00	1.41787E+12	1.75817E+16	1.21207E-03	-2.91647E+00
1.41124E+00	1.37840E+12	1.75772E+16	1.21278E-03	-2.91622E+00
1.41515E+00	1.35865E+12	1.75727E+16	1.21349E-03	-2.91596E+00
1.41906E+00	1.33893E+12	1.75679E+16	1.21422E-03	-2.91570E+00
1.42297E+00	1.31913E+12	1.75635E+16	1.21492E-03	-2.91545E+00
1.42688E+00	1.31913E+12	1.75593E+16	1.21561E-03	-2.91521E+00
1.43079E+00	1.29946E+12	1.75549E+16	1.21631E-03	-2.91496E+00
1.43470E+00	1.29946E+12	1.75507E+16	1.21700E-03	-2.91471E+00
1.43861E+00	1.25955E+12	1.75462E+16	1.21771E-03	-2.91446E+00
1.44252E+00	1.25955E+12	1.75422E+16	1.21839E-03	-2.91421E+00
1.44643E+00	1.23937E+12	1.75382E+16	1.21907E-03	-2.91397E+00
1.45034E+00	1.21964E+12	1.75338E+16	1.21976E-03	-2.91373E+00
1.45425E+00	1.21964E+12	1.75299E+16	1.22044E-03	-2.91348E+00
1.45816E+00	1.19947E+12	1.75256E+16	1.22113E-03	-2.91324E+00
1.46206E+00	1.19947E+12	1.75215E+16	1.22180E-03	-2.91300E+00
1.46597E+00	1.17973E+12	1.75178E+16	1.22245E-03	-2.91277E+00
1.46988E+00	1.15956E+12	1.75137E+16	1.22312E-03	-2.91253E+00
1.47379E+00	1.13938E+12	1.75102E+16	1.22375E-03	-2.91231E+00
1.47770E+00	1.11965E+12	1.75066E+16	1.22438E-03	-2.91208E+00
1.48161E+00	1.13938E+12	1.75028E+16	1.22504E-03	-2.91185E+00
1.48552E+00	1.11965E+12	1.74991E+16	1.22569E-03	-2.91162E+00
1.48943E+00	1.07974E+12	1.74953E+16	1.22633E-03	-2.91139E+00
1.49334E+00	1.07974E+12	1.74917E+16	1.22698E-03	-2.91116E+00
1.49725E+00	1.05955E+12	1.74881E+16	1.22761E-03	-2.91094E+00

EOF

TABLE 4 (continued)

SHOT 3-14

347 POINTS

158

TIME(MICROSEC)	CDEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
1.25096E+00	2.32433E+10	6.07202E+14	4.07253E-02	-1.39014E+00
1.25487E+00	2.32433E+10	6.07352E+14	4.07285E-02	-1.39010E+00
1.25979E+00	2.32433E+10	6.07502E+14	4.07317E-02	-1.39007E+00
1.26269E+00	2.32433E+10	6.07653E+14	4.07349E-02	-1.39003E+00
1.26660E+00	1.55141E+10	6.07799E+14	4.07384E-02	-1.39000E+00
1.27051E+00	3.10292E+10	6.07949E+14	4.07416E-02	-1.38996E+00
1.27442E+00	2.32433E+10	6.08084E+14	4.07457E-02	-1.38992E+00
1.27933E+00	2.25853E+10	6.08220E+14	4.07499E-02	-1.38987E+00
1.28224E+00	2.25953E+10	6.08355E+14	4.07541E-02	-1.38983E+00
1.28615E+00	3.01511E+10	6.08495E+14	4.07580E-02	-1.38979E+00
1.29006E+00	2.32433E+10	6.08634E+14	4.07619E-02	-1.38975E+00
1.29397E+00	3.01511E+10	6.08778E+14	4.07655E-02	-1.38971E+00
1.29788E+00	3.10292E+10	6.08913E+14	4.07696E-02	-1.38966E+00
1.30178E+00	3.10282E+10	6.09019E+14	4.07753E-02	-1.38960E+00
1.30569E+00	2.32433E+10	6.09157E+14	4.07779E-02	-1.38958E+00
1.30960E+00	2.32433E+10	6.09254E+14	4.07834E-02	-1.38952E+00
1.31351E+00	3.10282E+10	6.09350E+14	4.07899E-02	-1.38946E+00
1.31742E+00	3.10282E+10	6.09479E+14	4.07923E-02	-1.38942E+00
1.32133E+00	2.32433E+10	6.09583E+14	4.07972E-02	-1.38937E+00
1.32524E+00	2.32433E+10	6.09688E+14	4.08022E-02	-1.38932E+00
1.32915E+00	3.10282E+10	6.09827E+14	4.08048E-02	-1.38929E+00
1.33306E+00	3.10282E+10	6.09973E+14	4.08070E-02	-1.38927E+00
1.33697E+00	3.10292E+10	6.10119E+14	4.08092E-02	-1.38924E+00
1.34088E+00	3.10292E+10	6.10302E+14	4.08089E-02	-1.38925E+00
1.34479E+00	3.10292E+10	6.10476E+14	4.08092E-02	-1.38924E+00
1.34870E+00	3.10282E+10	6.10650E+14	4.08095E-02	-1.38924E+00
1.35260E+00	3.10282E+10	6.10790E+14	4.08120E-02	-1.38921E+00

EOF

TABLE 4 (continued)

SHOT 4-1

344 POINTS

179

TIME(MICROSEC)	CDEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
1.29602E+00	4.57781E+11	2.52719E+15	2.47072E-03	-2.60719E+00
1.30007E+00	4.64601E+11	2.52910E+15	2.49830E-03	-2.60236E+00
1.30412E+00	4.64601E+11	2.53116E+15	2.52987E-03	-2.59690E+00
1.30817E+00	4.61367E+11	2.53319E+15	2.56143E-03	-2.59152E+00
1.31222E+00	4.61367E+11	2.53506E+15	2.59309E-03	-2.58618E+00
1.31627E+00	4.61367E+11	2.53709E+15	2.62454E-03	-2.58095E+00
1.32032E+00	4.58132E+11	2.53895E+15	2.65612E-03	-2.57575E+00
1.32437E+00	4.54899E+11	2.54081E+15	2.68766E-03	-2.57063E+00
1.32842E+00	4.54899E+11	2.54260E+15	2.71922E-03	-2.56556E+00
1.33247E+00	4.58132E+11	2.54443E+15	2.75069E-03	-2.56056E+00
1.33652E+00	4.52485E+11	2.54642E+15	2.78195E-03	-2.55565E+00
1.34057E+00	4.54899E+11	2.54840E+15	2.81318E-03	-2.55080E+00
1.34462E+00	4.48429E+11	2.55036E+15	2.84437E-03	-2.54601E+00
1.34867E+00	4.45250E+11	2.55216E+15	2.87568E-03	-2.54126E+00
1.35272E+00	4.45250E+11	2.55381E+15	2.90765E-03	-2.53646E+00
1.35677E+00	4.45250E+11	2.55559E+15	2.94181E-03	-2.53139E+00
1.36082E+00	4.46127E+11	2.55737E+15	2.97591E-03	-2.52638E+00
1.36487E+00	4.42015E+11	2.55900E+15	3.01014E-03	-2.52141E+00
1.36892E+00	4.42947E+11	2.56062E+15	3.04435E-03	-2.51651E+00
1.37297E+00	4.42015E+11	2.56210E+15	3.07868E-03	-2.51164E+00
1.37702E+00	4.35546E+11	2.56356E+15	3.11299E-03	-2.50682E+00
1.38107E+00	4.36533E+11	2.56515E+15	3.14710E-03	-2.50209E+00
1.38512E+00	4.35545E+11	2.56675E+15	3.18117E-03	-2.49741E+00
1.38917E+00	4.32312E+11	2.56820E+15	3.21537E-03	-2.49277E+00

EOF

TABLE 4 (continued)

SHOT 4-2

353 POINTS

184

TIME (MICROSEC)	COEN (AMP/M2)	EOEN (ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
1.29602E+00	6.52963E+11	4.61003E+15	7.92754E-04	-3.10086E+00
1.30007E+00	6.46714E+11	4.61137E+15	7.93998E-04	-3.10018E+00
1.30412E+00	6.45179E+11	4.61266E+15	7.95400E-04	-3.09941E+00
1.30817E+00	6.43644E+11	4.61416E+15	7.96764E-04	-3.09867E+00
1.31222E+00	6.37394E+11	4.61566E+15	7.98128E-04	-3.09793E+00
1.31627E+00	6.34324E+11	4.61593E+15	7.99531E-04	-3.09716E+00
1.32032E+00	6.31200E+11	4.61845E+15	8.00898E-04	-3.09643E+00
1.32437E+00	6.28075E+11	4.61992E+15	8.02255E-04	-3.09569E+00
1.32842E+00	6.28075E+11	4.62157E+15	8.03587E-04	-3.09497E+00
1.33247E+00	6.23699E+11	4.62285E+15	8.04986E-04	-3.09421E+00
1.33652E+00	6.20519E+11	4.62448E+15	8.06321E-04	-3.09349E+00
1.34057E+00	6.12561E+11	4.62590E+15	8.07691E-04	-3.09275E+00
1.34462E+00	6.09435E+11	4.62731E+15	8.09065E-04	-3.09202E+00
1.34867E+00	6.12561E+11	4.62850E+15	8.10474E-04	-3.09126E+00
1.35272E+00	6.06311E+11	4.62989E+15	8.11876E-04	-3.09051E+00
1.35677E+00	6.06311E+11	4.63107E+15	8.13441E-04	-3.08967E+00
1.36082E+00	6.00117E+11	4.63225E+15	8.15006E-04	-3.08884E+00
1.36487E+00	5.99130E+11	4.63360E+15	8.16539E-04	-3.08802E+00
1.36892E+00	5.96060E+11	4.63496E+15	8.18071E-04	-3.08721E+00
1.37297E+00	5.89920E+11	4.63512E+15	8.19637E-04	-3.08638E+00
1.37702E+00	5.90797E+11	4.63746E+15	8.21170E-04	-3.08557E+00
1.38107E+00	5.84603E+11	4.63821E+15	8.22806E-04	-3.08470E+00
1.38512E+00	5.78353E+11	4.63915E+15	8.24409E-04	-3.08386E+00
1.38917E+00	5.78353E+11	4.64025E+15	8.25982E-04	-3.08303E+00
1.39322E+00	5.75228E+11	4.64118E+15	8.27585E-04	-3.08219E+00
1.39727E+00	5.69034E+11	4.64229E+15	8.29156E-04	-3.08136E+00
1.40132E+00	5.68375E+11	4.64337E+15	8.30729E-04	-3.08054E+00
1.40537E+00	5.59714E+11	4.64446E+15	8.32362E-04	-3.07969E+00
1.40942E+00	5.56589E+11	4.64554E+15	8.34009E-04	-3.07878E+00
1.41347E+00	5.53513E+11	4.64642E+15	8.35891E-04	-3.07785E+00
1.41752E+00	5.50395E+11	4.64748E+15	8.37642E-04	-3.07694E+00
1.42157E+00	5.47270E+11	4.64852E+15	8.39393E-04	-3.07603E+00
1.42562E+00	5.40745E+11	4.64922E+15	8.41207E-04	-3.07510E+00

EOF

TABLE 4 (continued)

SHOT 4-4

366 POINTS

185

TIME(MICROSEC)	COEN (AMP/M2)	EOEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
0.	3.66193E+11	9.55994E+13	0.	-3.47403E+00
4.05006E-03	3.71023E+11	1.03720E+14	3.35713E-04	-3.47403E+00
8.10012E-03	4.16195E+11	1.12897E+14	6.16845E-04	-3.24992E+00
1.21502E-02	4.32860E+11	1.21803E+14	8.57614E-04	-3.06671E+00
1.52002E-02	4.32960E+11	1.31277E+14	1.06096E-03	-2.97430E+00
2.02503E-02	4.50490E+11	1.41871E+14	1.22717E-03	-2.91110E+00
2.43004E-02	4.66131E+11	1.52984E+14	1.36564E-03	-2.86466E+00
2.83504E-02	4.82956E+11	1.64414E+14	1.48248E-03	-2.82901E+00
3.24005E-02	5.15187E+11	1.75779E+14	1.58472E-03	-2.80005E+00
3.64506E-02	5.16187E+11	1.89346E+14	1.65507E-03	-2.78118E+00
4.05006E-02	5.32952E+11	2.04538E+14	1.70238E-03	-2.76894E+00
4.45507E-02	5.66193E+11	2.21475E+14	1.72941E-03	-2.76210E+00
4.86007E-02	5.82948E+11	2.39526E+14	1.74372E-03	-2.75452E+00
5.26508E-02	5.99514E+11	2.59918E+14	1.74156E-03	-2.75906E+00
5.67009E-02	6.07408E+11	2.83231E+14	1.72114E-03	-2.76418E+00
6.07509E-02	6.49510E+11	3.09291E+14	1.69971E-03	-2.77244E+00
6.48010E-02	6.49510E+11	3.39398E+14	1.54150E-03	-2.79476E+00
6.88510E-02	6.66175E+11	3.73093E+14	1.59658E-03	-2.79954E+00
7.29011E-02	6.66175E+11	4.12734E+14	1.51956E-03	-2.81957E+00
7.69512E-02	6.99503E+11	4.57780E+14	1.44520E-03	-2.84007E+00
8.10012E-02	7.32935E+11	5.05503E+14	1.37737E-03	-2.86095E+00
8.50513E-02	7.32935E+11	5.67924E+14	1.29753E-03	-2.89024E+00
8.91014E-02	7.66167E+11	6.47386E+14	1.19329E-03	-2.92691E+00
9.31514E-02	7.82932E+11	7.46168E+14	1.07330E-03	-2.96928E+00
9.72015E-02	7.99498E+11	8.61978E+14	9.69494E-04	-3.01345E+00
1.01252E-01	7.99498E+11	9.94902E+14	8.74963E-04	-3.05901E+00
1.05302E-01	8.16163E+11	1.10596E+15	8.22643E-04	-3.08479E+00
1.09352E-01	8.49494E+11	1.19101E+15	8.04852E-04	-3.09428E+00
1.13402E-01	8.32928E+11	1.25615E+15	8.01949E-04	-3.09595E+00
1.17452E-01	8.49494E+11	1.32066E+15	7.99708E-04	-3.09707E+00
1.21502E-01	8.82924E+11	1.38488E+15	7.37848E-04	-3.09908E+00
1.25552E-01	8.82924E+11	1.42964E+15	8.07552E-04	-3.09293E+00
1.29602E-01	8.99490E+11	1.47483E+15	8.15333E-04	-3.08966E+00
1.33652E-01	8.99490E+11	1.52046E+15	8.22951E-04	-3.08463E+00
1.37702E-01	8.82924E+11	1.55517E+15	8.35946E-04	-3.07782E+00
1.41752E-01	9.16155E+11	1.59022E+15	8.43196E-04	-3.07150E+00
1.45802E-01	9.16155E+11	1.62505E+15	8.60032E-04	-3.06549E+00
1.49852E-01	8.99490E+11	1.65941E+15	8.71619E-04	-3.05967E+00
1.53902E-01	8.99490E+11	1.68757E+15	8.85978E-04	-3.05258E+00
1.57952E-01	8.66159E+11	1.71812E+15	8.98185E-04	-3.04663E+00
1.62002E-01	8.66159E+11	1.74912E+15	9.09266E-04	-3.04131E+00
1.66053E-01	8.49494E+11	1.77501E+15	9.22097E-04	-3.03522E+00
1.70103E-01	8.38958E+11	1.80462E+15	9.33647E-04	-3.02992E+00
1.74153E-01	8.16163E+11	1.83317E+15	9.44873E-04	-3.02463E+00
1.78203E-01	8.16163E+11	1.86099E+15	9.56130E-04	-3.01948E+00
1.82253E-01	8.16163E+11	1.88905E+15	9.66932E-04	-3.01460E+00
1.86303E-01	8.16163E+11	1.91658E+15	9.77687E-04	-3.00980E+00
1.90353E-01	8.32928E+11	1.94572E+15	9.87316E-04	-3.00554E+00
1.94403E-01	8.22303E+11	1.97318E+15	9.97515E-04	-3.00108E+00
1.98453E-01	8.49494E+11	2.00112E+15	1.00719E-03	-2.99689E+00
2.02503E-01	8.49494E+11	2.02941E+15	1.01642E-03	-2.99293E+00
2.06553E-01	8.49494E+11	2.05525E+15	1.02599E-03	-2.98886E+00
2.10603E-01	8.49494E+11	2.08377E+15	1.03320E-03	-2.98582E+00
2.14653E-01	8.82924E+11	2.11144E+15	1.03888E-03	-2.98343E+00
2.18703E-01	8.66159E+11	2.13963E+15	1.04465E-03	-2.98103E+00
2.22753E-01	9.16155E+11	2.16496E+15	1.05070E-03	-2.97852E+00
2.26803E-01	9.16155E+11	2.19262E+15	1.05596E-03	-2.97635E+00
2.30854E-01	9.04752E+11	2.22075E+15	1.06086E-03	-2.97434E+00
2.34904E-01	9.16155E+11	2.24944E+15	1.06595E-03	-2.97230E+00
2.38954E-01	9.32920E+11	2.27520E+15	1.07116E-03	-2.97115E+00
2.43004E-01	9.37645E+11	2.30323E+15	1.07575E-03	-2.96929E+00
2.47054E-01	9.53971E+11	2.33072E+15	1.08048E-03	-2.96638E+00
2.51104E-01	9.56151E+11	2.35836E+15	1.08503E-03	-2.96456E+00
2.55154E-01	9.56151E+11	2.38565E+15	1.09064E-03	-2.96272E+00
2.59204E-01	9.82915E+11	2.41242E+15	1.09437E-03	-2.96044E+00
2.63254E-01	9.99492E+11	2.43995E+15	1.09757E-03	-2.95957E+00
2.67304E-01	1.01615E+12	2.46853E+15	1.09996E-03	-2.95852E+00
2.71354E-01	1.01615E+12	2.49649E+15	1.10257E-03	-2.95759E+00
2.75404E-01	1.03291E+12	2.52444E+15	1.10513E-03	-2.95659E+00
2.79454E-01	1.04949E+12	2.55324E+15	1.10726E-03	-2.95575E+00
2.83504E-01	1.04949E+12	2.58247E+15	1.10917E-03	-2.95500E+00
2.87554E-01	1.03532E+12	2.61169E+15	1.11103E-03	-2.95427E+00
2.91604E-01	1.05299E+12	2.64050E+15	1.11302E-03	-2.95350E+00
2.95655E-01	1.08291E+12	2.66914E+15	1.11504E-03	-2.95271E+00
2.99705E-01	1.08544E+12	2.69902E+15	1.11651E-03	-2.95214E+00
3.03755E-01	1.09947E+12	2.72844E+15	1.11813E-03	-2.95151E+00
3.07805E-01	1.09947E+12	2.75785E+15	1.11972E-03	-2.95089E+00
3.11855E-01	1.11614E+12	2.78657E+15	1.12156E-03	-2.95018E+00
3.15905E-01	1.13231E+12	2.81531E+15	1.12353E-03	-2.94942E+00
3.19955E-01	1.14947E+12	2.84507E+15	1.12467E-03	-2.94897E+00

TABLE 4 (continued)

SHOT 4-4

366 POINTS

186

TIME(MICROSEC)	COEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
3.24005E-01	1.14947E+12	2.87518E+15	1.12644E-03	-2.94929E+00
3.29055E-01	1.16614E+12	2.90493E+15	1.12791E-03	-2.94773E+00
3.32105E-01	1.16799E+12	2.93443E+15	1.12946E-03	-2.94713E+00
3.36155E-01	1.19290E+12	2.96434E+15	1.13082E-03	-2.94661E+00
3.40205E-01	1.19947E+12	2.99423E+15	1.13215E-03	-2.94610E+00
3.44255E-01	1.19947E+12	3.02299E+15	1.13399E-03	-2.94543E+00
3.48305E-01	1.21613E+12	3.05174E+15	1.13560E-03	-2.94477E+00
3.52355E-01	1.21745E+12	3.08096E+15	1.13714E-03	-2.94419E+00
3.56405E-01	1.21745E+12	3.10999E+15	1.13864E-03	-2.94361E+00
3.60455E-01	1.23290E+12	3.13986E+15	1.13985E-03	-2.94315E+00
3.64505E-01	1.24945E+12	3.16972E+15	1.14096E-03	-2.94273E+00
3.68555E-01	1.24945E+12	3.19838E+15	1.14191E-03	-2.94237E+00
3.72605E-01	1.26657E+12	3.22775E+15	1.14260E-03	-2.94211E+00
3.76655E-01	1.26613E+12	3.25713E+15	1.14327E-03	-2.94195E+00
3.80705E-01	1.26657E+12	3.28772E+15	1.14350E-03	-2.94176E+00
3.84755E-01	1.26657E+12	3.31709E+15	1.14415E-03	-2.94152E+00
3.88805E-01	1.29279E+12	3.34681E+15	1.14467E-03	-2.94132E+00
3.92855E-01	1.29323E+12	3.37653E+15	1.14519E-03	-2.94113E+00
3.96905E-01	1.31569E+12	3.40660E+15	1.14557E-03	-2.94098E+00
4.00955E-01	1.31569E+12	3.43542E+15	1.14637E-03	-2.94068E+00
4.05005E-01	1.29346E+12	3.46430E+15	1.14713E-03	-2.94039E+00
4.09055E-01	1.33191E+12	3.49346E+15	1.14779E-03	-2.94014E+00
4.13105E-01	1.34814E+12	3.52262E+15	1.14843E-03	-2.93990E+00
4.17155E-01	1.33147E+12	3.55211E+15	1.14864E-03	-2.93991E+00
4.21205E-01	1.34770E+12	3.58287E+15	1.14764E-03	-2.94019E+00
4.25255E-01	1.34814E+12	3.61236E+15	1.14707E-03	-2.94041E+00
4.29305E-01	1.36393E+12	3.64187E+15	1.14649E-03	-2.94053E+00
4.33355E-01	1.36393E+12	3.67040E+15	1.14623E-03	-2.94073E+00
4.37405E-01	1.37971E+12	3.70023E+15	1.14557E-03	-2.94098E+00
4.41455E-01	1.37971E+12	3.72878E+15	1.14532E-03	-2.94107E+00
4.45505E-01	1.36436E+12	3.75861E+15	1.14468E-03	-2.94132E+00
4.49555E-01	1.39594E+12	3.78748E+15	1.14434E-03	-2.94144E+00
4.53605E-01	1.39594E+12	3.81648E+15	1.14396E-03	-2.94159E+00
4.57655E-01	1.41173E+12	3.84451E+15	1.14389E-03	-2.94162E+00
4.61705E-01	1.41173E+12	3.87234E+15	1.14396E-03	-2.94163E+00
4.65755E-01	1.41173E+12	3.90118E+15	1.14355E-03	-2.94174E+00
4.69805E-01	1.41305E+12	3.93035E+15	1.14266E-03	-2.94208E+00
4.73855E-01	1.42796E+12	3.95918E+15	1.14159E-03	-2.94249E+00
4.77905E-01	1.42735E+12	3.98767E+15	1.14007E-03	-2.94307E+00
4.81955E-01	1.42927E+12	4.01716E+15	1.13856E-03	-2.94364E+00
4.86005E-01	1.42796E+12	4.04586E+15	1.13730E-03	-2.94412E+00
4.90055E-01	1.44550E+12	4.07455E+15	1.13606E-03	-2.94460E+00
4.94105E-01	1.42927E+12	4.10166E+15	1.13527E-03	-2.94490E+00
4.98155E-01	1.44374E+12	4.13151E+15	1.13374E-03	-2.94549E+00
5.02205E-01	1.45997E+12	4.15996E+15	1.13262E-03	-2.94592E+00
5.06255E-01	1.44374E+12	4.18706E+15	1.13187E-03	-2.94620E+00
5.10305E-01	1.45997E+12	4.21551E+15	1.13078E-03	-2.94662E+00
5.14355E-01	1.45997E+12	4.24261E+15	1.13005E-03	-2.94690E+00
5.18405E-01	1.46173E+12	4.26971E+15	1.12934E-03	-2.94718E+00
5.22455E-01	1.47620E+12	4.29790E+15	1.12781E-03	-2.94776E+00
5.26505E-01	1.47620E+12	4.32559E+15	1.12609E-03	-2.94943E+00
5.30555E-01	1.47839E+12	4.35409E+15	1.12419E-03	-2.94916E+00
5.34605E-01	1.47839E+12	4.38045E+15	1.12286E-03	-2.94967E+00
5.38655E-01	1.49199E+12	4.40710E+15	1.12146E-03	-2.95022E+00
5.42705E-01	1.49462E+12	4.43479E+15	1.11983E-03	-2.95095E+00
5.46755E-01	1.49199E+12	4.46166E+15	1.11842E-03	-2.95140E+00
5.50805E-01	1.49199E+12	4.48934E+15	1.11692E-03	-2.95202E+00
5.54855E-01	1.49199E+12	4.51564E+15	1.11559E-03	-2.95250E+00
5.58905E-01	1.49199E+12	4.54117E+15	1.11455E-03	-2.95290E+00
5.62955E-01	1.49199E+12	4.56747E+15	1.11334E-03	-2.95337E+00
5.67005E-01	1.47839E+12	4.59301E+15	1.11233E-03	-2.95377E+00
5.71055E-01	1.49462E+12	4.61854E+15	1.11134E-03	-2.95415E+00
5.75105E-01	1.49462E+12	4.64456E+15	1.10960E-03	-2.95483E+00
5.79155E-01	1.49462E+12	4.67015E+15	1.10780E-03	-2.95554E+00
5.83205E-01	1.51084E+12	4.69596E+15	1.10596E-03	-2.95626E+00
5.87255E-01	1.52400E+12	4.72061E+15	1.10442E-03	-2.95687E+00
5.91305E-01	1.52400E+12	4.74481E+15	1.10300E-03	-2.95742E+00
5.95355E-01	1.52400E+12	4.76900E+15	1.10159E-03	-2.95798E+00
5.99405E-01	1.52400E+12	4.79396E+15	1.10020E-03	-2.95850E+00
6.03455E-01	1.52400E+12	4.81891E+15	1.09847E-03	-2.95921E+00
6.07505E-01	1.52400E+12	4.84311E+15	1.09711E-03	-2.95975E+00
6.11555E-01	1.52400E+12	4.86572E+15	1.09611E-03	-2.96015E+00
6.15605E-01	1.52400E+12	4.88787E+15	1.09523E-03	-2.96049E+00
6.19655E-01	1.50821E+12	4.91206E+15	1.09390E-03	-2.96102E+00
6.23710E-01	1.52400E+12	4.93671E+15	1.09249E-03	-2.96158E+00
6.27760E-01	1.52707E+12	4.96000E+15	1.09067E-03	-2.96231E+00
6.31810E-01	1.54023E+12	4.98329E+15	1.08882E-03	-2.96304E+00
6.35860E-01	1.50821E+12	5.00582E+15	1.08693E-03	-2.96390E+00
6.39910E-01	1.52400E+12	5.03335E+15	1.08505E-03	-2.96455E+00
6.43960E-01	1.52400E+12	5.05186E+15	1.08363E-03	-2.96512E+00

TABLE 4 (continued)

SHOT 4-4

366 POINTS

187

TIME(MICROSEC)	COEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
5.48010E-01	1.52707E+12	5.07515E+15	1.09194E-03	-2.96584E+00
5.52060E-01	1.52707E+12	5.09706E+15	1.09036E-03	-2.96643E+00
5.56110E-01	1.52400E+12	5.11921E+15	1.07884E-03	-2.96704E+00
6.60160E-01	1.50921E+12	5.14116E+15	1.07738E-03	-2.96763E+00
5.564210E-01	1.52400E+12	5.16330E+15	1.07589E-03	-2.96823E+00
6.58260E-01	1.52400E+12	5.18481E+15	1.07454E-03	-2.96878E+00
6.72310E-01	1.50921E+12	5.20672E+15	1.07312E-03	-2.96935E+00
6.76360E-01	1.50821E+12	5.22934E+15	1.07152E-03	-2.97000E+00
5.80410E-01	1.50821E+12	5.25219E+15	1.06929E-03	-2.97030E+00
6.84460E-01	1.52400E+12	5.27273E+15	1.06755E-03	-2.97161E+00
6.89510E-01	1.52400E+12	5.29327E+15	1.06583E-03	-2.97231E+00
6.92561E-01	1.52400E+12	5.31385E+15	1.06411E-03	-2.97301E+00
6.96611E-01	1.50821E+12	5.33384E+15	1.06252E-03	-2.97366E+00
7.00661E-01	1.50921E+12	5.35247E+15	1.06122E-03	-2.97419E+00
7.04711E-01	1.52400E+12	5.37301E+15	1.05954E-03	-2.97498E+00
7.08761E-01	1.51084E+12	5.39407E+15	1.05778E-03	-2.97560E+00
7.12811E-01	1.52400E+12	5.41303E+15	1.05644E-03	-2.97616E+00
7.16861E-01	1.52400E+12	5.43335E+15	1.05485E-03	-2.97681E+00
7.20911E-01	1.50821E+12	5.45309E+15	1.05338E-03	-2.97741E+00
7.24961E-01	1.50821E+12	5.47185E+15	1.05211E-03	-2.97794E+00
7.29011E-01	1.50821E+12	5.49061E+15	1.05075E-03	-2.97850E+00
7.33061E-01	1.52400E+12	5.50977E+15	1.04902E-03	-2.97922E+00
7.37111E-01	1.50821E+12	5.52739E+15	1.04761E-03	-2.97990E+00
7.41161E-01	1.50821E+12	5.54484E+15	1.04623E-03	-2.98037E+00
7.45211E-01	1.51084E+12	5.56246E+15	1.04483E-03	-2.98095E+00
7.49261E-01	1.51084E+12	5.58199E+15	1.04308E-03	-2.98158E+00
7.53311E-01	1.50821E+12	5.60153E+15	1.04135E-03	-2.98240E+00
7.57362E-01	1.50821E+12	5.61845E+15	1.04010E-03	-2.98292E+00
7.61412E-01	1.49199E+12	5.63455E+15	1.03902E-03	-2.98338E+00
7.65462E-01	1.49199E+12	5.65198E+15	1.03770E-03	-2.98393E+00
7.69512E-01	1.49199E+12	5.66924E+15	1.03642E-03	-2.98446E+00
7.73562E-01	1.49199E+12	5.68514E+15	1.03540E-03	-2.98489E+00
7.77612E-01	1.47620E+12	5.70238E+15	1.03413E-03	-2.98542E+00
7.81662E-01	1.47620E+12	5.71893E+15	1.03294E-03	-2.98592E+00
7.85712E-01	1.50821E+12	5.73483E+15	1.03177E-03	-2.98642E+00
7.89762E-01	1.49199E+12	5.75011E+15	1.03073E-03	-2.98686E+00
7.93812E-01	1.47933E+12	5.76539E+15	1.02969E-03	-2.98729E+00
7.97862E-01	1.49199E+12	5.77939E+15	1.02888E-03	-2.98754E+00
8.01912E-01	1.47620E+12	5.79366E+15	1.02803E-03	-2.98799E+00
8.05962E-01	1.47620E+12	5.80807E+15	1.02716E-03	-2.98836E+00
8.10012E-01	1.47620E+12	5.82249E+15	1.02629E-03	-2.98873E+00
8.14062E-01	1.47833E+12	5.83776E+15	1.02528E-03	-2.98916E+00
8.18112E-01	1.47620E+12	5.85270E+15	1.02433E-03	-2.98956E+00
8.22163E-01	1.46173E+12	5.86655E+15	1.02357E-03	-2.98988E+00
8.26213E-01	1.45997E+12	5.88066E+15	1.02278E-03	-2.99022E+00
8.30263E-01	1.45997E+12	5.89363E+15	1.02218E-03	-2.99047E+00
8.34313E-01	1.44374E+12	5.90772E+15	1.02137E-03	-2.99082E+00
8.38363E-01	1.44374E+12	5.92069E+15	1.02075E-03	-2.99118E+00
8.42413E-01	1.45997E+12	5.93351E+15	1.02015E-03	-2.99134E+00
8.46463E-01	1.44374E+12	5.94760E+15	1.01934E-03	-2.99158E+00
8.50513E-01	1.44374E+12	5.96139E+15	1.01858E-03	-2.99200E+00
8.54563E-01	1.44374E+12	5.97421E+15	1.01800E-03	-2.99225E+00
8.58613E-01	1.42927E+12	5.98589E+15	1.01743E-03	-2.99250E+00
8.62663E-01	1.44374E+12	5.99943E+15	1.01690E-03	-2.99272E+00
8.66713E-01	1.44374E+12	6.01083E+15	1.01656E-03	-2.99287E+00
8.70763E-01	1.44374E+12	6.02462E+15	1.01582E-03	-2.99318E+00
8.74813E-01	1.41173E+12	6.03729E+15	1.01526E-03	-2.99342E+00
8.78863E-01	1.42795E+12	6.04982E+15	1.01474E-03	-2.99365E+00
8.82913E-01	1.41305E+12	6.06195E+15	1.01430E-03	-2.99383E+00
8.86964E-01	1.42795E+12	6.07388E+15	1.01384E-03	-2.99403E+00
8.91014E-01	1.41173E+12	6.08355E+15	1.01377E-03	-2.99406E+00
8.95064E-01	1.42795E+12	6.09470E+15	1.01346E-03	-2.99419E+00
8.99114E-01	1.41173E+12	6.10448E+15	1.01337E-03	-2.99423E+00
9.03164E-01	1.41173E+12	6.11637E+15	1.01293E-03	-2.99442E+00
9.07214E-01	1.38059E+12	6.12594E+15	1.01271E-03	-2.99451E+00
9.11264E-01	1.41173E+12	6.13903E+15	1.01224E-03	-2.99472E+00
9.15314E-01	1.39594E+12	6.15098E+15	1.01180E-03	-2.99491E+00
9.19364E-01	1.38059E+12	6.16186E+15	1.01153E-03	-2.99502E+00
9.23414E-01	1.39594E+12	6.17231E+15	1.01134E-03	-2.99510E+00
9.27464E-01	1.38059E+12	6.18288E+15	1.01113E-03	-2.99519E+00
9.31514E-01	1.39594E+12	6.19243E+15	1.01108E-03	-2.99521E+00
9.35564E-01	1.37971E+12	6.20186E+15	1.01105E-03	-2.99523E+00
9.39614E-01	1.37971E+12	6.21261E+15	1.01076E-03	-2.99535E+00
9.43664E-01	1.36393E+12	6.22205E+15	1.01068E-03	-2.99539E+00
9.47714E-01	1.36393E+12	6.23266E+15	1.01041E-03	-2.99550E+00
9.51765E-01	1.33191E+12	6.24172E+15	1.01039E-03	-2.99551E+00
9.55815E-01	1.36393E+12	6.25079E+15	1.01038E-03	-2.99552E+00
9.59865E-01	1.34774E+12	6.25997E+15	1.01033E-03	-2.99554E+00
9.63915E-01	1.34814E+12	6.26812E+15	1.01046E-03	-2.99554E+00
9.67965E-01	1.33147E+12	6.27731E+15	1.01042E-03	-2.99550E+00

TABLE 4 (continued)

SHOT 4-4

366 POINTS

188

TIME(MICROSEC)	CDEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
9.72015E-01	1.33191E+12	6.29650E+15	1.01038E-03	-2.99552E+00
9.75065E-01	1.31568E+12	6.29570E+15	1.01034E-03	-2.99553E+00
9.80115E-01	1.33147E+12	6.30332E+15	1.01056E-03	-2.99544E+00
9.84165E-01	1.31568E+12	6.31103E+15	1.01075E-03	-2.99536E+00
9.88215E-01	1.33147E+12	6.31976E+15	1.01094E-03	-2.99527E+00
9.92265E-01	1.31568E+12	6.32638E+15	1.01109E-03	-2.99521E+00
9.96315E-01	1.29946E+12	6.33410E+15	1.01122E-03	-2.99515E+00
1.00037E+00	1.31568E+12	6.34183E+15	1.01134E-03	-2.99510E+00
1.00442E+00	1.29946E+12	6.34945E+15	1.01149E-03	-2.99504E+00
1.00847E+00	1.29946E+12	6.35707E+15	1.01163E-03	-2.99498E+00
1.01252E+00	1.29323E+12	6.36437E+15	1.01183E-03	-2.99489E+00
1.01657E+00	1.28323E+12	6.37189E+15	1.01199E-03	-2.99482E+00
1.02062E+00	1.26657E+12	6.37935E+15	1.01232E-03	-2.99468E+00
1.02467E+00	1.26279E+12	6.38470E+15	1.01266E-03	-2.99454E+00
1.02872E+00	1.26657E+12	6.39201E+15	1.01285E-03	-2.99445E+00
1.03277E+00	1.26657E+12	6.39928E+15	1.01321E-03	-2.99430E+00
1.03682E+00	1.26613E+12	6.40456E+15	1.01356E-03	-2.99415E+00
1.04087E+00	1.23367E+12	6.41175E+15	1.01376E-03	-2.99406E+00
1.04492E+00	1.25034E+12	6.41689E+15	1.01426E-03	-2.99385E+00
1.04897E+00	1.24945E+12	6.42297E+15	1.01461E-03	-2.99370E+00
1.05302E+00	1.21745E+12	6.42887E+15	1.01498E-03	-2.99354E+00
1.05707E+00	1.23367E+12	6.43487E+15	1.01534E-03	-2.99339E+00
1.06112E+00	1.21613E+12	6.44078E+15	1.01571E-03	-2.99323E+00
1.06517E+00	1.21745E+12	6.44579E+15	1.01607E-03	-2.99308E+00
1.06922E+00	1.20079E+12	6.45269E+15	1.01644E-03	-2.99292E+00
1.07327E+00	1.19947E+12	6.45834E+15	1.01685E-03	-2.99274E+00
1.07732E+00	1.18290E+12	6.46407E+15	1.01725E-03	-2.99257E+00
1.08137E+00	1.18455E+12	6.46977E+15	1.01780E-03	-2.99234E+00
1.08542E+00	1.18455E+12	6.47449E+15	1.01820E-03	-2.99217E+00
1.08947E+00	1.16614E+12	6.48012E+15	1.01861E-03	-2.99199E+00
1.09352E+00	1.15165E+12	6.48474E+15	1.01922E-03	-2.99173E+00
1.09757E+00	1.15165E+12	6.49030E+15	1.01974E-03	-2.99151E+00
1.10162E+00	1.15165E+12	6.49505E+15	1.02038E-03	-2.99124E+00
1.10567E+00	1.13280E+12	6.50052E+15	1.02092E-03	-2.99101E+00
1.10972E+00	1.13280E+12	6.50512E+15	1.02158E-03	-2.99073E+00
1.11377E+00	1.11614E+12	6.50966E+15	1.02226E-03	-2.99044E+00
1.11782E+00	1.11614E+12	6.51413E+15	1.02294E-03	-2.99015E+00
1.12187E+00	1.10211E+12	6.51854E+15	1.02364E-03	-2.98985E+00
1.12592E+00	1.09544E+12	6.52294E+15	1.02434E-03	-2.98956E+00
1.12997E+00	1.10211E+12	6.52727E+15	1.02504E-03	-2.98926E+00
1.13402E+00	1.08281E+12	6.53167E+15	1.02573E-03	-2.98897E+00
1.13807E+00	1.06921E+12	6.53600E+15	1.02644E-03	-2.98867E+00
1.14212E+00	1.05299E+12	6.54023E+15	1.02716E-03	-2.98836E+00
1.14617E+00	1.06614E+12	6.54456E+15	1.02794E-03	-2.98803E+00
1.15022E+00	1.03632E+12	6.54881E+15	1.02879E-03	-2.98767E+00
1.15427E+00	1.04943E+12	6.55215E+15	1.02980E-03	-2.98725E+00
1.15832E+00	1.03281E+12	6.55520E+15	1.03068E-03	-2.98688E+00
1.16237E+00	1.01965E+12	6.55958E+15	1.03168E-03	-2.98645E+00
1.16642E+00	1.01965E+12	6.56366E+15	1.03256E-03	-2.98608E+00
1.17047E+00	1.01615E+12	6.56692E+15	1.03357E-03	-2.98566E+00
1.17452E+00	1.00343E+12	6.57012E+15	1.03459E-03	-2.98523E+00
1.17857E+00	1.01615E+12	6.57332E+15	1.03560E-03	-2.98481E+00
1.18262E+00	9.99482E+11	6.57570E+15	1.03675E-03	-2.98433E+00
1.18667E+00	9.86763E+11	6.57803E+15	1.03790E-03	-2.98384E+00
1.19072E+00	9.99482E+11	6.58038E+15	1.03905E-03	-2.98336E+00
1.19477E+00	9.70537E+11	6.58267E+15	1.04021E-03	-2.98288E+00
1.19882E+00	9.82815E+11	6.58575E+15	1.04128E-03	-2.98243E+00
1.20287E+00	9.70537E+11	6.58873E+15	1.04238E-03	-2.98197E+00
1.20692E+00	9.53871E+11	6.59171E+15	1.04349E-03	-2.98151E+00
1.21097E+00	9.32820E+11	6.59475E+15	1.04458E-03	-2.98106E+00
1.21502E+00	9.53871E+11	6.59767E+15	1.04569E-03	-2.98060E+00
1.21907E+00	9.37545E+11	6.59991E+15	1.04690E-03	-2.98009E+00
1.22312E+00	9.20979E+11	6.60214E+15	1.04812E-03	-2.97959E+00
1.22717E+00	9.20979E+11	6.60503E+15	1.04923E-03	-2.97913E+00
1.23122E+00	9.04752E+11	6.60717E+15	1.05046E-03	-2.97862E+00
1.23527E+00	8.99490E+11	6.60860E+15	1.05180E-03	-2.97807E+00
1.23932E+00	8.99490E+11	6.61070E+15	1.05304E-03	-2.97756E+00
1.24337E+00	8.82824E+11	6.61276E+15	1.05428E-03	-2.97704E+00
1.24742E+00	8.82824E+11	6.61481E+15	1.05552E-03	-2.97653E+00
1.25147E+00	8.71860E+11	6.61523E+15	1.05683E-03	-2.97599E+00
1.25552E+00	8.71860E+11	6.61757E+15	1.05815E-03	-2.97545E+00
1.25957E+00	8.55195E+11	6.61992E+15	1.05947E-03	-2.97491E+00
1.26362E+00	8.39689E+11	6.62091E+15	1.06068E-03	-2.97442E+00
1.26767E+00	8.39689E+11	6.62227E+15	1.06199E-03	-2.97388E+00
1.27172E+00	8.49494E+11	6.62427E+15	1.06320E-03	-2.97339E+00
1.27577E+00	8.22303E+11	6.62626E+15	1.06441E-03	-2.97289E+00
1.27982E+00	8.22303E+11	6.62756E+15	1.06573E-03	-2.97235E+00
1.28387E+00	8.38968E+11	6.62949E+15	1.06695E-03	-2.97186E+00
1.28792E+00	8.06075E+11	6.63076E+15	1.06829E-03	-2.97131E+00
1.29197E+00	7.99498E+11	6.63257E+15	1.06951E-03	-2.97082E+00

TABLE 4 (continued)

SHOT 4-4

366 POINTS

189

TIME(MICROSEC)	CDEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
1.29602E+00	9.16163E+11	6.63381E+15	1.07084E-03	-2.97029E+00
1.30007E+00	7.99498E+11	6.63442E+15	1.07227E-03	-2.96970E+00
1.30412E+00	7.82832E+11	6.63505E+15	1.07370E-03	-2.96912E+00
1.30817E+00	7.89411E+11	6.63565E+15	1.07512E-03	-2.96854E+00
1.31222E+00	7.73184E+11	6.63625E+15	1.07655E-03	-2.96797E+00
1.31627E+00	7.56519E+11	6.63683E+15	1.07798E-03	-2.96739E+00
1.32032E+00	7.73184E+11	6.63741E+15	1.07942E-03	-2.96681E+00
1.32437E+00	7.66167E+11	6.63856E+15	1.08075E-03	-2.96627E+00
1.32842E+00	7.40292E+11	6.63913E+15	1.08219E-03	-2.96570E+00
1.33247E+00	7.40292E+11	6.63913E+15	1.08371E-03	-2.96509E+00
1.33652E+00	7.32836E+11	6.63970E+15	1.08514E-03	-2.96451E+00
1.34057E+00	7.49502E+11	6.63970E+15	1.08667E-03	-2.96390E+00
1.34462E+00	7.32836E+11	6.64026E+15	1.08810E-03	-2.96333E+00
1.34867E+00	7.32836E+11	6.64026E+15	1.08963E-03	-2.96272E+00
1.35272E+00	7.16171E+11	6.64026E+15	1.09115E-03	-2.96212E+00
1.35677E+00	7.07400E+11	6.64026E+15	1.09267E-03	-2.96151E+00
1.36082E+00	7.07400E+11	6.64080E+15	1.09411E-03	-2.96094E+00
1.36487E+00	6.99505E+11	6.64134E+15	1.09554E-03	-2.96037E+00
1.36892E+00	6.66175E+11	6.64134E+15	1.09707E-03	-2.95977E+00
1.37297E+00	6.66175E+11	6.64134E+15	1.09859E-03	-2.95916E+00
1.37702E+00	6.74508E+11	6.64134E+15	1.10011E-03	-2.95856E+00
1.38107E+00	6.74508E+11	6.64134E+15	1.10164E-03	-2.95796E+00
1.38512E+00	6.74508E+11	6.64134E+15	1.10316E-03	-2.95736E+00
1.38917E+00	6.57842E+11	6.64134E+15	1.10468E-03	-2.95676E+00
1.39322E+00	5.49510E+11	6.64134E+15	1.10621E-03	-2.95616E+00
1.39727E+00	6.41615E+11	6.64183E+15	1.10765E-03	-2.95550E+00
1.40132E+00	6.49510E+11	6.64183E+15	1.10917E-03	-2.95500E+00
1.40537E+00	5.32844E+11	6.64232E+15	1.11061E-03	-2.95444E+00
1.40942E+00	6.24950E+11	6.64282E+15	1.11205E-03	-2.95388E+00
1.41347E+00	5.32844E+11	6.64282E+15	1.11357E-03	-2.95328E+00
1.41752E+00	6.24950E+11	6.64282E+15	1.11509E-03	-2.95269E+00
1.42157E+00	6.24950E+11	6.64282E+15	1.11661E-03	-2.95210E+00
1.42562E+00	6.24950E+11	6.64282E+15	1.11813E-03	-2.95151E+00
1.42967E+00	6.24950E+11	6.64282E+15	1.11965E-03	-2.95092E+00
1.43372E+00	5.99514E+11	6.64328E+15	1.12109E-03	-2.95036E+00
1.43777E+00	6.16179E+11	6.64373E+15	1.12254E-03	-2.94980E+00
1.44182E+00	5.99514E+11	6.64328E+15	1.12413E-03	-2.94918E+00
1.44587E+00	6.08723E+11	6.64328E+15	1.12565E-03	-2.94860E+00
1.44992E+00	5.75831E+11	6.64285E+15	1.12725E-03	-2.94798E+00
1.45397E+00	5.75831E+11	6.64285E+15	1.12877E-03	-2.94739E+00
1.45802E+00	5.92058E+11	6.64285E+15	1.13031E-03	-2.94680E+00
1.46207E+00	5.82848E+11	6.64285E+15	1.13188E-03	-2.94620E+00
1.46612E+00	5.82848E+11	6.64327E+15	1.13337E-03	-2.94563E+00
1.47017E+00	5.75831E+11	6.64410E+15	1.13480E-03	-2.94508E+00
1.47422E+00	5.59165E+11	6.64451E+15	1.13629E-03	-2.94451E+00
1.47827E+00	5.42939E+11	6.64490E+15	1.13779E-03	-2.94394E+00

EOF

TABLE 4 (continued)

SHOT 4-5

370 POINTS

190

TIME(MICROSEC)	CDEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
0.	2.82872E+11	9.38349E+13	0.	-3.37065E+00
4.05066E-03	3.16203E+11	1.04304E+14	4.25941E-04	-3.37065E+00
8.10012E-03	3.49534E+11	1.14826E+14	7.73828E-04	-3.11136E+00
1.21502E-02	3.32868E+11	1.25930E+14	1.05839E-03	-2.97535E+00
1.52002E-02	3.56199E+11	1.37540E+14	1.29206E-03	-2.88872E+00
2.02503E-02	3.82864E+11	1.50014E+14	1.48078E-03	-2.82951E+00
2.43004E-02	4.21895E+11	1.63104E+14	1.63433E-03	-2.78666E+00
2.83504E-02	4.66191E+11	1.77126E+14	1.75577E-03	-2.75553E+00
3.24005E-02	4.56191E+11	1.92069E+14	1.85049E-03	-2.73271E+00
3.64506E-02	4.82855E+11	2.08477E+14	1.91795E-03	-2.71716E+00
4.05006E-02	5.09609E+11	2.27006E+14	1.95711E-03	-2.70338E+00
4.45507E-02	5.32552E+11	2.46519E+14	1.98242E-03	-2.70209E+00
4.86007E-02	5.49518E+11	2.69448E+14	1.97860E-03	-2.70364E+00
5.26508E-02	5.82848E+11	2.94636E+14	1.96025E-03	-2.70769E+00
5.67009E-02	5.99514E+11	3.23202E+14	1.92445E-03	-2.71569E+00
6.07509E-02	6.32544E+11	3.57298E+14	1.86515E-03	-2.72929E+00
6.48010E-02	6.49510E+11	3.97036E+14	1.79037E-03	-2.74706E+00
6.88510E-02	6.82840E+11	4.41926E+14	1.70904E-03	-2.76725E+00
7.29011E-02	7.16171E+11	4.92430E+14	1.62398E-03	-2.78942E+00
7.69512E-02	7.42485E+11	5.53412E+14	1.52531E-03	-2.81664E+00
8.10012E-02	7.49502E+11	6.32816E+14	1.40412E-03	-2.85250E+00
8.50513E-02	7.82832E+11	7.32644E+14	1.27344E-03	-2.89502E+00
8.91014E-02	8.16163E+11	8.48989E+14	1.15126E-03	-2.93883E+00
9.31514E-02	8.16163E+11	9.88770E+14	1.03344E-03	-2.98571E+00
9.72015E-02	8.49494E+11	1.14956E+15	9.27543E-04	-3.03267E+00
1.01252E-01	8.82824E+11	1.31070E+15	8.47399E-04	-3.07191E+00
1.05382E-01	8.82824E+11	1.43130E+15	8.09763E-04	-3.09164E+00
1.09352E-01	9.16155E+11	1.51210E+15	8.03900E-04	-3.09490E+00
1.13402E-01	9.32820E+11	1.59213E+15	7.99017E-04	-3.09744E+00
1.17452E-01	9.49485E+11	1.67251E+15	7.94432E-04	-3.09994E+00
1.21502E-01	9.49485E+11	1.73142E+15	8.00070E-04	-3.09687E+00
1.25552E-01	9.66151E+11	1.78932E+15	8.05790E-04	-3.09378E+00
1.29602E-01	9.99482E+11	1.84909E+15	8.10333E-04	-3.09134E+00
1.33652E-01	9.82815E+11	1.90241E+15	8.17350E-04	-3.08759E+00
1.37702E-01	9.99482E+11	1.94891E+15	8.26872E-04	-3.08256E+00
1.41752E-01	1.01615E+12	1.99599E+15	8.35706E-04	-3.07795E+00
1.45802E-01	9.99482E+11	2.04307E+15	8.44133E-04	-3.07359E+00
1.49852E-01	1.01515E+12	2.08482E+15	8.54357E-04	-3.06836E+00
1.53902E-01	9.99482E+11	2.12693E+15	8.64034E-04	-3.06347E+00
1.57952E-01	9.66151E+11	2.16924E+15	8.78077E-04	-3.05647E+00
1.62002E-01	9.82815E+11	2.21099E+15	8.96885E-04	-3.04726E+00
1.66053E-01	9.66151E+11	2.25252E+15	9.15089E-04	-3.03854E+00
1.70103E-01	9.66151E+11	2.29572E+15	9.31951E-04	-3.03051E+00
1.74153E-01	9.49485E+11	2.33832E+15	9.48437E-04	-3.02299E+00
1.78203E-01	9.49485E+11	2.37872E+15	9.65225E-04	-3.01537E+00
1.82253E-01	9.49485E+11	2.42165E+15	9.80423E-04	-3.00859E+00
1.86303E-01	9.66151E+11	2.46422E+15	9.95239E-04	-3.00207E+00
1.90353E-01	9.70537E+11	2.50537E+15	1.01013E-03	-2.99562E+00
1.94403E-01	9.99482E+11	2.54754E+15	1.02412E-03	-2.98965E+00
1.98453E-01	1.01615E+12	2.59118E+15	1.03707E-03	-2.98419E+00
2.02503E-01	1.01615E+12	2.63190E+15	1.05076E-03	-2.97850E+00
2.06553E-01	1.04348E+12	2.67379E+15	1.06356E-03	-2.97324E+00
2.10603E-01	1.06614E+12	2.71644E+15	1.07740E-03	-2.96752E+00
2.14653E-01	1.05299E+12	2.75914E+15	1.09174E-03	-2.96188E+00
2.18703E-01	1.09947E+12	2.80182E+15	1.10565E-03	-2.95639E+00
2.22753E-01	1.11614E+12	2.84449E+15	1.11915E-03	-2.95111E+00
2.26803E-01	1.09947E+12	2.88651E+15	1.13250E-03	-2.94596E+00
2.30854E-01	1.13280E+12	2.92908E+15	1.14526E-03	-2.94110E+00
2.34904E-01	1.16614E+12	2.97101E+15	1.15790E-03	-2.93633E+00
2.38954E-01	1.14947E+12	3.01295E+15	1.17018E-03	-2.93175E+00
2.43004E-01	1.18280E+12	3.05429E+15	1.18236E-03	-2.92725E+00
2.47054E-01	1.19947E+12	3.09665E+15	1.19382E-03	-2.92306E+00
2.51104E-01	1.20078E+12	3.13949E+15	1.20479E-03	-2.91909E+00
2.55154E-01	1.23280E+12	3.18288E+15	1.21525E-03	-2.91533E+00
2.59204E-01	1.23280E+12	3.22627E+15	1.22543E-03	-2.91171E+00
2.63254E-01	1.25034E+12	3.27012E+15	1.23434E-03	-2.90857E+00
2.67304E-01	1.26657E+12	3.31326E+15	1.24308E-03	-2.90550E+00
2.71354E-01	1.28279E+12	3.35689E+15	1.25141E-03	-2.90260E+00
2.75404E-01	1.28279E+12	3.40099E+15	1.25936E-03	-2.89985E+00
2.79454E-01	1.29946E+12	3.44513E+15	1.26709E-03	-2.89719E+00
2.83504E-01	1.33147E+12	3.48845E+15	1.27492E-03	-2.89452E+00
2.87554E-01	1.34770E+12	3.53276E+15	1.28220E-03	-2.89204E+00
2.91604E-01	1.36393E+12	3.57796E+15	1.28897E-03	-2.88976E+00
2.95655E-01	1.36393E+12	3.62316E+15	1.29559E-03	-2.88754E+00
2.99705E-01	1.37971E+12	3.66884E+15	1.30186E-03	-2.88544E+00
3.03755E-01	1.39594E+12	3.71360E+15	1.30831E-03	-2.88329E+00
3.07805E-01	1.39689E+12	3.75891E+15	1.31441E-03	-2.88127E+00
3.11855E-01	1.41305E+12	3.80248E+15	1.32097E-03	-2.87911E+00
3.15905E-01	1.42793E+12	3.84817E+15	1.32600E-03	-2.87746E+00
3.19955E-01	1.42927E+12	3.89573E+15	1.33025E-03	-2.87607E+00

TABLE 4 (continued)

SHOT 4-5

370 POINTS

191

TIME(MICROSEC)	COEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
3.24005E-01	1.44550E+12	3.94088E+15	1.33522E-03	-2.97445E+00
3.28055E-01	1.47939E+12	3.98604E+15	1.34007E-03	-2.97297E+00
3.32105E-01	1.50921E+12	4.03325E+15	1.34413E-03	-2.97156E+00
3.36155E-01	1.50921E+12	4.07851E+15	1.34874E-03	-2.97007E+00
3.40205E-01	1.52400E+12	4.12444E+15	1.35303E-03	-2.96859E+00
3.44255E-01	1.54023E+12	4.17095E+15	1.35703E-03	-2.96741E+00
3.48305E-01	1.55952E+12	4.21658E+15	1.36124E-03	-2.96607E+00
3.52355E-01	1.54330E+12	4.26367E+15	1.36498E-03	-2.96491E+00
3.56405E-01	1.57224E+12	4.30913E+15	1.36896E-03	-2.96361E+00
3.60455E-01	1.58847E+12	4.35502E+15	1.37292E-03	-2.96239E+00
3.64506E-01	1.50426E+12	4.40105E+15	1.37657E-03	-2.96120E+00
3.68556E-01	1.60426E+12	4.44797E+15	1.38011E-03	-2.96009E+00
3.72606E-01	1.62443E+12	4.49317E+15	1.38410E-03	-2.95893E+00
3.76656E-01	1.50921E+12	4.53881E+15	1.38788E-03	-2.95765E+00
3.80706E-01	1.63627E+12	4.58458E+15	1.39155E-03	-2.95650E+00
3.84756E-01	1.65250E+12	4.63282E+15	1.39440E-03	-2.95561E+00
3.88806E-01	1.66929E+12	4.67656E+15	1.39853E-03	-2.95433E+00
3.92856E-01	1.67311E+12	4.72212E+15	1.40205E-03	-2.95324E+00
3.96906E-01	1.66929E+12	4.76738E+15	1.40558E-03	-2.95214E+00
4.00956E-01	1.69451E+12	4.81322E+15	1.40888E-03	-2.95113E+00
4.05006E-01	1.58934E+12	4.85767E+15	1.41252E-03	-2.95001E+00
4.09056E-01	1.71653E+12	4.90212E+15	1.41610E-03	-2.94891E+00
4.13106E-01	1.72179E+12	4.94821E+15	1.41915E-03	-2.94797E+00
4.17156E-01	1.71653E+12	4.99305E+15	1.42226E-03	-2.94702E+00
4.21206E-01	1.73276E+12	5.03767E+15	1.42491E-03	-2.94624E+00
4.25256E-01	1.73902E+12	5.08122E+15	1.42762E-03	-2.94539E+00
4.29306E-01	1.77047E+12	5.12646E+15	1.42990E-03	-2.94469E+00
4.33357E-01	1.77047E+12	5.17171E+15	1.43215E-03	-2.94401E+00
4.37407E-01	1.78056E+12	5.21565E+15	1.43472E-03	-2.94323E+00
4.41457E-01	1.78056E+12	5.26128E+15	1.43679E-03	-2.94261E+00
4.45507E-01	1.80293E+12	5.30577E+15	1.43912E-03	-2.94190E+00
4.49557E-01	1.81257E+12	5.35009E+15	1.44146E-03	-2.94120E+00
4.53607E-01	1.81257E+12	5.39305E+15	1.44412E-03	-2.94040E+00
4.57657E-01	1.81257E+12	5.43792E+15	1.44624E-03	-2.93976E+00
4.61707E-01	1.82880E+12	5.48126E+15	1.44873E-03	-2.93901E+00
4.65757E-01	1.81915E+12	5.52613E+15	1.45079E-03	-2.93840E+00
4.69807E-01	1.82980E+12	5.56773E+15	1.45300E-03	-2.93773E+00
4.73857E-01	1.84503E+12	5.61187E+15	1.45375E-03	-2.93751E+00
4.77907E-01	1.84503E+12	5.65432E+15	1.45492E-03	-2.93716E+00
4.81957E-01	1.86082E+12	5.69626E+15	1.45620E-03	-2.93679E+00
4.86007E-01	1.86082E+12	5.74032E+15	1.45692E-03	-2.93656E+00
4.90057E-01	1.88406E+12	5.78420E+15	1.45768E-03	-2.93634E+00
4.94108E-01	1.87704E+12	5.82549E+15	1.45882E-03	-2.93600E+00
4.98158E-01	1.89283E+12	5.86704E+15	1.46039E-03	-2.93553E+00
5.02208E-01	1.90029E+12	5.91021E+15	1.46128E-03	-2.93527E+00
5.06258E-01	1.90905E+12	5.95182E+15	1.46258E-03	-2.93489E+00
5.10308E-01	1.91651E+12	5.99326E+15	1.46383E-03	-2.93451E+00
5.14358E-01	1.90029E+12	6.03284E+15	1.46555E-03	-2.93400E+00
5.18408E-01	1.90905E+12	6.07405E+15	1.46685E-03	-2.93361E+00
5.22458E-01	1.92485E+12	6.11527E+15	1.46736E-03	-2.93346E+00
5.26508E-01	1.92485E+12	6.15468E+15	1.46780E-03	-2.93333E+00
5.30558E-01	1.92485E+12	6.19442E+15	1.46915E-03	-2.93323E+00
5.34608E-01	1.94107E+12	6.23235E+15	1.46892E-03	-2.93300E+00
5.38658E-01	1.93274E+12	6.27013E+15	1.46972E-03	-2.93277E+00
5.42708E-01	1.94107E+12	6.31036E+15	1.46994E-03	-2.93270E+00
5.46758E-01	1.94107E+12	6.34707E+15	1.47097E-03	-2.93240E+00
5.50808E-01	1.98142E+12	6.38731E+15	1.47118E-03	-2.93233E+00
5.54858E-01	1.96513E+12	6.42462E+15	1.47206E-03	-2.93207E+00
5.58908E-01	1.95730E+12	6.46177E+15	1.47296E-03	-2.93181E+00
5.62958E-01	1.98142E+12	6.50000E+15	1.47360E-03	-2.93162E+00
5.67008E-01	1.97309E+12	6.53715E+15	1.47448E-03	-2.93136E+00
5.71058E-01	1.97309E+12	6.57387E+15	1.47545E-03	-2.93108E+00
5.75108E-01	1.97309E+12	6.61210E+15	1.47463E-03	-2.93132E+00
5.79158E-01	1.98932E+12	6.64925E+15	1.47362E-03	-2.93161E+00
5.83208E-01	1.98932E+12	6.68597E+15	1.47272E-03	-2.93188E+00
5.87258E-01	1.99142E+12	6.72162E+15	1.47205E-03	-2.93208E+00
5.91308E-01	2.01387E+12	6.75727E+15	1.47140E-03	-2.93227E+00
5.95358E-01	1.98142E+12	6.79416E+15	1.47049E-03	-2.93254E+00
5.99408E-01	2.01387E+12	6.82830E+15	1.47017E-03	-2.93263E+00
6.03458E-01	2.01387E+12	6.86217E+15	1.46992E-03	-2.93271E+00
6.07508E-01	2.00510E+12	6.89520E+15	1.46985E-03	-2.93273E+00
6.11558E-01	2.00510E+12	6.92935E+15	1.46954E-03	-2.93282E+00
6.15608E-01	2.00510E+12	6.96194E+15	1.46959E-03	-2.93290E+00
6.19658E-01	2.00510E+12	6.99716E+15	1.46904E-03	-2.93297E+00
6.23710E-01	2.02133E+12	7.03019E+15	1.46897E-03	-2.93299E+00
6.27760E-01	2.00510E+12	7.06254E+15	1.46739E-03	-2.93345E+00
6.31810E-01	2.00510E+12	7.09489E+15	1.46569E-03	-2.93396E+00
6.35860E-01	2.02133E+12	7.12635E+15	1.46420E-03	-2.93440E+00
6.39910E-01	2.02133E+12	7.15566E+15	1.46295E-03	-2.93477E+00
6.43960E-01	2.02133E+12	7.18787E+15	1.46152E-03	-2.93520E+00

TABLE 4 (continued)

SHOT 4-5

370 POINTS

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TIME (MICROSEC)	CJEN (AMP/M2)	EDENERGYS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
6.48010E-01	2.03054E+12	7.21933E+15	1.46006E-03	-2.93363E+00
6.52060E-01	2.03755E+12	7.25054E+15	1.45866E-03	-2.93605E+00
6.56110E-01	2.02133E+12	7.28175E+15	1.45729E-03	-2.93646E+00
6.60160E-01	2.02133E+12	7.31297E+15	1.45590E-03	-2.93687E+00
6.64210E-01	2.03755E+12	7.34150E+15	1.45507E-03	-2.93712E+00
6.68260E-01	2.04677E+12	7.37086E+15	1.45408E-03	-2.93741E+00
6.72310E-01	2.04677E+12	7.40012E+15	1.45312E-03	-2.93770E+00
6.76360E-01	2.02133E+12	7.42926E+15	1.45209E-03	-2.93801E+00
6.80410E-01	2.03755E+12	7.45886E+15	1.44998E-03	-2.93864E+00
6.84460E-01	2.03755E+12	7.48900E+15	1.44797E-03	-2.93924E+00
6.88510E-01	2.03755E+12	7.51630E+15	1.44615E-03	-2.93979E+00
6.92561E-01	2.02133E+12	7.54382E+15	1.44448E-03	-2.94029E+00
6.96611E-01	2.02133E+12	7.57414E+15	1.44229E-03	-2.94095E+00
7.00661E-01	2.03755E+12	7.60267E+15	1.44046E-03	-2.94150E+00
7.04711E-01	2.02133E+12	7.62997E+15	1.43888E-03	-2.94198E+00
7.08761E-01	2.02133E+12	7.65740E+15	1.43728E-03	-2.94246E+00
7.12811E-01	2.02133E+12	7.68505E+15	1.43566E-03	-2.94295E+00
7.16861E-01	2.02133E+12	7.71002E+15	1.43454E-03	-2.94329E+00
7.20911E-01	2.02133E+12	7.73479E+15	1.43347E-03	-2.94361E+00
7.24961E-01	2.02133E+12	7.76027E+15	1.43227E-03	-2.94398E+00
7.29011E-01	2.01387E+12	7.78580E+15	1.43067E-03	-2.94446E+00
7.33061E-01	2.00510E+12	7.81208E+15	1.42865E-03	-2.94507E+00
7.37111E-01	2.03755E+12	7.83736E+15	1.42665E-03	-2.94568E+00
7.41161E-01	2.00510E+12	7.86368E+15	1.42448E-03	-2.94634E+00
7.45211E-01	2.00510E+12	7.88717E+15	1.42282E-03	-2.94685E+00
7.49261E-01	2.02133E+12	7.91084E+15	1.42115E-03	-2.94736E+00
7.53311E-01	2.02133E+12	7.93512E+15	1.41920E-03	-2.94796E+00
7.57362E-01	2.02133E+12	7.95951E+15	1.41759E-03	-2.94845E+00
7.61412E-01	2.00510E+12	7.98300E+15	1.41598E-03	-2.94894E+00
7.65462E-01	2.01337E+12	8.00529E+15	1.41441E-03	-2.94942E+00
7.69512E-01	2.03054E+12	8.03066E+15	1.41266E-03	-2.94996E+00
7.73562E-01	2.02133E+12	8.05494E+15	1.41094E-03	-2.95049E+00
7.77612E-01	2.00510E+12	8.07755E+15	1.40952E-03	-2.95093E+00
7.81662E-01	2.00510E+12	8.09896E+15	1.40807E-03	-2.95138E+00
7.85712E-01	2.00510E+12	8.12029E+15	1.40630E-03	-2.95192E+00
7.89762E-01	1.98932E+12	8.14144E+15	1.40456E-03	-2.95246E+00
7.93812E-01	1.98932E+12	8.16258E+15	1.40283E-03	-2.95299E+00
7.97862E-01	1.98932E+12	8.18373E+15	1.40111E-03	-2.95353E+00
8.01912E-01	1.98932E+12	8.20444E+15	1.39948E-03	-2.95403E+00
8.05962E-01	2.00510E+12	8.22382E+15	1.39808E-03	-2.95447E+00
8.10012E-01	1.98932E+12	8.24249E+15	1.39680E-03	-2.95487E+00
8.14062E-01	1.98142E+12	8.26286E+15	1.39525E-03	-2.95535E+00
8.18112E-01	1.98932E+12	8.28145E+15	1.39400E-03	-2.95574E+00
8.22163E-01	1.97309E+12	8.30066E+15	1.39265E-03	-2.95616E+00
8.26213E-01	1.97309E+12	8.31988E+15	1.39131E-03	-2.95658E+00
8.30263E-01	1.97309E+12	8.33894E+15	1.39000E-03	-2.95699E+00
8.34313E-01	1.96519E+12	8.35897E+15	1.38834E-03	-2.95750E+00
8.38363E-01	1.97309E+12	8.37917E+15	1.38652E-03	-2.95807E+00
8.42413E-01	1.96519E+12	8.39760E+15	1.38500E-03	-2.95855E+00
8.46463E-01	1.95730E+12	8.41649E+15	1.38340E-03	-2.95905E+00
8.50513E-01	1.94107E+12	8.43369E+15	1.38210E-03	-2.95946E+00
8.54563E-01	1.94107E+12	8.45088E+15	1.38079E-03	-2.95987E+00
8.58613E-01	1.94107E+12	8.46793E+15	1.37952E-03	-2.96027E+00
8.62663E-01	1.95730E+12	8.48497E+15	1.37825E-03	-2.96057E+00
8.66713E-01	1.94107E+12	8.50346E+15	1.37676E-03	-2.96114E+00
8.70763E-01	1.92485E+12	8.52036E+15	1.37553E-03	-2.96153E+00
8.74813E-01	1.92485E+12	8.53703E+15	1.37433E-03	-2.96191E+00
8.78863E-01	1.91651E+12	8.55393E+15	1.37311E-03	-2.96229E+00
8.82913E-01	1.92485E+12	8.56893E+15	1.37220E-03	-2.96258E+00
8.86964E-01	1.92485E+12	8.58397E+15	1.37113E-03	-2.96292E+00
8.91014E-01	1.90905E+12	8.60048E+15	1.36974E-03	-2.96336E+00
8.95064E-01	1.89283E+12	8.61709E+15	1.36835E-03	-2.96380E+00
8.99114E-01	1.90905E+12	8.63355E+15	1.36699E-03	-2.96423E+00
9.03164E-01	1.90029E+12	8.64954E+15	1.36572E-03	-2.96464E+00
9.07214E-01	1.89283E+12	8.66372E+15	1.36473E-03	-2.96495E+00
9.11264E-01	1.89283E+12	8.67840E+15	1.36366E-03	-2.96529E+00
9.15314E-01	1.89283E+12	8.69295E+15	1.36262E-03	-2.96563E+00
9.19364E-01	1.87704E+12	8.70755E+15	1.36158E-03	-2.96596E+00
9.23414E-01	1.87704E+12	8.72168E+15	1.36061E-03	-2.96627E+00
9.27464E-01	1.85161E+12	8.73574E+15	1.35966E-03	-2.96657E+00
9.31514E-01	1.86082E+12	8.75007E+15	1.35867E-03	-2.96699E+00
9.35564E-01	1.86082E+12	8.76436E+15	1.35768E-03	-2.96720E+00
9.39614E-01	1.83538E+12	8.77698E+15	1.35679E-03	-2.96749E+00
9.43664E-01	1.86082E+12	8.79086E+15	1.35567E-03	-2.96795E+00
9.47714E-01	1.83538E+12	8.80320E+15	1.35480E-03	-2.96812E+00
9.51765E-01	1.82880E+12	8.81413E+15	1.35415E-03	-2.96833E+00
9.55815E-01	1.82880E+12	8.82348E+15	1.35374E-03	-2.96846E+00
9.59865E-01	1.82880E+12	8.83437E+15	1.35310E-03	-2.96867E+00
9.63915E-01	1.81257E+12	8.84517E+15	1.35247E-03	-2.96887E+00
9.67965E-01	1.81257E+12	8.85597E+15	1.35184E-03	-2.96907E+00

TABLE 4 (continued)

SHOT 4-5

370 POINTS

193

TIME(MICROSEC)	CDEV (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
9.72015E-01	1.78670E+12	8.86630E+15	1.35129E-03	-2.86925E+00
9.76065E-01	1.79573E+12	8.87561E+15	1.35074E-03	-2.86943E+00
9.80115E-01	1.78055E+12	8.88702E+15	1.35018E-03	-2.86961E+00
9.84165E-01	1.78570E+12	8.89452E+15	1.35006E-03	-2.86965E+00
9.88215E-01	1.78055E+12	8.90343E+15	1.34972E-03	-2.86976E+00
9.92265E-01	1.77047E+12	8.91223E+15	1.34932E-03	-2.86989E+00
9.96315E-01	1.75425E+12	8.92113E+15	1.34892E-03	-2.87011E+00
1.00037E+00	1.74354E+12	8.92969E+15	1.34856E-03	-2.87013E+00
1.00442E+00	1.73902E+12	8.93811E+15	1.34823E-03	-2.87024E+00
1.00847E+00	1.74354E+12	8.94637E+15	1.34784E-03	-2.87036E+00
1.01252E+00	1.74354E+12	8.95526E+15	1.34751E-03	-2.87047E+00
1.01657E+00	1.72173E+12	8.96394E+15	1.34714E-03	-2.87059E+00
1.02062E+00	1.71653E+12	8.97252E+15	1.34678E-03	-2.87070E+00
1.02467E+00	1.71653E+12	8.98101E+15	1.34644E-03	-2.87081E+00
1.02872E+00	1.70074E+12	8.98949E+15	1.34610E-03	-2.87092E+00
1.03277E+00	1.70074E+12	8.99765E+15	1.34581E-03	-2.87102E+00
1.03682E+00	1.67311E+12	9.00605E+15	1.34549E-03	-2.87112E+00
1.04087E+00	1.67311E+12	9.01297E+15	1.34538E-03	-2.87116E+00
1.04492E+00	1.66823E+12	9.01982E+15	1.34529E-03	-2.87118E+00
1.04897E+00	1.64065E+12	9.02804E+15	1.34499E-03	-2.87128E+00
1.05302E+00	1.65250E+12	9.03489E+15	1.34490E-03	-2.87131E+00
1.05707E+00	1.63527E+12	9.04166E+15	1.34482E-03	-2.87134E+00
1.06112E+00	1.62443E+12	9.04978E+15	1.34453E-03	-2.87143E+00
1.06517E+00	1.62443E+12	9.05648E+15	1.34446E-03	-2.87145E+00
1.06922E+00	1.62043E+12	9.06435E+15	1.34422E-03	-2.87153E+00
1.07327E+00	1.59193E+12	9.07182E+15	1.34403E-03	-2.87159E+00
1.07732E+00	1.60821E+12	9.07761E+15	1.34380E-03	-2.87157E+00
1.08137E+00	1.58847E+12	9.08739E+15	1.34357E-03	-2.87174E+00
1.08542E+00	1.59193E+12	9.09500E+15	1.34337E-03	-2.87180E+00
1.08947E+00	1.57575E+12	9.10252E+15	1.34318E-03	-2.87187E+00
1.09352E+00	1.55952E+12	9.10989E+15	1.34301E-03	-2.87192E+00
1.09757E+00	1.55602E+12	9.11616E+15	1.34298E-03	-2.87193E+00
1.10162E+00	1.54330E+12	9.12116E+15	1.34315E-03	-2.87198E+00
1.10567E+00	1.54330E+12	9.12742E+15	1.34313E-03	-2.87198E+00
1.10972E+00	1.52400E+12	9.13354E+15	1.34313E-03	-2.87198E+00
1.11377E+00	1.51084E+12	9.13836E+15	1.34332E-03	-2.87192E+00
1.11782E+00	1.50821E+12	9.14448E+15	1.34332E-03	-2.87192E+00
1.12187E+00	1.51084E+12	9.14939E+15	1.34349E-03	-2.87177E+00
1.12592E+00	1.49193E+12	9.15543E+15	1.34350E-03	-2.87176E+00
1.12997E+00	1.49193E+12	9.16140E+15	1.34353E-03	-2.87175E+00
1.13402E+00	1.47620E+12	9.16722E+15	1.34357E-03	-2.87174E+00
1.13807E+00	1.47833E+12	9.17312E+15	1.34360E-03	-2.87173E+00
1.14212E+00	1.44550E+12	9.17870E+15	1.34368E-03	-2.87170E+00
1.14617E+00	1.44130E+12	9.18451E+15	1.34372E-03	-2.87169E+00
1.15022E+00	1.42927E+12	9.19009E+15	1.34380E-03	-2.87157E+00
1.15427E+00	1.42795E+12	9.19576E+15	1.34386E-03	-2.87155E+00
1.15832E+00	1.39632E+12	9.20136E+15	1.34394E-03	-2.87162E+00
1.16237E+00	1.38059E+12	9.20588E+15	1.34402E-03	-2.87159E+00
1.16642E+00	1.39594E+12	9.21248E+15	1.34410E-03	-2.87157E+00
1.17047E+00	1.38059E+12	9.21800E+15	1.34418E-03	-2.87154E+00
1.17452E+00	1.38059E+12	9.22235E+15	1.34444E-03	-2.87146E+00
1.17857E+00	1.37971E+12	9.22756E+15	1.34457E-03	-2.87142E+00
1.18262E+00	1.34814E+12	9.23192E+15	1.34483E-03	-2.87133E+00
1.18667E+00	1.33191E+12	9.23721E+15	1.34494E-03	-2.87130E+00
1.19072E+00	1.34770E+12	9.24242E+15	1.34507E-03	-2.87126E+00
1.19477E+00	1.31563E+12	9.24764E+15	1.34520E-03	-2.87121E+00
1.19882E+00	1.33191E+12	9.25287E+15	1.34532E-03	-2.87117E+00
1.20287E+00	1.31563E+12	9.25692E+15	1.34561E-03	-2.87108E+00
1.20692E+00	1.29323E+12	9.26092E+15	1.34590E-03	-2.87099E+00
1.21097E+00	1.29945E+12	9.26401E+15	1.34632E-03	-2.87085E+00
1.21502E+00	1.26657E+12	9.26700E+15	1.34676E-03	-2.87071E+00
1.21907E+00	1.28273E+12	9.27094E+15	1.34707E-03	-2.87061E+00
1.22312E+00	1.26657E+12	9.27487E+15	1.34737E-03	-2.87051E+00
1.22717E+00	1.25034E+12	9.27881E+15	1.34767E-03	-2.87042E+00
1.23122E+00	1.23290E+12	9.28262E+15	1.34799E-03	-2.87031E+00
1.23527E+00	1.21745E+12	9.28643E+15	1.34831E-03	-2.87021E+00
1.23932E+00	1.23367E+12	9.28937E+15	1.34875E-03	-2.87007E+00
1.24337E+00	1.21745E+12	9.29223E+15	1.34921E-03	-2.86992E+00
1.24742E+00	1.21745E+12	9.29597E+15	1.34953E-03	-2.86982E+00
1.25147E+00	1.20078E+12	9.29971E+15	1.34998E-03	-2.86967E+00
1.25552E+00	1.18290E+12	9.30144E+15	1.35043E-03	-2.86953E+00
1.25957E+00	1.16614E+12	9.30502E+15	1.35075E-03	-2.86943E+00
1.26362E+00	1.16614E+12	9.30859E+15	1.35107E-03	-2.86932E+00
1.26767E+00	1.14947E+12	9.31119E+15	1.35154E-03	-2.86917E+00
1.27172E+00	1.15165E+12	9.31387E+15	1.35199E-03	-2.86903E+00
1.27577E+00	1.15165E+12	9.31556E+15	1.35259E-03	-2.86884E+00
1.27982E+00	1.11977E+12	9.31814E+15	1.35305E-03	-2.86869E+00
1.28387E+00	1.10211E+12	9.32159E+15	1.35339E-03	-2.86858E+00
1.28792E+00	1.10211E+12	9.32413E+15	1.35386E-03	-2.86843E+00
1.29197E+00	1.09947E+12	9.32662E+15	1.35433E-03	-2.86828E+00

TABLE 4 (continued)

SHOT 4-5

370 POINTS

194

TIME(MICROSEC)	CDEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
1.29602E+00	1.09544E+12	9.32909E+15	1.35481E-03	-2.86912E+00
1.30007E+00	1.09544E+12	9.33069E+15	1.35542E-03	-2.86793E+00
1.30412E+00	1.09544E+12	9.33314E+15	1.35589E-03	-2.86778E+00
1.30817E+00	1.05299E+12	9.33555E+15	1.35636E-03	-2.86763E+00
1.31222E+00	1.04948E+12	9.33791E+15	1.35685E-03	-2.86747E+00
1.31627E+00	1.04948E+12	9.33950E+15	1.35744E-03	-2.86729E+00
1.32032E+00	1.04948E+12	9.34105E+15	1.35804E-03	-2.86709E+00
1.32437E+00	1.03281E+12	9.34345E+15	1.35851E-03	-2.86694E+00
1.32842E+00	1.00343E+12	9.34574E+15	1.35901E-03	-2.86678E+00
1.33247E+00	1.00343E+12	9.34727E+15	1.35961E-03	-2.86659E+00
1.33652E+00	9.86763E+11	9.34956E+15	1.36010E-03	-2.86643E+00
1.34057E+00	9.86763E+11	9.35183E+15	1.36059E-03	-2.86627E+00
1.34462E+00	9.82815E+11	9.35470E+15	1.36099E-03	-2.86615E+00
1.34867E+00	9.70537E+11	9.35690E+15	1.36150E-03	-2.86598E+00
1.35272E+00	9.53871E+11	9.35914E+15	1.36199E-03	-2.86583E+00
1.35677E+00	9.32920E+11	9.36134E+15	1.36247E-03	-2.86567E+00
1.36082E+00	9.49485E+11	9.36353E+15	1.36295E-03	-2.86552E+00
1.36487E+00	9.49485E+11	9.36499E+15	1.36354E-03	-2.86533E+00
1.36892E+00	9.32920E+11	9.36645E+15	1.36413E-03	-2.86514E+00
1.37297E+00	9.16155E+11	9.36788E+15	1.36472E-03	-2.86496E+00
1.37702E+00	9.04752E+11	9.36931E+15	1.36532E-03	-2.86477E+00
1.38107E+00	8.88087E+11	9.37135E+15	1.36582E-03	-2.86461E+00
1.38512E+00	8.99490E+11	9.37337E+15	1.36633E-03	-2.86444E+00
1.38917E+00	8.82924E+11	9.37545E+15	1.36683E-03	-2.86429E+00
1.39322E+00	8.56159E+11	9.37742E+15	1.36734E-03	-2.86412E+00
1.39727E+00	8.55195E+11	9.37874E+15	1.36794E-03	-2.86393E+00
1.40132E+00	8.55195E+11	9.38004E+15	1.36855E-03	-2.86374E+00
1.40537E+00	8.55195E+11	9.38201E+15	1.36908E-03	-2.86357E+00
1.40942E+00	8.38968E+11	9.38395E+15	1.36962E-03	-2.86340E+00
1.41347E+00	8.49494E+11	9.38520E+15	1.37026E-03	-2.86320E+00
1.41752E+00	8.38968E+11	9.38765E+15	1.37073E-03	-2.86305E+00
1.42157E+00	8.32828E+11	9.38954E+15	1.37128E-03	-2.86287E+00
1.42562E+00	8.16163E+11	9.39135E+15	1.37184E-03	-2.86270E+00
1.42967E+00	8.06075E+11	9.39315E+15	1.37241E-03	-2.86252E+00
1.43372E+00	7.99498E+11	9.39491E+15	1.37297E-03	-2.86234E+00
1.43777E+00	8.06075E+11	9.39608E+15	1.37363E-03	-2.86213E+00
1.44182E+00	8.06075E+11	9.39724E+15	1.37429E-03	-2.86192E+00
1.44587E+00	8.06075E+11	9.39887E+15	1.37487E-03	-2.86174E+00
1.44992E+00	8.06075E+11	9.39998E+15	1.37554E-03	-2.86153E+00
1.45397E+00	7.82832E+11	9.40163E+15	1.37612E-03	-2.86134E+00
1.45802E+00	7.66167E+11	9.40329E+15	1.37669E-03	-2.86116E+00
1.46207E+00	7.66167E+11	9.40437E+15	1.37735E-03	-2.86096E+00
1.46612E+00	7.73184E+11	9.40544E+15	1.37800E-03	-2.86075E+00
1.47017E+00	7.40292E+11	9.40648E+15	1.37866E-03	-2.86054E+00
1.47422E+00	7.40292E+11	9.40699E+15	1.37940E-03	-2.86031E+00
1.47827E+00	7.23627E+11	9.40896E+15	1.37992E-03	-2.86015E+00
1.48232E+00	7.32835E+11	9.40994E+15	1.38058E-03	-2.85994E+00
1.48637E+00	7.16171E+11	9.41191E+15	1.38110E-03	-2.85977E+00
1.49042E+00	7.23627E+11	9.41388E+15	1.38163E-03	-2.85951E+00
1.49447E+00	6.90734E+11	9.41578E+15	1.38216E-03	-2.85944E+00

EOF

TABLE 4 (continued)

SHOT 4-6

369 POINTS

195

TIME(MICROSEC)	COEN (AMP/M2)	EOEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
J.	3.32863E+11	8.86791E+13	0.	-3.50339E+00
4.05006E-03	3.66193E+11	1.00456E+14	3.13776E-04	-3.50338E+00
9.10012E-03	3.99530E+11	1.13323E+14	5.56298E-04	-3.25469E+00
1.21502E-02	3.99530E+11	1.26871E+14	7.45343E-04	-3.12764E+00
1.62002E-02	4.49525E+11	1.41689E+14	8.89856E-04	-3.05088E+00
2.02503E-02	4.66191E+11	1.57570E+14	1.00021E-03	-2.99991E+00
2.43004E-02	5.06100E+11	1.75110E+14	1.04003E-03	-2.96656E+00
2.83504E-02	5.32952E+11	1.94557E+14	1.13409E-03	-2.94535E+00
3.24005E-02	5.82848E+11	2.16259E+14	1.16603E-03	-2.93329E+00
3.64506E-02	5.82848E+11	2.42277E+14	1.17092E-03	-2.93147E+00
4.05006E-02	6.24950E+11	2.72447E+14	1.15695E-03	-2.93669E+00
4.45507E-02	6.49510E+11	3.06871E+14	1.12988E-03	-2.94697E+00
4.86007E-02	6.82840E+11	3.46513E+14	1.09159E-03	-2.96194E+00
5.26508E-02	7.16171E+11	3.92459E+14	1.04411E-03	-2.99125E+00
5.67009E-02	7.32836E+11	4.47561E+14	9.85989E-04	-3.00613E+00
5.07509E-02	7.82832E+11	5.07952E+14	9.30818E-04	-3.03114E+00
6.48010E-02	7.99498E+11	5.93439E+14	8.49847E-04	-3.07066E+00
6.88510E-02	8.16163E+11	7.01506E+14	7.63860E-04	-3.11699E+00
7.29011E-02	8.66153E+11	8.37071E+14	6.77809E-04	-3.16389E+00
7.69512E-02	8.94227E+11	1.00271E+15	5.97277E-04	-3.22392E+00
8.10012E-02	9.32820E+11	1.14308E+15	5.51506E-04	-3.25445E+00
8.50513E-02	9.49485E+11	1.25747E+15	5.26403E-04	-3.27368E+00
9.91014E-02	9.82815E+11	1.34424E+15	5.15873E-04	-3.28746E+00
9.31514E-02	9.82815E+11	1.43512E+15	5.05170E-04	-3.29656E+00
9.72015E-02	1.01615E+12	1.52562E+15	4.95862E-04	-3.30464E+00
1.01252E-01	1.04948E+12	1.58757E+15	4.96369E-04	-3.30420E+00
1.05302E-01	1.04948E+12	1.65638E+15	5.03486E-04	-3.29901E+00
1.09352E-01	1.06614E+12	1.72730E+15	5.27053E-04	-3.27815E+00
1.13402E-01	1.08281E+12	1.78248E+15	5.53603E-04	-3.25680E+00
1.17452E-01	1.09947E+12	1.83766E+15	5.78559E-04	-3.23765E+00
1.21502E-01	1.08281E+12	1.89642E+15	6.00926E-04	-3.22118E+00
1.25552E-01	1.06614E+12	1.95345E+15	6.22497E-04	-3.20586E+00
1.29602E-01	1.08281E+12	2.00566E+15	6.44389E-04	-3.19085E+00
1.33652E-01	1.06614E+12	2.06077E+15	6.64234E-04	-3.17788E+00
1.37702E-01	1.06614E+12	2.11449E+15	6.83497E-04	-3.16526E+00
1.41752E-01	1.08281E+12	2.16577E+15	7.02595E-04	-3.15329E+00
1.45802E-01	1.08281E+12	2.21888E+15	7.20213E-04	-3.14254E+00
1.49852E-01	1.11514E+12	2.27274E+15	7.36765E-04	-3.13267E+00
1.53902E-01	1.13280E+12	2.32535E+15	7.52955E-04	-3.12323E+00
1.57952E-01	1.11614E+12	2.37686E+15	7.76631E-04	-3.10979E+00
1.62002E-01	1.16614E+12	2.42905E+15	8.07321E-04	-3.09295E+00
1.66053E-01	1.18283E+12	2.48195E+15	8.36484E-04	-3.07754E+00
1.70103E-01	1.19947E+12	2.53422E+15	8.64643E-04	-3.06316E+00
1.74153E-01	1.23280E+12	2.58742E+15	8.91344E-04	-3.04995E+00
1.78203E-01	1.23280E+12	2.64163E+15	9.16617E-04	-3.03781E+00
1.82253E-01	1.24945E+12	2.69490E+15	9.41205E-04	-3.02632E+00
1.86303E-01	1.26613E+12	2.74879E+15	9.64623E-04	-3.01554E+00
1.90353E-01	1.29945E+12	2.80367E+15	9.86787E-04	-3.00578E+00
1.94403E-01	1.29946E+12	2.85683E+15	1.00871E-03	-2.99623E+00
1.98453E-01	1.33147E+12	2.91147E+15	1.02931E-03	-2.98745E+00
2.02503E-01	1.34770E+12	2.96589E+15	1.04922E-03	-2.97913E+00
2.06553E-01	1.36393E+12	3.02093E+15	1.06820E-03	-2.97135E+00
2.10603E-01	1.37971E+12	3.07597E+15	1.08887E-03	-2.96302E+00
2.14653E-01	1.39682E+12	3.13110E+15	1.11006E-03	-2.95465E+00
2.18703E-01	1.42796E+12	3.18788E+15	1.12993E-03	-2.94695E+00
2.22753E-01	1.45997E+12	3.24379E+15	1.14942E-03	-2.93952E+00
2.26803E-01	1.46173E+12	3.29816E+15	1.16879E-03	-2.93226E+00
2.30854E-01	1.47839E+12	3.35498E+15	1.18667E-03	-2.92567E+00
2.34904E-01	1.50821E+12	3.41144E+15	1.20408E-03	-2.91934E+00
2.38954E-01	1.51084E+12	3.46750E+15	1.22107E-03	-2.91326E+00
2.43004E-01	1.55502E+12	3.52429E+15	1.23725E-03	-2.90754E+00
2.47054E-01	1.57224E+12	3.58261E+15	1.25239E-03	-2.90226E+00
2.51104E-01	1.57575E+12	3.63938E+15	1.26758E-03	-2.89702E+00
2.55154E-01	1.56425E+12	3.69720E+15	1.28194E-03	-2.89213E+00
2.59204E-01	1.63627E+12	3.75610E+15	1.29549E-03	-2.88757E+00
2.63254E-01	1.62443E+12	3.81327E+15	1.30809E-03	-2.88336E+00
2.67304E-01	1.64066E+12	3.87311E+15	1.31914E-03	-2.87971E+00
2.71354E-01	1.68451E+12	3.93349E+15	1.32967E-03	-2.87626E+00
2.75404E-01	1.69934E+12	3.99161E+15	1.34065E-03	-2.87288E+00
2.79454E-01	1.71653E+12	4.04995E+15	1.35123E-03	-2.86927E+00
2.83504E-01	1.74854E+12	4.10955E+15	1.36133E-03	-2.86604E+00
2.87554E-01	1.74854E+12	4.16857E+15	1.37087E-03	-2.86300E+00
2.91604E-01	1.78055E+12	4.22850E+15	1.38007E-03	-2.86010E+00
2.95655E-01	1.79573E+12	4.28896E+15	1.38885E-03	-2.85734E+00
2.99705E-01	1.81257E+12	4.34987E+15	1.39724E-03	-2.85473E+00
3.03755E-01	1.82980E+12	4.40931E+15	1.40586E-03	-2.85206E+00
3.07805E-01	1.83539E+12	4.46926E+15	1.41410E-03	-2.84952E+00
3.11855E-01	1.85161E+12	4.52796E+15	1.42250E-03	-2.84695E+00
3.15905E-01	1.87774E+12	4.58898E+15	1.42846E-03	-2.84513E+00
3.19955E-01	1.88405E+12	4.65238E+15	1.43342E-03	-2.84363E+00

TABLE 4 (continued)

SHOT 4-6

363 POINTS

196

TIME (MICROSEC)	CJEN (AMP/M2)	EDEN (ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
3.24005E-01	1.90029E+12	4.71225E+15	1.43934E-03	-2.84184E+00
3.29055E-01	1.91551E+12	4.77332E+15	1.44476E-03	-2.84020E+00
3.32105E-01	1.92485E+12	4.83438E+15	1.45004E-03	-2.83862E+00
3.36155E-01	1.94107E+12	4.89592E+15	1.45505E-03	-2.83712E+00
3.40205E-01	1.95731E+12	4.95789E+15	1.45981E-03	-2.83570E+00
3.44255E-01	1.97303E+12	5.02069E+15	1.46420E-03	-2.83440E+00
3.48305E-01	1.99765E+12	5.08121E+15	1.46915E-03	-2.83293E+00
3.52355E-01	1.99765E+12	5.14037E+15	1.47437E-03	-2.83139E+00
3.56405E-01	2.03755E+12	5.20190E+15	1.47880E-03	-2.83009E+00
3.60455E-01	2.03755E+12	5.26196E+15	1.48354E-03	-2.82870E+00
3.64505E-01	2.05335E+12	5.32277E+15	1.48783E-03	-2.82745E+00
3.68555E-01	2.06957E+12	5.38328E+15	1.49116E-03	-2.82648E+00
3.72605E-01	2.09545E+12	5.44424E+15	1.49430E-03	-2.82556E+00
3.76655E-01	2.07922E+12	5.50565E+15	1.49724E-03	-2.82471E+00
3.80705E-01	2.10159E+12	5.56737E+15	1.50004E-03	-2.82390E+00
3.84755E-01	2.11739E+12	5.63171E+15	1.50207E-03	-2.82331E+00
3.88805E-01	2.13360E+12	5.69030E+15	1.50558E-03	-2.82230E+00
3.92855E-01	2.16035E+12	5.74920E+15	1.50894E-03	-2.82133E+00
3.96905E-01	2.14983E+12	5.80866E+15	1.51208E-03	-2.82043E+00
4.00955E-01	2.16562E+12	5.87061E+15	1.51452E-03	-2.81972E+00
4.05005E-01	2.17559E+12	5.93019E+15	1.51751E-03	-2.81897E+00
4.09055E-01	2.18184E+12	5.99018E+15	1.52034E-03	-2.81806E+00
4.13105E-01	2.19291E+12	6.05092E+15	1.52292E-03	-2.81732E+00
4.17155E-01	2.21385E+12	6.10924E+15	1.52574E-03	-2.81652E+00
4.21205E-01	2.21335E+12	6.16797E+15	1.52764E-03	-2.81599E+00
4.25255E-01	2.22525E+12	6.22707E+15	1.52940E-03	-2.81548E+00
4.29305E-01	2.25771E+12	6.28621E+15	1.53113E-03	-2.81499E+00
4.33355E-01	2.27394E+12	6.34526E+15	1.53284E-03	-2.81450E+00
4.37405E-01	2.26211E+12	6.40269E+15	1.53491E-03	-2.81392E+00
4.41455E-01	2.27793E+12	6.46224E+15	1.53644E-03	-2.81348E+00
4.45505E-01	2.30640E+12	6.52006E+15	1.53834E-03	-2.81295E+00
4.49555E-01	2.29412E+12	6.57829E+15	1.54012E-03	-2.81245E+00
4.53605E-01	2.30990E+12	6.63436E+15	1.54237E-03	-2.81181E+00
4.57655E-01	2.30990E+12	6.69111E+15	1.54443E-03	-2.81123E+00
4.61705E-01	2.32613E+12	6.74755E+15	1.54652E-03	-2.81054E+00
4.65755E-01	2.32262E+12	6.80616E+15	1.54808E-03	-2.81021E+00
4.69805E-01	2.34192E+12	6.86073E+15	1.55009E-03	-2.80954E+00
4.73855E-01	2.34192E+12	6.91836E+15	1.55085E-03	-2.80943E+00
4.77905E-01	2.35815E+12	6.97386E+15	1.55206E-03	-2.80909E+00
4.81955E-01	2.37437E+12	7.02894E+15	1.55337E-03	-2.80873E+00
4.86005E-01	2.37437E+12	7.08642E+15	1.55409E-03	-2.80852E+00
4.90055E-01	2.40375E+12	7.14177E+15	1.55528E-03	-2.80819E+00
4.94105E-01	2.39015E+12	7.19490E+15	1.55694E-03	-2.80773E+00
4.98155E-01	2.39015E+12	7.25061E+15	1.55802E-03	-2.80743E+00
5.02205E-01	2.40375E+12	7.30405E+15	1.55956E-03	-2.80700E+00
5.06255E-01	2.40639E+12	7.35635E+15	1.56132E-03	-2.80651E+00
5.10305E-01	2.41998E+12	7.41083E+15	1.56260E-03	-2.80615E+00
5.14355E-01	2.41998E+12	7.46274E+15	1.56440E-03	-2.80565E+00
5.18405E-01	2.42218E+12	7.51688E+15	1.56571E-03	-2.80529E+00
5.22455E-01	2.43840E+12	7.57106E+15	1.56639E-03	-2.80510E+00
5.26505E-01	2.43840E+12	7.62103E+15	1.56753E-03	-2.80479E+00
5.30555E-01	2.43840E+12	7.67297E+15	1.56826E-03	-2.80458E+00
5.34605E-01	2.45413E+12	7.72265E+15	1.56944E-03	-2.80426E+00
5.38655E-01	2.45244E+12	7.77232E+15	1.57060E-03	-2.80393E+00
5.42705E-01	2.47042E+12	7.82459E+15	1.57122E-03	-2.80376E+00
5.46755E-01	2.47042E+12	7.87505E+15	1.57220E-03	-2.80349E+00
5.50805E-01	2.48449E+12	7.92501E+15	1.57326E-03	-2.80320E+00
5.54855E-01	2.48449E+12	7.97397E+15	1.57453E-03	-2.80285E+00
5.58905E-01	2.48664E+12	8.02022E+15	1.57628E-03	-2.80237E+00
5.62955E-01	2.50112E+12	8.06821E+15	1.57769E-03	-2.80188E+00
5.67005E-01	2.48664E+12	8.11516E+15	1.57928E-03	-2.80154E+00
5.71055E-01	2.48664E+12	8.16318E+15	1.58064E-03	-2.80117E+00
5.75105E-01	2.48664E+12	8.20863E+15	1.58158E-03	-2.80091E+00
5.79155E-01	2.50243E+12	8.25306E+15	1.58244E-03	-2.80067E+00
5.83205E-01	2.48664E+12	8.29881E+15	1.58303E-03	-2.80051E+00
5.87255E-01	2.50112E+12	8.34351E+15	1.58382E-03	-2.80029E+00
5.91305E-01	2.51734E+12	8.38821E+15	1.58460E-03	-2.80008E+00
5.95355E-01	2.50112E+12	8.43396E+15	1.58517E-03	-2.79992E+00
5.99405E-01	2.51734E+12	8.47839E+15	1.58599E-03	-2.79970E+00
6.03455E-01	2.53357E+12	8.52059E+15	1.58721E-03	-2.79937E+00
6.07505E-01	2.51865E+12	8.56226E+15	1.58851E-03	-2.79901E+00
6.11555E-01	2.51865E+12	8.60473E+15	1.58966E-03	-2.79870E+00
6.15605E-01	2.50243E+12	8.64472E+15	1.59125E-03	-2.79826E+00
6.19655E-01	2.51865E+12	8.68598E+15	1.59261E-03	-2.79789E+00
6.23705E-01	2.51865E+12	8.72730E+15	1.59391E-03	-2.79754E+00
6.27755E-01	2.53445E+12	8.76529E+15	1.59453E-03	-2.79737E+00
6.31805E-01	2.53445E+12	8.80577E+15	1.59458E-03	-2.79735E+00
6.35855E-01	2.51865E+12	8.84666E+15	1.59492E-03	-2.79726E+00
6.39905E-01	2.51865E+12	8.88424E+15	1.59546E-03	-2.79711E+00
6.43955E-01	2.51865E+12	8.92156E+15	1.59575E-03	-2.79704E+00

TABLE 4 (continued)

SHOT 4-6

369 POINTS

197

TIME(MICROSEC)	COEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
5.49010E-01	2.54990E+12	8.96045E+15	1.59609E-03	-2.79694E+00
5.52060E-01	2.53445E+12	8.99705E+15	1.59682E-03	-2.79674E+00
5.56110E-01	2.51865E+12	9.03364E+15	1.59755E-03	-2.79655E+00
5.60160E-01	2.51865E+12	9.07024E+15	1.59828E-03	-2.79635E+00
5.64210E-01	2.53445E+12	9.10579E+15	1.59919E-03	-2.79610E+00
5.68260E-01	2.53357E+12	9.14238E+15	1.59989E-03	-2.79591E+00
5.72310E-01	2.54990E+12	9.17874E+15	1.60064E-03	-2.79571E+00
5.76360E-01	2.51865E+12	9.21510E+15	1.60126E-03	-2.79554E+00
5.80410E-01	2.51865E+12	9.24918E+15	1.60103E-03	-2.79560E+00
5.84460E-01	2.53445E+12	9.28552E+15	1.60042E-03	-2.79577E+00
5.88510E-01	2.51865E+12	9.31864E+15	1.60036E-03	-2.79578E+00
5.92561E-01	2.51865E+12	9.35064E+15	1.60049E-03	-2.79575E+00
5.96511E-01	2.51865E+12	9.38596E+15	1.60006E-03	-2.79586E+00
7.00661E-01	2.51865E+12	9.41887E+15	1.60004E-03	-2.79587E+00
7.04711E-01	2.51865E+12	9.45047E+15	1.60024E-03	-2.79581E+00
7.08761E-01	2.51865E+12	9.48226E+15	1.60041E-03	-2.79577E+00
7.12811E-01	2.50243E+12	9.51386E+15	1.60061E-03	-2.79571E+00
7.16861E-01	2.51865E+12	9.54458E+15	1.60095E-03	-2.79552E+00
7.20911E-01	2.50243E+12	9.57306E+15	1.60167E-03	-2.79543E+00
7.24961E-01	2.50243E+12	9.60240E+15	1.60224E-03	-2.79527E+00
7.29011E-01	2.50112E+12	9.63311E+15	1.60226E-03	-2.79527E+00
7.33061E-01	2.50243E+12	9.66247E+15	1.60153E-03	-2.79546E+00
7.37111E-01	2.51865E+12	9.69144E+15	1.60088E-03	-2.79564E+00
7.41161E-01	2.50243E+12	9.72176E+15	1.60001E-03	-2.79588E+00
7.45211E-01	2.48664E+12	9.74867E+15	1.59970E-03	-2.79596E+00
7.49261E-01	2.48664E+12	9.77541E+15	1.59942E-03	-2.79604E+00
7.53311E-01	2.50243E+12	9.80198E+15	1.59917E-03	-2.79611E+00
7.57362E-01	2.48664E+12	9.83077E+15	1.59856E-03	-2.79627E+00
7.61412E-01	2.48664E+12	9.85750E+15	1.59829E-03	-2.79634E+00
7.65462E-01	2.48433E+12	9.88407E+15	1.59805E-03	-2.79641E+00
7.69512E-01	2.48433E+12	9.91002E+15	1.59791E-03	-2.79645E+00
7.73562E-01	2.48664E+12	9.93598E+15	1.59776E-03	-2.79649E+00
7.77612E-01	2.48664E+12	9.95933E+15	1.59804E-03	-2.79641E+00
7.81662E-01	2.45419E+12	9.98572E+15	1.59740E-03	-2.79659E+00
7.85712E-01	2.45419E+12	1.00099E+16	1.59649E-03	-2.79683E+00
7.89762E-01	2.47042E+12	1.00339E+16	1.59561E-03	-2.79707E+00
7.93812E-01	2.45419E+12	1.00557E+16	1.59509E-03	-2.79721E+00
7.97862E-01	2.43840E+12	1.00774E+16	1.59458E-03	-2.79735E+00
8.01912E-01	2.43840E+12	1.01006E+16	1.59385E-03	-2.79755E+00
8.05962E-01	2.45419E+12	1.01222E+16	1.59337E-03	-2.79778E+00
8.10012E-01	2.43840E+12	1.01430E+16	1.59302E-03	-2.79778E+00
8.14062E-01	2.45244E+12	1.01539E+16	1.59264E-03	-2.79788E+00
8.18112E-01	2.45419E+12	1.01847E+16	1.59229E-03	-2.79798E+00
8.22163E-01	2.42219E+12	1.02060E+16	1.59187E-03	-2.79809E+00
8.26213E-01	2.40639E+12	1.02253E+16	1.59176E-03	-2.79812E+00
8.30263E-01	2.42219E+12	1.02445E+16	1.59165E-03	-2.79815E+00
8.34313E-01	2.41998E+12	1.02672E+16	1.59061E-03	-2.79844E+00
8.38363E-01	2.40639E+12	1.02979E+16	1.58959E-03	-2.79871E+00
8.42413E-01	2.40375E+12	1.03084E+16	1.58859E-03	-2.79899E+00
8.46463E-01	2.39015E+12	1.03273E+16	1.58786E-03	-2.79919E+00
8.50513E-01	2.39015E+12	1.03463E+16	1.58710E-03	-2.79940E+00
8.54563E-01	2.37437E+12	1.03630E+16	1.58669E-03	-2.79951E+00
8.58613E-01	2.35915E+12	1.03798E+16	1.58628E-03	-2.79962E+00
8.62663E-01	2.37437E+12	1.03964E+16	1.58589E-03	-2.79973E+00
8.66713E-01	2.35915E+12	1.04152E+16	1.58518E-03	-2.79992E+00
8.70763E-01	2.34192E+12	1.04338E+16	1.58450E-03	-2.80011E+00
8.74813E-01	2.35815E+12	1.04524E+16	1.58382E-03	-2.80029E+00
8.78863E-01	2.35508E+12	1.04588E+16	1.58347E-03	-2.80039E+00
8.82913E-01	2.34192E+12	1.04851E+16	1.58314E-03	-2.80048E+00
8.86964E-01	2.34192E+12	1.05014E+16	1.58245E-03	-2.80067E+00
8.91014E-01	2.32613E+12	1.05177E+16	1.58163E-03	-2.80090E+00
8.95064E-01	2.30990E+12	1.05340E+16	1.58082E-03	-2.80112E+00
8.99114E-01	2.32613E+12	1.05501E+16	1.58004E-03	-2.80133E+00
9.03164E-01	2.30540E+12	1.05657E+16	1.57933E-03	-2.80153E+00
9.07214E-01	2.30390E+12	1.05813E+16	1.57862E-03	-2.80172E+00
9.11264E-01	2.29412E+12	1.05953E+16	1.57816E-03	-2.80185E+00
9.15314E-01	2.29412E+12	1.06071E+16	1.57801E-03	-2.80189E+00
9.19364E-01	2.27789E+12	1.06190E+16	1.57787E-03	-2.80193E+00
9.23414E-01	2.27789E+12	1.06344E+16	1.57720E-03	-2.80211E+00
9.27464E-01	2.25771E+12	1.06477E+16	1.57684E-03	-2.80221E+00
9.31514E-01	2.26211E+12	1.06615E+16	1.57641E-03	-2.80233E+00
9.35564E-01	2.24587E+12	1.06751E+16	1.57600E-03	-2.80244E+00
9.39614E-01	2.24149E+12	1.06897E+16	1.57531E-03	-2.80263E+00
9.43664E-01	2.24587E+12	1.07019E+16	1.57465E-03	-2.80282E+00
9.47714E-01	2.24149E+12	1.07151E+16	1.57398E-03	-2.80300E+00
9.51765E-01	2.21395E+12	1.07246E+16	1.57385E-03	-2.80304E+00
9.55815E-01	2.21395E+12	1.07361E+16	1.57344E-03	-2.80315E+00
9.59865E-01	2.21395E+12	1.07494E+16	1.57275E-03	-2.80334E+00
9.63915E-01	2.19763E+12	1.07626E+16	1.57209E-03	-2.80352E+00
9.67965E-01	2.18134E+12	1.07759E+16	1.57144E-03	-2.80370E+00

TABLE 4 (continued)

SHOT 4-6

368 POINTS

198

TIME(MICROSEC)	COEN (A4P/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
3.72015E-01	2.17659E+12	1.07566E+16	1.57112E-03	-2.93379E+00
9.76065E-01	2.18194E+12	1.07975E+16	1.57090E-03	-2.93398E+00
9.90115E-01	2.14983E+12	1.08085E+16	1.57047E-03	-2.93397E+00
9.94165E-01	2.17659E+12	1.08176E+16	1.57040E-03	-2.93399E+00
9.98215E-01	2.14983E+12	1.08285E+16	1.57007E-03	-2.93408E+00
9.92265E-01	2.14413E+12	1.09393E+16	1.56955E-03	-2.80422E+00
9.96315E-01	2.12790E+12	1.08501E+16	1.56904E-03	-2.93437E+00
1.00037E+00	2.13360E+12	1.08605E+16	1.56858E-03	-2.93449E+00
1.00442E+00	2.11167E+12	1.08708E+16	1.56814E-03	-2.80462E+00
1.00847E+00	2.10159E+12	1.09814E+16	1.56765E-03	-2.93475E+00
1.01252E+00	2.10159E+12	1.08917E+16	1.56722E-03	-2.93497E+00
1.01657E+00	2.07922E+12	1.09021E+16	1.56676E-03	-2.93500E+00
1.02062E+00	2.06957E+12	1.09125E+16	1.56630E-03	-2.93513E+00
1.02467E+00	2.05335E+12	1.09228E+16	1.56596E-03	-2.93525E+00
1.02872E+00	2.05335E+12	1.09332E+16	1.56541E-03	-2.93537E+00
1.03277E+00	2.03755E+12	1.09415E+16	1.56526E-03	-2.93541E+00
1.03682E+00	2.01387E+12	1.09500E+16	1.56509E-03	-2.93546E+00
1.04087E+00	2.01387E+12	1.09567E+16	1.56513E-03	-2.93545E+00
1.04492E+00	2.00510E+12	1.09634E+16	1.56506E-03	-2.93547E+00
1.04897E+00	1.99142E+12	1.09718E+16	1.56475E-03	-2.93556E+00
1.05302E+00	1.97309E+12	1.09784E+16	1.56469E-03	-2.93557E+00
1.05707E+00	1.97309E+12	1.09949E+16	1.56464E-03	-2.93559E+00
1.06112E+00	1.94897E+12	1.09931E+16	1.56436E-03	-2.80566E+00
1.06517E+00	1.94897E+12	1.09995E+16	1.56432E-03	-2.93567E+00
1.06922E+00	1.94107E+12	1.10076E+16	1.56405E-03	-2.93575E+00
1.07327E+00	1.91651E+12	1.10154E+16	1.56383E-03	-2.80591E+00
1.07732E+00	1.91651E+12	1.10233E+16	1.56358E-03	-2.93598E+00
1.08137E+00	1.89283E+12	1.10312E+16	1.56335E-03	-2.80594E+00
1.08542E+00	1.90029E+12	1.10390E+16	1.56312E-03	-2.80601E+00
1.08947E+00	1.88406E+12	1.10468E+16	1.56299E-03	-2.93607E+00
1.09352E+00	1.86793E+12	1.10528E+16	1.56299E-03	-2.83607E+00
1.09757E+00	1.86082E+12	1.10588E+16	1.56279E-03	-2.93610E+00
1.10162E+00	1.95161E+12	1.10634E+16	1.56292E-03	-2.93606E+00
1.10567E+00	1.83539E+12	1.10694E+16	1.56294E-03	-2.93609E+00
1.10972E+00	1.82980E+12	1.10754E+16	1.56276E-03	-2.93611E+00
1.11377E+00	1.80293E+12	1.10900E+16	1.56299E-03	-2.93607E+00
1.11782E+00	1.79679E+12	1.10859E+16	1.56283E-03	-2.93609E+00
1.12187E+00	1.78670E+12	1.10904E+16	1.56296E-03	-2.93605E+00
1.12592E+00	1.78055E+12	1.10962E+16	1.56291E-03	-2.93607E+00
1.12997E+00	1.76477E+12	1.11020E+16	1.56296E-03	-2.80609E+00
1.13402E+00	1.74854E+12	1.11078E+16	1.56292E-03	-2.93609E+00
1.13807E+00	1.75425E+12	1.11135E+16	1.56278E-03	-2.93610E+00
1.14212E+00	1.72179E+12	1.11190E+16	1.56277E-03	-2.93610E+00
1.14617E+00	1.72179E+12	1.11246E+16	1.56273E-03	-2.93612E+00
1.15022E+00	1.72179E+12	1.11301E+16	1.56267E-03	-2.93613E+00
1.15427E+00	1.70074E+12	1.11342E+16	1.56291E-03	-2.93609E+00
1.15832E+00	1.67311E+12	1.11394E+16	1.56294E-03	-2.93606E+00
1.16237E+00	1.67311E+12	1.11425E+16	1.56309E-03	-2.83602E+00
1.16642E+00	1.66929E+12	1.11465E+16	1.56323E-03	-2.93598E+00
1.17047E+00	1.65689E+12	1.11506E+16	1.56338E-03	-2.80594E+00
1.17452E+00	1.65689E+12	1.11532E+16	1.56372E-03	-2.80594E+00
1.17857E+00	1.63627E+12	1.11571E+16	1.56390E-03	-2.93579E+00
1.18262E+00	1.60921E+12	1.11597E+16	1.56424E-03	-2.93570E+00
1.18667E+00	1.60921E+12	1.11636E+16	1.56441E-03	-2.80595E+00
1.19072E+00	1.60425E+12	1.11574E+16	1.56459E-03	-2.93550E+00
1.19477E+00	1.57575E+12	1.11712E+16	1.56477E-03	-2.93555E+00
1.19882E+00	1.57575E+12	1.11750E+16	1.56494E-03	-2.93550E+00
1.20287E+00	1.57224E+12	1.11775E+16	1.56527E-03	-2.93541E+00
1.20692E+00	1.54330E+12	1.11800E+16	1.56561E-03	-2.93532E+00
1.21097E+00	1.55602E+12	1.11825E+16	1.56594E-03	-2.93522E+00
1.21502E+00	1.52707E+12	1.11837E+16	1.56645E-03	-2.93508E+00
1.21907E+00	1.52400E+12	1.11861E+16	1.56680E-03	-2.93499E+00
1.22312E+00	1.49462E+12	1.11885E+16	1.56714E-03	-2.80489E+00
1.22717E+00	1.49462E+12	1.11909E+16	1.56749E-03	-2.93480E+00
1.23122E+00	1.47939E+12	1.11932E+16	1.56785E-03	-2.93470E+00
1.23527E+00	1.47939E+12	1.11955E+16	1.56820E-03	-2.80460E+00
1.23932E+00	1.44550E+12	1.11967E+16	1.56872E-03	-2.93445E+00
1.24337E+00	1.44550E+12	1.11979E+16	1.56924E-03	-2.93431E+00
1.24742E+00	1.42927E+12	1.12001E+16	1.56960E-03	-2.80421E+00
1.25147E+00	1.42927E+12	1.12012E+16	1.57011E-03	-2.93407E+00
1.25552E+00	1.39594E+12	1.12024E+16	1.57062E-03	-2.80393E+00
1.25957E+00	1.39594E+12	1.12046E+16	1.57097E-03	-2.93393E+00
1.26362E+00	1.38059E+12	1.12067E+16	1.57132E-03	-2.80374E+00
1.26767E+00	1.38059E+12	1.12078E+16	1.57184E-03	-2.80359E+00
1.27172E+00	1.36435E+12	1.12099E+16	1.57235E-03	-2.80345E+00
1.27577E+00	1.36435E+12	1.12099E+16	1.57286E-03	-2.93331E+00
1.27982E+00	1.33191E+12	1.12099E+16	1.57352E-03	-2.93313E+00
1.28387E+00	1.31569E+12	1.12120E+16	1.57399E-03	-2.80303E+00
1.28792E+00	1.33191E+12	1.12130E+16	1.57441E-03	-2.93298E+00
1.29197E+00	1.31569E+12	1.12161E+16	1.57464E-03	-2.93292E+00

TABLE 4 (continued)

SHOT 4-6

368 POINTS

199

TIME(MICROSEC)	CDEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
1.29602E+00	1.29323E+12	1.12181E+16	1.57502E-03	-2.90271E+00
1.30007E+00	1.28323E+12	1.12191E+16	1.57554E-03	-2.90257E+00
1.30412E+00	1.29323E+12	1.12211E+16	1.57590E-03	-2.90247E+00
1.30817E+00	1.25034E+12	1.12220E+16	1.57641E-03	-2.90233E+00
1.31222E+00	1.24946E+12	1.12240E+16	1.57679E-03	-2.90223E+00
1.31627E+00	1.24945E+12	1.12259E+16	1.57716E-03	-2.90212E+00
1.32032E+00	1.23280E+12	1.12269E+16	1.57757E-03	-2.90198E+00
1.32437E+00	1.21613E+12	1.12278E+16	1.57818E-03	-2.90184E+00
1.32842E+00	1.20079E+12	1.12296E+16	1.57857E-03	-2.90174E+00
1.33247E+00	1.18455E+12	1.12306E+16	1.57908E-03	-2.90160E+00
1.33652E+00	1.16789E+12	1.12315E+16	1.57960E-03	-2.90145E+00
1.34057E+00	1.15165E+12	1.12324E+16	1.58012E-03	-2.90131E+00
1.34462E+00	1.16614E+12	1.12341E+16	1.58052E-03	-2.90120E+00
1.34867E+00	1.13503E+12	1.12350E+16	1.58104E-03	-2.90106E+00
1.35272E+00	1.13503E+12	1.12359E+16	1.58155E-03	-2.90092E+00
1.35677E+00	1.11514E+12	1.12385E+16	1.58181E-03	-2.90085E+00
1.35082E+00	1.13280E+12	1.12394E+16	1.58231E-03	-2.90071E+00
1.36487E+00	1.11614E+12	1.12411E+16	1.58269E-03	-2.90060E+00
1.36892E+00	1.09947E+12	1.12428E+16	1.58308E-03	-2.90050E+00
1.37297E+00	1.09347E+12	1.12436E+16	1.58358E-03	-2.90036E+00
1.37702E+00	1.06921E+12	1.12445E+16	1.58408E-03	-2.90022E+00
1.38107E+00	1.06921E+12	1.12461E+16	1.58448E-03	-2.90011E+00
1.38512E+00	1.04949E+12	1.12477E+16	1.58488E-03	-2.90000E+00
1.38917E+00	1.03281E+12	1.12495E+16	1.58539E-03	-2.79986E+00
1.39322E+00	1.01615E+12	1.12501E+16	1.58578E-03	-2.79976E+00
1.39727E+00	1.01965E+12	1.12509E+16	1.58630E-03	-2.79961E+00
1.40132E+00	1.01965E+12	1.12516E+16	1.58681E-03	-2.79948E+00
1.40537E+00	1.00343E+12	1.12524E+16	1.58733E-03	-2.79933E+00
1.40942E+00	9.86763E+11	1.12532E+16	1.58783E-03	-2.79920E+00
1.41347E+00	9.82815E+11	1.12547E+16	1.58823E-03	-2.79909E+00
1.41752E+00	9.96763E+11	1.12562E+16	1.58862E-03	-2.79898E+00
1.42157E+00	9.56151E+11	1.12577E+16	1.58903E-03	-2.79887E+00
1.42562E+00	9.66151E+11	1.12591E+16	1.58943E-03	-2.79876E+00
1.42967E+00	9.37645E+11	1.12605E+16	1.58984E-03	-2.79865E+00
1.43372E+00	9.49485E+11	1.12612E+16	1.59036E-03	-2.79850E+00
1.43777E+00	9.37645E+11	1.12626E+16	1.59077E-03	-2.79839E+00
1.44182E+00	9.37545E+11	1.12640E+16	1.59119E-03	-2.79828E+00
1.44587E+00	9.20973E+11	1.12646E+16	1.59171E-03	-2.79814E+00
1.44992E+00	9.20973E+11	1.12653E+16	1.59222E-03	-2.79800E+00
1.45397E+00	8.99490E+11	1.12666E+16	1.59265E-03	-2.79789E+00
1.45802E+00	8.82824E+11	1.12679E+16	1.59309E-03	-2.79776E+00
1.46207E+00	8.82824E+11	1.12695E+16	1.59364E-03	-2.79761E+00
1.46612E+00	8.88087E+11	1.12692E+16	1.59418E-03	-2.79746E+00
1.47017E+00	8.55135E+11	1.12692E+16	1.59482E-03	-2.79729E+00
1.47422E+00	8.38969E+11	1.12592E+16	1.59546E-03	-2.79711E+00
1.47827E+00	8.38969E+11	1.12697E+16	1.59601E-03	-2.79696E+00
1.48232E+00	8.32825E+11	1.12703E+16	1.59656E-03	-2.79681E+00
1.48637E+00	8.32825E+11	1.12721E+16	1.59695E-03	-2.79671E+00

EOF

TABLE 4 (continued)

SHOT 4-7

371 POINTS

200

TIME(MICROSEC)	CODEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
0.	3.32863E+11	9.11199E+13	0.	-3.37052E+00
4.05006E-03	3.82864E+11	1.05577E+14	4.25967E-04	-3.37062E+00
8.10012E-03	3.99530E+11	1.21003E+14	7.43325E-04	-3.12882E+00
1.21502E-02	4.49525E+11	1.37973E+14	9.77849E-04	-3.00973E+00
1.62002E-02	4.82855E+11	1.55441E+14	1.15728E-03	-2.93656E+00
2.02503E-02	4.99522E+11	1.74199E+14	1.29083E-03	-2.89913E+00
2.43004E-02	5.49518E+11	1.95392E+14	1.38098E-03	-2.85931E+00
2.83504E-02	5.82848E+11	2.18297E+14	1.44210E-03	-2.84100E+00
3.24005E-02	6.07408E+11	2.43566E+14	1.47652E-03	-2.83076E+00
3.64506E-02	6.66175E+11	2.74769E+14	1.47305E-03	-2.83178E+00
4.05006E-02	6.99505E+11	3.09619E+14	1.45250E-03	-2.83738E+00
4.45507E-02	7.32835E+11	3.49598E+14	1.41463E-03	-2.84936E+00
4.86007E-02	7.73184E+11	3.97601E+14	1.35731E-03	-2.86732E+00
5.26508E-02	7.99498E+11	4.52301E+14	1.29259E-03	-2.88854E+00
5.67009E-02	8.32828E+11	5.14869E+14	1.22286E-03	-2.91262E+00
6.07509E-02	8.82824E+11	5.95026E+14	1.13370E-03	-2.94550E+00
6.48010E-02	8.99490E+11	6.99736E+14	1.02832E-03	-2.95787E+00
6.88510E-02	9.16155E+11	8.35091E+14	9.15502E-04	-3.03834E+00
7.29011E-02	9.66151E+11	9.99471E+14	8.09928E-04	-3.09155E+00
7.69512E-02	9.99482E+11	1.18717E+15	7.19753E-04	-3.14282E+00
8.10012E-02	1.04948E+12	1.33353E+15	6.74484E-04	-3.17103E+00
8.50513E-02	1.06307E+12	1.43111E+15	6.59920E-04	-3.19051E+00
8.91014E-02	1.09947E+12	1.53364E+15	6.45124E-04	-3.19036E+00
9.31514E-02	1.09947E+12	1.64124E+15	6.30230E-04	-3.20050E+00
9.72015E-02	1.14947E+12	1.74524E+15	6.18443E-04	-3.20870E+00
1.01252E-01	1.14947E+12	1.82393E+15	6.16419E-04	-3.21012E+00
1.05302E-01	1.16614E+12	1.90808E+15	6.29136E-04	-3.20126E+00
1.09352E-01	1.19947E+12	1.99255E+15	6.73703E-04	-3.17153E+00
1.13402E-01	1.18280E+12	2.06100E+15	7.20200E-04	-3.14255E+00
1.17452E-01	1.19947E+12	2.13267E+15	7.62551E-04	-3.11773E+00
1.21502E-01	1.19947E+12	2.20740E+15	8.01040E-04	-3.09635E+00
1.25552E-01	1.19947E+12	2.27933E+15	8.37851E-04	-3.07683E+00
1.29602E-01	1.19947E+12	2.34913E+15	8.73559E-04	-3.05871E+00
1.33652E-01	1.21613E+12	2.42167E+15	9.06004E-04	-3.04287E+00
1.37702E-01	1.26513E+12	2.49394E+15	9.36665E-04	-3.02842E+00
1.41752E-01	1.26613E+12	2.56235E+15	9.67054E-04	-3.01455E+00
1.45802E-01	1.29945E+12	2.63287E+15	9.95067E-04	-3.00215E+00
1.49852E-01	1.33147E+12	2.70426E+15	1.02129E-03	-2.99095E+00
1.53902E-01	1.33191E+12	2.77529E+15	1.04629E-03	-2.98035E+00
1.57952E-01	1.37971E+12	2.84572E+15	1.07736E-03	-2.96764E+00
1.62002E-01	1.41173E+12	2.91752E+15	1.11393E-03	-2.95318E+00
1.66053E-01	1.41305E+12	2.98824E+15	1.14897E-03	-2.93959E+00
1.70103E-01	1.45997E+12	3.05905E+15	1.18245E-03	-2.92722E+00
1.74153E-01	1.47620E+12	3.13132E+15	1.21384E-03	-2.91584E+00
1.78203E-01	1.49199E+12	3.20505E+15	1.24325E-03	-2.90544E+00
1.82253E-01	1.52707E+12	3.27638E+15	1.27227E-03	-2.89552E+00
1.86303E-01	1.52707E+12	3.34974E+15	1.29927E-03	-2.88630E+00
1.90353E-01	1.55952E+12	3.42246E+15	1.32536E-03	-2.87767E+00
1.94403E-01	1.59198E+12	3.49571E+15	1.35015E-03	-2.86962E+00
1.98453E-01	1.60821E+12	3.57097E+15	1.37316E-03	-2.86228E+00
2.02503E-01	1.63527E+12	3.64653E+15	1.39510E-03	-2.85539E+00
2.06553E-01	1.66929E+12	3.72218E+15	1.41612E-03	-2.84890E+00
2.10603E-01	1.66823E+12	3.79625E+15	1.43630E-03	-2.84275E+00
2.14653E-01	1.71653E+12	3.87059E+15	1.45529E-03	-2.83705E+00
2.18703E-01	1.74854E+12	3.94682E+15	1.47287E-03	-2.83144E+00
2.22753E-01	1.77047E+12	4.02296E+15	1.48980E-03	-2.82687E+00
2.26803E-01	1.79679E+12	4.10006E+15	1.50576E-03	-2.82224E+00
2.30854E-01	1.81257E+12	4.17633E+15	1.52143E-03	-2.81775E+00
2.34904E-01	1.81915E+12	4.25277E+15	1.53647E-03	-2.81348E+00
2.38954E-01	1.85161E+12	4.33015E+15	1.55065E-03	-2.80949E+00
2.43004E-01	1.88283E+12	4.40846E+15	1.56400E-03	-2.80576E+00
2.47054E-01	1.91651E+12	4.48740E+15	1.57667E-03	-2.80226E+00
2.51104E-01	1.94107E+12	4.56792E+15	1.58837E-03	-2.79905E+00
2.55154E-01	1.95730E+12	4.64989E+15	1.59946E-03	-2.79603E+00
2.59204E-01	1.98142E+12	4.72905E+15	1.61047E-03	-2.79305E+00
2.63254E-01	2.00510E+12	4.80867E+15	1.61973E-03	-2.79083E+00
2.67304E-01	2.02133E+12	4.88792E+15	1.62579E-03	-2.78894E+00
2.71354E-01	2.04677E+12	4.96915E+15	1.63216E-03	-2.78724E+00
2.75404E-01	2.06299E+12	5.05097E+15	1.63814E-03	-2.78555E+00
2.79454E-01	2.10159E+12	5.13339E+15	1.64373E-03	-2.78417E+00
2.83504E-01	2.11167E+12	5.21498E+15	1.64941E-03	-2.78267E+00
2.87554E-01	2.13360E+12	5.29773E+15	1.65455E-03	-2.78132E+00
2.91604E-01	2.16562E+12	5.38130E+15	1.65928E-03	-2.78008E+00
2.95655E-01	2.18184E+12	5.46487E+15	1.66397E-03	-2.77888E+00
2.99705E-01	2.19763E+12	5.54917E+15	1.66810E-03	-2.77778E+00
3.03755E-01	2.21395E+12	5.63176E+15	1.67271E-03	-2.77658E+00
3.07805E-01	2.24587E+12	5.71459E+15	1.67712E-03	-2.77544E+00
3.11855E-01	2.27789E+12	5.79858E+15	1.68106E-03	-2.77442E+00
3.15905E-01	2.29017E+12	5.88323E+15	1.68247E-03	-2.77405E+00
3.19955E-01	2.29017E+12	5.96493E+15	1.68462E-03	-2.77350E+00

TABLE 4 (continued)

SHOT 4-7

371 POINTS

201

TIME(MICROSEC)	COEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
3.24005E-01	2.30990E+12	6.04924E+15	1.68593E-03	-2.77316E+00
3.28055E-01	2.32262E+12	6.13616E+15	1.68651E-03	-2.77301E+00
3.32105E-01	2.33885E+12	6.21987E+15	1.68795E-03	-2.77264E+00
3.36155E-01	2.37130E+12	6.30561E+15	1.68880E-03	-2.77242E+00
3.40205E-01	2.39016E+12	6.38918E+15	1.69020E-03	-2.77206E+00
3.44255E-01	2.42218E+12	6.47099E+15	1.69203E-03	-2.77159E+00
3.48305E-01	2.43840E+12	6.55845E+15	1.69236E-03	-2.77151E+00
3.52355E-01	2.45419E+12	6.64197E+15	1.69368E-03	-2.77117E+00
3.56405E-01	2.48489E+12	6.72654E+15	1.69470E-03	-2.77091E+00
3.60455E-01	2.48489E+12	6.81098E+15	1.69573E-03	-2.77054E+00
3.64506E-01	2.48664E+12	6.89357E+15	1.69697E-03	-2.77033E+00
3.68556E-01	2.50243E+12	6.97565E+15	1.69654E-03	-2.77044E+00
3.72606E-01	2.53445E+12	7.06079E+15	1.69587E-03	-2.77061E+00
3.76656E-01	2.55067E+12	7.14247E+15	1.69580E-03	-2.77036E+00
3.80706E-01	2.58269E+12	7.22511E+15	1.69551E-03	-2.77070E+00
3.84756E-01	2.58269E+12	7.30823E+15	1.69511E-03	-2.77090E+00
3.88805E-01	2.59848E+12	7.39134E+15	1.69472E-03	-2.77090E+00
3.92856E-01	2.61427E+12	7.47737E+15	1.69368E-03	-2.77117E+00
3.96906E-01	2.61427E+12	7.55902E+15	1.69365E-03	-2.77119E+00
4.00956E-01	2.64495E+12	7.64058E+15	1.69361E-03	-2.77119E+00
4.05006E-01	2.64495E+12	7.72319E+15	1.69339E-03	-2.77124E+00
4.09056E-01	2.67610E+12	7.80360E+15	1.69363E-03	-2.77118E+00
4.13106E-01	2.69145E+12	7.88598E+15	1.69322E-03	-2.77129E+00
4.17156E-01	2.69145E+12	7.96790E+15	1.69291E-03	-2.77137E+00
4.21206E-01	2.70680E+12	8.04926E+15	1.69143E-03	-2.77175E+00
4.25256E-01	2.72259E+12	8.13143E+15	1.69881E-03	-2.77216E+00
4.29307E-01	2.72259E+12	8.21067E+15	1.68882E-03	-2.77242E+00
4.33357E-01	2.75329E+12	8.29057E+15	1.68771E-03	-2.77270E+00
4.37407E-01	2.76688E+12	8.36812E+15	1.69711E-03	-2.77286E+00
4.41457E-01	2.78223E+12	8.44567E+15	1.68651E-03	-2.77301E+00
4.45507E-01	2.78443E+12	8.52522E+15	1.69533E-03	-2.77332E+00
4.49557E-01	2.79978E+12	8.60577E+15	1.69417E-03	-2.77361E+00
4.53607E-01	2.82784E+12	8.68516E+15	1.69346E-03	-2.77380E+00
4.57657E-01	2.81513E+12	8.76397E+15	1.68267E-03	-2.77400E+00
4.61707E-01	2.83048E+12	8.84014E+15	1.69240E-03	-2.77407E+00
4.65757E-01	2.84625E+12	8.91672E+15	1.69206E-03	-2.77416E+00
4.69807E-01	2.84625E+12	8.99361E+15	1.69106E-03	-2.77442E+00
4.73857E-01	2.86161E+12	9.07100E+15	1.67922E-03	-2.77489E+00
4.77907E-01	2.86161E+12	9.14562E+15	1.67793E-03	-2.77523E+00
4.81957E-01	2.87595E+12	9.22081E+15	1.67656E-03	-2.77558E+00
4.86007E-01	2.89231E+12	9.29408E+15	1.67555E-03	-2.77584E+00
4.90057E-01	2.89231E+12	9.36652E+15	1.67471E-03	-2.77606E+00
4.94108E-01	2.90810E+12	9.44163E+15	1.67340E-03	-2.77640E+00
4.98158E-01	2.91950E+12	9.51446E+15	1.67252E-03	-2.77663E+00
5.02208E-01	2.90810E+12	9.58730E+15	1.67165E-03	-2.77685E+00
5.06258E-01	2.93880E+12	9.66050E+15	1.67073E-03	-2.77709E+00
5.10308E-01	2.93435E+12	9.73371E+15	1.66983E-03	-2.77733E+00
5.14358E-01	2.93880E+12	9.80470E+15	1.66931E-03	-2.77746E+00
5.18408E-01	2.96555E+12	9.87352E+15	1.66917E-03	-2.77750E+00
5.22458E-01	2.95415E+12	9.94152E+15	1.66836E-03	-2.77771E+00
5.26508E-01	2.95415E+12	1.00126E+16	1.66652E-03	-2.77819E+00
5.30558E-01	2.96994E+12	1.00841E+16	1.66465E-03	-2.77868E+00
5.34608E-01	2.96994E+12	1.01522E+16	1.66336E-03	-2.77901E+00
5.38658E-01	2.98523E+12	1.02237E+16	1.66154E-03	-2.77949E+00
5.42708E-01	2.98523E+12	1.02897E+16	1.66061E-03	-2.77973E+00
5.46758E-01	2.98090E+12	1.03527E+16	1.66019E-03	-2.77984E+00
5.50808E-01	3.00064E+12	1.04188E+16	1.65928E-03	-2.78008E+00
5.54858E-01	2.99581E+12	1.04830E+16	1.65869E-03	-2.78023E+00
5.58908E-01	3.01115E+12	1.05490E+16	1.65780E-03	-2.78047E+00
5.62958E-01	3.02651E+12	1.06132E+16	1.65722E-03	-2.78062E+00
5.67008E-01	3.00064E+12	1.06777E+16	1.65660E-03	-2.78078E+00
5.71058E-01	3.02651E+12	1.07443E+16	1.65566E-03	-2.78103E+00
5.75108E-01	3.03178E+12	1.08067E+16	1.65465E-03	-2.78129E+00
5.79158E-01	3.01599E+12	1.08703E+16	1.65324E-03	-2.78166E+00
5.83208E-01	3.03178E+12	1.09340E+16	1.65185E-03	-2.78203E+00
5.87258E-01	3.03178E+12	1.09931E+16	1.65115E-03	-2.78221E+00
5.91308E-01	3.03178E+12	1.10540E+16	1.65020E-03	-2.78246E+00
5.95358E-01	3.03178E+12	1.11131E+16	1.64951E-03	-2.78265E+00
5.99408E-01	3.04713E+12	1.11699E+16	1.64919E-03	-2.78273E+00
6.03458E-01	3.04185E+12	1.12282E+16	1.64865E-03	-2.78287E+00
6.07508E-01	3.05721E+12	1.12848E+16	1.64834E-03	-2.78295E+00
6.11558E-01	3.07255E+12	1.13416E+16	1.64803E-03	-2.78303E+00
6.15608E-01	3.04713E+12	1.13972E+16	1.64789E-03	-2.78307E+00
6.19658E-01	3.04713E+12	1.14514E+16	1.64795E-03	-2.78306E+00
6.23710E-01	3.04713E+12	1.15053E+16	1.64804E-03	-2.78303E+00
6.27760E-01	3.04713E+12	1.15578E+16	1.64727E-03	-2.78324E+00
6.31810E-01	3.04713E+12	1.16104E+16	1.64641E-03	-2.78346E+00
6.35860E-01	3.06248E+12	1.16517E+16	1.64574E-03	-2.78364E+00
6.39910E-01	3.05721E+12	1.17159E+16	1.64467E-03	-2.78392E+00
6.43960E-01	3.05721E+12	1.17661E+16	1.64416E-03	-2.78406E+00

TABLE 4 (continued)

SHOT 4-7

371 POINTS

202

TIME(MICROSEC)	COEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
5.49010E-01	3.06248E+12	1.18172E+16	1.64354E-03	-2.79422E+00
5.52060E-01	3.06248E+12	1.18696E+16	1.64273E-03	-2.79443E+00
5.56110E-01	3.07255E+12	1.19222E+16	1.64191E-03	-2.79465E+00
5.60160E-01	3.05721E+12	1.19720E+16	1.64148E-03	-2.79476E+00
5.64210E-01	3.04185E+12	1.20218E+16	1.64106E-03	-2.79488E+00
5.68260E-01	3.04713E+12	1.20716E+16	1.64064E-03	-2.79499E+00
5.72310E-01	3.06248E+12	1.21171E+16	1.64081E-03	-2.79494E+00
5.76360E-01	3.07255E+12	1.21666E+16	1.64030E-03	-2.79508E+00
5.80410E-01	3.07255E+12	1.22134E+16	1.63990E-03	-2.79545E+00
5.84460E-01	3.04713E+12	1.22627E+16	1.63718E-03	-2.79590E+00
5.88510E-01	3.04185E+12	1.23093E+16	1.63584E-03	-2.79626E+00
5.92561E-01	3.04713E+12	1.23558E+16	1.63450E-03	-2.79662E+00
5.96611E-01	3.04713E+12	1.24011E+16	1.63336E-03	-2.79692E+00
7.00661E-01	3.04713E+12	1.24449E+16	1.63240E-03	-2.79717E+00
7.04711E-01	3.04713E+12	1.24903E+16	1.63125E-03	-2.79748E+00
7.08761E-01	3.04713E+12	1.25328E+16	1.63047E-03	-2.79759E+00
7.12811E-01	3.03178E+12	1.25739E+16	1.62989E-03	-2.79784E+00
7.16861E-01	3.03178E+12	1.26150E+16	1.62932E-03	-2.79799E+00
7.20911E-01	3.03178E+12	1.26558E+16	1.62878E-03	-2.79814E+00
7.24961E-01	3.01599E+12	1.26953E+16	1.62842E-03	-2.79823E+00
7.29011E-01	3.01599E+12	1.27348E+16	1.62774E-03	-2.79841E+00
7.33061E-01	3.01599E+12	1.27756E+16	1.62599E-03	-2.79888E+00
7.37111E-01	3.01599E+12	1.28152E+16	1.62439E-03	-2.79931E+00
7.41161E-01	3.01599E+12	1.28531E+16	1.62302E-03	-2.79958E+00
7.45211E-01	3.02651E+12	1.28912E+16	1.62164E-03	-2.79905E+00
7.49261E-01	3.01599E+12	1.29305E+16	1.62011E-03	-2.79946E+00
7.53311E-01	3.01599E+12	1.29680E+16	1.61881E-03	-2.79908E+00
7.57362E-01	3.01599E+12	1.30056E+16	1.61752E-03	-2.79115E+00
7.61412E-01	2.99581E+12	1.30404E+16	1.61656E-03	-2.79141E+00
7.65462E-01	2.98529E+12	1.30778E+16	1.61531E-03	-2.79174E+00
7.69512E-01	2.98529E+12	1.31125E+16	1.61439E-03	-2.79199E+00
7.73562E-01	2.99581E+12	1.31472E+16	1.61347E-03	-2.79224E+00
7.77612E-01	2.99581E+12	1.31834E+16	1.61237E-03	-2.79254E+00
7.81662E-01	2.98090E+12	1.32195E+16	1.61095E-03	-2.79292E+00
7.85712E-01	2.99581E+12	1.32502E+16	1.60971E-03	-2.79325E+00
7.89762E-01	2.96994E+12	1.32817E+16	1.60836E-03	-2.79362E+00
7.93812E-01	2.95415E+12	1.33132E+16	1.60703E-03	-2.79398E+00
7.97862E-01	2.95415E+12	1.33422E+16	1.60600E-03	-2.79425E+00
8.01912E-01	2.95415E+12	1.33737E+16	1.60467E-03	-2.79451E+00
8.05962E-01	2.93890E+12	1.34052E+16	1.60335E-03	-2.79497E+00
8.10012E-01	2.93890E+12	1.34380E+16	1.60199E-03	-2.79537E+00
8.14062E-01	2.95020E+12	1.34664E+16	1.60095E-03	-2.79562E+00
8.18112E-01	2.93890E+12	1.34941E+16	1.60011E-03	-2.79585E+00
8.22163E-01	2.93485E+12	1.35215E+16	1.59930E-03	-2.79607E+00
8.26213E-01	2.92345E+12	1.35493E+16	1.59845E-03	-2.79630E+00
8.30263E-01	2.89231E+12	1.35750E+16	1.59784E-03	-2.79647E+00
8.34313E-01	2.89231E+12	1.36005E+16	1.59692E-03	-2.79672E+00
8.38363E-01	2.89231E+12	1.36262E+16	1.59573E-03	-2.79704E+00
8.42413E-01	2.90810E+12	1.36535E+16	1.59437E-03	-2.79741E+00
8.46463E-01	2.89231E+12	1.36807E+16	1.59302E-03	-2.79778E+00
8.50513E-01	2.89231E+12	1.37078E+16	1.59168E-03	-2.79814E+00
8.54563E-01	2.86161E+12	1.37331E+16	1.59056E-03	-2.79845E+00
8.58613E-01	2.84625E+12	1.37583E+16	1.58946E-03	-2.79875E+00
8.62663E-01	2.84625E+12	1.37810E+16	1.58864E-03	-2.79897E+00
8.66713E-01	2.83048E+12	1.38037E+16	1.58784E-03	-2.79919E+00
8.70763E-01	2.86161E+12	1.38261E+16	1.58706E-03	-2.79941E+00
8.74813E-01	2.83048E+12	1.38510E+16	1.58600E-03	-2.79970E+00
8.78863E-01	2.81513E+12	1.38733E+16	1.58525E-03	-2.79990E+00
8.82913E-01	2.83048E+12	1.38929E+16	1.58440E-03	-2.80003E+00
8.86964E-01	2.81250E+12	1.39152E+16	1.58376E-03	-2.80031E+00
8.91014E-01	2.79978E+12	1.39373E+16	1.58263E-03	-2.80062E+00
8.95064E-01	2.79978E+12	1.39568E+16	1.58180E-03	-2.80085E+00
8.99114E-01	2.78443E+12	1.39788E+16	1.58069E-03	-2.80115E+00
9.03164E-01	2.76864E+12	1.40007E+16	1.57960E-03	-2.80145E+00
9.07214E-01	2.78443E+12	1.40225E+16	1.57851E-03	-2.80175E+00
9.11264E-01	2.76864E+12	1.40412E+16	1.57779E-03	-2.80195E+00
9.15314E-01	2.75323E+12	1.40622E+16	1.57681E-03	-2.80222E+00
9.19364E-01	2.75323E+12	1.40790E+16	1.57630E-03	-2.80236E+00
9.23414E-01	2.73794E+12	1.40957E+16	1.57590E-03	-2.80250E+00
9.27464E-01	2.72253E+12	1.41123E+16	1.57531E-03	-2.80263E+00
9.31514E-01	2.70690E+12	1.41307E+16	1.57462E-03	-2.80292E+00
9.35564E-01	2.72253E+12	1.41491E+16	1.57394E-03	-2.80301E+00
9.39614E-01	2.70690E+12	1.41678E+16	1.57298E-03	-2.80328E+00
9.43664E-01	2.69145E+12	1.41866E+16	1.57200E-03	-2.80355E+00
9.47714E-01	2.69058E+12	1.42029E+16	1.57129E-03	-2.80374E+00
9.51765E-01	2.67699E+12	1.42187E+16	1.57063E-03	-2.80393E+00
9.55815E-01	2.67523E+12	1.42344E+16	1.56999E-03	-2.80410E+00
9.59865E-01	2.64495E+12	1.42482E+16	1.56956E-03	-2.80422E+00
9.63915E-01	2.64496E+12	1.42619E+16	1.56914E-03	-2.80434E+00
9.67965E-01	2.64496E+12	1.42755E+16	1.56873E-03	-2.80445E+00

TABLE 4 (continued)

SHOT 4-7

371 POINTS

203

TIME(MICROSEC)	COEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
9.72015E-01	2.52961E+12	1.42891E+16	1.56832E-03	-2.90457E+00
9.76065E-01	2.61427E+12	1.43048E+16	1.56769E-03	-2.90474E+00
9.80115E-01	2.51427E+12	1.43200E+16	1.56711E-03	-2.90490E+00
9.84165E-01	2.59848E+12	1.43351E+16	1.56654E-03	-2.90506E+00
9.88215E-01	2.58269E+12	1.43484E+16	1.56616E-03	-2.90516E+00
9.92265E-01	2.58263E+12	1.43594E+16	1.56587E-03	-2.90524E+00
9.96315E-01	2.56645E+12	1.43726E+16	1.56534E-03	-2.90539E+00
1.00037E+00	2.56645E+12	1.43857E+16	1.56481E-03	-2.90554E+00
1.00442E+00	2.53357E+12	1.43987E+16	1.56430E-03	-2.90568E+00
1.00847E+00	2.53445E+12	1.44112E+16	1.56384E-03	-2.90581E+00
1.01252E+00	2.51734E+12	1.44216E+16	1.56362E-03	-2.90587E+00
1.01657E+00	2.50243E+12	1.44345E+16	1.56313E-03	-2.90600E+00
1.02062E+00	2.50243E+12	1.44448E+16	1.56291E-03	-2.90607E+00
1.02467E+00	2.48489E+12	1.44575E+16	1.56243E-03	-2.90620E+00
1.02872E+00	2.47042E+12	1.44702E+16	1.56197E-03	-2.90633E+00
1.03277E+00	2.45413E+12	1.44806E+16	1.56174E-03	-2.90639E+00
1.03682E+00	2.45413E+12	1.44911E+16	1.56150E-03	-2.90646E+00
1.04087E+00	2.43840E+12	1.45013E+16	1.56128E-03	-2.90652E+00
1.04492E+00	2.41998E+12	1.45116E+16	1.56093E-03	-2.90662E+00
1.04897E+00	2.41998E+12	1.45198E+16	1.56081E-03	-2.90665E+00
1.05302E+00	2.40539E+12	1.45280E+16	1.56071E-03	-2.90668E+00
1.05707E+00	2.38753E+12	1.45361E+16	1.56060E-03	-2.90671E+00
1.06112E+00	2.37437E+12	1.45422E+16	1.56071E-03	-2.90668E+00
1.06517E+00	2.35815E+12	1.45482E+16	1.56083E-03	-2.90664E+00
1.06922E+00	2.35508E+12	1.45541E+16	1.56096E-03	-2.90661E+00
1.07327E+00	2.35508E+12	1.45580E+16	1.56130E-03	-2.90651E+00
1.07732E+00	2.32613E+12	1.45638E+16	1.56144E-03	-2.90647E+00
1.08137E+00	2.32262E+12	1.45694E+16	1.56160E-03	-2.90643E+00
1.08542E+00	2.30640E+12	1.45751E+16	1.56175E-03	-2.90639E+00
1.08947E+00	2.30990E+12	1.45809E+16	1.56190E-03	-2.90635E+00
1.09352E+00	2.30640E+12	1.45866E+16	1.56202E-03	-2.90631E+00
1.09757E+00	2.27394E+12	1.45922E+16	1.56209E-03	-2.90629E+00
1.10162E+00	2.27394E+12	1.45958E+16	1.56236E-03	-2.90622E+00
1.10567E+00	2.24587E+12	1.45995E+16	1.56264E-03	-2.90614E+00
1.10972E+00	2.24143E+12	1.46013E+16	1.56311E-03	-2.90601E+00
1.11377E+00	2.24143E+12	1.46049E+16	1.56339E-03	-2.90593E+00
1.11782E+00	2.19763E+12	1.46086E+16	1.56367E-03	-2.90585E+00
1.12187E+00	2.17658E+12	1.46103E+16	1.56414E-03	-2.90572E+00
1.12592E+00	2.16562E+12	1.46139E+16	1.56443E-03	-2.90564E+00
1.12997E+00	2.16035E+12	1.46158E+16	1.56490E-03	-2.90551E+00
1.13402E+00	2.13360E+12	1.46175E+16	1.56538E-03	-2.90538E+00
1.13807E+00	2.11739E+12	1.46192E+16	1.56586E-03	-2.90525E+00
1.14212E+00	2.10153E+12	1.46209E+16	1.56634E-03	-2.90511E+00
1.14617E+00	2.11167E+12	1.46226E+16	1.56679E-03	-2.90499E+00
1.15022E+00	2.07922E+12	1.46243E+16	1.56721E-03	-2.90487E+00
1.15427E+00	2.06293E+12	1.46260E+16	1.56763E-03	-2.90476E+00
1.15832E+00	2.06299E+12	1.46276E+16	1.56805E-03	-2.90464E+00
1.16237E+00	2.03755E+12	1.46293E+16	1.56847E-03	-2.90452E+00
1.16642E+00	2.01387E+12	1.46293E+16	1.56907E-03	-2.90436E+00
1.17047E+00	1.99765E+12	1.46293E+16	1.56967E-03	-2.90419E+00
1.17452E+00	1.98932E+12	1.46293E+16	1.57027E-03	-2.90403E+00
1.17857E+00	1.98142E+12	1.46293E+16	1.57086E-03	-2.90386E+00
1.18262E+00	1.98142E+12	1.46277E+16	1.57163E-03	-2.90365E+00
1.18667E+00	1.95730E+12	1.46277E+16	1.57223E-03	-2.90349E+00
1.19072E+00	1.93274E+12	1.46261E+16	1.57300E-03	-2.90327E+00
1.19477E+00	1.91651E+12	1.46261E+16	1.57360E-03	-2.90311E+00
1.19882E+00	1.90905E+12	1.46245E+16	1.57434E-03	-2.90290E+00
1.20287E+00	1.89405E+12	1.46230E+16	1.57506E-03	-2.90270E+00
1.20692E+00	1.88405E+12	1.46215E+16	1.57578E-03	-2.90250E+00
1.21097E+00	1.87704E+12	1.46184E+16	1.57666E-03	-2.90226E+00
1.21502E+00	1.85161E+12	1.46154E+16	1.57754E-03	-2.90202E+00
1.21907E+00	1.84503E+12	1.46124E+16	1.57843E-03	-2.90177E+00
1.22312E+00	1.81915E+12	1.46094E+16	1.57930E-03	-2.90154E+00
1.22717E+00	1.81257E+12	1.46080E+16	1.58002E-03	-2.90134E+00
1.23122E+00	1.78670E+12	1.46065E+16	1.58073E-03	-2.90114E+00
1.23527E+00	1.77047E+12	1.46037E+16	1.58160E-03	-2.90090E+00
1.23932E+00	1.77047E+12	1.46008E+16	1.58247E-03	-2.90066E+00
1.24337E+00	1.75425E+12	1.45980E+16	1.58332E-03	-2.90043E+00
1.24742E+00	1.73802E+12	1.45937E+16	1.58435E-03	-2.90019E+00
1.25147E+00	1.72179E+12	1.45895E+16	1.58534E-03	-2.79988E+00
1.25552E+00	1.72179E+12	1.45868E+16	1.58617E-03	-2.79955E+00
1.25957E+00	1.70557E+12	1.45827E+16	1.58716E-03	-2.79938E+00
1.26362E+00	1.66823E+12	1.45786E+16	1.58814E-03	-2.79911E+00
1.26767E+00	1.58451E+12	1.45746E+16	1.58911E-03	-2.79885E+00
1.27172E+00	1.65683E+12	1.45706E+16	1.59008E-03	-2.79858E+00
1.27577E+00	1.64065E+12	1.45669E+16	1.59103E-03	-2.79832E+00
1.27982E+00	1.64065E+12	1.45617E+16	1.59214E-03	-2.79802E+00
1.28387E+00	1.52443E+12	1.45566E+16	1.59323E-03	-2.79772E+00
1.28792E+00	1.59199E+12	1.45516E+16	1.59432E-03	-2.79742E+00
1.29197E+00	1.57575E+12	1.45479E+16	1.59526E-03	-2.79717E+00

TABLE 4 (continued)

SHOT 4-7

371 POINTS

204

TIME(MICROSEC)	COEN (A4P/M2)	EOEN (ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
1.29602E+00	1.57575E+12	1.45430E+16	1.59634E-03	-2.79687E+00
1.30007E+00	1.57575E+12	1.45381E+16	1.59742E-03	-2.79658E+00
1.30412E+00	1.52707E+12	1.45332E+16	1.59848E-03	-2.79629E+00
1.30817E+00	1.52707E+12	1.45271E+16	1.59968E-03	-2.79597E+00
1.31222E+00	1.52707E+12	1.45224E+16	1.60073E-03	-2.79568E+00
1.31627E+00	1.49462E+12	1.45164E+16	1.60191E-03	-2.79536E+00
1.32032E+00	1.49462E+12	1.45118E+16	1.60295E-03	-2.79508E+00
1.32437E+00	1.49462E+12	1.45059E+16	1.60413E-03	-2.79476E+00
1.32842E+00	1.45997E+12	1.45002E+16	1.60529E-03	-2.79445E+00
1.33247E+00	1.46173E+12	1.44933E+16	1.60658E-03	-2.79410E+00
1.33652E+00	1.442927E+12	1.44866E+16	1.60786E-03	-2.79375E+00
1.34057E+00	1.41305E+12	1.44800E+16	1.60911E-03	-2.79341E+00
1.34462E+00	1.39813E+12	1.44735E+16	1.61037E-03	-2.79307E+00
1.34867E+00	1.38059E+12	1.44670E+16	1.61162E-03	-2.79274E+00
1.35272E+00	1.38059E+12	1.44618E+16	1.61272E-03	-2.79244E+00
1.35677E+00	1.36436E+12	1.44555E+16	1.61398E-03	-2.79210E+00
1.36082E+00	1.34814E+12	1.44491E+16	1.61523E-03	-2.79177E+00
1.36487E+00	1.34814E+12	1.44439E+16	1.61635E-03	-2.79146E+00
1.36892E+00	1.34770E+12	1.44379E+16	1.61758E-03	-2.79113E+00
1.37297E+00	1.33191E+12	1.44319E+16	1.61878E-03	-2.79081E+00
1.37702E+00	1.31563E+12	1.44260E+16	1.61999E-03	-2.79049E+00
1.38107E+00	1.29945E+12	1.44200E+16	1.62121E-03	-2.79016E+00
1.38512E+00	1.26657E+12	1.44150E+16	1.62232E-03	-2.78986E+00
1.38917E+00	1.26657E+12	1.44095E+16	1.62348E-03	-2.78955E+00
1.39322E+00	1.24945E+12	1.44039E+16	1.62466E-03	-2.78924E+00
1.39727E+00	1.23290E+12	1.43972E+16	1.62596E-03	-2.78894E+00
1.40132E+00	1.23290E+12	1.43909E+16	1.62722E-03	-2.78855E+00
1.40537E+00	1.20079E+12	1.43854E+16	1.62839E-03	-2.78824E+00
1.40942E+00	1.20079E+12	1.43792E+16	1.62965E-03	-2.78791E+00
1.41347E+00	1.18455E+12	1.43740E+16	1.63081E-03	-2.78760E+00
1.41752E+00	1.16789E+12	1.43677E+16	1.63208E-03	-2.78726E+00
1.42157E+00	1.16614E+12	1.43617E+16	1.63332E-03	-2.78693E+00
1.42562E+00	1.13500E+12	1.43566E+16	1.63446E-03	-2.78663E+00
1.42967E+00	1.13250E+12	1.43505E+16	1.63573E-03	-2.78629E+00
1.43372E+00	1.11614E+12	1.43464E+16	1.63676E-03	-2.78601E+00
1.43777E+00	1.08544E+12	1.43423E+16	1.63778E-03	-2.78574E+00
1.44182E+00	1.09947E+12	1.43375E+16	1.63890E-03	-2.78545E+00
1.44587E+00	1.08544E+12	1.43327E+16	1.64000E-03	-2.78516E+00
1.44992E+00	1.06921E+12	1.43278E+16	1.64113E-03	-2.78486E+00
1.45397E+00	1.06921E+12	1.43231E+16	1.64224E-03	-2.78456E+00
1.45802E+00	1.03632E+12	1.43183E+16	1.64334E-03	-2.78427E+00
1.46207E+00	1.03291E+12	1.43144E+16	1.64433E-03	-2.78401E+00
1.46612E+00	1.01615E+12	1.43106E+16	1.64532E-03	-2.78375E+00
1.47017E+00	9.99482E+11	1.43062E+16	1.64638E-03	-2.78347E+00
1.47422E+00	1.00343E+12	1.43024E+16	1.64736E-03	-2.78321E+00
1.47827E+00	9.70537E+11	1.42981E+16	1.64840E-03	-2.78294E+00
1.48232E+00	9.53871E+11	1.42938E+16	1.64945E-03	-2.78266E+00
1.48637E+00	9.53871E+11	1.42904E+16	1.65039E-03	-2.78241E+00
1.49042E+00	9.49495E+11	1.42862E+16	1.65143E-03	-2.78214E+00
1.49447E+00	9.32820E+11	1.42827E+16	1.65237E-03	-2.78189E+00
1.49852E+00	9.37645E+11	1.42794E+16	1.65331E-03	-2.78165E+00

EOF

TABLE 4 (continued)

SHOT 4-9

371 POINTS

205

TIME (MICROSEC)	CDEN (AMP/M2)	EDEN (ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
0.	3.92964E+11	9.92347E+13	0.	-3.90793E+00
4.05006E-03	4.32960E+11	1.17987E+14	1.23616E-04	-3.90793E+00
9.10012E-03	4.49525E+11	1.39552E+14	2.10539E-04	-3.67657E+00
1.21502E-02	5.16187E+11	1.60792E+14	2.72141E-04	-3.56521E+00
1.62002E-02	5.49519E+11	1.84422E+14	3.16344E-04	-3.49984E+00
2.02503E-02	5.82848E+11	2.14336E+14	3.43240E-04	-3.46821E+00
2.43004E-02	6.16173E+11	2.49476E+14	3.50779E-04	-3.45497E+00
2.83504E-02	6.66175E+11	2.91224E+14	3.50576E-04	-3.45522E+00
3.24005E-02	7.08715E+11	3.37799E+14	3.45417E-04	-3.46166E+00
3.64506E-02	7.82832E+11	3.95452E+14	3.31941E-04	-3.47894E+00
4.05006E-02	9.16163E+11	4.66404E+14	3.12716E-04	-3.50495E+00
4.45507E-02	8.32828E+11	5.61947E+14	2.95553E-04	-3.54431E+00
4.86007E-02	9.55195E+11	6.78191E+14	2.58072E-04	-3.58926E+00
5.26508E-02	9.16155E+11	8.21708E+14	2.30748E-04	-3.63686E+00
5.67009E-02	9.49495E+11	9.87855E+14	2.06703E-04	-3.68465E+00
6.07509E-02	1.01615E+12	1.18323E+15	1.84898E-04	-3.73307E+00
6.48010E-02	1.03291E+12	1.33461E+15	1.74855E-04	-3.75732E+00
6.88510E-02	1.06614E+12	1.44414E+15	1.71692E-04	-3.76525E+00
7.29011E-02	1.11514E+12	1.56137E+15	1.68143E-04	-3.77432E+00
7.69512E-02	1.13290E+12	1.67751E+15	1.65196E-04	-3.78200E+00
8.10012E-02	1.18290E+12	1.75729E+15	1.65996E-04	-3.77990E+00
8.50513E-02	1.21525E+12	1.84167E+15	1.66310E-04	-3.77908E+00
8.91014E-02	1.21613E+12	1.93524E+15	1.65720E-04	-3.78063E+00
9.31514E-02	1.21613E+12	2.02781E+15	1.65429E-04	-3.78139E+00
9.72015E-02	1.24946E+12	2.10717E+15	1.66120E-04	-3.77958E+00
1.01252E-01	1.23290E+12	2.19023E+15	1.66480E-04	-3.77864E+00
1.05302E-01	1.23290E+12	2.27533E+15	1.75924E-04	-3.75467E+00
1.09352E-01	1.26613E+12	2.35272E+15	2.04204E-04	-3.68934E+00
1.13402E-01	1.26613E+12	2.43437E+15	2.30277E-04	-3.63775E+00
1.17452E-01	1.29946E+12	2.51933E+15	2.54426E-04	-3.59444E+00
1.21502E-01	1.33147E+12	2.59788E+15	2.77497E-04	-3.55676E+00
1.25552E-01	1.36393E+12	2.67654E+15	2.99277E-04	-3.52393E+00
1.29602E-01	1.38059E+12	2.75953E+15	3.19321E-04	-3.49577E+00
1.33652E-01	1.41305E+12	2.84367E+15	3.38057E-04	-3.47101E+00
1.37702E-01	1.44374E+12	2.92436E+15	3.56137E-04	-3.44838E+00
1.41752E-01	1.47839E+12	3.00752E+15	3.72938E-04	-3.42936E+00
1.45802E-01	1.49462E+12	3.09202E+15	3.88667E-04	-3.41042E+00
1.49852E-01	1.54023E+12	3.17541E+15	4.03701E-04	-3.39394E+00
1.53902E-01	1.55952E+12	3.26066E+15	4.17726E-04	-3.37911E+00
1.57952E-01	1.60425E+12	3.34734E+15	4.42397E-04	-3.35420E+00
1.62002E-01	1.62049E+12	3.43308E+15	4.78015E-04	-3.32056E+00
1.66053E-01	1.65689E+12	3.51647E+15	5.12247E-04	-3.29052E+00
1.70103E-01	1.68451E+12	3.60487E+15	5.44135E-04	-3.26429E+00
1.74153E-01	1.71653E+12	3.69408E+15	5.74373E-04	-3.24041E+00
1.78203E-01	1.73275E+12	3.78319E+15	6.03199E-04	-3.21954E+00
1.82253E-01	1.77047E+12	3.87217E+15	6.30722E-04	-3.20016E+00
1.86303E-01	1.80293E+12	3.96504E+15	6.56360E-04	-3.18261E+00
1.90353E-01	1.81915E+12	4.05569E+15	6.81200E-04	-3.16673E+00
1.94403E-01	1.86783E+12	4.14527E+15	7.05135E-04	-3.15173E+00
1.98453E-01	1.88405E+12	4.23647E+15	7.27779E-04	-3.13800E+00
2.02503E-01	1.90905E+12	4.32970E+15	7.49118E-04	-3.12545E+00
2.06553E-01	1.95730E+12	4.42234E+15	7.69659E-04	-3.11370E+00
2.10603E-01	1.97309E+12	4.51586E+15	7.93276E-04	-3.10085E+00
2.14653E-01	1.98932E+12	4.60886E+15	8.18245E-04	-3.08712E+00
2.18713E-01	2.05335E+12	4.70314E+15	8.41996E-04	-3.07469E+00
2.22753E-01	2.06299E+12	4.79886E+15	8.64556E-04	-3.06321E+00
2.26803E-01	2.10159E+12	4.89521E+15	8.85937E-04	-3.05260E+00
2.30854E-01	2.13360E+12	4.99269E+15	9.06642E-04	-3.04256E+00
2.34904E-01	2.14413E+12	5.08923E+15	9.26552E-04	-3.03313E+00
2.38954E-01	2.17659E+12	5.18713E+15	9.45471E-04	-3.02435E+00
2.43004E-01	2.21385E+12	5.28416E+15	9.63849E-04	-3.01599E+00
2.47054E-01	2.24149E+12	5.38268E+15	9.81293E-04	-3.00820E+00
2.51104E-01	2.26210E+12	5.48264E+15	9.97847E-04	-3.00094E+00
2.55154E-01	2.29412E+12	5.58316E+15	1.01371E-03	-2.99409E+00
2.59204E-01	2.32262E+12	5.67945E+15	1.02970E-03	-2.98729E+00
2.63254E-01	2.35915E+12	5.78088E+15	1.04343E-03	-2.98154E+00
2.67304E-01	2.37437E+12	5.88251E+15	1.05635E-03	-2.97619E+00
2.71354E-01	2.38753E+12	5.98314E+15	1.06901E-03	-2.97102E+00
2.75404E-01	2.41998E+12	6.08275E+15	1.08143E-03	-2.96600E+00
2.79454E-01	2.45419E+12	6.18594E+15	1.09282E-03	-2.96145E+00
2.83504E-01	2.46865E+12	6.28742E+15	1.10414E-03	-2.95698E+00
2.87554E-01	2.48664E+12	6.38772E+15	1.11530E-03	-2.95261E+00
2.91604E-01	2.51965E+12	6.49165E+15	1.12549E-03	-2.94866E+00
2.95655E-01	2.55067E+12	6.59432E+15	1.13557E-03	-2.94479E+00
2.99705E-01	2.58269E+12	6.69758E+15	1.14524E-03	-2.94110E+00
3.03755E-01	2.59949E+12	6.80203E+15	1.15442E-03	-2.93764E+00
3.07805E-01	2.52961E+12	6.90645E+15	1.16333E-03	-2.93430E+00
3.11855E-01	2.64495E+12	7.00996E+15	1.17229E-03	-2.93096E+00
3.15905E-01	2.67610E+12	7.11012E+15	1.17986E-03	-2.92817E+00
3.19955E-01	2.69145E+12	7.21228E+15	1.18700E-03	-2.92555E+00

TABLE 4 (continued)

SHOT 4-8

371 POINTS

206

TIME(MICROSEC)	COEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
3.24005E-01	2.72259E+12	7.31557E+15	1.19376E-03	-2.92308E+00
3.29055E-01	2.73794E+12	7.41997E+15	1.20031E-03	-2.92071E+00
3.32105E-01	2.75329E+12	7.52073E+15	1.20695E-03	-2.91931E+00
3.36155E-01	2.78443E+12	7.62317E+15	1.21330E-03	-2.91603E+00
3.40205E-01	2.79978E+12	7.72617E+15	1.21940E-03	-2.91385E+00
3.44255E-01	2.83049E+12	7.82705E+15	1.22566E-03	-2.91163E+00
3.48305E-01	2.84625E+12	7.93381E+15	1.23086E-03	-2.90979E+00
3.52355E-01	2.86161E+12	8.03332E+15	1.23703E-03	-2.90752E+00
3.56405E-01	2.89231E+12	8.13337E+15	1.24296E-03	-2.90554E+00
3.60455E-01	2.90810E+12	8.23575E+15	1.24925E-03	-2.90370E+00
3.64506E-01	2.92345E+12	8.33758E+15	1.25367E-03	-2.90192E+00
3.68556E-01	2.93880E+12	8.43519E+15	1.25846E-03	-2.90016E+00
3.72606E-01	2.95415E+12	8.53647E+15	1.26288E-03	-2.89864E+00
3.76656E-01	2.96994E+12	8.63757E+15	1.26709E-03	-2.89719E+00
3.80706E-01	2.99581E+12	8.73647E+15	1.27151E-03	-2.89568E+00
3.84756E-01	3.00064E+12	8.83878E+15	1.27535E-03	-2.89437E+00
3.88806E-01	3.01599E+12	8.93808E+15	1.27953E-03	-2.89295E+00
3.92856E-01	3.04713E+12	9.04074E+15	1.28314E-03	-2.89173E+00
3.96906E-01	3.06248E+12	9.13537E+15	1.28780E-03	-2.89015E+00
4.00956E-01	3.08747E+12	9.23329E+15	1.29190E-03	-2.88977E+00
4.05006E-01	3.10895E+12	9.32878E+15	1.29626E-03	-2.88731E+00
4.09056E-01	3.12431E+12	9.42475E+15	1.30046E-03	-2.88590E+00
4.13106E-01	3.12431E+12	9.51847E+15	1.30489E-03	-2.88443E+00
4.17156E-01	3.14010E+12	9.61264E+15	1.30983E-03	-2.88312E+00
4.21206E-01	3.15545E+12	9.70657E+15	1.31191E-03	-2.88210E+00
4.25256E-01	3.17080E+12	9.80096E+15	1.31487E-03	-2.88112E+00
4.29307E-01	3.18615E+12	9.89304E+15	1.31808E-03	-2.88006E+00
4.33357E-01	3.20194E+12	9.98560E+15	1.32117E-03	-2.87904E+00
4.37407E-01	3.22518E+12	1.00754E+16	1.32457E-03	-2.87793E+00
4.41457E-01	3.24053E+12	1.01651E+16	1.32792E-03	-2.87693E+00
4.45507E-01	3.23264E+12	1.02583E+16	1.33076E-03	-2.87590E+00
4.49557E-01	3.24799E+12	1.03515E+16	1.33355E-03	-2.87499E+00
4.53607E-01	3.27123E+12	1.04421E+16	1.33661E-03	-2.87400E+00
4.57657E-01	3.27912E+12	1.05301E+16	1.33996E-03	-2.87291E+00
4.61707E-01	3.29447E+12	1.06184E+16	1.34320E-03	-2.87196E+00
4.65757E-01	3.29447E+12	1.07072E+16	1.34634E-03	-2.87095E+00
4.69807E-01	3.30982E+12	1.07960E+16	1.34996E-03	-2.87000E+00
4.73857E-01	3.30982E+12	1.08857E+16	1.35084E-03	-2.86904E+00
4.77907E-01	3.32561E+12	1.09722E+16	1.35308E-03	-2.86868E+00
4.81957E-01	3.34096E+12	1.10598E+16	1.35515E-03	-2.86801E+00
4.86007E-01	3.35631E+12	1.11476E+16	1.35716E-03	-2.86737E+00
4.90057E-01	3.37166E+12	1.12351E+16	1.35919E-03	-2.86672E+00
4.94108E-01	3.37166E+12	1.13224E+16	1.36120E-03	-2.86608E+00
4.98158E-01	3.40550E+12	1.14069E+16	1.36351E-03	-2.86534E+00
5.02208E-01	3.40290E+12	1.14894E+16	1.36616E-03	-2.86450E+00
5.06258E-01	3.40290E+12	1.15730E+16	1.36839E-03	-2.86379E+00
5.10308E-01	3.42395E+12	1.16548E+16	1.37092E-03	-2.86299E+00
5.14358E-01	3.43350E+12	1.17346E+16	1.37365E-03	-2.86212E+00
5.18408E-01	3.43920E+12	1.18142E+16	1.37637E-03	-2.86126E+00
5.22458E-01	3.43350E+12	1.18935E+16	1.37947E-03	-2.86060E+00
5.26508E-01	3.44929E+12	1.19726E+16	1.38016E-03	-2.86007E+00
5.30558E-01	3.44929E+12	1.20521E+16	1.38179E-03	-2.85956E+00
5.34608E-01	3.44929E+12	1.21293E+16	1.38377E-03	-2.85994E+00
5.38658E-01	3.46464E+12	1.22080E+16	1.38533E-03	-2.85945E+00
5.42708E-01	3.47999E+12	1.22846E+16	1.38722E-03	-2.85785E+00
5.46758E-01	3.46990E+12	1.23580E+16	1.38945E-03	-2.85716E+00
5.50808E-01	3.49534E+12	1.24348E+16	1.39127E-03	-2.85659E+00
5.54858E-01	3.48481E+12	1.25095E+16	1.39330E-03	-2.85596E+00
5.58908E-01	3.50015E+12	1.25931E+16	1.39542E-03	-2.85530E+00
5.62958E-01	3.50016E+12	1.26550E+16	1.39772E-03	-2.85458E+00
5.67008E-01	3.51112E+12	1.27269E+16	1.39999E-03	-2.85388E+00
5.71058E-01	3.51551E+12	1.27974E+16	1.40238E-03	-2.85313E+00
5.75108E-01	3.51112E+12	1.28662E+16	1.40411E-03	-2.85260E+00
5.79158E-01	3.52647E+12	1.29371E+16	1.40536E-03	-2.85221E+00
5.83208E-01	3.52647E+12	1.30082E+16	1.40657E-03	-2.85194E+00
5.87258E-01	3.52647E+12	1.30741E+16	1.40833E-03	-2.85130E+00
5.91308E-01	3.54182E+12	1.31416E+16	1.40989E-03	-2.85081E+00
5.95358E-01	3.54182E+12	1.32072E+16	1.41164E-03	-2.85028E+00
5.99408E-01	3.54182E+12	1.32700E+16	1.41368E-03	-2.84965E+00
6.03458E-01	3.53085E+12	1.33375E+16	1.41520E-03	-2.84918E+00
6.07508E-01	3.54621E+12	1.33998E+16	1.41725E-03	-2.84855E+00
6.11558E-01	3.54621E+12	1.34589E+16	1.41961E-03	-2.84793E+00
6.15608E-01	3.55717E+12	1.35171E+16	1.42206E-03	-2.84708E+00
6.19658E-01	3.55717E+12	1.35795E+16	1.42400E-03	-2.84648E+00
6.23710E-01	3.54182E+12	1.36421E+16	1.42598E-03	-2.84589E+00
6.27760E-01	3.54182E+12	1.37033E+16	1.42706E-03	-2.84556E+00
6.31810E-01	3.55717E+12	1.37610E+16	1.42841E-03	-2.84515E+00
6.35860E-01	3.54182E+12	1.38206E+16	1.42955E-03	-2.84480E+00
6.39910E-01	3.53085E+12	1.38802E+16	1.43068E-03	-2.84446E+00
6.43960E-01	3.53085E+12	1.39349E+16	1.43230E-03	-2.84397E+00

TABLE 4 (continued)

SHOT 4-9

371 POINTS

207

TIME(MICROSEC)	COEN (AMP/M2)	EOEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
5.49010E-01	3.55717E+12	1.39912E+16	1.43375E-03	-2.84353E+00
5.52060E-01	3.54132E+12	1.40459E+16	1.43535E-03	-2.84304E+00
5.56110E-01	3.54621E+12	1.41036E+16	1.43663E-03	-2.84266E+00
5.59160E-01	3.54621E+12	1.41593E+16	1.43921E-03	-2.84218E+00
5.64210E-01	3.53095E+12	1.42130E+16	1.43977E-03	-2.84171E+00
5.69260E-01	3.55717E+12	1.42642E+16	1.44168E-03	-2.84113E+00
5.72310E-01	3.55717E+12	1.43171E+16	1.44340E-03	-2.84061E+00
5.76360E-01	3.54621E+12	1.43684E+16	1.44519E-03	-2.84008E+00
5.80410E-01	3.54621E+12	1.44194E+16	1.44613E-03	-2.83979E+00
5.84460E-01	3.54182E+12	1.44672E+16	1.44738E-03	-2.83942E+00
5.89510E-01	3.53085E+12	1.45182E+16	1.44931E-03	-2.83914E+00
5.92561E-01	3.54182E+12	1.45660E+16	1.44955E-03	-2.83977E+00
5.96611E-01	3.54182E+12	1.46156E+16	1.45060E-03	-2.83945E+00
7.00661E-01	3.52547E+12	1.46632E+16	1.45185E-03	-2.83908E+00
7.04711E-01	3.52647E+12	1.47123E+16	1.45293E-03	-2.83776E+00
7.08761E-01	3.52647E+12	1.47615E+16	1.45400E-03	-2.83744E+00
7.12811E-01	3.52647E+12	1.48059E+16	1.45554E-03	-2.83699E+00
7.16861E-01	3.51112E+12	1.48533E+16	1.45677E-03	-2.83661E+00
7.20911E-01	3.51112E+12	1.48975E+16	1.45830E-03	-2.83615E+00
7.24961E-01	3.51112E+12	1.49404E+16	1.45996E-03	-2.83566E+00
7.29011E-01	3.51112E+12	1.49932E+16	1.46139E-03	-2.83523E+00
7.33061E-01	3.51112E+12	1.50272E+16	1.46200E-03	-2.83505E+00
7.37111E-01	3.49534E+12	1.50701E+16	1.46273E-03	-2.83494E+00
7.41161E-01	3.47999E+12	1.51108E+16	1.46365E-03	-2.83456E+00
7.45211E-01	3.49481E+12	1.51514E+16	1.46458E-03	-2.83429E+00
7.49261E-01	3.49534E+12	1.51939E+16	1.46533E-03	-2.83406E+00
7.53311E-01	3.47999E+12	1.52345E+16	1.46626E-03	-2.83379E+00
7.57362E-01	3.47999E+12	1.52717E+16	1.46751E-03	-2.83342E+00
7.61412E-01	3.46990E+12	1.53088E+16	1.46876E-03	-2.83305E+00
7.65462E-01	3.46464E+12	1.53459E+16	1.47001E-03	-2.83268E+00
7.69512E-01	3.46464E+12	1.53829E+16	1.47125E-03	-2.83231E+00
7.73562E-01	3.46990E+12	1.54168E+16	1.47279E-03	-2.83196E+00
7.77612E-01	3.45455E+12	1.54525E+16	1.47415E-03	-2.83146E+00
7.81662E-01	3.43920E+12	1.54882E+16	1.47512E-03	-2.83117E+00
7.85712E-01	3.43920E+12	1.55211E+16	1.47581E-03	-2.83097E+00
7.89762E-01	3.43350E+12	1.55546E+16	1.47644E-03	-2.83078E+00
7.93812E-01	3.41815E+12	1.55981E+16	1.47707E-03	-2.83060E+00
7.97862E-01	3.40290E+12	1.56184E+16	1.47799E-03	-2.83033E+00
8.01912E-01	3.40280E+12	1.56498E+16	1.47892E-03	-2.83006E+00
8.05962E-01	3.40290E+12	1.56821E+16	1.47955E-03	-2.82987E+00
8.10012E-01	3.38745E+12	1.57145E+16	1.48027E-03	-2.82956E+00
8.14062E-01	3.39315E+12	1.57446E+16	1.48120E-03	-2.82939E+00
8.18112E-01	3.37165E+12	1.57736E+16	1.48223E-03	-2.82908E+00
8.22163E-01	3.37780E+12	1.58026E+16	1.48327E-03	-2.82878E+00
8.26213E-01	3.38745E+12	1.58286E+16	1.48457E-03	-2.82840E+00
8.30263E-01	3.35631E+12	1.58594E+16	1.48552E-03	-2.82812E+00
8.34313E-01	3.35631E+12	1.58950E+16	1.48631E-03	-2.82799E+00
8.38363E-01	3.34095E+12	1.59116E+16	1.48678E-03	-2.82775E+00
8.42413E-01	3.34095E+12	1.59374E+16	1.48731E-03	-2.82760E+00
8.46463E-01	3.34095E+12	1.59659E+16	1.48759E-03	-2.82752E+00
8.50513E-01	3.34095E+12	1.59945E+16	1.48787E-03	-2.82744E+00
8.54563E-01	3.30982E+12	1.60179E+16	1.48861E-03	-2.82722E+00
8.58613E-01	3.29447E+12	1.60412E+16	1.48938E-03	-2.82699E+00
8.62663E-01	3.27912E+12	1.60643E+16	1.49015E-03	-2.82677E+00
8.66713E-01	3.27912E+12	1.60874E+16	1.49092E-03	-2.82655E+00
8.70763E-01	3.27912E+12	1.61076E+16	1.49197E-03	-2.82624E+00
8.74813E-01	3.26377E+12	1.61333E+16	1.49249E-03	-2.82609E+00
8.78863E-01	3.24799E+12	1.61561E+16	1.49329E-03	-2.82586E+00
8.82913E-01	3.24799E+12	1.61761E+16	1.49434E-03	-2.82555E+00
8.86964E-01	3.24053E+12	1.61959E+16	1.49492E-03	-2.82538E+00
8.91014E-01	3.23264E+12	1.62128E+16	1.49559E-03	-2.82519E+00
8.95064E-01	3.23264E+12	1.62297E+16	1.49627E-03	-2.82499E+00
8.99114E-01	3.20194E+12	1.62492E+16	1.49669E-03	-2.82487E+00
9.03164E-01	3.18615E+12	1.62717E+16	1.49686E-03	-2.82482E+00
9.07214E-01	3.18615E+12	1.62912E+16	1.49729E-03	-2.82470E+00
9.11264E-01	3.17380E+12	1.63102E+16	1.49775E-03	-2.82456E+00
9.15314E-01	3.17080E+12	1.63290E+16	1.49824E-03	-2.82442E+00
9.19364E-01	3.15545E+12	1.63455E+16	1.49894E-03	-2.82422E+00
9.23414E-01	3.14013E+12	1.63593E+16	1.49989E-03	-2.82394E+00
9.27464E-01	3.14010E+12	1.63757E+16	1.50059E-03	-2.82374E+00
9.31514E-01	3.12431E+12	1.63916E+16	1.50135E-03	-2.82352E+00
9.35564E-01	3.10995E+12	1.64074E+16	1.50211E-03	-2.82330E+00
9.39614E-01	3.09361E+12	1.64235E+16	1.50247E-03	-2.82319E+00
9.43664E-01	3.07825E+12	1.64396E+16	1.50279E-03	-2.82310E+00
9.47714E-01	3.06347E+12	1.64531E+16	1.50335E-03	-2.82294E+00
9.51765E-01	3.08395E+12	1.64661E+16	1.50396E-03	-2.82276E+00
9.55815E-01	3.07255E+12	1.64789E+16	1.50457E-03	-2.82259E+00
9.59865E-01	3.04713E+12	1.64921E+16	1.50515E-03	-2.82242E+00
9.63915E-01	3.03178E+12	1.65052E+16	1.50574E-03	-2.82225E+00
9.67965E-01	3.03178E+12	1.65194E+16	1.50633E-03	-2.82208E+00

TABLE 4 (continued)

SHOT 4-8

371 POINTS

208

TIME(MICROSEC)	CDEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
9.78065E-01	3.01889E+12	1.65548E+16	1.50892E-03	-2.82134E+00
9.80165E-01	2.98939E+12	1.65568E+16	1.50934E-03	-2.82135E+00
9.89215E-01	2.95415E+12	1.65769E+16	1.50985E-03	-2.82136E+00
9.92265E-01	2.96994E+12	1.65845E+16	1.51071E-03	-2.82332E+00
9.96315E-01	2.93890E+12	1.65946E+16	1.51132E-03	-2.82064E+00
1.00037E+00	2.92345E+12	1.66046E+16	1.51192E-03	-2.82047E+00
1.00442E+00	2.90810E+12	1.66145E+16	1.51254E-03	-2.82029E+00
1.00847E+00	2.89231E+12	1.66242E+16	1.51318E-03	-2.82011E+00
1.01252E+00	2.89231E+12	1.66338E+16	1.51333E-03	-2.81992E+00
1.01657E+00	2.87695E+12	1.66411E+16	1.51467E-03	-2.81968E+00
1.02062E+00	2.86468E+12	1.66483E+16	1.51554E-03	-2.81943E+00
1.02467E+00	2.84625E+12	1.66557E+16	1.51639E-03	-2.81919E+00
1.02872E+00	2.83355E+12	1.66529E+16	1.51724E-03	-2.81895E+00
1.03277E+00	2.81513E+12	1.66701E+16	1.51810E-03	-2.81870E+00
1.03682E+00	2.80197E+12	1.66774E+16	1.51895E-03	-2.81846E+00
1.04087E+00	2.78662E+12	1.66843E+16	1.51979E-03	-2.81822E+00
1.04492E+00	2.78443E+12	1.66914E+16	1.52045E-03	-2.81803E+00
1.04897E+00	2.76964E+12	1.66938E+16	1.52154E-03	-2.81772E+00
1.05302E+00	2.73794E+12	1.66961E+16	1.52263E-03	-2.81741E+00
1.05707E+00	2.73794E+12	1.67008E+16	1.52352E-03	-2.81715E+00
1.06112E+00	2.72391E+12	1.67008E+16	1.52432E-03	-2.81678E+00
1.06517E+00	2.70912E+12	1.67008E+16	1.52613E-03	-2.81641E+00
1.06922E+00	2.70680E+12	1.67008E+16	1.52744E-03	-2.81604E+00
1.07327E+00	2.70590E+12	1.66995E+16	1.52895E-03	-2.81561E+00
1.07732E+00	2.66119E+12	1.66995E+16	1.53026E-03	-2.81523E+00
1.08137E+00	2.64495E+12	1.66995E+16	1.53156E-03	-2.81487E+00
1.08542E+00	2.66075E+12	1.66995E+16	1.53287E-03	-2.81449E+00
1.08947E+00	2.63005E+12	1.66995E+16	1.53417E-03	-2.81413E+00
1.09352E+00	2.61427E+12	1.66995E+16	1.53543E-03	-2.81377E+00
1.09757E+00	2.59943E+12	1.66995E+16	1.53654E-03	-2.81344E+00
1.10162E+00	2.59849E+12	1.66964E+16	1.53794E-03	-2.81306E+00
1.10567E+00	2.56645E+12	1.66943E+16	1.53929E-03	-2.81268E+00
1.10972E+00	2.54980E+12	1.66900E+16	1.54084E-03	-2.81224E+00
1.11377E+00	2.53357E+12	1.66879E+16	1.54220E-03	-2.81186E+00
1.11782E+00	2.50243E+12	1.66858E+16	1.54355E-03	-2.81148E+00
1.12187E+00	2.48489E+12	1.66817E+16	1.54509E-03	-2.81105E+00
1.12592E+00	2.47042E+12	1.66796E+16	1.54644E-03	-2.81067E+00
1.12997E+00	2.46965E+12	1.66754E+16	1.54800E-03	-2.81023E+00
1.13402E+00	2.43940E+12	1.66713E+16	1.54994E-03	-2.80980E+00
1.13807E+00	2.42218E+12	1.66673E+16	1.55107E-03	-2.80937E+00
1.14212E+00	2.40639E+12	1.66633E+16	1.55260E-03	-2.80894E+00
1.14617E+00	2.40375E+12	1.66593E+16	1.55408E-03	-2.80853E+00
1.15022E+00	2.37130E+12	1.66555E+16	1.55548E-03	-2.80814E+00
1.15427E+00	2.35508E+12	1.66516E+16	1.55690E-03	-2.80774E+00
1.15832E+00	2.35508E+12	1.66478E+16	1.55831E-03	-2.80735E+00
1.16237E+00	2.32613E+12	1.66439E+16	1.55972E-03	-2.80695E+00
1.16642E+00	2.30540E+12	1.66382E+16	1.56131E-03	-2.80651E+00
1.17047E+00	2.29017E+12	1.66325E+16	1.56290E-03	-2.80607E+00
1.17452E+00	2.27793E+12	1.66269E+16	1.56449E-03	-2.80563E+00
1.17857E+00	2.25771E+12	1.66214E+16	1.56605E-03	-2.80519E+00
1.18262E+00	2.25771E+12	1.66140E+16	1.56790E-03	-2.80471E+00
1.18667E+00	2.22965E+12	1.66097E+16	1.56935E-03	-2.80423E+00
1.19072E+00	2.20903E+12	1.66014E+16	1.57110E-03	-2.80380E+00
1.19477E+00	2.19291E+12	1.65942E+16	1.57283E-03	-2.80332E+00
1.19882E+00	2.18194E+12	1.65872E+16	1.57450E-03	-2.80296E+00
1.20287E+00	2.16035E+12	1.65802E+16	1.57614E-03	-2.80241E+00
1.20692E+00	2.16035E+12	1.65732E+16	1.57779E-03	-2.80195E+00
1.21097E+00	2.13360E+12	1.65646E+16	1.57958E-03	-2.80146E+00
1.21502E+00	2.11167E+12	1.65561E+16	1.58139E-03	-2.80096E+00
1.21907E+00	2.10159E+12	1.65473E+16	1.58319E-03	-2.80047E+00
1.22312E+00	2.07922E+12	1.65399E+16	1.58498E-03	-2.79998E+00
1.22717E+00	2.06957E+12	1.65306E+16	1.58676E-03	-2.79949E+00
1.23122E+00	2.04577E+12	1.65224E+16	1.58853E-03	-2.79900E+00
1.23527E+00	2.03054E+12	1.65142E+16	1.59029E-03	-2.79852E+00
1.23932E+00	2.01387E+12	1.65061E+16	1.59206E-03	-2.79804E+00
1.24337E+00	1.99765E+12	1.64981E+16	1.59381E-03	-2.79756E+00
1.24742E+00	1.96519E+12	1.64885E+16	1.59557E-03	-2.79704E+00
1.25147E+00	1.96519E+12	1.64790E+16	1.59756E-03	-2.79654E+00
1.25552E+00	1.94897E+12	1.64712E+16	1.59923E-03	-2.79609E+00
1.25957E+00	1.91651E+12	1.64604E+16	1.60119E-03	-2.79556E+00
1.26362E+00	1.90905E+12	1.64498E+16	1.60312E-03	-2.79503E+00
1.26767E+00	1.89293E+12	1.64406E+16	1.60492E-03	-2.79455E+00
1.27172E+00	1.88405E+12	1.64316E+16	1.60670E-03	-2.79407E+00
1.27577E+00	1.86793E+12	1.64217E+16	1.60859E-03	-2.79356E+00
1.27982E+00	1.85161E+12	1.64098E+16	1.61066E-03	-2.79300E+00
1.28387E+00	1.83539E+12	1.63993E+16	1.61270E-03	-2.79245E+00
1.28792E+00	1.80293E+12	1.63869E+16	1.61473E-03	-2.79190E+00
1.29197E+00	1.79570E+12	1.63793E+16	1.61649E-03	-2.79143E+00

TABLE 4 (continued)

SHOT 4-8

371 POINTS

209

TIME(MICROSEC)	CDEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
1.29502E+00	1.78673E+12	1.63659E+16	1.61863E-03	-2.79085E+00
1.30007E+00	1.75425E+12	1.63562E+16	1.62049E-03	-2.79035E+00
1.30412E+00	1.72179E+12	1.63467E+16	1.62227E-03	-2.78988E+00
1.30817E+00	1.73902E+12	1.63358E+16	1.62420E-03	-2.78936E+00
1.31222E+00	1.72179E+12	1.63249E+16	1.62613E-03	-2.78884E+00
1.31627E+00	1.68934E+12	1.63128E+16	1.62818E-03	-2.78830E+00
1.32032E+00	1.67311E+12	1.63022E+16	1.63038E-03	-2.78779E+00
1.32437E+00	1.67311E+12	1.62902E+16	1.63213E-03	-2.78725E+00
1.32842E+00	1.65250E+12	1.62786E+16	1.63413E-03	-2.78671E+00
1.33247E+00	1.64065E+12	1.62666E+16	1.63619E-03	-2.78617E+00
1.33652E+00	1.60821E+12	1.62553E+16	1.63817E-03	-2.78564E+00
1.34057E+00	1.59198E+12	1.62441E+16	1.64014E-03	-2.78512E+00
1.34462E+00	1.57925E+12	1.62331E+16	1.64211E-03	-2.78460E+00
1.34867E+00	1.55952E+12	1.62221E+16	1.64407E-03	-2.78408E+00
1.35272E+00	1.57575E+12	1.62128E+16	1.64585E-03	-2.78361E+00
1.35677E+00	1.52707E+12	1.62008E+16	1.64784E-03	-2.78308E+00
1.36082E+00	1.51084E+12	1.61899E+16	1.64973E-03	-2.78259E+00
1.36487E+00	1.49462E+12	1.61805E+16	1.65146E-03	-2.78213E+00
1.36892E+00	1.50821E+12	1.61589E+16	1.65342E-03	-2.78162E+00
1.37297E+00	1.49462E+12	1.61575E+16	1.65536E-03	-2.78111E+00
1.37702E+00	1.47839E+12	1.61474E+16	1.65717E-03	-2.78063E+00
1.38107E+00	1.45997E+12	1.61360E+16	1.65912E-03	-2.78012E+00
1.38512E+00	1.44292E+12	1.61248E+16	1.66106E-03	-2.77961E+00
1.38917E+00	1.44305E+12	1.61154E+16	1.66281E-03	-2.77916E+00
1.39322E+00	1.42795E+12	1.61058E+16	1.66458E-03	-2.77870E+00
1.39727E+00	1.37971E+12	1.60949E+16	1.66649E-03	-2.77820E+00
1.40132E+00	1.36436E+12	1.60856E+16	1.66823E-03	-2.77774E+00
1.40537E+00	1.34914E+12	1.60755E+16	1.67003E-03	-2.77728E+00
1.40942E+00	1.34814E+12	1.60653E+16	1.67178E-03	-2.77682E+00
1.41347E+00	1.31568E+12	1.60554E+16	1.67350E-03	-2.77637E+00
1.41752E+00	1.31568E+12	1.60464E+16	1.67513E-03	-2.77595E+00
1.42157E+00	1.29945E+12	1.60367E+16	1.67684E-03	-2.77551E+00
1.42562E+00	1.28323E+12	1.60241E+16	1.67844E-03	-2.77509E+00
1.42967E+00	1.28279E+12	1.60183E+16	1.68016E-03	-2.77465E+00
1.43372E+00	1.24946E+12	1.60107E+16	1.68165E-03	-2.77426E+00
1.43777E+00	1.23367E+12	1.60033E+16	1.68312E-03	-2.77388E+00
1.44182E+00	1.23280E+12	1.59953E+16	1.68467E-03	-2.77349E+00
1.44587E+00	1.21745E+12	1.59872E+16	1.68621E-03	-2.77309E+00
1.44992E+00	1.20078E+12	1.59800E+16	1.68767E-03	-2.77271E+00
1.45397E+00	1.18455E+12	1.59729E+16	1.68912E-03	-2.77234E+00
1.45802E+00	1.16789E+12	1.59658E+16	1.69052E-03	-2.77198E+00
1.46207E+00	1.16514E+12	1.59598E+16	1.69179E-03	-2.77165E+00
1.46612E+00	1.13280E+12	1.59538E+16	1.69305E-03	-2.77133E+00
1.47017E+00	1.11614E+12	1.59471E+16	1.69438E-03	-2.77099E+00
1.47422E+00	1.11377E+12	1.59413E+16	1.69563E-03	-2.77067E+00
1.47827E+00	1.08544E+12	1.59356E+16	1.69685E-03	-2.77036E+00
1.48232E+00	1.06921E+12	1.59301E+16	1.69807E-03	-2.77004E+00
1.48637E+00	1.06921E+12	1.59255E+16	1.69919E-03	-2.76976E+00
1.49042E+00	1.04948E+12	1.59200E+16	1.70040E-03	-2.76945E+00
1.49447E+00	1.04948E+12	1.59155E+16	1.70151E-03	-2.76917E+00
1.49852E+00	1.03632E+12	1.59110E+16	1.70262E-03	-2.76888E+00

EOF

TABLE 4 (continued)

SHOT 4-9

371 POINTS

210

TIME(MICROSEC)	COEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
0.	3.82864E+11	1.01301E+14	0.	-3.74331E+00
4.05006E-03	3.99530E+11	1.18471E+14	1.80588E-04	-3.74331E+00
8.10012E-03	4.56191E+11	1.38930E+14	3.07989E-04	-3.51146E+00
1.21502E-02	4.82855E+11	1.61290E+14	3.97937E-04	-3.40019E+00
1.52002E-02	5.49518E+11	1.85909E+14	4.60321E-04	-3.33694E+00
2.02503E-02	5.92848E+11	2.11432E+14	5.05942E-04	-3.29500E+00
2.43004E-02	6.16179E+11	2.43502E+14	5.27169E-04	-3.27905E+00
2.83504E-02	6.49510E+11	2.83098E+14	5.29008E-04	-3.27654E+00
3.24005E-02	6.99505E+11	3.27977E+14	5.21852E-04	-3.28245E+00
3.64506E-02	7.42485E+11	3.78623E+14	5.08554E-04	-3.29366E+00
4.05006E-02	7.99499E+11	4.41012E+14	4.85121E-04	-3.31415E+00
4.45507E-02	8.32828E+11	5.23532E+14	4.49435E-04	-3.34733E+00
4.96007E-02	9.66159E+11	6.13396E+14	4.18551E-04	-3.37825E+00
5.26508E-02	9.20979E+11	7.40017E+14	3.75940E-04	-3.42500E+00
5.67009E-02	9.49485E+11	8.99022E+14	3.33164E-04	-3.47734E+00
6.07509E-02	9.99482E+11	1.09215E+15	2.93840E-04	-3.53189E+00
6.48010E-02	1.04948E+12	1.24404E+15	2.75161E-04	-3.56041E+00
6.88510E-02	1.08281E+12	1.35026E+15	2.69360E-04	-3.56957E+00
7.29011E-02	1.11514E+12	1.46579E+15	2.62546E-04	-3.58079E+00
7.69512E-02	1.14947E+12	1.58486E+15	2.56486E-04	-3.59094E+00
8.10012E-02	1.18280E+12	1.66792E+15	2.56541E-04	-3.59084E+00
8.50513E-02	1.23280E+12	1.75343E+15	2.56232E-04	-3.59137E+00
8.91014E-02	1.24902E+12	1.85246E+15	2.54083E-04	-3.59502E+00
9.31514E-02	1.26613E+12	1.93766E+15	2.53951E-04	-3.59525E+00
9.72015E-02	1.26513E+12	2.01915E+15	2.54299E-04	-3.59466E+00
1.01252E-01	1.29945E+12	2.10509E+15	2.54080E-04	-3.59503E+00
1.05302E-01	1.29279E+12	2.19459E+15	2.69058E-04	-3.57015E+00
1.09352E-01	1.29945E+12	2.27948E+15	3.15132E-04	-3.50151E+00
1.13402E-01	1.33147E+12	2.36376E+15	3.57991E-04	-3.44613E+00
1.17452E-01	1.36436E+12	2.45117E+15	3.97391E-04	-3.40079E+00
1.21502E-01	1.39594E+12	2.53787E+15	4.34198E-04	-3.36231E+00
1.25552E-01	1.42796E+12	2.62018E+15	4.63358E-04	-3.32850E+00
1.29602E-01	1.45997E+12	2.70536E+15	5.01658E-04	-3.29959E+00
1.33652E-01	1.49462E+12	2.79333E+15	5.31815E-04	-3.27424E+00
1.37702E-01	1.51084E+12	2.88036E+15	5.60140E-04	-3.25170E+00
1.41752E-01	1.55502E+12	2.97002E+15	5.86281E-04	-3.23189E+00
1.45802E-01	1.57575E+12	3.06011E+15	6.10806E-04	-3.21410E+00
1.49852E-01	1.62443E+12	3.14740E+15	6.34493E-04	-3.19757E+00
1.53902E-01	1.65250E+12	3.23850E+15	6.56127E-04	-3.18301E+00
1.57952E-01	1.68934E+12	3.33177E+15	6.90042E-04	-3.16112E+00
1.62002E-01	1.71653E+12	3.42670E+15	7.36284E-04	-3.13295E+00
1.66053E-01	1.76477E+12	3.51875E+15	7.80674E-04	-3.10753E+00
1.70103E-01	1.77047E+12	3.61447E+15	8.21963E-04	-3.08515E+00
1.74153E-01	1.81257E+12	3.71101E+15	8.60933E-04	-3.06503E+00
1.78203E-01	1.84503E+12	3.80558E+15	9.98390E-04	-3.04654E+00
1.82253E-01	1.97704E+12	3.90356E+15	9.33216E-04	-3.03002E+00
1.86303E-01	1.91651E+12	4.00128E+15	9.66399E-04	-3.01484E+00
1.90353E-01	1.93274E+12	4.09924E+15	9.97940E-04	-3.00090E+00
1.94403E-01	1.96519E+12	4.19730E+15	1.02798E-03	-2.98802E+00
1.98453E-01	2.01387E+12	4.29612E+15	1.05647E-03	-2.97614E+00
2.02503E-01	2.03305E+12	4.39468E+15	1.08374E-03	-2.96507E+00
2.06553E-01	2.05335E+12	4.49445E+15	1.10952E-03	-2.95486E+00
2.10603E-01	2.11738E+12	4.59648E+15	1.13409E-03	-2.94535E+00
2.14653E-01	2.13360E+12	4.69989E+15	1.15751E-03	-2.93648E+00
2.18703E-01	2.14983E+12	4.80198E+15	1.18025E-03	-2.92803E+00
2.22753E-01	2.19763E+12	4.90628E+15	1.20151E-03	-2.92027E+00
2.26803E-01	2.22525E+12	5.01425E+15	1.22098E-03	-2.91329E+00
2.30854E-01	2.27793E+12	5.12158E+15	1.23979E-03	-2.91665E+00
2.34904E-01	2.29412E+12	5.22728E+15	1.25821E-03	-2.90025E+00
2.38954E-01	2.32262E+12	5.33579E+15	1.27524E-03	-2.89441E+00
2.43004E-01	2.35508E+12	5.44348E+15	1.29178E-03	-2.88881E+00
2.47054E-01	2.39015E+12	5.55022E+15	1.30790E-03	-2.88343E+00
2.51104E-01	2.40375E+12	5.65838E+15	1.32308E-03	-2.87841E+00
2.55154E-01	2.43840E+12	5.77023E+15	1.33684E-03	-2.87392E+00
2.59204E-01	2.47042E+12	5.88029E+15	1.35049E-03	-2.86951E+00
2.63254E-01	2.50112E+12	5.99078E+15	1.36168E-03	-2.86532E+00
2.67304E-01	2.53445E+12	6.10280E+15	1.37168E-03	-2.86275E+00
2.71354E-01	2.55067E+12	6.21366E+15	1.38158E-03	-2.85962E+00
2.75404E-01	2.59849E+12	6.32492E+15	1.39105E-03	-2.85666E+00
2.79454E-01	2.61427E+12	6.43743E+15	1.39991E-03	-2.85390E+00
2.83504E-01	2.64495E+12	6.55057E+15	1.40834E-03	-2.85129E+00
2.87554E-01	2.66075E+12	6.66499E+15	1.41620E-03	-2.84888E+00
2.91604E-01	2.69277E+12	6.78066E+15	1.42354E-03	-2.84663E+00
2.95655E-01	2.72259E+12	6.89515E+15	1.43088E-03	-2.84440E+00
2.99705E-01	2.75329E+12	7.01089E+15	1.43772E-03	-2.84233E+00
3.03755E-01	2.76954E+12	7.12516E+15	1.44464E-03	-2.84024E+00
3.07805E-01	2.79979E+12	7.24004E+15	1.45122E-03	-2.83827E+00
3.11855E-01	2.83049E+12	7.35481E+15	1.45761E-03	-2.83636E+00
3.15905E-01	2.84525E+12	7.47079E+15	1.46329E-03	-2.83467E+00
3.19955E-01	2.87695E+12	7.58466E+15	1.46919E-03	-2.83292E+00

TABLE 4 (continued)

SHOT 4-9

371 POINTS

211

TIME(MICROSEC)	COEN (A4P/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
3.24005E-01	2.30810E+12	7.69752E+15	1.47511E-03	-2.33118E+00
3.29055E-01	2.92345E+12	7.81098E+15	1.49075E-03	-2.32952E+00
3.32105E-01	2.93380E+12	7.92779E+15	1.48560E-03	-2.32810E+00
3.36155E-01	2.96994E+12	8.04298E+15	1.49060E-03	-2.32664E+00
3.40205E-01	2.98523E+12	8.15973E+15	1.49537E-03	-2.32525E+00
3.44255E-01	3.01599E+12	8.27168E+15	1.50051E-03	-2.32376E+00
3.48305E-01	3.03178E+12	8.38575E+15	1.50530E-03	-2.32238E+00
3.52355E-01	3.06248E+12	8.50323E+15	1.50937E-03	-2.32120E+00
3.56405E-01	3.07925E+12	8.62070E+15	1.51343E-03	-2.32004E+00
3.60455E-01	3.10895E+12	8.73776E+15	1.51724E-03	-2.31895E+00
3.64506E-01	3.10895E+12	8.85226E+15	1.52153E-03	-2.31772E+00
3.68556E-01	3.14010E+12	8.96729E+15	1.52583E-03	-2.31649E+00
3.72606E-01	3.15545E+12	9.08044E+15	1.53034E-03	-2.31521E+00
3.76656E-01	3.17080E+12	9.19449E+15	1.53459E-03	-2.31401E+00
3.80706E-01	3.20194E+12	9.30931E+15	1.53860E-03	-2.31287E+00
3.84756E-01	3.22518E+12	9.42134E+15	1.54298E-03	-2.31154E+00
3.88806E-01	3.23264E+12	9.53440E+15	1.54708E-03	-2.31049E+00
3.92856E-01	3.24799E+12	9.64719E+15	1.55114E-03	-2.30935E+00
3.96906E-01	3.27912E+12	9.76050E+15	1.55501E-03	-2.30827E+00
4.00956E-01	3.29447E+12	9.86926E+15	1.55968E-03	-2.30696E+00
4.05006E-01	3.31694E+12	9.98019E+15	1.56359E-03	-2.30593E+00
4.09056E-01	3.32561E+12	1.00919E+16	1.56744E-03	-2.30481E+00
4.13106E-01	3.35531E+12	1.02044E+16	1.57110E-03	-2.30380E+00
4.17156E-01	3.35631E+12	1.03148E+16	1.57473E-03	-2.30279E+00
4.21206E-01	3.37165E+12	1.04224E+16	1.57804E-03	-2.30188E+00
4.25256E-01	3.38745E+12	1.05298E+16	1.58130E-03	-2.30099E+00
4.29307E-01	3.41815E+12	1.06378E+16	1.58443E-03	-2.30013E+00
4.33357E-01	3.41815E+12	1.07468E+16	1.58734E-03	-2.29933E+00
4.37407E-01	3.43350E+12	1.08526E+16	1.59067E-03	-2.29842E+00
4.41457E-01	3.46390E+12	1.09587E+16	1.59387E-03	-2.29755E+00
4.45507E-01	3.48481E+12	1.10653E+16	1.59695E-03	-2.29671E+00
4.49557E-01	3.47999E+12	1.11592E+16	1.60037E-03	-2.29578E+00
4.53607E-01	3.49534E+12	1.12763E+16	1.60326E-03	-2.29500E+00
4.57657E-01	3.53086E+12	1.13777E+16	1.60689E-03	-2.29401E+00
4.61707E-01	3.52647E+12	1.14796E+16	1.61040E-03	-2.29307E+00
4.65757E-01	3.54182E+12	1.15815E+16	1.61385E-03	-2.29214E+00
4.69807E-01	3.55717E+12	1.16838E+16	1.61631E-03	-2.29148E+00
4.73857E-01	3.57295E+12	1.17862E+16	1.61765E-03	-2.29112E+00
4.77907E-01	3.57295E+12	1.18922E+16	1.61847E-03	-2.29090E+00
4.81957E-01	3.58831E+12	1.19921E+16	1.62011E-03	-2.29046E+00
4.86007E-01	3.60366E+12	1.20892E+16	1.62209E-03	-2.28993E+00
4.90057E-01	3.61945E+12	1.21866E+16	1.62400E-03	-2.28941E+00
4.94108E-01	3.61345E+12	1.22840E+16	1.62588E-03	-2.28891E+00
4.98158E-01	3.63480E+12	1.23814E+16	1.62774E-03	-2.28841E+00
5.02208E-01	3.63787E+12	1.24821E+16	1.62913E-03	-2.28804E+00
5.06258E-01	3.65015E+12	1.25765E+16	1.63132E-03	-2.28746E+00
5.10308E-01	3.66550E+12	1.26709E+16	1.63348E-03	-2.28689E+00
5.14358E-01	3.66957E+12	1.27690E+16	1.63513E-03	-2.28645E+00
5.18408E-01	3.68129E+12	1.28611E+16	1.63752E-03	-2.28581E+00
5.22458E-01	3.69833E+12	1.29533E+16	1.63896E-03	-2.28543E+00
5.26508E-01	3.69564E+12	1.30451E+16	1.63983E-03	-2.28502E+00
5.30558E-01	3.69664E+12	1.31369E+16	1.64069E-03	-2.28497E+00
5.34608E-01	3.71198E+12	1.32291E+16	1.64149E-03	-2.28476E+00
5.38658E-01	3.71198E+12	1.33148E+16	1.64309E-03	-2.28434E+00
5.42708E-01	3.72733E+12	1.34039E+16	1.64424E-03	-2.28403E+00
5.46758E-01	3.72733E+12	1.34865E+16	1.64618E-03	-2.28352E+00
5.50808E-01	3.72353E+12	1.35691E+16	1.64809E-03	-2.28302E+00
5.54858E-01	3.74312E+12	1.36551E+16	1.64957E-03	-2.28253E+00
5.58908E-01	3.74488E+12	1.37390E+16	1.65128E-03	-2.28218E+00
5.62958E-01	3.76023E+12	1.38254E+16	1.65267E-03	-2.28191E+00
5.67008E-01	3.77514E+12	1.39059E+16	1.65474E-03	-2.28127E+00
5.71058E-01	3.77382E+12	1.39871E+16	1.65670E-03	-2.28076E+00
5.75108E-01	3.79043E+12	1.40563E+16	1.65786E-03	-2.28045E+00
5.79158E-01	3.78917E+12	1.41438E+16	1.65889E-03	-2.28018E+00
5.83208E-01	3.78917E+12	1.42233E+16	1.65967E-03	-2.27998E+00
5.87258E-01	3.78917E+12	1.43031E+16	1.66042E-03	-2.27978E+00
5.91308E-01	3.80496E+12	1.43773E+16	1.66181E-03	-2.27942E+00
5.95358E-01	3.80496E+12	1.44536E+16	1.66293E-03	-2.27913E+00
5.99408E-01	3.80496E+12	1.45278E+16	1.66429E-03	-2.27877E+00
6.03458E-01	3.83566E+12	1.46019E+16	1.66564E-03	-2.27842E+00
6.07508E-01	3.79043E+12	1.46782E+16	1.66672E-03	-2.27814E+00
6.11558E-01	3.82119E+12	1.47487E+16	1.66845E-03	-2.27759E+00
6.15608E-01	3.80584E+12	1.48195E+16	1.67014E-03	-2.27725E+00
6.19658E-01	3.82031E+12	1.48887E+16	1.67232E-03	-2.27658E+00
6.23708E-01	3.82031E+12	1.49531E+16	1.67435E-03	-2.27615E+00
6.27758E-01	3.82031E+12	1.50205E+16	1.67519E-03	-2.27594E+00
6.31808E-01	3.82031E+12	1.50899E+16	1.67570E-03	-2.27590E+00
6.35858E-01	3.82031E+12	1.51590E+16	1.67624E-03	-2.27566E+00
6.39908E-01	3.82031E+12	1.52267E+16	1.67694E-03	-2.27548E+00
6.43958E-01	3.80584E+12	1.52907E+16	1.67803E-03	-2.27520E+00

TABLE 4 (continued)

SHOT 4-9

371 POINTS

213

TIME (MICROSEC)	CJEN (AMP/M2)	EDEN (ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
3.72015E-01	3.27912E+12	1.82295E+16	1.75208E-03	-2.75545E+00
9.76065E-01	3.26377E+12	1.82436E+16	1.75287E-03	-2.75625E+00
9.90115E-01	3.24733E+12	1.82576E+16	1.75368E-03	-2.75605E+00
9.84165E-01	3.23264E+12	1.82711E+16	1.75453E-03	-2.75584E+00
9.83215E-01	3.23264E+12	1.82919E+16	1.75562E-03	-2.75557E+00
9.92265E-01	3.21729E+12	1.82930E+16	1.75631E-03	-2.75540E+00
9.96315E-01	3.20194E+12	1.83013E+16	1.75727E-03	-2.75516E+00
1.00037E+00	3.18615E+12	1.83122E+16	1.75797E-03	-2.75499E+00
1.00442E+00	3.17090E+12	1.83231E+16	1.75867E-03	-2.75482E+00
1.00847E+00	3.15545E+12	1.83312E+16	1.75964E-03	-2.75458E+00
1.01252E+00	3.14010E+12	1.83417E+16	1.76039E-03	-2.75439E+00
1.01657E+00	3.12431E+12	1.83522E+16	1.76112E-03	-2.75421E+00
1.02062E+00	3.12431E+12	1.83629E+16	1.76194E-03	-2.75403E+00
1.02467E+00	3.11510E+12	1.83732E+16	1.76259E-03	-2.75385E+00
1.02872E+00	3.07925E+12	1.83938E+16	1.76332E-03	-2.75367E+00
1.03277E+00	3.08395E+12	1.83917E+16	1.76430E-03	-2.75343E+00
1.03582E+00	3.06249E+12	1.83996E+16	1.76529E-03	-2.75318E+00
1.04087E+00	3.05233E+12	1.84075E+16	1.76621E-03	-2.75296E+00
1.04492E+00	3.03704E+12	1.84150E+16	1.76694E-03	-2.75278E+00
1.04897E+00	3.01599E+12	1.84202E+16	1.76789E-03	-2.75254E+00
1.05302E+00	3.00064E+12	1.84227E+16	1.76909E-03	-2.75225E+00
1.05707E+00	2.99529E+12	1.84252E+16	1.77029E-03	-2.75196E+00
1.06112E+00	2.96994E+12	1.84302E+16	1.77125E-03	-2.75172E+00
1.06517E+00	2.97432E+12	1.84327E+16	1.77246E-03	-2.75142E+00
1.06922E+00	2.95954E+12	1.84352E+16	1.77367E-03	-2.75113E+00
1.07327E+00	2.93880E+12	1.84376E+16	1.77497E-03	-2.75083E+00
1.07732E+00	2.92345E+12	1.84376E+16	1.77632E-03	-2.75048E+00
1.08137E+00	2.89592E+12	1.84400E+16	1.77753E-03	-2.75019E+00
1.08542E+00	2.89231E+12	1.84424E+16	1.77875E-03	-2.74989E+00
1.08947E+00	2.89231E+12	1.84447E+16	1.77996E-03	-2.74959E+00
1.09352E+00	2.84890E+12	1.84447E+16	1.78133E-03	-2.74926E+00
1.09757E+00	2.84623E+12	1.84447E+16	1.78256E-03	-2.74896E+00
1.10162E+00	2.81513E+12	1.84447E+16	1.78379E-03	-2.74866E+00
1.10567E+00	2.79979E+12	1.84447E+16	1.78502E-03	-2.74836E+00
1.10972E+00	2.77093E+12	1.84447E+16	1.78625E-03	-2.74806E+00
1.11377E+00	2.76964E+12	1.84424E+16	1.78770E-03	-2.74771E+00
1.11792E+00	2.75329E+12	1.84401E+16	1.78915E-03	-2.74735E+00
1.12187E+00	2.72391E+12	1.84379E+16	1.79060E-03	-2.74700E+00
1.12592E+00	2.70690E+12	1.84334E+16	1.79227E-03	-2.74665E+00
1.12997E+00	2.67699E+12	1.84311E+16	1.79372E-03	-2.74625E+00
1.13402E+00	2.67610E+12	1.84266E+16	1.79540E-03	-2.74584E+00
1.13807E+00	2.64594E+12	1.84222E+16	1.79706E-03	-2.74544E+00
1.14212E+00	2.63003E+12	1.84178E+16	1.79872E-03	-2.74504E+00
1.14617E+00	2.61427E+12	1.84135E+16	1.80028E-03	-2.74466E+00
1.15022E+00	2.61427E+12	1.84092E+16	1.80177E-03	-2.74430E+00
1.15427E+00	2.59269E+12	1.84050E+16	1.80324E-03	-2.74395E+00
1.15832E+00	2.56645E+12	1.84008E+16	1.80472E-03	-2.74359E+00
1.16237E+00	2.54993E+12	1.83947E+16	1.80639E-03	-2.74319E+00
1.16642E+00	2.51965E+12	1.83894E+16	1.80806E-03	-2.74279E+00
1.17047E+00	2.50112E+12	1.83822E+16	1.80974E-03	-2.74238E+00
1.17452E+00	2.48493E+12	1.83760E+16	1.81141E-03	-2.74198E+00
1.17857E+00	2.47042E+12	1.83699E+16	1.81308E-03	-2.74158E+00
1.18262E+00	2.45244E+12	1.83638E+16	1.81475E-03	-2.74118E+00
1.18667E+00	2.45244E+12	1.83538E+16	1.81690E-03	-2.74069E+00
1.19072E+00	2.40639E+12	1.83461E+16	1.81864E-03	-2.74025E+00
1.19477E+00	2.38753E+12	1.83360E+16	1.82071E-03	-2.73976E+00
1.19882E+00	2.37130E+12	1.83282E+16	1.82246E-03	-2.73934E+00
1.20287E+00	2.35915E+12	1.83204E+16	1.82417E-03	-2.73893E+00
1.20692E+00	2.35509E+12	1.83108E+16	1.82607E-03	-2.73849E+00
1.21097E+00	2.35509E+12	1.83014E+16	1.82795E-03	-2.73804E+00
1.21502E+00	2.30990E+12	1.82901E+16	1.83002E-03	-2.73754E+00
1.21907E+00	2.30640E+12	1.82799E+16	1.83209E-03	-2.73705E+00
1.22312E+00	2.29412E+12	1.82673E+16	1.83419E-03	-2.73656E+00
1.22717E+00	2.27394E+12	1.82563E+16	1.83623E-03	-2.73607E+00
1.23122E+00	2.26210E+12	1.82453E+16	1.83828E-03	-2.73559E+00
1.23527E+00	2.24149E+12	1.82346E+16	1.84031E-03	-2.73511E+00
1.23932E+00	2.22526E+12	1.82240E+16	1.84233E-03	-2.73463E+00
1.24337E+00	2.19281E+12	1.82133E+16	1.84435E-03	-2.73416E+00
1.24742E+00	2.19281E+12	1.82029E+16	1.84636E-03	-2.73368E+00
1.25147E+00	2.16035E+12	1.81903E+16	1.84846E-03	-2.73319E+00
1.25552E+00	2.14413E+12	1.81765E+16	1.85069E-03	-2.73267E+00
1.25957E+00	2.12790E+12	1.81647E+16	1.85269E-03	-2.73220E+00
1.26362E+00	2.1167E+12	1.81513E+16	1.85499E-03	-2.73169E+00
1.26767E+00	2.09535E+12	1.81379E+16	1.85706E-03	-2.73117E+00
1.27172E+00	2.06957E+12	1.81264E+16	1.85906E-03	-2.73071E+00
1.27577E+00	2.06299E+12	1.81133E+16	1.86122E-03	-2.73020E+00
1.27982E+00	2.04677E+12	1.81009E+16	1.86333E-03	-2.72971E+00
1.28387E+00	2.01397E+12	1.80876E+16	1.86550E-03	-2.72920E+00
1.28792E+00	2.01397E+12	1.80749E+16	1.86764E-03	-2.72871E+00
1.29197E+00	1.96519E+12	1.80623E+16	1.86975E-03	-2.72822E+00

TABLE 4 (continued)

SHOT 4-9

371 POINTS

214

TIME (MICROSEC)	CDEN (AMP/M2)	EDEN (ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
1.29502E+00	1.94937E+12	1.80498E+16	1.87197E-03	-2.72772E+00
1.30007E+00	1.94897E+12	1.80360E+16	1.87412E-03	-2.72720E+00
1.30412E+00	1.93274E+12	1.80237E+16	1.87612E-03	-2.72674E+00
1.30817E+00	1.90029E+12	1.80117E+16	1.87810E-03	-2.72628E+00
1.31222E+00	1.90029E+12	1.79981E+16	1.88023E-03	-2.72579E+00
1.31627E+00	1.89405E+12	1.79877E+16	1.88204E-03	-2.72537E+00
1.32032E+00	1.85161E+12	1.79758E+16	1.88401E-03	-2.72492E+00
1.32437E+00	1.85161E+12	1.79641E+16	1.88595E-03	-2.72447E+00
1.32842E+00	1.83538E+12	1.79509E+16	1.88807E-03	-2.72398E+00
1.33247E+00	1.81257E+12	1.79381E+16	1.89014E-03	-2.72351E+00
1.33652E+00	1.80293E+12	1.79248E+16	1.89226E-03	-2.72302E+00
1.34057E+00	1.77047E+12	1.79108E+16	1.89446E-03	-2.72251E+00
1.34462E+00	1.75425E+12	1.78985E+16	1.89649E-03	-2.72205E+00
1.34867E+00	1.75995E+12	1.78861E+16	1.89853E-03	-2.72158E+00
1.35272E+00	1.72173E+12	1.78725E+16	1.90068E-03	-2.72109E+00
1.35677E+00	1.72173E+12	1.78621E+16	1.90243E-03	-2.72069E+00
1.36082E+00	1.58893E+12	1.78489E+16	1.90447E-03	-2.72023E+00
1.36487E+00	1.58893E+12	1.78356E+16	1.90654E-03	-2.71975E+00
1.36892E+00	1.65693E+12	1.78240E+16	1.90842E-03	-2.71933E+00
1.37297E+00	1.65250E+12	1.78113E+16	1.91042E-03	-2.71887E+00
1.37702E+00	1.64065E+12	1.77977E+16	1.91253E-03	-2.71839E+00
1.38107E+00	1.64065E+12	1.77853E+16	1.91450E-03	-2.71794E+00
1.38512E+00	1.60425E+12	1.77726E+16	1.91650E-03	-2.71749E+00
1.38917E+00	1.57575E+12	1.77502E+16	1.91849E-03	-2.71704E+00
1.39322E+00	1.55952E+12	1.77509E+16	1.92014E-03	-2.71667E+00
1.39727E+00	1.57224E+12	1.77401E+16	1.92195E-03	-2.71626E+00
1.40132E+00	1.54023E+12	1.77279E+16	1.92391E-03	-2.71582E+00
1.40537E+00	1.51084E+12	1.77164E+16	1.92578E-03	-2.71539E+00
1.40942E+00	1.51084E+12	1.77049E+16	1.92760E-03	-2.71498E+00
1.41347E+00	1.49462E+12	1.76934E+16	1.92942E-03	-2.71457E+00
1.41752E+00	1.47839E+12	1.76823E+16	1.93119E-03	-2.71417E+00
1.42157E+00	1.46173E+12	1.76722E+16	1.93286E-03	-2.71380E+00
1.42562E+00	1.44550E+12	1.76624E+16	1.93451E-03	-2.71343E+00
1.42967E+00	1.42927E+12	1.76537E+16	1.93603E-03	-2.71309E+00
1.43372E+00	1.41305E+12	1.76448E+16	1.93757E-03	-2.71274E+00
1.43777E+00	1.39682E+12	1.76374E+16	1.93895E-03	-2.71243E+00
1.44182E+00	1.36435E+12	1.76300E+16	1.94033E-03	-2.71212E+00
1.44587E+00	1.36393E+12	1.76218E+16	1.94180E-03	-2.71180E+00
1.44992E+00	1.34814E+12	1.76137E+16	1.94327E-03	-2.71147E+00
1.45397E+00	1.33191E+12	1.76056E+16	1.94472E-03	-2.71114E+00
1.45802E+00	1.31568E+12	1.75977E+16	1.94616E-03	-2.71082E+00
1.46207E+00	1.31568E+12	1.75898E+16	1.94758E-03	-2.71050E+00
1.46612E+00	1.29946E+12	1.75840E+16	1.94876E-03	-2.71024E+00
1.47017E+00	1.26613E+12	1.75784E+16	1.94994E-03	-2.70998E+00
1.47422E+00	1.26613E+12	1.75709E+16	1.95132E-03	-2.70957E+00
1.47827E+00	1.26657E+12	1.75544E+16	1.95259E-03	-2.70939E+00
1.48232E+00	1.21745E+12	1.75580E+16	1.95384E-03	-2.70911E+00
1.48637E+00	1.20078E+12	1.75517E+16	1.95509E-03	-2.70883E+00
1.49042E+00	1.20078E+12	1.75465E+16	1.95622E-03	-2.70858E+00
1.49447E+00	1.19947E+12	1.75403E+16	1.95746E-03	-2.70831E+00
1.49852E+00	1.18280E+12	1.75352E+16	1.95857E-03	-2.70806E+00

EOF

TABLE 4 (continued)

SHOT 4-10

150 POINTS

215

TIME(MICROSEC)	CDEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
0.	2.41593E+11	8.79978E+13	0.	-2.99819E+00
1.00191E-02	2.44982E+11	9.99959E+13	1.02757E-03	-2.99819E+00
2.00363E-02	2.49225E+11	9.23139E+13	2.00108E-03	-2.69974E+00
3.00544E-02	2.48225E+11	9.47639E+13	2.92464E-03	-2.53393E+00
4.00726E-02	2.49225E+11	9.72005E+13	3.90096E-03	-2.42011E+00
5.00907E-02	2.54959E+11	9.96572E+13	4.63409E-03	-2.33404E+00
6.01099E-02	2.51515E+11	1.02142E+14	5.42561E-03	-2.26555E+00
7.01270E-02	2.58149E+11	1.04627E+14	6.17955E-03	-2.20904E+00
8.01451E-02	2.58149E+11	1.07392E+14	6.89050E-03	-2.16238E+00
9.01532E-02	2.58149E+11	1.09933E+14	7.56163E-03	-2.12138E+00
1.00191E-01	2.51329E+11	1.12729E+14	8.19341E-03	-2.08654E+00
1.10200E-01	2.56797E+11	1.15556E+14	8.41932E-03	-2.07472E+00
1.20219E-01	2.57797E+11	1.18673E+14	8.38966E-03	-2.07626E+00
1.30236E-01	2.67797E+11	1.21795E+14	8.36121E-03	-2.07773E+00
1.40254E-01	2.74046E+11	1.24980E+14	8.32998E-03	-2.07936E+00
1.50272E-01	2.74265E+11	1.27900E+14	8.31746E-03	-2.09001E+00
1.60290E-01	2.77281E+11	1.30794E+14	8.30139E-03	-2.09095E+00
1.70308E-01	2.77281E+11	1.33950E+14	8.26224E-03	-2.09290E+00
1.80326E-01	2.80460E+11	1.37168E+14	8.22116E-03	-2.09507E+00
1.90345E-01	2.80460E+11	1.40626E+14	8.16907E-03	-2.08798E+00
2.00363E-01	2.83640E+11	1.44113E+14	8.11581E-03	-2.09067E+00
2.10381E-01	2.86919E+11	1.47638E+14	8.06097E-03	-2.09361E+00
2.20399E-01	2.86919E+11	1.51206E+14	7.99690E-03	-2.09708E+00
2.30417E-01	2.89399E+11	1.55041E+14	7.92219E-03	-2.10116E+00
2.40435E-01	2.93179E+11	1.58954E+14	7.84716E-03	-2.10529E+00
2.50453E-01	2.93617E+11	1.63105E+14	7.76439E-03	-2.10999E+00
2.60472E-01	2.99539E+11	1.67858E+14	7.65773E-03	-2.11590E+00
2.70490E-01	2.99539E+11	1.72940E+14	7.53331E-03	-2.12301E+00
2.80508E-01	2.96951E+11	1.78599E+14	7.39245E-03	-2.13121E+00
2.90526E-01	2.96951E+11	1.84578E+14	7.24684E-03	-2.13985E+00
3.00544E-01	3.02717E+11	1.91138E+14	7.08917E-03	-2.14940E+00
3.10562E-01	3.00085E+11	1.97648E+14	6.94369E-03	-2.15941E+00
3.20580E-01	3.02717E+11	2.04522E+14	6.79025E-03	-2.16811E+00
3.30599E-01	3.05951E+11	2.11723E+14	6.63573E-03	-2.17811E+00
3.40617E-01	3.09734E+11	2.18942E+14	6.49080E-03	-2.18770E+00
3.50635E-01	3.09131E+11	2.26143E+14	6.35567E-03	-2.19694E+00
3.60653E-01	3.12311E+11	2.33652E+14	6.22063E-03	-2.20617E+00
3.70671E-01	3.15490E+11	2.41796E+14	6.07690E-03	-2.21632E+00
3.80689E-01	3.12311E+11	2.50355E+14	5.93214E-03	-2.22679E+00
3.90707E-01	3.15490E+11	2.58932E+14	5.79980E-03	-2.23666E+00
4.00726E-01	3.18670E+11	2.67591E+14	5.66794E-03	-2.24657E+00
4.10744E-01	3.18670E+11	2.77293E+14	5.52671E-03	-2.25753E+00
4.20762E-01	3.21849E+11	2.86975E+14	5.39306E-03	-2.26816E+00
4.30780E-01	3.21849E+11	2.97254E+14	5.25565E-03	-2.27937E+00
4.40798E-01	3.19437E+11	3.07929E+14	5.12083E-03	-2.29066E+00
4.50816E-01	3.19437E+11	3.19197E+14	4.98579E-03	-2.30227E+00
4.60834E-01	3.25029E+11	3.30762E+14	4.85566E-03	-2.31376E+00
4.70853E-01	3.25905E+11	3.42983E+14	4.72391E-03	-2.32571E+00
4.80871E-01	3.25029E+11	3.56030E+14	4.58736E-03	-2.33844E+00
4.90899E-01	3.25905E+11	3.69779E+14	4.45210E-03	-2.35144E+00
5.00917E-01	3.29209E+11	3.84502E+14	4.31556E-03	-2.36496E+00
5.10935E-01	3.31398E+11	4.00110E+14	4.17984E-03	-2.37894E+00
5.20953E-01	3.28209E+11	4.16307E+14	4.04838E-03	-2.39272E+00
5.30961E-01	3.29209E+11	4.33903E+14	3.91324E-03	-2.40746E+00
5.40979E-01	3.31398E+11	4.53259E+14	3.77219E-03	-2.42341E+00
5.50998E-01	3.31398E+11	4.74031E+14	3.63265E-03	-2.43979E+00
5.61016E-01	3.31398E+11	4.96720E+14	3.49129E-03	-2.45701E+00
5.71034E-01	3.34622E+11	5.22736E+14	3.34099E-03	-2.47614E+00
5.81052E-01	3.34622E+11	5.52380E+14	3.19242E-03	-2.49724E+00
5.91070E-01	3.34622E+11	5.86533E+14	3.01661E-03	-2.52049E+00
6.01088E-01	3.34622E+11	6.27768E+14	2.83668E-03	-2.54719E+00
6.11106E-01	3.34622E+11	6.69491E+14	2.67702E-03	-2.57235E+00
6.21125E-01	3.34622E+11	7.34266E+14	2.45639E-03	-2.60970E+00
6.31143E-01	3.32320E+11	8.19632E+14	2.21497E-03	-2.65463E+00
6.41161E-01	3.32320E+11	9.23641E+14	1.97950E-03	-2.70366E+00
6.51179E-01	3.32320E+11	1.01150E+15	1.82029E-03	-2.73996E+00
6.61197E-01	3.29085E+11	1.09519E+15	1.70602E-03	-2.76902E+00
6.71215E-01	3.37802E+11	1.15072E+15	1.61928E-03	-2.79059E+00
6.81233E-01	3.34622E+11	1.20534E+15	1.55579E-03	-2.80905E+00
6.91252E-01	3.31398E+11	1.24962E+15	1.51019E-03	-2.82097E+00
7.01270E-01	3.31398E+11	1.28173E+15	1.48163E-03	-2.82926E+00
7.11288E-01	3.31398E+11	1.30582E+15	1.46340E-03	-2.83464E+00
7.21306E-01	3.29209E+11	1.33599E+15	1.43937E-03	-2.84193E+00
7.31324E-01	3.28209E+11	1.35662E+15	1.42615E-03	-2.84593E+00
7.41342E-01	3.25029E+11	1.37306E+15	1.41779E-03	-2.84839E+00
7.51360E-01	3.21949E+11	1.38927E+15	1.41086E-03	-2.85051E+00
7.61379E-01	3.15490E+11	1.40307E+15	1.40453E-03	-2.85247E+00
7.71397E-01	3.02717E+11	1.41831E+15	1.39797E-03	-2.85453E+00
7.81415E-01	2.89999E+11	1.43649E+15	1.39074E-03	-2.85675E+00
7.91433E-01	2.74265E+11	1.45085E+15	1.38453E-03	-2.85870E+00

TABLE 4 (continued)

SHOT 4-10

150 POINTS

216

TIME(MICROSEC)	CDEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
8.01451E-01	2.71031E+11	1.46722E+15	1.37855E-03	-2.86058E+00
8.11469E-01	2.80463E+11	1.48210E+15	1.37408E-03	-2.86199E+00
8.21487E-01	2.93640E+11	1.49492E+15	1.37167E-03	-2.86275E+00
8.31506E-01	2.90383E+11	1.50538E+15	1.37128E-03	-2.86297E+00
8.41524E-01	2.93178E+11	1.51523E+15	1.37184E-03	-2.86270E+00
8.51542E-01	2.89999E+11	1.52562E+15	1.37193E-03	-2.86267E+00
8.61560E-01	2.83969E+11	1.53597E+15	1.37204E-03	-2.86263E+00
8.71578E-01	2.80460E+11	1.54638E+15	1.37210E-03	-2.86251E+00
8.81596E-01	2.64507E+11	1.55731E+15	1.37171E-03	-2.86274E+00
8.91614E-01	2.45045E+11	1.56883E+15	1.37047E-03	-2.86313E+00
9.01632E-01	2.31999E+11	1.58041E+15	1.36909E-03	-2.86357E+00
9.11651E-01	2.38523E+11	1.59180E+15	1.36789E-03	-2.86395E+00
9.21669E-01	2.51515E+11	1.60213E+15	1.36761E-03	-2.86404E+00
9.31687E-01	2.61328E+11	1.61135E+15	1.36827E-03	-2.86393E+00
9.41705E-01	2.57687E+11	1.61923E+15	1.37045E-03	-2.86314E+00
9.51723E-01	2.70867E+11	1.62737E+15	1.37268E-03	-2.86243E+00
9.61741E-01	2.70867E+11	1.63637E+15	1.37416E-03	-2.86196E+00
9.71759E-01	2.70867E+11	1.64549E+15	1.37552E-03	-2.86153E+00
9.81778E-01	2.64507E+11	1.65530E+15	1.37630E-03	-2.86129E+00
9.91796E-01	2.54859E+11	1.66547E+15	1.37731E-03	-2.86097E+00
1.00181E+00	2.38523E+11	1.67567E+15	1.37917E-03	-2.86038E+00
1.01183E+00	2.34959E+11	1.68593E+15	1.38095E-03	-2.85982E+00
1.02185E+00	2.41812E+11	1.69526E+15	1.38348E-03	-2.85903E+00
1.03187E+00	2.54859E+11	1.70319E+15	1.38711E-03	-2.85789E+00
1.04189E+00	2.61328E+11	1.71033E+15	1.39134E-03	-2.85657E+00
1.05190E+00	2.67797E+11	1.71821E+15	1.39491E-03	-2.85545E+00
1.06192E+00	2.71031E+11	1.72513E+15	1.39840E-03	-2.85437E+00
1.07194E+00	2.74045E+11	1.73452E+15	1.40149E-03	-2.85341E+00
1.08196E+00	2.67687E+11	1.74322E+15	1.40429E-03	-2.85254E+00
1.09198E+00	2.61328E+11	1.75202E+15	1.40698E-03	-2.85171E+00
1.10200E+00	2.48335E+11	1.76117E+15	1.40956E-03	-2.85092E+00
1.11201E+00	2.41812E+11	1.77018E+15	1.41222E-03	-2.85010E+00
1.12203E+00	2.45046E+11	1.77858E+15	1.41534E-03	-2.84914E+00
1.13205E+00	2.51625E+11	1.78611E+15	1.41912E-03	-2.84798E+00
1.14207E+00	2.54859E+11	1.79264E+15	1.42366E-03	-2.84659E+00
1.15209E+00	2.67797E+11	1.79944E+15	1.42818E-03	-2.84522E+00
1.16210E+00	2.70867E+11	1.80676E+15	1.43231E-03	-2.84396E+00
1.17212E+00	2.70867E+11	1.81413E+15	1.43638E-03	-2.84273E+00
1.18214E+00	2.71031E+11	1.82161E+15	1.44031E-03	-2.84154E+00
1.19216E+00	2.67687E+11	1.82983E+15	1.44363E-03	-2.84054E+00
1.20218E+00	2.61333E+11	1.83793E+15	1.44628E-03	-2.83975E+00
1.21219E+00	2.48225E+11	1.84524E+15	1.44828E-03	-2.83915E+00
1.22221E+00	2.48335E+11	1.85370E+15	1.45093E-03	-2.83835E+00
1.23223E+00	2.51625E+11	1.86050E+15	1.45407E-03	-2.83741E+00
1.24225E+00	2.54859E+11	1.86610E+15	1.45813E-03	-2.83620E+00
1.25227E+00	2.64507E+11	1.87210E+15	1.46251E-03	-2.83490E+00
1.26229E+00	2.67687E+11	1.87802E+15	1.46781E-03	-2.83333E+00
1.27230E+00	2.70867E+11	1.88389E+15	1.47311E-03	-2.83176E+00
1.28232E+00	2.74045E+11	1.88952E+15	1.47857E-03	-2.83016E+00
1.29234E+00	2.70867E+11	1.89465E+15	1.48438E-03	-2.82845E+00
1.30236E+00	2.64507E+11	1.89951E+15	1.49045E-03	-2.82668E+00
1.31238E+00	2.58148E+11	1.90377E+15	1.49719E-03	-2.82472E+00
1.32239E+00	2.51625E+11	1.90776E+15	1.50410E-03	-2.82272E+00
1.33241E+00	2.48335E+11	1.91150E+15	1.51118E-03	-2.82068E+00
1.34243E+00	2.58148E+11	1.91495E+15	1.51848E-03	-2.81859E+00
1.35245E+00	2.61273E+11	1.91807E+15	1.52594E-03	-2.81646E+00
1.36247E+00	2.67797E+11	1.92209E+15	1.53156E-03	-2.81437E+00
1.37249E+00	2.70867E+11	1.92555E+15	1.53680E-03	-2.81233E+00
1.38250E+00	2.74045E+11	1.93126E+15	1.54181E-03	-2.81019E+00
1.39252E+00	2.70867E+11	1.93590E+15	1.54685E-03	-2.81055E+00
1.40254E+00	2.70702E+11	1.94088E+15	1.55160E-03	-2.80922E+00
1.41256E+00	2.64507E+11	1.94593E+15	1.55675E-03	-2.80778E+00
1.42258E+00	2.54859E+11	1.95032E+15	1.56247E-03	-2.80619E+00
1.43259E+00	2.51625E+11	1.95416E+15	1.56861E-03	-2.80449E+00
1.44261E+00	2.48335E+11	1.95709E+15	1.57546E-03	-2.80259E+00
1.45263E+00	2.48335E+11	1.96003E+15	1.58228E-03	-2.80072E+00
1.46265E+00	2.38523E+11	1.96341E+15	1.58962E-03	-2.79871E+00
1.47267E+00	2.35238E+11	1.96704E+15	1.59719E-03	-2.79664E+00
1.48268E+00	2.31999E+11	1.97063E+15	1.60475E-03	-2.79459E+00
1.49270E+00	2.28710E+11	1.97413E+15	1.61237E-03	-2.79254E+00

EOF

TIME(MICROSEC)	CDEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
0.	2.99538E+11	8.98840E+13	0.	-3.36184E+00
1.00181E-02	3.00036E+11	9.37019E+13	4.34673E-04	-3.36184E+00
2.00363E-02	3.00595E+11	9.75570E+13	8.34993E-04	-3.07932E+00
3.00544E-02	3.01131E+11	1.01485E+14	1.20401E-03	-2.91937E+00
4.00726E-02	3.01734E+11	1.05144E+14	1.54948E-03	-2.80981E+00
5.00907E-02	3.12311E+11	1.08915E+14	1.97151E-03	-2.72791E+00
6.01088E-02	3.15490E+11	1.12520E+14	2.17197E-03	-2.66317E+00
7.01270E-02	3.16203E+11	1.15749E+14	2.46317E-03	-2.60851E+00
8.01451E-02	3.21849E+11	1.19209E+14	2.73334E-03	-2.56331E+00
9.01632E-02	3.31388E+11	1.23335E+14	2.97214E-03	-2.52693E+00
1.00181E-01	3.34622E+11	1.28181E+14	3.17751E-03	-2.49791E+00
1.10200E-01	3.40982E+11	1.33395E+14	3.28309E-03	-2.48372E+00
1.20218E-01	3.44161E+11	1.39012E+14	3.32626E-03	-2.47404E+00
1.30236E-01	3.45258E+11	1.44698E+14	3.36445E-03	-2.47309E+00
1.40254E-01	3.48437E+11	1.50074E+14	3.40681E-03	-2.46765E+00
1.50272E-01	3.53700E+11	1.55934E+14	3.43772E-03	-2.46373E+00
1.60290E-01	3.54905E+11	1.61983E+14	3.45689E-03	-2.46131E+00
1.70308E-01	3.58140E+11	1.69187E+14	3.45142E-03	-2.46200E+00
1.80326E-01	3.59144E+11	1.76767E+14	3.43905E-03	-2.46356E+00
1.90345E-01	3.64609E+11	1.85070E+14	3.41431E-03	-2.46670E+00
2.00363E-01	3.67789E+11	1.94559E+14	3.37104E-03	-2.47224E+00
2.10381E-01	3.72832E+11	2.05064E+14	3.31341E-03	-2.47972E+00
2.20399E-01	3.77492E+11	2.16540E+14	3.24113E-03	-2.48930E+00
2.30417E-01	3.79191E+11	2.28430E+14	3.17036E-03	-2.49889E+00
2.40435E-01	3.82371E+11	2.41040E+14	3.09731E-03	-2.50902E+00
2.50453E-01	3.85550E+11	2.54552E+14	3.02079E-03	-2.51988E+00
2.60472E-01	3.87140E+11	2.68395E+14	2.94823E-03	-2.53044E+00
2.70490E-01	3.88785E+11	2.82965E+14	2.87331E-03	-2.54152E+00
2.80508E-01	3.90375E+11	2.99117E+14	2.79088E-03	-2.55426E+00
2.90526E-01	3.93609E+11	3.16006E+14	2.71056E-03	-2.56694E+00
3.00544E-01	3.95144E+11	3.34729E+14	2.62394E-03	-2.58105E+00
3.10562E-01	4.04683E+11	3.55375E+14	2.52844E-03	-2.59715E+00
3.20580E-01	4.06547E+11	3.79457E+14	2.42849E-03	-2.61466E+00
3.30599E-01	4.06547E+11	4.05197E+14	2.32702E-03	-2.63320E+00
3.40617E-01	4.11042E+11	4.33255E+14	2.22432E-03	-2.65280E+00
3.50635E-01	4.09725E+11	4.66409E+14	2.11337E-03	-2.67502E+00
3.60653E-01	4.11042E+11	5.04894E+14	1.99466E-03	-2.70013E+00
3.70671E-01	4.14275E+11	5.47933E+14	1.87619E-03	-2.72672E+00
3.80689E-01	4.11042E+11	5.96188E+14	1.75827E-03	-2.75491E+00
3.90707E-01	4.14275E+11	6.73561E+14	1.58661E-03	-2.79953E+00
4.00726E-01	4.20635E+11	7.76073E+14	1.40334E-03	-2.85284E+00
4.10744E-01	4.20635E+11	9.07351E+14	1.22291E-03	-2.91254E+00
4.20762E-01	4.20635E+11	1.05982E+15	1.06599E-03	-2.97225E+00
4.30780E-01	4.23815E+11	1.20568E+15	9.53650E-04	-3.02061E+00
4.40798E-01	4.23815E+11	1.35547E+15	8.63050E-04	-3.06396E+00
4.50816E-01	4.25898E+11	1.48852E+15	7.99374E-04	-3.09725E+00
4.60834E-01	4.23815E+11	1.60358E+15	7.54518E-04	-3.12233E+00
4.70853E-01	4.23815E+11	1.70220E+15	7.22517E-04	-3.14115E+00
4.80871E-01	4.19429E+11	1.77927E+15	7.02290E-04	-3.15348E+00
4.90889E-01	4.12961E+11	1.83888E+15	6.90233E-04	-3.16100E+00
5.00907E-01	4.07852E+11	1.87905E+15	6.85958E-04	-3.16370E+00
5.10925E-01	3.90375E+11	1.91395E+15	6.83739E-04	-3.16511E+00
5.20943E-01	3.82371E+11	1.94490E+15	6.82930E-04	-3.16552E+00
5.30961E-01	3.85550E+11	1.97525E+15	6.81836E-04	-3.16632E+00
5.40979E-01	3.93609E+11	2.00593E+15	6.80664E-04	-3.16707E+00
5.50998E-01	3.98324E+11	2.03799E+15	6.79066E-04	-3.16809E+00
5.61016E-01	4.01503E+11	2.06993E+15	6.77557E-04	-3.16905E+00
5.71034E-01	4.01503E+11	2.09951E+15	6.76854E-04	-3.16951E+00
5.81052E-01	3.98324E+11	2.12706E+15	6.76579E-04	-3.16968E+00
5.91070E-01	3.98324E+11	2.15149E+15	6.77266E-04	-3.16924E+00
6.01088E-01	3.95144E+11	2.17242E+15	6.79033E-04	-3.16811E+00
6.11106E-01	3.82371E+11	2.18923E+15	6.82043E-04	-3.16619E+00
6.21125E-01	3.56879E+11	2.20495E+15	6.85350E-04	-3.16409E+00
6.31143E-01	3.53700E+11	2.22086E+15	6.88393E-04	-3.16216E+00
6.41161E-01	3.61375E+11	2.23757E+15	6.91085E-04	-3.16047E+00
6.51179E-01	3.74257E+11	2.25485E+15	6.93561E-04	-3.15892E+00
6.61197E-01	3.88785E+11	2.27306E+15	6.95715E-04	-3.15757E+00
6.71215E-01	3.90375E+11	2.29079E+15	6.97979E-04	-3.15616E+00
6.81233E-01	3.91964E+11	2.30864E+15	7.00124E-04	-3.15483E+00
6.91252E-01	3.93609E+11	2.32478E+15	7.02707E-04	-3.15323E+00
7.01270E-01	3.95144E+11	2.33935E+15	7.05727E-04	-3.15136E+00
7.11288E-01	3.91964E+11	2.35100E+15	7.09588E-04	-3.14999E+00
7.21306E-01	3.85550E+11	2.36112E+15	7.13874E-04	-3.14638E+00
7.31324E-01	3.66473E+11	2.37240E+15	7.17750E-04	-3.14403E+00
7.41342E-01	3.69653E+11	2.38509E+15	7.21109E-04	-3.14200E+00
7.51360E-01	3.82371E+11	2.39800E+15	7.24368E-04	-3.14004E+00
7.61379E-01	3.95144E+11	2.41205E+15	7.27246E-04	-3.13832E+00
7.71397E-01	4.04683E+11	2.42611E+15	7.30090E-04	-3.13662E+00
7.81415E-01	4.11042E+11	2.44000E+15	7.32906E-04	-3.13495E+00
7.91433E-01	4.11042E+11	2.45373E+15	7.35482E-04	-3.13343E+00

TABLE 4 (continued)

SHOT 4-12

150 POINTS

218

TIME(MICROSEC)	COEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
8.01451E-01	4.11342E+11	2.46531E+15	7.39371E-04	-3.13173E+00
8.11469E-01	4.11042E+11	2.47690E+15	7.41925E-04	-3.12970E+00
8.21487E-01	4.07962E+11	2.49499E+15	7.46001E-04	-3.12726E+00
8.31506E-01	3.36943E+11	2.49461E+15	7.49690E-04	-3.12512E+00
8.41524E-01	3.97143E+11	2.50558E+15	7.52655E-04	-3.12340E+00
8.51542E-01	3.93609E+11	2.51705E+15	7.55428E-04	-3.12181E+00
8.61560E-01	4.06547E+11	2.52927E+15	7.57952E-04	-3.12036E+00
8.71578E-01	4.17455E+11	2.54167E+15	7.60397E-04	-3.11996E+00
8.81596E-01	4.23915E+11	2.55430E+15	7.62750E-04	-3.11762E+00
8.91614E-01	4.26994E+11	2.56701E+15	7.64854E-04	-3.11642E+00
9.01632E-01	4.36174E+11	2.57856E+15	7.67221E-04	-3.11509E+00
9.11651E-01	4.30174E+11	2.58931E+15	7.69804E-04	-3.11362E+00
9.21669E-01	4.26994E+11	2.59765E+15	7.73081E-04	-3.11178E+00
9.31687E-01	4.26994E+11	2.60598E+15	7.76341E-04	-3.10995E+00
9.41705E-01	4.17455E+11	2.61561E+15	7.79343E-04	-3.10927E+00
9.51723E-01	4.11042E+11	2.62540E+15	7.82087E-04	-3.10674E+00
9.61741E-01	4.17455E+11	2.63776E+15	7.84642E-04	-3.10533E+00
9.71759E-01	4.30174E+11	2.64931E+15	7.87117E-04	-3.10396E+00
9.81778E-01	4.36533E+11	2.66102E+15	7.89523E-04	-3.10264E+00
9.91796E-01	4.45250E+11	2.67290E+15	7.91897E-04	-3.10134E+00
1.00181E+00	4.48429E+11	2.68395E+15	7.94519E-04	-3.09990E+00
1.01193E+00	4.49305E+11	2.69429E+15	7.97339E-04	-3.09836E+00
1.02195E+00	4.49306E+11	2.70295E+15	8.00637E-04	-3.09656E+00
1.03197E+00	4.48429E+11	2.71108E+15	8.04069E-04	-3.09471E+00
1.04189E+00	4.39713E+11	2.71991E+15	8.07225E-04	-3.09301E+00
1.05190E+00	4.30174E+11	2.72986E+15	8.09806E-04	-3.09162E+00
1.06192E+00	4.32312E+11	2.74038E+15	8.12201E-04	-3.09034E+00
1.07194E+00	4.39713E+11	2.75135E+15	8.14442E-04	-3.08914E+00
1.08196E+00	4.49305E+11	2.76271E+15	8.16553E-04	-3.08802E+00
1.09198E+00	4.55665E+11	2.77399E+15	8.18668E-04	-3.08689E+00
1.10200E+00	4.62025E+11	2.78543E+15	8.21028E-04	-3.08564E+00
1.11201E+00	4.62025E+11	2.79611E+15	8.23590E-04	-3.08429E+00
1.12203E+00	4.62025E+11	2.80495E+15	8.26677E-04	-3.08266E+00
1.13205E+00	4.55204E+11	2.81294E+15	8.29994E-04	-3.08093E+00
1.14207E+00	4.58945E+11	2.82190E+15	8.33036E-04	-3.07934E+00
1.15209E+00	4.52486E+11	2.83129E+15	8.36146E-04	-3.07772E+00
1.16210E+00	4.49306E+11	2.84208E+15	8.38913E-04	-3.07628E+00
1.17212E+00	4.52486E+11	2.85260E+15	8.41740E-04	-3.07482E+00
1.18214E+00	4.58945E+11	2.86368E+15	8.44378E-04	-3.07346E+00
1.19216E+00	4.71015E+11	2.87519E+15	8.46971E-04	-3.07218E+00
1.20218E+00	4.71618E+11	2.88511E+15	8.49474E-04	-3.07085E+00
1.21219E+00	4.77977E+11	2.89691E+15	8.52061E-04	-3.06953E+00
1.22221E+00	4.77484E+11	2.90678E+15	8.54902E-04	-3.06808E+00
1.23223E+00	4.74798E+11	2.91517E+15	8.58160E-04	-3.06643E+00
1.24225E+00	4.74798E+11	2.92340E+15	8.61446E-04	-3.06477E+00
1.25227E+00	4.74243E+11	2.93265E+15	8.64467E-04	-3.06325E+00
1.26229E+00	4.57791E+11	2.94252E+15	8.67364E-04	-3.06180E+00
1.27230E+00	4.55204E+11	2.95281E+15	8.70118E-04	-3.06042E+00
1.28232E+00	4.58384E+11	2.96371E+15	8.72671E-04	-3.05915E+00
1.29234E+00	4.74798E+11	2.97420E+15	8.75326E-04	-3.05783E+00
1.30236E+00	4.81157E+11	2.98551E+15	8.77713E-04	-3.05655E+00
1.31238E+00	4.81157E+11	2.99571E+15	8.80373E-04	-3.05533E+00
1.32239E+00	4.87515E+11	3.00549E+15	8.83142E-04	-3.05397E+00
1.33241E+00	4.87515E+11	3.01430E+15	8.86175E-04	-3.05249E+00
1.34243E+00	4.84335E+11	3.02232E+15	8.89422E-04	-3.05089E+00
1.35245E+00	4.87187E+11	3.03133E+15	8.92370E-04	-3.04946E+00
1.36247E+00	4.77977E+11	3.04114E+15	8.95271E-04	-3.04805E+00
1.37249E+00	4.74798E+11	3.05108E+15	8.98113E-04	-3.04667E+00
1.38250E+00	4.77484E+11	3.06138E+15	9.00831E-04	-3.04536E+00
1.39252E+00	4.77977E+11	3.07225E+15	9.03364E-04	-3.04414E+00
1.40254E+00	4.87187E+11	3.08320E+15	9.05857E-04	-3.04294E+00
1.41256E+00	4.87515E+11	3.09377E+15	9.08592E-04	-3.04163E+00
1.42258E+00	4.80639E+11	3.10324E+15	9.11656E-04	-3.04017E+00
1.43259E+00	4.93875E+11	3.11117E+15	9.15156E-04	-3.03950E+00
1.44261E+00	4.93601E+11	3.11987E+15	9.18706E-04	-3.03692E+00
1.45263E+00	4.37055E+11	3.12757E+15	9.21943E-04	-3.03530E+00
1.46265E+00	4.80639E+11	3.13638E+15	9.25165E-04	-3.03378E+00
1.47267E+00	4.84335E+11	3.14583E+15	9.28201E-04	-3.03236E+00
1.48268E+00	4.81157E+11	3.15501E+15	9.31296E-04	-3.03091E+00
1.49270E+00	4.81157E+11	3.16376E+15	9.34498E-04	-3.02942E+00

EOF

TABLE 4 (continued)

SHOT 4-14

150 POINTS

219

TIME(MICROSEC)	CJEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
0.	2.93640E+11	8.91947E+13	0.	-3.48259E+00
1.00181E-02	2.90333E+11	9.47579E+13	3.29162E-04	-3.48259E+00
2.00363E-02	2.93617E+11	1.00433E+14	6.21126E-04	-3.20682E+00
3.00544E-02	3.06555E+11	1.06208E+14	9.91024E-04	-3.05501E+00
4.00726E-02	3.21849E+11	1.12063E+14	1.11333E-03	-2.95338E+00
5.00907E-02	3.32320E+11	1.16389E+14	1.33993E-03	-2.87292E+00
6.01089E-02	3.42023E+11	1.21713E+14	1.53758E-03	-2.81316E+00
7.01270E-02	3.47341E+11	1.27191E+14	1.71659E-03	-2.76533E+00
8.01451E-02	3.54905E+11	1.34688E+14	1.95262E-03	-2.73221E+00
9.01632E-02	3.61375E+11	1.44281E+14	1.94563E-03	-2.71094E+00
1.00181E-01	3.67799E+11	1.53084E+14	2.03749E-03	-2.69090E+00
1.10200E-01	3.72932E+11	1.62017E+14	2.12957E-03	-2.67171E+00
1.20218E-01	3.77492E+11	1.69972E+14	2.23177E-03	-2.65135E+00
1.30236E-01	3.95550E+11	1.77064E+14	2.33615E-03	-2.63150E+00
1.40254E-01	3.95144E+11	1.84259E+14	2.43114E-03	-2.61419E+00
1.50272E-01	4.06547E+11	1.92498E+14	2.50531E-03	-2.60114E+00
1.60290E-01	4.17455E+11	2.00909E+14	2.59319E-03	-2.58617E+00
1.70309E-01	4.26994E+11	2.11709E+14	2.67170E-03	-2.57321E+00
1.80326E-01	4.35546E+11	2.24761E+14	2.71510E-03	-2.56621E+00
1.90345E-01	4.42015E+11	2.40378E+14	2.72437E-03	-2.56473E+00
2.00363E-01	4.42947E+11	2.58587E+14	2.70510E-03	-2.56782E+00
2.10381E-01	4.51664E+11	2.77455E+14	2.68575E-03	-2.57093E+00
2.20399E-01	4.58132E+11	2.98321E+14	2.66224E-03	-2.57475E+00
2.30417E-01	4.58845E+11	3.20481E+14	2.63112E-03	-2.57936E+00
2.40435E-01	4.58384E+11	3.43950E+14	2.59413E-03	-2.59601E+00
2.50453E-01	4.80719E+11	3.69763E+14	2.54562E-03	-2.59421E+00
2.60472E-01	4.84335E+11	3.99610E+14	2.47778E-03	-2.60594E+00
2.70490E-01	4.96935E+11	4.34236E+14	2.39549E-03	-2.62242E+00
2.80508E-01	5.06648E+11	4.73828E+14	2.28266E-03	-2.64156E+00
2.90526E-01	5.09718E+11	5.22697E+14	2.15671E-03	-2.66621E+00
3.00544E-01	5.16187E+11	5.82451E+14	2.01395E-03	-2.69595E+00
3.10562E-01	5.19257E+11	6.61733E+14	1.84175E-03	-2.73477E+00
3.20580E-01	5.22327E+11	7.44226E+14	1.69479E-03	-2.77088E+00
3.30599E-01	5.22382E+11	8.96160E+14	1.44634E-03	-2.83973E+00
3.40617E-01	5.31537E+11	1.12569E+15	1.18532E-03	-2.92616E+00
3.50635E-01	5.31537E+11	1.34950E+15	1.01701E-03	-2.99267E+00
3.60653E-01	5.34607E+11	1.57012E+15	8.98416E-04	-3.04652E+00
3.70671E-01	5.43815E+11	1.75119E+15	8.24433E-04	-3.09384E+00
3.80689E-01	5.37951E+11	1.89194E+15	7.79267E-04	-3.10831E+00
3.90707E-01	5.43815E+11	2.02073E+15	7.44740E-04	-3.12800E+00
4.00726E-01	5.43815E+11	2.13014E+15	7.20950E-04	-3.14216E+00
4.10744E-01	5.40746E+11	2.22694E+15	7.03250E-04	-3.15289E+00
4.20762E-01	5.37457E+11	2.30515E+15	6.91405E-04	-3.16027E+00
4.30780E-01	5.31537E+11	2.37344E+15	6.82734E-04	-3.16575E+00
4.40798E-01	5.40746E+11	2.44286E+15	6.79518E-04	-3.16790E+00
4.50816E-01	5.49955E+11	2.46634E+15	6.74058E-04	-3.16887E+00
4.60834E-01	5.53026E+11	2.51370E+15	6.75607E-04	-3.17031E+00
4.70853E-01	5.62235E+11	2.56094E+15	6.73013E-04	-3.17198E+00
4.80871E-01	5.64758E+11	2.60823E+15	6.69956E-04	-3.17402E+00
4.90889E-01	5.62839E+11	2.65329E+15	6.67370E-04	-3.17563E+00
5.00907E-01	5.55361E+11	2.69771E+15	6.65127E-04	-3.17710E+00
5.10925E-01	5.59714E+11	2.73829E+15	6.63884E-04	-3.17791E+00
5.20943E-01	5.59165E+11	2.77482E+15	6.63602E-04	-3.17809E+00
5.30961E-01	5.49955E+11	2.80847E+15	6.63592E-04	-3.17910E+00
5.40979E-01	5.37675E+11	2.83539E+15	6.65156E-04	-3.17708E+00
5.50998E-01	5.53026E+11	2.89927E+15	6.67398E-04	-3.17562E+00
5.61016E-01	5.68375E+11	2.88694E+15	6.68724E-04	-3.17475E+00
5.71034E-01	5.83780E+11	2.91675E+15	6.69534E-04	-3.17423E+00
5.81052E-01	5.89920E+11	2.94898E+15	6.69360E-04	-3.17434E+00
5.91070E-01	5.99130E+11	2.98184E+15	6.69004E-04	-3.17457E+00
6.01088E-01	6.02200E+11	3.01372E+15	6.68872E-04	-3.17466E+00
6.11106E-01	6.02200E+11	3.04443E+15	6.68999E-04	-3.17457E+00
6.21125E-01	5.99130E+11	3.07384E+15	6.69409E-04	-3.17431E+00
6.31143E-01	5.99130E+11	3.10029E+15	6.70245E-04	-3.17377E+00
6.41161E-01	5.90797E+11	3.12381E+15	6.71616E-04	-3.17288E+00
6.51179E-01	5.86850E+11	3.14274E+15	6.73948E-04	-3.17137E+00
6.61197E-01	6.03241E+11	3.16302E+15	6.75964E-04	-3.17008E+00
6.71215E-01	6.23689E+11	3.18778E+15	6.77001E-04	-3.16941E+00
6.81233E-01	6.35963E+11	3.21623E+15	6.77159E-04	-3.16931E+00
6.91252E-01	6.45179E+11	3.24521E+15	6.77128E-04	-3.16933E+00
7.01270E-01	6.51319E+11	3.27315E+15	6.77310E-04	-3.16921E+00
7.11288E-01	6.54389E+11	3.30122E+15	6.77464E-04	-3.16911E+00
7.21306E-01	6.54389E+11	3.32797E+15	6.77883E-04	-3.16885E+00
7.31324E-01	6.54389E+11	3.35496E+15	6.78188E-04	-3.16865E+00
7.41342E-01	6.48249E+11	3.37698E+15	6.79369E-04	-3.16789E+00
7.51360E-01	6.45179E+11	3.39586E+15	6.81163E-04	-3.16675E+00
7.61379E-01	6.48249E+11	3.41457E+15	6.82971E-04	-3.16560E+00
7.71397E-01	6.66668E+11	3.43827E+15	6.83766E-04	-3.16509E+00
7.81415E-01	6.78948E+11	3.46573E+15	6.83794E-04	-3.16507E+00
7.91433E-01	6.91283E+11	3.49354E+15	6.83673E-04	-3.16515E+00

TABLE 4 (continued)

SHOT 4-14

150 POINTS

220

TIME(MICROSEC)	CDEN (A4P/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
9.01451E-01	5.94353E+11	3.52261E+15	6.83308E-04	-3.16533E+00
9.11469E-01	7.00492E+11	3.55113E+15	6.83059E-04	-3.16554E+00
9.21487E-01	7.06632E+11	3.57907E+15	6.83112E-04	-3.16551E+00
9.31506E-01	7.00492E+11	3.60342E+15	6.83465E-04	-3.16529E+00
9.41524E-01	7.03562E+11	3.62878E+15	6.83718E-04	-3.16512E+00
9.51542E-01	7.00492E+11	3.65067E+15	6.84611E-04	-3.16456E+00
9.61560E-01	6.94353E+11	3.67012E+15	6.85950E-04	-3.16371E+00
9.71579E-01	7.03562E+11	3.69128E+15	6.86955E-04	-3.16307E+00
9.81596E-01	7.18912E+11	3.71592E+15	6.87305E-04	-3.16285E+00
9.91614E-01	7.28122E+11	3.74341E+15	6.87038E-04	-3.16302E+00
9.01632E-01	7.4002E+11	3.77135E+15	6.86666E-04	-3.16325E+00
9.11651E-01	7.46541E+11	3.79950E+15	6.86259E-04	-3.16351E+00
9.21669E-01	7.49611E+11	3.82798E+15	6.85819E-04	-3.16379E+00
9.31687E-01	7.52691E+11	3.85468E+15	6.85666E-04	-3.16399E+00
9.41705E-01	7.52691E+11	3.88148E+15	6.85477E-04	-3.16401E+00
9.51723E-01	7.49611E+11	3.90404E+15	6.86008E-04	-3.16367E+00
9.61741E-01	7.43099E+11	3.92540E+15	6.86742E-04	-3.16321E+00
9.71759E-01	7.46541E+11	3.94434E+15	6.87890E-04	-3.16248E+00
9.81779E-01	7.52691E+11	3.96731E+15	6.88328E-04	-3.16220E+00
9.91796E-01	7.54961E+11	3.99422E+15	6.88095E-04	-3.16235E+00
1.00181E+00	7.77241E+11	4.02325E+15	6.87523E-04	-3.16271E+00
1.01183E+00	7.83391E+11	4.05166E+15	6.87066E-04	-3.16300E+00
1.02185E+00	7.89520E+11	4.07927E+15	6.86749E-04	-3.16320E+00
1.03187E+00	7.95660E+11	4.10709E+15	6.86402E-04	-3.16342E+00
1.04189E+00	7.95660E+11	4.13514E+15	6.86032E-04	-3.16366E+00
1.05190E+00	7.95563E+11	4.15945E+15	6.86322E-04	-3.16347E+00
1.06192E+00	7.92593E+11	4.18116E+15	6.87036E-04	-3.16302E+00
1.07194E+00	7.99520E+11	4.20343E+15	6.87652E-04	-3.16253E+00
1.08195E+00	7.96453E+11	4.22561E+15	6.88274E-04	-3.16224E+00
1.09195E+00	7.99730E+11	4.25159E+15	6.88276E-04	-3.16224E+00
1.10200E+00	8.07940E+11	4.27740E+15	6.88371E-04	-3.16219E+00
1.11201E+00	8.13641E+11	4.30617E+15	6.87992E-04	-3.16242E+00
1.12203E+00	8.19725E+11	4.33423E+15	6.87731E-04	-3.16258E+00
1.13205E+00	8.25757E+11	4.36320E+15	6.87329E-04	-3.16294E+00
1.14207E+00	8.32554E+11	4.39136E+15	6.87060E-04	-3.16301E+00
1.15209E+00	8.32554E+11	4.41952E+15	6.86730E-04	-3.16321E+00
1.16210E+00	8.29494E+11	4.44262E+15	6.87170E-04	-3.16294E+00
1.17212E+00	8.26360E+11	4.46368E+15	6.87919E-04	-3.16246E+00
1.18214E+00	8.23290E+11	4.48670E+15	6.88628E-04	-3.16219E+00
1.19216E+00	8.26360E+11	4.50988E+15	6.88775E-04	-3.16192E+00
1.20218E+00	8.38694E+11	4.53515E+15	6.88958E-04	-3.16197E+00
1.21219E+00	8.44834E+11	4.56391E+15	6.88423E-04	-3.16214E+00
1.22221E+00	8.54044E+11	4.59459E+15	6.87676E-04	-3.16262E+00
1.23223E+00	8.57114E+11	4.62331E+15	6.87244E-04	-3.16299E+00
1.24225E+00	8.60184E+11	4.65237E+15	6.86768E-04	-3.16319E+00
1.25227E+00	8.56194E+11	4.68029E+15	6.86530E-04	-3.16334E+00
1.26229E+00	8.60184E+11	4.70412E+15	6.86971E-04	-3.16306E+00
1.27230E+00	8.57114E+11	4.72589E+15	6.87710E-04	-3.16259E+00
1.28232E+00	8.53112E+11	4.74759E+15	6.88452E-04	-3.16213E+00
1.29234E+00	8.54044E+11	4.77453E+15	6.88431E-04	-3.16214E+00
1.30236E+00	8.50194E+11	4.80037E+15	6.88563E-04	-3.16206E+00
1.31238E+00	8.55227E+11	4.83048E+15	6.88065E-04	-3.16237E+00
1.32239E+00	8.75533E+11	4.85868E+15	6.87844E-04	-3.16251E+00
1.33241E+00	8.81673E+11	4.88492E+15	6.87901E-04	-3.16247E+00
1.34243E+00	8.77397E+11	4.91458E+15	6.87479E-04	-3.16274E+00
1.35245E+00	8.87813E+11	4.94105E+15	6.87502E-04	-3.16273E+00
1.36247E+00	8.97813E+11	4.96670E+15	6.87543E-04	-3.16270E+00
1.37249E+00	8.94743E+11	4.98915E+15	6.88024E-04	-3.16240E+00
1.38250E+00	8.81673E+11	5.01146E+15	6.88522E-04	-3.16209E+00
1.39252E+00	8.78603E+11	5.03693E+15	6.88591E-04	-3.16204E+00
1.40254E+00	8.81673E+11	5.06119E+15	6.88806E-04	-3.16190E+00
1.41256E+00	8.84743E+11	5.08957E+15	6.88337E-04	-3.16220E+00
1.42258E+00	8.93953E+11	5.11550E+15	6.88211E-04	-3.16229E+00
1.43259E+00	8.97023E+11	5.14431E+15	6.87696E-04	-3.16261E+00
1.44261E+00	8.99513E+11	5.17328E+15	6.87147E-04	-3.16295E+00
1.45263E+00	9.06233E+11	5.20029E+15	6.86973E-04	-3.16312E+00
1.46265E+00	9.06233E+11	5.22520E+15	6.86904E-04	-3.16317E+00
1.47267E+00	9.04699E+11	5.25202E+15	6.86451E-04	-3.16339E+00
1.48269E+00	9.09303E+11	5.27406E+15	6.86724E-04	-3.16322E+00
1.49270E+00	9.03163E+11	5.29973E+15	6.86654E-04	-3.16326E+00

EOF

TABLE 4 (continued)

SHOT 4-16

150 POINTS

222

TIME(MICROSEC)	COEN (AMP/M2)	E0EN(ERGS/M2)	ENERGY RATIO (E0/EI)	LOG 10 E0/EI
8.01451E-01	9.49485E+11	4.30291E+15	1.03984E-03	-2.99303E+00
8.11469E-01	9.49485E+11	4.34182E+15	1.03904E-03	-2.99379E+00
8.21487E-01	9.32820E+11	4.37774E+15	1.03699E-03	-2.99423E+00
8.31506E-01	9.32820E+11	4.41230E+15	1.03627E-03	-2.99453E+00
8.41524E-01	9.32820E+11	4.44193E+15	1.03608E-03	-2.99461E+00
8.51542E-01	9.49485E+11	4.46949E+15	1.03634E-03	-2.99450E+00
8.61560E-01	9.66151E+11	4.49205E+15	1.03775E-03	-2.98391E+00
8.71578E-01	9.82815E+11	4.52168E+15	1.03752E-03	-2.99400E+00
8.81596E-01	9.99482E+11	4.55524E+15	1.03618E-03	-2.99456E+00
8.91614E-01	1.01515E+12	4.59635E+15	1.03333E-03	-2.98576E+00
9.01632E-01	1.01965E+12	4.63714E+15	1.03030E-03	-2.99704E+00
9.11651E-01	1.03281E+12	4.67953E+15	1.02720E-03	-2.99334E+00
9.21669E-01	1.04948E+12	4.71781E+15	1.02460E-03	-2.99946E+00
9.31687E-01	1.01965E+12	4.75452E+15	1.02260E-03	-2.99029E+00
9.41705E-01	1.01615E+12	4.78958E+15	1.02126E-03	-2.99086E+00
9.51723E-01	1.01615E+12	4.81961E+15	1.02061E-03	-2.99114E+00
9.61741E-01	1.01615E+12	4.84581E+15	1.02098E-03	-2.99098E+00
9.71759E-01	1.04948E+12	4.87638E+15	1.02044E-03	-2.99121E+00
9.81778E-01	1.06614E+12	4.91043E+15	1.01918E-03	-2.99175E+00
9.91796E-01	1.08281E+12	4.94761E+15	1.01723E-03	-2.99258E+00
1.00181E+00	1.06614E+12	4.98751E+15	1.01464E-03	-2.99369E+00
1.01183E+00	1.09947E+12	5.02792E+15	1.01199E-03	-2.99432E+00
1.02185E+00	1.09947E+12	5.06889E+15	1.00928E-03	-2.99599E+00
1.03187E+00	1.09947E+12	5.10869E+15	1.00683E-03	-2.99704E+00
1.04189E+00	1.11614E+12	5.14365E+15	1.00532E-03	-2.99770E+00
1.05190E+00	1.11614E+12	5.17591E+15	1.00414E-03	-2.99821E+00
1.06192E+00	1.09947E+12	5.20594E+15	1.00340E-03	-2.99853E+00
1.07194E+00	1.09947E+12	5.23364E+15	1.00312E-03	-2.99865E+00
1.08196E+00	1.11614E+12	5.26541E+15	1.00187E-03	-2.99919E+00
1.09198E+00	1.13500E+12	5.30415E+15	9.99701E-04	-3.00013E+00
1.10200E+00	1.15165E+12	5.34571E+15	9.96675E-04	-3.00145E+00
1.11201E+00	1.16614E+12	5.38727E+15	9.93694E-04	-3.00275E+00
1.12203E+00	1.16789E+12	5.42547E+15	9.91371E-04	-3.00376E+00
1.13205E+00	1.16614E+12	5.46581E+15	9.89696E-04	-3.00494E+00
1.14207E+00	1.15155E+12	5.50219E+15	9.86768E-04	-3.00578E+00
1.15209E+00	1.16614E+12	5.53532E+15	9.85125E-04	-3.00651E+00
1.16210E+00	1.16789E+12	5.56801E+15	9.83901E-04	-3.00709E+00
1.17212E+00	1.16614E+12	5.59683E+15	9.83194E-04	-3.00736E+00
1.18214E+00	1.18280E+12	5.63040E+15	9.81665E-04	-3.00800E+00
1.19216E+00	1.18455E+12	5.66738E+15	9.79566E-04	-3.00897E+00
1.20218E+00	1.19947E+12	5.70484E+15	9.77300E-04	-3.00997E+00
1.21219E+00	1.21613E+12	5.74568E+15	9.74419E-04	-3.01125E+00
1.22221E+00	1.21513E+12	5.78653E+15	9.71579E-04	-3.01252E+00
1.23223E+00	1.23280E+12	5.82960E+15	9.68410E-04	-3.01394E+00
1.24225E+00	1.23280E+12	5.86754E+15	9.66129E-04	-3.01496E+00
1.25227E+00	1.21613E+12	5.90549E+15	9.63867E-04	-3.01598E+00
1.26229E+00	1.23280E+12	5.93837E+15	9.62439E-04	-3.01663E+00
1.27230E+00	1.21613E+12	5.96707E+15	9.61700E-04	-3.01696E+00
1.28232E+00	1.20078E+12	5.99663E+15	9.60831E-04	-3.01735E+00
1.29234E+00	1.23367E+12	6.03107E+15	9.59194E-04	-3.01809E+00
1.30236E+00	1.23367E+12	6.06949E+15	9.56922E-04	-3.01912E+00
1.31238E+00	1.25034E+12	6.10969E+15	9.54323E-04	-3.02030E+00
1.32239E+00	1.28323E+12	6.15087E+15	9.51607E-04	-3.02154E+00
1.33241E+00	1.28323E+12	6.19023E+15	9.49206E-04	-3.02264E+00
1.34243E+00	1.26657E+12	6.23006E+15	9.46763E-04	-3.02376E+00
1.35245E+00	1.28323E+12	6.26681E+15	9.44809E-04	-3.02466E+00
1.36247E+00	1.28279E+12	6.30009E+15	9.43270E-04	-3.02536E+00
1.37249E+00	1.28279E+12	6.33073E+15	9.42141E-04	-3.02588E+00
1.38250E+00	1.28279E+12	6.36013E+15	9.41206E-04	-3.02632E+00
1.39252E+00	1.26613E+12	6.39247E+15	9.39847E-04	-3.02694E+00
1.40254E+00	1.28279E+12	6.43068E+15	9.37645E-04	-3.02796E+00
1.41256E+00	1.29945E+12	6.47196E+15	9.35022E-04	-3.02918E+00
1.42258E+00	1.29945E+12	6.50861E+15	9.33063E-04	-3.03009E+00
1.43259E+00	1.31568E+12	6.54580E+15	9.31065E-04	-3.03102E+00
1.44261E+00	1.29945E+12	6.58611E+15	9.28647E-04	-3.03215E+00
1.45263E+00	1.29945E+12	6.62330E+15	9.26697E-04	-3.03306E+00
1.46265E+00	1.33147E+12	6.65941E+15	9.24910E-04	-3.03390E+00
1.47267E+00	1.31568E+12	6.69042E+15	9.23842E-04	-3.03440E+00
1.48268E+00	1.31568E+12	6.72449E+15	9.22365E-04	-3.03510E+00
1.49270E+00	1.31568E+12	6.75549E+15	9.21322E-04	-3.03559E+00

EOF

TABLE 4 (continued)

SHOT 4-19

150 POINTS

223

TIME(MICROSEC)	CDEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
0.	2.49542E+11	9.63141E+13	0.	-2.59637E+00
1.00181E-02	2.66207E+11	1.05406E+14	2.53297E-03	-2.59637E+00
2.00363E-02	2.82972E+11	1.11457E+14	4.79063E-03	-2.31961E+00
3.00544E-02	3.03435E+11	1.17963E+14	6.78960E-03	-2.16916E+00
4.00726E-02	3.16203E+11	1.23381E+14	9.65529E-03	-2.06272E+00
5.00907E-02	3.16243E+11	1.27843E+14	1.04415E-02	-1.98124E+00
5.01089E-02	3.16203E+11	1.34574E+14	1.19031E-02	-1.92434E+00
7.01270E-02	3.32869E+11	1.42832E+14	1.30940E-02	-1.89326E+00
8.01451E-02	3.32869E+11	1.59374E+14	1.34012E-02	-1.87286E+00
9.01632E-02	3.71023E+11	1.78449E+14	1.34647E-02	-1.87090E+00
1.00181E-01	3.82964E+11	1.97773E+14	1.34990E-02	-1.86970E+00
1.10200E-01	4.16195E+11	2.21333E+14	1.28114E-02	-1.89240E+00
1.20219E-01	4.32960E+11	2.48270E+14	1.18386E-02	-1.92670E+00
1.30236E-01	4.49525E+11	2.77995E+14	1.09493E-02	-1.96061E+00
1.40254E-01	4.49525E+11	3.13430E+14	1.00393E-02	-1.99934E+00
1.50272E-01	4.82955E+11	3.53570E+14	9.19165E-03	-2.03661E+00
1.60290E-01	4.82955E+11	4.09012E+14	8.19624E-03	-2.09692E+00
1.70308E-01	4.82955E+11	4.73458E+14	7.26514E-03	-2.13976E+00
1.80326E-01	4.99522E+11	5.50109E+14	6.41909E-03	-2.19253E+00
1.90345E-01	5.09509E+11	6.95798E+14	5.20649E-03	-2.29345E+00
2.00363E-01	5.26274E+11	9.11208E+14	4.07604E-03	-2.39976E+00
2.10381E-01	5.49518E+11	1.20366E+15	3.15924E-03	-2.50042E+00
2.20399E-01	5.73638E+11	1.51406E+15	2.56377E-03	-2.59112E+00
2.30417E-01	5.82948E+11	1.77189E+15	2.23535E-03	-2.65055E+00
2.40435E-01	5.99514E+11	1.97073E+15	2.04993E-03	-2.69926E+00
2.50453E-01	5.99514E+11	2.11656E+15	1.94606E-03	-2.71084E+00
2.60472E-01	6.16179E+11	2.23989E+15	1.87399E-03	-2.72723E+00
2.70490E-01	6.32844E+11	2.34524E+15	1.81924E-03	-2.74011E+00
2.80508E-01	6.16179E+11	2.44006E+15	1.77641E-03	-2.75046E+00
2.90526E-01	6.32844E+11	2.51914E+15	1.74845E-03	-2.75735E+00
3.00544E-01	6.32844E+11	2.58528E+15	1.73041E-03	-2.76195E+00
3.10562E-01	6.49510E+11	2.64464E+15	1.71767E-03	-2.76506E+00
3.20580E-01	6.49510E+11	2.70769E+15	1.70040E-03	-2.76945E+00
3.30599E-01	6.49510E+11	2.77379E+15	1.68161E-03	-2.77427E+00
3.40617E-01	6.66175E+11	2.83944E+15	1.66453E-03	-2.77871E+00
3.50635E-01	6.99505E+11	2.90018E+15	1.64998E-03	-2.78255E+00
3.60653E-01	7.23627E+11	2.95515E+15	1.63958E-03	-2.78527E+00
3.70671E-01	7.16171E+11	3.00379E+15	1.63138E-03	-2.79744E+00
3.80699E-01	7.32936E+11	3.04577E+15	1.62614E-03	-2.79994E+00
3.90717E-01	7.40292E+11	3.08386E+15	1.62309E-03	-2.79966E+00
4.00726E-01	7.32936E+11	3.11631E+15	1.62305E-03	-2.79967E+00
4.10744E-01	7.49502E+11	3.14939E+15	1.62268E-03	-2.79977E+00
4.20762E-01	7.59599E+11	3.18906E+15	1.61901E-03	-2.79102E+00
4.30780E-01	7.32936E+11	3.23467E+15	1.60945E-03	-2.79332E+00
4.40798E-01	7.32873E+11	3.28287E+15	1.59987E-03	-2.79592E+00
4.50816E-01	7.56519E+11	3.32979E+15	1.59118E-03	-2.79828E+00
4.60834E-01	7.93358E+11	3.37373E+15	1.58412E-03	-2.80021E+00
4.70853E-01	7.99498E+11	3.41497E+15	1.57799E-03	-2.80191E+00
4.80871E-01	9.32829E+11	3.45250E+15	1.57221E-03	-2.80349E+00
4.90889E-01	9.43792E+11	3.49505E+15	1.56885E-03	-2.80442E+00
5.00907E-01	9.32829E+11	3.51387E+15	1.56721E-03	-2.80487E+00
5.10925E-01	8.49494E+11	3.54035E+15	1.56663E-03	-2.80503E+00
5.20943E-01	8.66159E+11	3.57124E+15	1.56397E-03	-2.80577E+00
5.30961E-01	8.49494E+11	3.61057E+15	1.55622E-03	-2.80793E+00
5.40979E-01	8.66159E+11	3.65394E+15	1.54693E-03	-2.81053E+00
5.50998E-01	9.82324E+11	3.69872E+15	1.53727E-03	-2.81325E+00
5.61016E-01	8.82824E+11	3.74422E+15	1.52755E-03	-2.81600E+00
5.71034E-01	9.32920E+11	3.79314E+15	1.52070E-03	-2.81796E+00
5.81052E-01	9.49485E+11	3.82206E+15	1.51299E-03	-2.82016E+00
5.91070E-01	9.49485E+11	3.85662E+15	1.50703E-03	-2.82188E+00
6.01088E-01	9.56151E+11	3.88587E+15	1.50323E-03	-2.82297E+00
6.11106E-01	9.82915E+11	3.91557E+15	1.49931E-03	-2.82411E+00
6.21125E-01	9.86763E+11	3.94231E+15	1.49658E-03	-2.82490E+00
6.31143E-01	9.66151E+11	3.98242E+15	1.48927E-03	-2.82732E+00
6.41161E-01	9.86763E+11	4.02441E+15	1.47920E-03	-2.82997E+00
6.51179E-01	9.82915E+11	4.06832E+15	1.46962E-03	-2.83279E+00
6.61197E-01	9.82915E+11	4.11157E+15	1.46049E-03	-2.83550E+00
6.71215E-01	9.99482E+11	4.15142E+15	1.45272E-03	-2.83782E+00
6.81233E-01	1.01615E+12	4.19126E+15	1.44490E-03	-2.84016E+00
6.91252E-01	1.04948E+12	4.22996E+15	1.43777E-03	-2.84231E+00
7.01270E-01	1.06614E+12	4.26084E+15	1.43271E-03	-2.84384E+00
7.11289E-01	1.08281E+12	4.29316E+15	1.42758E-03	-2.84540E+00
7.21306E-01	1.09291E+12	4.32049E+15	1.42418E-03	-2.84644E+00
7.31324E-01	1.09947E+12	4.35326E+15	1.41894E-03	-2.84804E+00
7.41342E-01	1.08544E+12	4.39696E+15	1.41009E-03	-2.85075E+00
7.51360E-01	1.10211E+12	4.43905E+15	1.40192E-03	-2.85328E+00
7.61379E-01	1.08281E+12	4.48456E+15	1.39284E-03	-2.85610E+00
7.71397E-01	1.11514E+12	4.52722E+15	1.38482E-03	-2.85961E+00
7.81415E-01	1.09947E+12	4.56807E+15	1.37743E-03	-2.86093E+00
7.91433E-01	1.14347E+12	4.60891E+15	1.36991E-03	-2.86334E+00

TABLE 4 (continued)

SHOT 4-19

150 POINTS

224

TIME (MICROSEC)	COEN (A4P/M2)	EOEN (ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
8.01451E-01	1.16614E+12	4.64639E+15	1.36332E-03	-2.86540E+00
8.11469E-01	1.18230E+12	4.67806E+15	1.35861E-03	-2.86691E+00
8.21487E-01	1.18280E+12	4.71055E+15	1.35372E-03	-2.86847E+00
8.31506E-01	1.19947E+12	4.74223E+15	1.34914E-03	-2.86994E+00
8.41524E-01	1.18230E+12	4.78065E+15	1.34249E-03	-2.87209E+00
8.51542E-01	1.19947E+12	4.82794E+15	1.33347E-03	-2.87502E+00
8.61560E-01	1.21613E+12	4.87638E+15	1.32432E-03	-2.87801E+00
8.71578E-01	1.21613E+12	4.92285E+15	1.31588E-03	-2.88078E+00
8.81596E-01	1.21613E+12	4.96933E+15	1.30759E-03	-2.88353E+00
8.91614E-01	1.24945E+12	5.01220E+15	1.30037E-03	-2.88593E+00
9.01632E-01	1.26613E+12	5.05297E+15	1.29330E-03	-2.88813E+00
9.11651E-01	1.26657E+12	5.08744E+15	1.28894E-03	-2.88977E+00
9.21669E-01	1.29946E+12	5.12191E+15	1.28413E-03	-2.89139E+00
9.31687E-01	1.29945E+12	5.15638E+15	1.27940E-03	-2.89299E+00
9.41705E-01	1.28323E+12	5.19715E+15	1.27310E-03	-2.89514E+00
9.51723E-01	1.28279E+12	5.24420E+15	1.26533E-03	-2.89780E+00
9.61741E-01	1.31568E+12	5.29180E+15	1.25756E-03	-2.90047E+00
9.71759E-01	1.28273E+12	5.34044E+15	1.24969E-03	-2.90320E+00
9.81778E-01	1.29945E+12	5.38722E+15	1.24239E-03	-2.90574E+00
9.91796E-01	1.31568E+12	5.43211E+15	1.23562E-03	-2.90812E+00
1.00181E+00	1.31568E+12	5.47432E+15	1.22952E-03	-2.91026E+00
1.01183E+00	1.34770E+12	5.51410E+15	1.22405E-03	-2.91220E+00
1.02185E+00	1.37971E+12	5.55055E+15	1.21939E-03	-2.91386E+00
1.03187E+00	1.37971E+12	5.58701E+15	1.21479E-03	-2.91550E+00
1.04189E+00	1.36393E+12	5.62522E+15	1.20987E-03	-2.91726E+00
1.05190E+00	1.39594E+12	5.66707E+15	1.20420E-03	-2.91930E+00
1.06192E+00	1.39594E+12	5.70937E+15	1.19853E-03	-2.92135E+00
1.07194E+00	1.39594E+12	5.75678E+15	1.19188E-03	-2.92377E+00
1.08196E+00	1.39594E+12	5.80418E+15	1.18534E-03	-2.92616E+00
1.09198E+00	1.39594E+12	5.84869E+15	1.17950E-03	-2.92830E+00
1.10200E+00	1.39682E+12	5.89319E+15	1.17368E-03	-2.93045E+00
1.11201E+00	1.41305E+12	5.93426E+15	1.16863E-03	-2.93232E+00
1.12203E+00	1.44374E+12	5.97230E+15	1.16425E-03	-2.93395E+00
1.13205E+00	1.42927E+12	6.00926E+15	1.16012E-03	-2.93550E+00
1.14207E+00	1.42795E+12	6.04657E+15	1.15598E-03	-2.93705E+00
1.15209E+00	1.44550E+12	6.08653E+15	1.15141E-03	-2.93877E+00
1.16210E+00	1.47620E+12	6.13113E+15	1.14603E-03	-2.94080E+00
1.17212E+00	1.47620E+12	6.17572E+15	1.14074E-03	-2.94281E+00
1.18214E+00	1.47620E+12	6.22463E+15	1.13473E-03	-2.94511E+00
1.19216E+00	1.45997E+12	6.27663E+15	1.12827E-03	-2.94759E+00
1.20218E+00	1.47620E+12	6.32302E+15	1.12285E-03	-2.94968E+00
1.21219E+00	1.49199E+12	6.36625E+15	1.11804E-03	-2.95154E+00
1.22221E+00	1.50821E+12	6.40587E+15	1.11392E-03	-2.95315E+00
1.23223E+00	1.50821E+12	6.44155E+15	1.11052E-03	-2.95447E+00
1.24225E+00	1.52400E+12	6.47966E+15	1.10675E-03	-2.95595E+00
1.25227E+00	1.52400E+12	6.51889E+15	1.10290E-03	-2.95746E+00
1.26229E+00	1.52400E+12	6.56212E+15	1.09851E-03	-2.95920E+00
1.27230E+00	1.54023E+12	6.60897E+15	1.09357E-03	-2.96115E+00
1.28232E+00	1.54023E+12	6.65492E+15	1.08886E-03	-2.96303E+00
1.29234E+00	1.51084E+12	6.70188E+15	1.08404E-03	-2.96495E+00
1.30236E+00	1.52707E+12	6.75102E+15	1.07913E-03	-2.96693E+00
1.31238E+00	1.52707E+12	6.79880E+15	1.07510E-03	-2.96855E+00
1.32239E+00	1.52707E+12	6.84163E+15	1.07191E-03	-2.96984E+00
1.33241E+00	1.55502E+12	6.88457E+15	1.06874E-03	-2.97113E+00
1.34243E+00	1.57224E+12	6.92498E+15	1.06600E-03	-2.97224E+00
1.35245E+00	1.58847E+12	6.96174E+15	1.06391E-03	-2.97310E+00
1.36247E+00	1.58847E+12	7.00551E+15	1.06219E-03	-2.97390E+00
1.37249E+00	1.60425E+12	7.05004E+15	1.06038E-03	-2.97454E+00
1.38250E+00	1.60425E+12	7.09458E+15	1.05860E-03	-2.97527E+00
1.39252E+00	1.58847E+12	7.14507E+15	1.05595E-03	-2.97636E+00
1.40254E+00	1.58847E+12	7.19605E+15	1.05327E-03	-2.97746E+00
1.41256E+00	1.58847E+12	7.24334E+15	1.05369E-03	-2.97729E+00
1.42258E+00	1.60426E+12	7.29064E+15	1.05453E-03	-2.97694E+00
1.43259E+00	1.60426E+12	7.33184E+15	1.05623E-03	-2.97624E+00
1.44261E+00	1.62048E+12	7.36968E+15	1.05840E-03	-2.97535E+00
1.45263E+00	1.50821E+12	7.40716E+15	1.06360E-03	-2.97445E+00
1.46265E+00	1.50821E+12	7.44836E+15	1.06602E-03	-2.97223E+00
1.47267E+00	1.63627E+12	7.49202E+15	1.07294E-03	-2.96942E+00
1.48268E+00	1.53627E+12	7.53742E+15	1.07952E-03	-2.96677E+00
1.49270E+00	1.54065E+12	7.58675E+15	1.08547E-03	-2.96438E+00

EOF

TABLE 4 (continued)

SHOT 6-7

150 POINTS

225

TIME (MICROSEC)	COEN (AMP/M2)	EDEN (ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
J.	4.22005E+11	8.98803E+13	0.	-3.21059E+00
1.00417E-02	4.30174E+11	9.48304E+13	6.15759E-04	-3.21059E+00
2.00835E-02	4.38397E+11	9.94711E+13	1.17406E-03	-2.93031E+00
3.01252E-02	4.46565E+11	1.04158E+14	1.68185E-03	-2.77421E+00
4.01669E-02	4.58845E+11	1.08528E+14	2.15217E-03	-2.66712E+00
5.02087E-02	4.62957E+11	1.12732E+14	2.58990E-03	-2.58672E+00
6.02504E-02	4.71125E+11	1.17271E+14	2.98756E-03	-2.52458E+00
7.02921E-02	4.79348E+11	1.21896E+14	3.35326E-03	-2.47453E+00
8.03338E-02	4.83404E+11	1.26288E+14	3.64134E-03	-2.43874E+00
9.03756E-02	4.87515E+11	1.35506E+14	3.87544E-03	-2.41158E+00
1.00417E-01	4.91627E+11	1.43879E+14	4.05844E-03	-2.39164E+00
1.10459E-01	4.95733E+11	1.51804E+14	4.14207E-03	-2.38278E+00
1.20501E-01	5.03907E+11	1.60218E+14	4.15765E-03	-2.38115E+00
1.30543E-01	5.08019E+11	1.68703E+14	4.16993E-03	-2.37997E+00
1.40584E-01	5.19970E+11	1.77686E+14	4.16932E-03	-2.37993E+00
1.50626E-01	5.27754E+11	1.87252E+14	4.15577E-03	-2.38135E+00
1.60668E-01	5.35423E+11	1.97774E+14	4.11137E-03	-2.38601E+00
1.70709E-01	5.43158E+11	2.08990E+14	4.04468E-03	-2.39312E+00
1.80751E-01	5.43158E+11	2.22196E+14	3.94910E-03	-2.40350E+00
1.90793E-01	5.46996E+11	2.37442E+14	3.83105E-03	-2.41658E+00
2.00835E-01	5.50833E+11	2.54783E+14	3.69659E-03	-2.43220E+00
2.10876E-01	5.54725E+11	2.72762E+14	3.56635E-03	-2.44778E+00
2.20918E-01	5.58563E+11	2.92332E+14	3.42284E-03	-2.46561E+00
2.30960E-01	5.65525E+11	3.14506E+14	3.27004E-03	-2.48545E+00
2.41002E-01	5.70130E+11	3.39311E+14	3.11304E-03	-2.50682E+00
2.51043E-01	5.78737E+11	3.68948E+14	2.93844E-03	-2.53188E+00
2.61085E-01	5.84493E+11	4.01356E+14	2.76982E-03	-2.55755E+00
2.71127E-01	5.93209E+11	4.53263E+14	2.50812E-03	-2.60065E+00
2.81168E-01	5.95841E+11	5.24887E+14	2.21379E-03	-2.65486E+00
2.91210E-01	5.99578E+11	6.17591E+14	1.92222E-03	-2.71620E+00
3.01252E-01	5.97047E+11	7.30278E+14	1.66305E-03	-2.77988E+00
3.11294E-01	5.99678E+11	8.44226E+14	1.46578E-03	-2.83393E+00
3.21335E-01	5.98253E+11	9.57141E+14	1.31680E-03	-2.88048E+00
3.31377E-01	5.99678E+11	1.05754E+15	1.21330E-03	-2.91603E+00
3.41419E-01	5.97047E+11	1.14646E+15	1.13903E-03	-2.94346E+00
3.51461E-01	5.99372E+11	1.22227E+15	1.08699E-03	-2.96377E+00
3.61502E-01	5.93203E+11	1.28508E+15	1.05157E-03	-2.97816E+00
3.71544E-01	6.03461E+11	1.33610E+15	1.02702E-03	-2.98842E+00
3.81586E-01	6.08514E+11	1.37522E+15	1.01250E-03	-2.99450E+00
3.91628E-01	6.18646E+11	1.40982E+15	1.00199E-03	-2.99914E+00
4.01669E-01	6.20181E+11	1.44278E+15	9.93101E-04	-3.00301E+00
4.11711E-01	6.24018E+11	1.47473E+15	9.85293E-04	-3.00643E+00
4.21753E-01	6.24018E+11	1.50588E+15	9.77545E-04	-3.00973E+00
4.31794E-01	6.24018E+11	1.53902E+15	9.70823E-04	-3.01296E+00
4.41836E-01	6.20181E+11	1.57006E+15	9.64769E-04	-3.01558E+00
4.51878E-01	6.16283E+11	1.59852E+15	9.60493E-04	-3.01751E+00
4.61920E-01	6.12451E+11	1.62442E+15	9.57879E-04	-3.01859E+00
4.71961E-01	6.12451E+11	1.64873E+15	9.56191E-04	-3.01946E+00
4.82003E-01	6.24018E+11	1.66979E+15	9.56291E-04	-3.01941E+00
4.92045E-01	6.35585E+11	1.68954E+15	9.57133E-04	-3.01903E+00
5.02087E-01	6.43260E+11	1.71068E+15	9.57175E-04	-3.01901E+00
5.12128E-01	6.50990E+11	1.73259E+15	9.56792E-04	-3.01918E+00
5.22170E-01	6.50990E+11	1.75456E+15	9.56205E-04	-3.01945E+00
5.32212E-01	6.58665E+11	1.77738E+15	9.54541E-04	-3.02021E+00
5.42253E-01	6.54827E+11	1.79948E+15	9.53299E-04	-3.02077E+00
5.52295E-01	6.54827E+11	1.82217E+15	9.51781E-04	-3.02146E+00
5.62337E-01	6.48961E+11	1.84288E+15	9.51315E-04	-3.02158E+00
5.72379E-01	6.47098E+11	1.86210E+15	9.51634E-04	-3.02153E+00
5.82420E-01	6.54827E+11	1.88050E+15	9.52494E-04	-3.02114E+00
5.92462E-01	6.56394E+11	1.89740E+15	9.54089E-04	-3.02041E+00
6.02504E-01	6.75543E+11	1.91456E+15	9.55531E-04	-3.01976E+00
6.12546E-01	6.95635E+11	1.93360E+15	9.56014E-04	-3.01954E+00
6.22587E-01	6.99474E+11	1.95406E+15	9.55796E-04	-3.01963E+00
6.32629E-01	6.97148E+11	1.97380E+15	9.55983E-04	-3.01955E+00
6.42671E-01	6.93311E+11	1.99365E+15	9.56124E-04	-3.01949E+00
6.52713E-01	6.97148E+11	2.01403E+15	9.56012E-04	-3.01954E+00
6.62754E-01	6.94517E+11	2.03369E+15	9.56235E-04	-3.01944E+00
6.72796E-01	6.90734E+11	2.05277E+15	9.56731E-04	-3.01921E+00
6.82838E-01	6.90734E+11	2.06973E+15	9.57773E-04	-3.01874E+00
6.92879E-01	6.97148E+11	2.08566E+15	9.59080E-04	-3.01815E+00
7.02921E-01	7.09702E+11	2.10254E+15	9.59928E-04	-3.01776E+00
7.12963E-01	7.17267E+11	2.12076E+15	9.60160E-04	-3.01756E+00
7.23005E-01	7.24887E+11	2.14035E+15	9.59771E-04	-3.01738E+00
7.33046E-01	7.27957E+11	2.16004E+15	9.59190E-04	-3.01810E+00
7.43088E-01	7.32453E+11	2.17974E+15	9.58469E-04	-3.01842E+00
7.53130E-01	7.36235E+11	2.19379E+15	9.58041E-04	-3.01852E+00
7.63172E-01	7.36235E+11	2.21896E+15	9.57136E-04	-3.01903E+00
7.73213E-01	7.32453E+11	2.23780E+15	9.56814E-04	-3.01917E+00
7.83255E-01	7.28671E+11	2.25623E+15	9.56651E-04	-3.01925E+00
7.93297E-01	7.27957E+11	2.27365E+15	9.56861E-04	-3.01915E+00

TABLE 4 (continued)

SHOT 6-7

150 POINTS

226

TIME (MICROSEC)	CDEN (AMP/M2)	EDEN (ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
9.03338E-01	7.36235E+11	2.29059E+15	9.57265E-04	-3.01837E+00
9.13390E-01	7.47638E+11	2.30778E+15	9.57563E-04	-3.01833E+00
9.23422E-01	7.55203E+11	2.32578E+15	9.57518E-04	-3.01835E+00
9.33464E-01	7.59765E+11	2.34497E+15	9.56966E-04	-3.01910E+00
9.43505E-01	7.62923E+11	2.36481E+15	9.55996E-04	-3.01954E+00
9.53547E-01	7.66505E+11	2.39456E+15	9.55080E-04	-3.01996E+00
9.63589E-01	7.66605E+11	2.40430E+15	9.54191E-04	-3.02037E+00
9.73631E-01	7.66496E+11	2.42360E+15	9.53474E-04	-3.02059E+00
9.83672E-01	7.62923E+11	2.44221E+15	9.53043E-04	-3.02096E+00
9.93714E-01	7.62504E+11	2.45975E+15	9.52998E-04	-3.02105E+00
9.03756E-01	7.66505E+11	2.47738E+15	9.52697E-04	-3.02116E+00
9.13798E-01	7.70333E+11	2.49518E+15	9.51933E-04	-3.02139E+00
9.23839E-01	7.91791E+11	2.51366E+15	9.51125E-04	-3.02176E+00
9.33881E-01	7.95573E+11	2.53296E+15	9.50290E-04	-3.02248E+00
9.43923E-01	7.93413E+11	2.55236E+15	9.49552E-04	-3.02293E+00
9.53964E-01	7.93413E+11	2.57153E+15	9.48569E-04	-3.02337E+00
9.64006E-01	7.93139E+11	2.59140E+15	9.47607E-04	-3.02375E+00
9.74048E-01	7.97250E+11	2.61126E+15	9.46789E-04	-3.02393E+00
9.84090E-01	7.99575E+11	2.63075E+15	9.46389E-04	-3.02394E+00
9.94131E-01	7.93413E+11	2.64891E+15	9.46365E-04	-3.02409E+00
1.00441E+00	7.99575E+11	2.66564E+15	9.46064E-04	-3.02434E+00
1.01421E+00	7.93413E+11	2.68326E+15	9.45490E-04	-3.02492E+00
1.02426E+00	8.01142E+11	2.70166E+15	9.44463E-04	-3.02527E+00
1.03430E+00	8.03490E+11	2.72139E+15	9.43473E-04	-3.02574E+00
1.04434E+00	8.12655E+11	2.74111E+15	9.42464E-04	-3.02616E+00
1.05438E+00	8.16547E+11	2.76097E+15	9.41547E-04	-3.02649E+00
1.06442E+00	8.20334E+11	2.78061E+15	9.40850E-04	-3.02655E+00
1.07447E+00	8.16547E+11	2.79963E+15	9.40049E-04	-3.02711E+00
1.08451E+00	8.15939E+11	2.81900E+15	9.39491E-04	-3.02742E+00
1.09455E+00	8.16547E+11	2.83758E+15	9.38932E-04	-3.02775E+00
1.10459E+00	8.12655E+11	2.85631E+15	9.38096E-04	-3.02906E+00
1.11463E+00	8.16547E+11	2.87394E+15	9.37432E-04	-3.02950E+00
1.12467E+00	8.16547E+11	2.89197E+15	9.36496E-04	-3.02926E+00
1.13472E+00	8.24222E+11	2.91063E+15	9.33393E-04	-3.02994E+00
1.14476E+00	8.28053E+11	2.93015E+15	9.31790E-04	-3.03124E+00
1.15480E+00	8.27292E+11	2.95025E+15	9.29628E-04	-3.03169E+00
1.16484E+00	8.35789E+11	2.96979E+15	9.28548E-04	-3.03220E+00
1.17488E+00	8.35789E+11	2.98990E+15	9.27715E-04	-3.03259E+00
1.18492E+00	8.35789E+11	3.00874E+15	9.26603E-04	-3.03311E+00
1.19497E+00	8.31074E+11	3.02691E+15	9.25354E-04	-3.03369E+00
1.20501E+00	8.31951E+11	3.04458E+15	9.23712E-04	-3.03446E+00
1.21505E+00	8.31951E+11	3.06137E+15	9.22275E-04	-3.03598E+00
1.22509E+00	8.31951E+11	3.07912E+15	9.20495E-04	-3.03671E+00
1.23513E+00	8.39625E+11	3.09738E+15	9.18936E-04	-3.03739E+00
1.24517E+00	8.39625E+11	3.11700E+15	9.17538E-04	-3.03905E+00
1.25522E+00	8.42477E+11	3.13609E+15	9.16108E-04	-3.03955E+00
1.26526E+00	8.42477E+11	3.15647E+15	9.15061E-04	-3.03991E+00
1.27530E+00	8.46259E+11	3.17609E+15	9.13906E-04	-3.03953E+00
1.28534E+00	8.46259E+11	3.19526E+15	9.12988E-04	-3.04012E+00
1.29538E+00	8.46259E+11	3.21460E+15	9.11761E-04	-3.04074E+00
1.30543E+00	8.42477E+11	3.23339E+15	9.10468E-04	-3.04139E+00
1.31547E+00	8.42477E+11	3.25038E+15	9.09105E-04	-3.04227E+00
1.32551E+00	8.43463E+11	3.26757E+15	9.07250E-04	-3.04319E+00
1.33555E+00	8.42477E+11	3.28591E+15	9.05340E-04	-3.04400E+00
1.34559E+00	8.46259E+11	3.30453E+15	9.03652E-04	-3.04452E+00
1.35563E+00	8.53924E+11	3.32310E+15	9.02362E-04	-3.04535E+00
1.36568E+00	8.58868E+11	3.34291E+15	9.00843E-04	-3.04591E+00
1.37572E+00	8.57562E+11	3.36299E+15	9.98339E-04	-3.04656E+00
1.38576E+00	8.50042E+11	3.38233E+15	9.97004E-04	-3.04721E+00
1.39580E+00	8.53924E+11	3.40024E+15	9.95726E-04	-3.04792E+00
1.40584E+00	8.50042E+11	3.41903E+15	9.94136E-04	-3.04850E+00
1.41588E+00	8.53924E+11	3.43630E+15	9.92659E-04	-3.04906E+00
1.42593E+00	8.51193E+11	3.45440E+15	9.91130E-04	-3.05006E+00
1.43597E+00	8.50042E+11	3.47247E+15	9.89657E-04	-3.05150E+00
1.44601E+00	8.55031E+11	3.49037E+15	9.88178E-04	-3.05150E+00
1.45605E+00	8.53924E+11	3.50956E+15		
1.46609E+00	8.53924E+11	3.52972E+15		
1.47613E+00	8.51444E+11	3.54914E+15		
1.48618E+00	8.57562E+11	3.56741E+15		
1.49622E+00	8.52760E+11	3.58577E+15		

EOF

TABLE 4 (continued)

SHOT 5-8

150 POINTS

227

TIME(MICROSEC)	CDEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
J.	3.58392E+11	9.19170E+13	0.	-3.25308E+00
1.00417E-02	3.87638E+11	9.91448E+13	5.58364E-04	-3.25308E+00
2.00835E-02	4.06995E+11	1.06377E+14	1.04095E-03	-2.98261E+00
3.01252E-02	4.06995E+11	1.14737E+14	1.44746E-03	-2.33939E+00
4.01669E-02	4.46017E+11	1.23101E+14	1.79882E-03	-2.74501E+00
5.02087E-02	4.26720E+11	1.31881E+14	2.09882E-03	-2.67802E+00
6.02504E-02	4.46017E+11	1.41890E+14	2.34092E-03	-2.63061E+00
7.02921E-02	4.65314E+11	1.53539E+14	2.52223E-03	-2.59922E+00
8.03339E-02	4.65314E+11	1.69099E+14	2.61901E-03	-2.58186E+00
9.03756E-02	4.84610E+11	1.86903E+14	2.66571E-03	-2.57419E+00
1.00417E-01	4.84610E+11	2.06193E+14	2.68481E-03	-2.57109E+00
1.10459E-01	4.84610E+11	2.30800E+14	2.61435E-03	-2.58254E+00
1.20501E-01	5.04345E+11	2.59925E+14	2.50116E-03	-2.60186E+00
1.30543E-01	5.23642E+11	2.93646E+14	2.37304E-03	-2.62469E+00
1.40584E-01	5.42933E+11	3.28794E+14	2.26147E-03	-2.64551E+00
1.50626E-01	5.42933E+11	3.87527E+14	2.03929E-03	-2.69052E+00
1.60668E-01	5.42933E+11	4.71282E+14	1.73419E-03	-2.74856E+00
1.70709E-01	5.62235E+11	5.78730E+14	1.54900E-03	-2.81023E+00
1.80751E-01	5.81971E+11	7.12910E+14	1.33401E-03	-2.87484E+00
1.90793E-01	5.81971E+11	8.52588E+14	1.17970E-03	-2.92923E+00
2.00835E-01	6.01269E+11	9.68572E+14	1.09536E-03	-2.96044E+00
2.10876E-01	5.81971E+11	1.06047E+15	1.05327E-03	-2.97746E+00
2.20918E-01	6.01269E+11	1.13100E+15	1.03934E-03	-2.98324E+00
2.30960E-01	6.20565E+11	1.19129E+15	1.03587E-03	-2.98469E+00
2.41002E-01	5.20565E+11	1.24193E+15	1.04077E-03	-2.98265E+00
2.51043E-01	6.39861E+11	1.28594E+15	1.05075E-03	-2.97950E+00
2.61085E-01	6.59158E+11	1.32202E+15	1.06580E-03	-2.97232E+00
2.71127E-01	6.59158E+11	1.35674E+15	1.07739E-03	-2.96763E+00
2.81168E-01	6.59158E+11	1.39333E+15	1.08694E-03	-2.96379E+00
2.91210E-01	6.78893E+11	1.43048E+15	1.09558E-03	-2.96036E+00
3.01252E-01	6.78893E+11	1.46945E+15	1.10241E-03	-2.95756E+00
3.11294E-01	6.59158E+11	1.50675E+15	1.11011E-03	-2.95463E+00
3.21335E-01	6.78893E+11	1.54237E+15	1.11485E-03	-2.95278E+00
3.31377E-01	6.59158E+11	1.57529E+15	1.12099E-03	-2.95040E+00
3.41419E-01	6.78893E+11	1.60680E+15	1.12789E-03	-2.94773E+00
3.51461E-01	6.98193E+11	1.63356E+15	1.13781E-03	-2.94393E+00
3.61502E-01	6.98193E+11	1.66547E+15	1.15008E-03	-2.93927E+00
3.71544E-01	7.17437E+11	1.67856E+15	1.16072E-03	-2.93527E+00
3.81586E-01	7.56513E+11	1.70681E+15	1.16625E-03	-2.93321E+00
3.91628E-01	7.36783E+11	1.73547E+15	1.17065E-03	-2.93157E+00
4.01669E-01	7.56513E+11	1.76768E+15	1.17387E-03	-2.93038E+00
4.11711E-01	7.56513E+11	1.79833E+15	1.17734E-03	-2.92910E+00
4.21753E-01	7.45115E+11	1.82797E+15	1.18005E-03	-2.92810E+00
4.31794E-01	7.36783E+11	1.85676E+15	1.18225E-03	-2.92729E+00
4.41836E-01	7.17437E+11	1.88484E+15	1.18484E-03	-2.92634E+00
4.51878E-01	7.36783E+11	1.90956E+15	1.18937E-03	-2.92468E+00
4.61920E-01	7.56513E+11	1.93248E+15	1.19502E-03	-2.92252E+00
4.71961E-01	7.95112E+11	1.95280E+15	1.20156E-03	-2.92025E+00
4.82003E-01	8.14409E+11	1.97479E+15	1.20615E-03	-2.91850E+00
4.92045E-01	8.21864E+11	2.00289E+15	1.20694E-03	-2.91831E+00
5.02087E-01	8.21864E+11	2.03242E+15	1.20687E-03	-2.91834E+00
5.12129E-01	8.34144E+11	2.06302E+15	1.20617E-03	-2.91859E+00
5.22170E-01	8.34144E+11	2.09174E+15	1.20644E-03	-2.91849E+00
5.32212E-01	8.34144E+11	2.12026E+15	1.20635E-03	-2.91853E+00
5.42253E-01	8.21864E+11	2.14819E+15	1.20659E-03	-2.91844E+00
5.52295E-01	8.53441E+11	2.17376E+15	1.20813E-03	-2.91799E+00
5.62337E-01	8.40722E+11	2.19815E+15	1.21029E-03	-2.91711E+00
5.72379E-01	8.72737E+11	2.22111E+15	1.21316E-03	-2.91608E+00
5.82420E-01	8.78877E+11	2.24374E+15	1.21551E-03	-2.91524E+00
5.92462E-01	8.78877E+11	2.27177E+15	1.21490E-03	-2.91546E+00
6.02504E-01	8.98174E+11	2.30205E+15	1.21313E-03	-2.91609E+00
6.12546E-01	9.31069E+11	2.33133E+15	1.21192E-03	-2.91653E+00
6.22587E-01	9.38174E+11	2.36076E+15	1.21067E-03	-2.91697E+00
6.32629E-01	9.17471E+11	2.39005E+15	1.20929E-03	-2.91747E+00
6.42671E-01	8.98174E+11	2.41950E+15	1.20832E-03	-2.91782E+00
6.52713E-01	9.98174E+11	2.44527E+15	1.20820E-03	-2.91786E+00
6.62754E-01	9.11769E+11	2.47038E+15	1.20890E-03	-2.91761E+00
6.72796E-01	9.17471E+11	2.49427E+15	1.21018E-03	-2.91715E+00
6.82838E-01	9.36329E+11	2.51690E+15	1.21191E-03	-2.91653E+00
6.92879E-01	9.55625E+11	2.54229E+15	1.21225E-03	-2.91641E+00
7.02921E-01	9.50363E+11	2.57167E+15	1.21069E-03	-2.91697E+00
7.12963E-01	9.74494E+11	2.60184E+15	1.20880E-03	-2.91765E+00
7.23005E-01	9.59660E+11	2.63376E+15	1.20753E-03	-2.91810E+00
7.33046E-01	9.74494E+11	2.66003E+15	1.20594E-03	-2.91871E+00
7.43088E-01	9.69660E+11	2.69076E+15	1.20324E-03	-2.91965E+00
7.53130E-01	9.69660E+11	2.72003E+15	1.20134E-03	-2.92033E+00
7.63172E-01	9.59660E+11	2.74714E+15	1.20043E-03	-2.92066E+00
7.73213E-01	9.59660E+11	2.77383E+15	1.19972E-03	-2.92092E+00
7.83255E-01	9.88955E+11	2.79820E+15	1.19984E-03	-2.92088E+00
7.93297E-01	1.00353E+12	2.82492E+15	1.19864E-03	-2.92131E+00

TABLE 4 (continued)

SHOT 5-8

150 POINTS

228

TIME(MICROSECS)	CDEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
8.03338E-01	1.00869E+12	2.85449E+15	1.19625E-03	-2.92219E+00
8.13380E-01	1.03194E+12	2.93355E+15	1.19413E-03	-2.92295E+00
8.23422E-01	1.02799E+12	2.91461E+15	1.19124E-03	-2.92400E+00
8.33464E-01	1.04729E+12	2.94419E+15	1.18896E-03	-2.92483E+00
8.43505E-01	1.04729E+12	2.97525E+15	1.18588E-03	-2.92596E+00
8.53547E-01	1.02799E+12	3.00493E+15	1.18344E-03	-2.92685E+00
8.63589E-01	1.04729E+12	3.03395E+15	1.18124E-03	-2.92766E+00
8.73631E-01	1.02799E+12	3.06015E+15	1.18020E-03	-2.92804E+00
8.83672E-01	1.04729E+12	3.08583E+15	1.17938E-03	-2.92835E+00
8.93714E-01	1.06658E+12	3.11248E+15	1.16957E-03	-2.93197E+00
9.03756E-01	1.08632E+12	3.14118E+15	1.15888E-03	-2.93596E+00
9.13798E-01	1.10561E+12	3.17231E+15	1.14751E-03	-2.94024E+00
9.23839E-01	1.10561E+12	3.20259E+15	1.13666E-03	-2.94437E+00
9.33881E-01	1.08632E+12	3.23322E+15	1.12589E-03	-2.94850E+00
9.43923E-01	1.12491E+12	3.26489E+15	1.11497E-03	-2.95274E+00
9.53964E-01	1.10561E+12	3.29602E+15	1.10444E-03	-2.95696E+00
9.64006E-01	1.12491E+12	3.32616E+15	1.09443E-03	-2.96081E+00
9.74048E-01	1.08632E+12	3.35532E+15	1.08492E-03	-2.96460E+00
9.84090E-01	1.10561E+12	3.38248E+15	1.07621E-03	-2.96810E+00
9.94131E-01	1.12491E+12	3.40872E+15	1.06793E-03	-2.97146E+00
1.00417E+00	1.12491E+12	3.43755E+15	1.05897E-03	-2.97512E+00
1.01421E+00	1.14421E+12	3.46823E+15	1.04960E-03	-2.97899E+00
1.02426E+00	1.14421E+12	3.49986E+15	1.04012E-03	-2.98292E+00
1.03430E+00	1.14584E+12	3.53099E+15	1.03094E-03	-2.98677E+00
1.04434E+00	1.16394E+12	3.56319E+15	1.02163E-03	-2.99071E+00
1.05438E+00	1.16394E+12	3.59302E+15	1.01315E-03	-2.99433E+00
1.06442E+00	1.13324E+12	3.62328E+15	1.00469E-03	-2.99797E+00
1.07447E+00	1.14684E+12	3.65280E+15	9.96565E-04	-3.00149E+00
1.08451E+00	1.16394E+12	3.68127E+15	9.88860E-04	-3.00487E+00
1.09455E+00	1.16394E+12	3.70871E+15	9.81542E-04	-3.00809E+00
1.10459E+00	1.16394E+12	3.73809E+15	9.73829E-04	-3.01152E+00
1.11463E+00	1.16570E+12	3.76887E+15	9.65975E-04	-3.01509E+00
1.12467E+00	1.16570E+12	3.79948E+15	9.58095E-04	-3.01859E+00
1.13472E+00	1.20254E+12	3.83104E+15	9.50202E-04	-3.02218E+00
1.14476E+00	1.18499E+12	3.86209E+15	9.42561E-04	-3.02569E+00
1.15480E+00	1.18499E+12	3.89422E+15	9.34784E-04	-3.02929E+00
1.16484E+00	1.22183E+12	3.92530E+15	9.27382E-04	-3.03274E+00
1.17488E+00	1.20254E+12	3.95552E+15	9.20297E-04	-3.03607E+00
1.18492E+00	1.20385E+12	3.98514E+15	9.13457E-04	-3.03931E+00
1.19497E+00	1.18499E+12	4.01301E+15	9.07114E-04	-3.04234E+00
1.20501E+00	1.20254E+12	4.04114E+15	9.00799E-04	-3.04537E+00
1.21505E+00	1.22183E+12	4.07097E+15	8.94200E-04	-3.04857E+00
1.22509E+00	1.22183E+12	4.10119E+15	8.87611E-04	-3.05178E+00
1.23513E+00	1.22315E+12	4.13166E+15	8.81063E-04	-3.05499E+00
1.24517E+00	1.24113E+12	4.16214E+15	8.74612E-04	-3.05819E+00
1.25522E+00	1.26085E+12	4.19370E+15	8.68030E-04	-3.06147E+00
1.26526E+00	1.22315E+12	4.22636E+15	8.61323E-04	-3.06483E+00
1.27530E+00	1.22315E+12	4.25775E+15	8.54971E-04	-3.06805E+00
1.28534E+00	1.26133E+12	4.29759E+15	8.49022E-04	-3.07109E+00
1.29538E+00	1.24113E+12	4.31553E+15	8.43526E-04	-3.07390E+00
1.30543E+00	1.24113E+12	4.34356E+15	8.38082E-04	-3.07671E+00
1.31547E+00	1.24201E+12	4.37159E+15	8.32709E-04	-3.07951E+00
1.32551E+00	1.24201E+12	4.40211E+15	8.26934E-04	-3.08253E+00
1.33555E+00	1.26085E+12	4.43150E+15	8.21451E-04	-3.08552E+00
1.34559E+00	1.24201E+12	4.46312E+15	8.15631E-04	-3.08851E+00
1.35563E+00	1.24201E+12	4.49473E+15	8.09894E-04	-3.09157E+00
1.36568E+00	1.28015E+12	4.52501E+15	8.04475E-04	-3.09449E+00
1.37572E+00	1.26130E+12	4.55484E+15	7.99206E-04	-3.09734E+00
1.38576E+00	1.24201E+12	4.58427E+15	7.94075E-04	-3.10014E+00
1.39580E+00	1.26130E+12	4.61389E+15	7.88977E-04	-3.10294E+00
1.40584E+00	1.26130E+12	4.64115E+15	7.84344E-04	-3.10549E+00
1.41588E+00	1.26130E+12	4.67030E+15	7.79448E-04	-3.10821E+00
1.42593E+00	1.26130E+12	4.69992E+15	7.74536E-04	-3.11096E+00
1.43597E+00	1.29345E+12	4.72866E+15	7.69829E-04	-3.11361E+00
1.44601E+00	1.28060E+12	4.75809E+15	7.65067E-04	-3.11630E+00
1.45605E+00	1.28060E+12	4.78792E+15	7.60300E-04	-3.11902E+00
1.46609E+00	1.29945E+12	4.81893E+15	7.55407E-04	-3.12182E+00
1.47613E+00	1.29345E+12	4.84855E+15	7.50793E-04	-3.12448E+00
1.48618E+00	1.29945E+12	4.87771E+15	7.46305E-04	-3.12708E+00
1.49622E+00	1.26130E+12	4.90540E+15	7.42093E-04	-3.12954E+00

EOF

TABLE 4 (continued)

SHOT 6-9

150 POINTS

229

TIME(MICROSEC)	COEN (AMP/M2)	EOEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
0.	4.06985E+11	9.62011E+13	0.	-2.72472E+00
1.00417E-02	4.39439E+11	1.07074E+14	1.88485E-03	-2.72472E+00
2.00835E-02	4.65314E+11	1.17920E+14	3.42300E-03	-2.46559E+00
3.01252E-02	4.84610E+11	1.28311E+14	4.71867E-03	-2.32619E+00
4.01669E-02	4.84610E+11	1.37799E+14	5.85837E-03	-2.23222E+00
5.02087E-02	5.23642E+11	1.47986E+14	6.81886E-03	-2.16629E+00
6.02504E-02	5.23642E+11	1.58173E+14	7.65563E-03	-2.11502E+00
7.02921E-02	5.23642E+11	1.70227E+14	8.29915E-03	-2.08097E+00
8.03338E-02	5.62235E+11	1.84150E+14	8.76760E-03	-2.05712E+00
9.03756E-02	5.52236E+11	1.99679E+14	9.09650E-03	-2.04113E+00
1.00417E-01	5.31971E+11	2.24685E+14	9.93233E-03	-2.03466E+00
1.10459E-01	5.81971E+11	2.58641E+14	9.28566E-03	-2.08167E+00
1.20501E-01	6.20565E+11	2.99042E+14	7.44032E-03	-2.12838E+00
1.30543E-01	6.20565E+11	3.43661E+14	6.71365E-03	-2.17304E+00
1.40584E-01	6.39861E+11	4.14126E+14	5.76956E-03	-2.23885E+00
1.50626E-01	6.59158E+11	5.09599E+14	4.84975E-03	-2.31428E+00
1.60668E-01	6.78893E+11	6.31104E+14	4.05903E-03	-2.39158E+00
1.70709E-01	6.78893E+11	7.84938E+14	3.39088E-03	-2.46969E+00
1.80751E-01	6.98190E+11	9.44033E+14	2.92459E-03	-2.53339E+00
1.90793E-01	6.98190E+11	1.07530E+15	2.65775E-03	-2.57549E+00
2.00835E-01	6.98190E+11	1.17894E+15	2.51035E-03	-2.60018E+00
2.10876E-01	7.36783E+11	1.28061E+15	2.38834E-03	-2.62181E+00
2.20918E-01	7.56519E+11	1.36812E+15	2.30737E-03	-2.63688E+00
2.30960E-01	7.75815E+11	1.44406E+15	2.25360E-03	-2.64712E+00
2.41002E-01	7.75815E+11	1.50553E+15	2.22639E-03	-2.65240E+00
2.51043E-01	7.95112E+11	1.55906E+15	2.21254E-03	-2.65511E+00
2.61085E-01	7.95112E+11	1.60319E+15	2.21175E-03	-2.65526E+00
2.71127E-01	8.14409E+11	1.64867E+15	2.20307E-03	-2.65697E+00
2.81168E-01	8.14409E+11	1.69517E+15	2.19354E-03	-2.65885E+00
2.91210E-01	8.14409E+11	1.74296E+15	2.18291E-03	-2.66096E+00
3.01252E-01	8.14409E+11	1.79154E+15	2.17188E-03	-2.66316E+00
3.11294E-01	8.14409E+11	1.83933E+15	2.16238E-03	-2.66507E+00
3.21335E-01	8.53441E+11	1.88833E+15	2.14595E-03	-2.66838E+00
3.31377E-01	8.72737E+11	1.93530E+15	2.13215E-03	-2.67119E+00
3.41419E-01	9.11769E+11	1.97903E+15	2.12248E-03	-2.67316E+00
3.51461E-01	9.11769E+11	2.01872E+15	2.11745E-03	-2.67419E+00
3.61502E-01	9.11769E+11	2.05263E+15	2.11856E-03	-2.67396E+00
3.71544E-01	9.31065E+11	2.08707E+15	2.11685E-03	-2.67431E+00
3.81586E-01	9.11769E+11	2.12324E+15	2.11274E-03	-2.67515E+00
3.91628E-01	9.11769E+11	2.16102E+15	2.10720E-03	-2.67629E+00
4.01669E-01	9.11769E+11	2.20195E+15	2.09884E-03	-2.67802E+00
4.11711E-01	9.31065E+11	2.24474E+15	2.08906E-03	-2.68005E+00
4.21753E-01	9.31065E+11	2.28902E+15	2.07740E-03	-2.68248E+00
4.31794E-01	9.50363E+11	2.33274E+15	2.06604E-03	-2.68486E+00
4.41836E-01	9.69560E+11	2.37476E+15	2.05658E-03	-2.68685E+00
4.51878E-01	9.88856E+11	2.41290E+15	2.05073E-03	-2.68890E+00
4.61920E-01	1.04728E+12	2.44701E+15	2.04844E-03	-2.68858E+00
4.71961E-01	1.04728E+12	2.47945E+15	2.04716E-03	-2.68885E+00
4.82003E-01	1.04728E+12	2.51634E+15	2.04164E-03	-2.69002E+00
4.92045E-01	1.04728E+12	2.55331E+15	2.03621E-03	-2.69118E+00
5.02087E-01	1.05123E+12	2.59202E+15	2.02958E-03	-2.69259E+00
5.12128E-01	1.04728E+12	2.63527E+15	2.01966E-03	-2.69472E+00
5.22170E-01	1.04728E+12	2.68019E+15	2.00869E-03	-2.69709E+00
5.32212E-01	1.06658E+12	2.72539E+15	1.99747E-03	-2.69952E+00
5.42253E-01	1.10561E+12	2.76778E+15	1.98833E-03	-2.70145E+00
5.52295E-01	1.12491E+12	2.80919E+15	1.98075E-03	-2.70317E+00
5.62337E-01	1.12491E+12	2.84598E+15	1.97630E-03	-2.70415E+00
5.72379E-01	1.14684E+12	2.88075E+15	1.97331E-03	-2.70480E+00
5.82420E-01	1.16570E+12	2.91564E+15	1.96883E-03	-2.70579E+00
5.92462E-01	1.18324E+12	2.95467E+15	1.96303E-03	-2.70707E+00
6.02504E-01	1.18324E+12	2.99329E+15	1.95700E-03	-2.70841E+00
6.12546E-01	1.16394E+12	3.03649E+15	1.94817E-03	-2.71037E+00
6.22587E-01	1.16570E+12	3.08131E+15	1.93858E-03	-2.71252E+00
6.32629E-01	1.18324E+12	3.12681E+15	1.92953E-03	-2.71477E+00
6.42671E-01	1.18499E+12	3.17230E+15	1.91872E-03	-2.71699E+00
6.52713E-01	1.22183E+12	3.21761E+15	1.90930E-03	-2.71913E+00
6.62754E-01	1.22315E+12	3.26032E+15	1.90165E-03	-2.72097E+00
6.72796E-01	1.22315E+12	3.29732E+15	1.89748E-03	-2.72192E+00
6.82838E-01	1.24201E+12	3.33605E+15	1.89239E-03	-2.72299E+00
6.92879E-01	1.28016E+12	3.37706E+15	1.88613E-03	-2.72443E+00
7.02921E-01	1.26130E+12	3.41817E+15	1.87996E-03	-2.72585E+00
7.12963E-01	1.28063E+12	3.46412E+15	1.87132E-03	-2.72785E+00
7.23005E-01	1.28060E+12	3.51200E+15	1.86189E-03	-2.73005E+00
7.33046E-01	1.28060E+12	3.55846E+15	1.85310E-03	-2.73210E+00
7.43088E-01	1.29945E+12	3.60651E+15	1.84367E-03	-2.73432E+00
7.53130E-01	1.29945E+12	3.65385E+15	1.83475E-03	-2.73662E+00
7.63172E-01	1.32007E+12	3.70119E+15	1.82606E-03	-2.73848E+00
7.73213E-01	1.32007E+12	3.74179E+15	1.82087E-03	-2.73972E+00
7.83255E-01	1.36130E+12	3.78231E+15	1.81549E-03	-2.74101E+00
7.93297E-01	1.36130E+12	3.82467E+15	1.80867E-03	-2.74264E+00

TABLE 4 (continued)

SHOT 5-9

150 POINTS

230

TIME(MICROSEC)	CDEN (4MP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
8.03338E-01	1.36133E+12	3.86703E+15	1.80199E-03	-2.74425E+00
8.13380E-01	1.38191E+12	3.91378E+15	1.79344E-03	-2.74631E+00
8.23422E-01	1.38191E+12	3.96321E+15	1.79390E-03	-2.74963E+00
8.33464E-01	1.38191E+12	4.01447E+15	1.77364E-03	-2.75113E+00
8.43505E-01	1.40252E+12	4.06328E+15	1.76397E-03	-2.75351E+00
8.53547E-01	1.40252E+12	4.11472E+15	1.75340E-03	-2.75612E+00
8.63589E-01	1.42313E+12	4.16286E+15	1.74447E-03	-2.75934E+00
8.73631E-01	1.42313E+12	4.20833E+15	1.73685E-03	-2.76024E+00
8.83672E-01	1.44374E+12	4.25238E+15	1.72997E-03	-2.76196E+00
8.93714E-01	1.44374E+12	4.29566E+15	1.72319E-03	-2.7637E+00
9.03756E-01	1.46435E+12	4.34300E+15	1.71492E-03	-2.76576E+00
9.13798E-01	1.46435E+12	4.39338E+15	1.70760E-03	-2.76751E+00
9.23839E-01	1.46436E+12	4.43918E+15	1.69935E-03	-2.76997E+00
9.33881E-01	1.48497E+12	4.49127E+15	1.69992E-03	-2.77212E+00
9.43923E-01	1.48497E+12	4.54267E+15	1.67928E-03	-2.77488E+00
9.53964E-01	1.48497E+12	4.59488E+15	1.66954E-03	-2.77740E+00
9.64006E-01	1.50558E+12	4.64426E+15	1.66102E-03	-2.77953E+00
9.74048E-01	1.50558E+12	4.69493E+15	1.65223E-03	-2.78193E+00
9.84090E-01	1.54681E+12	4.74134E+15	1.64510E-03	-2.78391E+00
9.94131E-01	1.56742E+12	4.78774E+15	1.63758E-03	-2.78590E+00
1.000417E+00	1.56742E+12	4.83423E+15	1.62983E-03	-2.78786E+00
1.01421E+00	1.54681E+12	4.88265E+15	1.62159E-03	-2.79006E+00
1.02426E+00	1.58847E+12	4.93534E+15	1.61211E-03	-2.79251E+00
1.03430E+00	1.58847E+12	4.98877E+15	1.60260E-03	-2.79517E+00
1.04434E+00	1.56742E+12	5.04088E+15	1.59345E-03	-2.79766E+00
1.05438E+00	1.56742E+12	5.09357E+15	1.58398E-03	-2.80025E+00
1.06442E+00	1.58847E+12	5.14692E+15	1.57451E-03	-2.80285E+00
1.07447E+00	1.58847E+12	5.19576E+15	1.56628E-03	-2.80513E+00
1.08451E+00	1.62963E+12	5.24458E+15	1.55881E-03	-2.80721E+00
1.09455E+00	1.62963E+12	5.29315E+15	1.55114E-03	-2.80935E+00
1.10459E+00	1.62969E+12	5.34149E+15	1.54334E-03	-2.81154E+00
1.11463E+00	1.62969E+12	5.39172E+15	1.53514E-03	-2.81385E+00
1.12467E+00	1.65031E+12	5.44556E+15	1.52608E-03	-2.81642E+00
1.13472E+00	1.65031E+12	5.49789E+15	1.51761E-03	-2.81894E+00
1.14476E+00	1.67092E+12	5.55112E+15	1.50903E-03	-2.82130E+00
1.15480E+00	1.62969E+12	5.60578E+15	1.49990E-03	-2.82394E+00
1.16484E+00	1.65031E+12	5.66176E+15	1.49061E-03	-2.82664E+00
1.17488E+00	1.67092E+12	5.71537E+15	1.48210E-03	-2.82912E+00
1.18492E+00	1.67092E+12	5.76661E+15	1.47366E-03	-2.83140E+00
1.19497E+00	1.65031E+12	5.81458E+15	1.46758E-03	-2.83340E+00
1.20501E+00	1.67662E+12	5.86488E+15	1.46004E-03	-2.83564E+00
1.21505E+00	1.70557E+12	5.91481E+15	1.45268E-03	-2.83793E+00
1.22509E+00	1.69757E+12	5.96625E+15	1.44507E-03	-2.84011E+00
1.23513E+00	1.71214E+12	6.01960E+15	1.43714E-03	-2.84250E+00
1.24517E+00	1.73275E+12	6.07295E+15	1.42935E-03	-2.84486E+00
1.25522E+00	1.73275E+12	6.12691E+15	1.42128E-03	-2.84732E+00
1.26526E+00	1.71214E+12	6.18049E+15	1.41333E-03	-2.84976E+00
1.27530E+00	1.71214E+12	6.23429E+15	1.40546E-03	-2.85218E+00
1.28534E+00	1.75337E+12	6.28525E+15	1.39836E-03	-2.85438E+00
1.29538E+00	1.72574E+12	6.33481E+15	1.39168E-03	-2.85646E+00
1.30543E+00	1.74635E+12	6.38392E+15	1.38503E-03	-2.85854E+00
1.31547E+00	1.73275E+12	6.43225E+15	1.37849E-03	-2.86060E+00
1.32551E+00	1.76653E+12	6.48335E+15	1.37147E-03	-2.86281E+00
1.33555E+00	1.76653E+12	6.53504E+15	1.36443E-03	-2.86505E+00
1.34559E+00	1.75337E+12	6.58961E+15	1.35691E-03	-2.86745E+00
1.35563E+00	1.75337E+12	6.64443E+15	1.34935E-03	-2.86988E+00
1.36568E+00	1.76653E+12	6.69769E+15	1.34205E-03	-2.87223E+00
1.37572E+00	1.76653E+12	6.75006E+15	1.33505E-03	-2.87450E+00
1.38576E+00	1.78675E+12	6.80075E+15	1.32847E-03	-2.87655E+00
1.39580E+00	1.77393E+12	6.84986E+15	1.32230E-03	-2.87867E+00
1.40584E+00	1.78144E+12	6.89791E+15	1.31638E-03	-2.88062E+00
1.41588E+00	1.78675E+12	6.94597E+15	1.31035E-03	-2.88261E+00
1.42593E+00	1.79459E+12	6.99558E+15	1.30411E-03	-2.88469E+00
1.43597E+00	1.77393E+12	7.04640E+15	1.29773E-03	-2.88682E+00
1.44601E+00	1.80697E+12	7.09926E+15	1.29107E-03	-2.88905E+00
1.45605E+00	1.81521E+12	7.15053E+15	1.28480E-03	-2.89116E+00
1.46609E+00	1.79459E+12	7.20407E+15	1.27804E-03	-2.89346E+00
1.47613E+00	1.81521E+12	7.25693E+15	1.27149E-03	-2.89559E+00
1.48618E+00	1.80687E+12	7.30733E+15	1.26546E-03	-2.89775E+00
1.49622E+00	1.81521E+12	7.35568E+15	1.25987E-03	-2.89995E+00

EOF

TABLE 4 (continued)

SHOT 6-10

150 POINTS

231

TIME(MICROSEC)	CDEN (A4P/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
0.	4.59735E+11	9.05635E+13	0.	-3.12944E+00
1.00417E-02	4.55314E+11	1.02273E+14	7.43995E-04	-3.12944E+00
2.00835E-02	4.84610E+11	1.14893E+14	1.32453E-03	-2.97794E+00
3.01252E-02	5.04345E+11	1.27092E+14	1.79609E-03	-2.74567E+00
4.01669E-02	5.23642E+11	1.39741E+14	2.17902E-03	-2.66194E+00
5.02087E-02	5.42939E+11	1.52390E+14	2.49654E-03	-2.60266E+00
6.02504E-02	5.42939E+11	1.66446E+14	2.74296E-03	-2.56190E+00
7.02921E-02	5.42939E+11	1.81002E+14	2.94267E-03	-2.53126E+00
8.03338E-02	5.52235E+11	1.99160E+14	3.05642E-03	-2.51479E+00
9.03756E-02	6.01268E+11	2.19557E+14	3.11904E-03	-2.50598E+00
1.00417E-01	5.81971E+11	2.42861E+14	3.13306E-03	-2.50403E+00
1.10459E-01	6.20565E+11	2.67451E+14	3.06188E-03	-2.51401E+00
1.20501E-01	6.39861E+11	3.15082E+14	2.75128E-03	-2.56047E+00
1.30543E-01	6.59158E+11	3.89162E+14	2.35093E-03	-2.62978E+00
1.40594E-01	6.79893E+11	4.89595E+14	1.96658E-03	-2.70629E+00
1.50626E-01	6.99190E+11	6.19557E+14	1.63150E-03	-2.79741E+00
1.60668E-01	6.99190E+11	7.75635E+14	1.37307E-03	-2.86231E+00
1.70709E-01	7.17487E+11	9.35912E+14	1.20349E-03	-2.91956E+00
1.80751E-01	7.17487E+11	1.04843E+15	1.13285E-03	-2.94583E+00
1.90793E-01	7.36793E+11	1.11562E+15	1.11962E-03	-2.95093E+00
2.00835E-01	7.36793E+11	1.17143E+15	1.11866E-03	-2.95130E+00
2.10876E-01	7.56519E+11	1.22035E+15	1.12706E-03	-2.94905E+00
2.20918E-01	7.75815E+11	1.27170E+15	1.13974E-03	-2.94319E+00
2.30960E-01	7.75815E+11	1.32161E+15	1.15269E-03	-2.93929E+00
2.41002E-01	8.14409E+11	1.36680E+15	1.16871E-03	-2.93229E+00
2.51043E-01	8.14409E+11	1.40822E+15	1.13857E-03	-2.92499E+00
2.61085E-01	8.14409E+11	1.45583E+15	1.19949E-03	-2.92106E+00
2.71127E-01	8.34144E+11	1.50776E+15	1.21262E-03	-2.91629E+00
2.81168E-01	8.53441E+11	1.55926E+15	1.22522E-03	-2.91179E+00
2.91210E-01	8.72737E+11	1.60522E+15	1.24129E-03	-2.90613E+00
3.01252E-01	8.72737E+11	1.64922E+15	1.25971E-03	-2.90007E+00
3.11294E-01	8.92034E+11	1.69079E+15	1.27557E-03	-2.89430E+00
3.21335E-01	8.92034E+11	1.73297E+15	1.29327E-03	-2.88831E+00
3.31377E-01	9.31066E+11	1.77602E+15	1.30959E-03	-2.88286E+00
3.41419E-01	9.31066E+11	1.81995E+15	1.32450E-03	-2.87795E+00
3.51461E-01	9.31066E+11	1.86036E+15	1.34124E-03	-2.87249E+00
3.61502E-01	9.50363E+11	1.90039E+15	1.35735E-03	-2.86725E+00
3.71544E-01	9.50363E+11	1.95152E+15	1.36477E-03	-2.86494E+00
3.81586E-01	9.69660E+11	2.00169E+15	1.37212E-03	-2.86261E+00
3.91628E-01	9.88955E+11	2.05009E+15	1.38030E-03	-2.86003E+00
4.01669E-01	1.00869E+12	2.09381E+15	1.39120E-03	-2.85651E+00
4.11711E-01	1.02799E+12	2.13787E+15	1.40144E-03	-2.85343E+00
4.21753E-01	1.00869E+12	2.18050E+15	1.41165E-03	-2.85027E+00
4.31794E-01	1.02799E+12	2.22392E+15	1.42059E-03	-2.84753E+00
4.41836E-01	1.04729E+12	2.26638E+15	1.42980E-03	-2.84472E+00
4.51878E-01	1.06632E+12	2.30772E+15	1.43935E-03	-2.84193E+00
4.61920E-01	1.06658E+12	2.34736E+15	1.44963E-03	-2.83974E+00
4.71961E-01	1.08632E+12	2.39572E+15	1.45306E-03	-2.83772E+00
4.82003E-01	1.08632E+12	2.44635E+15	1.45532E-03	-2.83704E+00
4.92045E-01	1.10824E+12	2.49574E+15	1.45762E-03	-2.83636E+00
5.02087E-01	1.12491E+12	2.54244E+15	1.46138E-03	-2.83524E+00
5.12128E-01	1.14421E+12	2.58503E+15	1.465734E-03	-2.83347E+00
5.22170E-01	1.14421E+12	2.62674E+15	1.47360E-03	-2.83162E+00
5.32212E-01	1.16394E+12	2.66906E+15	1.47934E-03	-2.82993E+00
5.42253E-01	1.18324E+12	2.71206E+15	1.48453E-03	-2.82841E+00
5.52295E-01	1.20254E+12	2.75350E+15	1.49040E-03	-2.82670E+00
5.62337E-01	1.20385E+12	2.79496E+15	1.49608E-03	-2.82505E+00
5.72379E-01	1.20385E+12	2.84272E+15	1.49929E-03	-2.82440E+00
5.82420E-01	1.22183E+12	2.88977E+15	1.50114E-03	-2.82358E+00
5.92462E-01	1.24113E+12	2.93868E+15	1.50295E-03	-2.82306E+00
6.02504E-01	1.26085E+12	2.98558E+15	1.50572E-03	-2.82226E+00
6.12546E-01	1.26130E+12	3.02897E+15	1.51015E-03	-2.82098E+00
6.22587E-01	1.28015E+12	3.07304E+15	1.51412E-03	-2.81994E+00
6.32629E-01	1.26130E+12	3.11643E+15	1.51830E-03	-2.81864E+00
6.42671E-01	1.29945E+12	3.16228E+15	1.52119E-03	-2.81792E+00
6.52713E-01	1.28063E+12	3.20770E+15	1.52420E-03	-2.81696E+00
6.62754E-01	1.32007E+12	3.25302E+15	1.52717E-03	-2.81611E+00
6.72796E-01	1.32007E+12	3.30072E+15	1.52996E-03	-2.81566E+00
6.82838E-01	1.34069E+12	3.35154E+15	1.52928E-03	-2.81551E+00
6.92879E-01	1.32007E+12	3.40085E+15	1.53027E-03	-2.81523E+00
7.02921E-01	1.36261E+12	3.45141E+15	1.53068E-03	-2.81512E+00
7.12963E-01	1.39191E+12	3.49818E+15	1.53273E-03	-2.81453E+00
7.23005E-01	1.39191E+12	3.54307E+15	1.53554E-03	-2.81374E+00
7.33046E-01	1.39191E+12	3.58796E+15	1.53909E-03	-2.81302E+00
7.43088E-01	1.40252E+12	3.63349E+15	1.54011E-03	-2.81245E+00
7.53130E-01	1.42313E+12	3.68097E+15	1.54127E-03	-2.81212E+00
7.63172E-01	1.42313E+12	3.72592E+15	1.54348E-03	-2.81150E+00
7.73213E-01	1.44374E+12	3.77519E+15	1.54379E-03	-2.81141E+00
7.83255E-01	1.44374E+12	3.82586E+15	1.54340E-03	-2.81152E+00
7.93297E-01	1.44374E+12	3.87502E+15	1.54295E-03	-2.81158E+00

TABLE 4 (continued)

SHOT 5-10

150 POINTS

232

TIME(MICROSEC)	COEN (AMP/M2)	EDEN(ERGS/M2)	ENERGY RATIO (EO/EI)	LOG 10 EO/EI
8.03338E-01	1.44374E+12	3.92942E+15	1.54105E-03	-2.81218E+00
8.13381E-01	1.46435E+12	3.98162E+15	1.53976E-03	-2.81255E+00
8.23422E-01	1.44997E+12	4.03101E+15	1.53958E-03	-2.81260E+00
8.33464E-01	1.48497E+12	4.07935E+15	1.54005E-03	-2.81247E+00
8.43505E-01	1.50559E+12	4.12914E+15	1.53953E-03	-2.81299E+00
8.53547E-01	1.50558E+12	4.17453E+15	1.53756E-03	-2.81317E+00
8.63589E-01	1.52519E+12	4.22650E+15	1.53713E-03	-2.81329E+00
8.73631E-01	1.54681E+12	4.27647E+15	1.53599E-03	-2.81361E+00
8.83672E-01	1.54681E+12	4.32791E+15	1.53435E-03	-2.81408E+00
8.93714E-01	1.54681E+12	4.38203E+15	1.53085E-03	-2.81507E+00
9.03756E-01	1.54681E+12	4.43546E+15	1.52764E-03	-2.81598E+00
9.13798E-01	1.56742E+12	4.49038E+15	1.52400E-03	-2.81702E+00
9.23839E-01	1.58847E+12	4.54165E+15	1.52168E-03	-2.81764E+00
9.33881E-01	1.58847E+12	4.59211E+15	1.51967E-03	-2.81825E+00
9.43923E-01	1.58847E+12	4.64320E+15	1.51679E-03	-2.81907E+00
9.53964E-01	1.60864E+12	4.69293E+15	1.51427E-03	-2.81989E+00
9.64006E-01	1.60864E+12	4.74806E+15	1.51065E-03	-2.82084E+00
9.74048E-01	1.65031E+12	4.79777E+15	1.50759E-03	-2.82172E+00
9.84090E-01	1.67092E+12	4.85309E+15	1.50347E-03	-2.82291E+00
9.94131E-01	1.67092E+12	4.90916E+15	1.49863E-03	-2.82431E+00
1.00417E+00	1.65031E+12	4.96367E+15	1.49400E-03	-2.82555E+00
1.01421E+00	1.67092E+12	5.01982E+15	1.48898E-03	-2.82711E+00
1.02426E+00	1.69153E+12	5.07433E+15	1.48455E-03	-2.82841E+00
1.03430E+00	1.69153E+12	5.12885E+15	1.48022E-03	-2.82967E+00
1.04434E+00	1.69153E+12	5.18242E+15	1.47594E-03	-2.83093E+00
1.05438E+00	1.71214E+12	5.23754E+15	1.47094E-03	-2.83241E+00
1.06442E+00	1.71214E+12	5.29024E+15	1.46670E-03	-2.83366E+00
1.07447E+00	1.73275E+12	5.34294E+15	1.46255E-03	-2.83489E+00
1.08451E+00	1.75337E+12	5.39869E+15	1.45766E-03	-2.83634E+00
1.09455E+00	1.75337E+12	5.45473E+15	1.45267E-03	-2.83783E+00
1.10459E+00	1.71214E+12	5.51307E+15	1.44693E-03	-2.83954E+00
1.11463E+00	1.75337E+12	5.57162E+15	1.44132E-03	-2.84124E+00
1.12467E+00	1.75337E+12	5.62706E+15	1.43620E-03	-2.84279E+00
1.13472E+00	1.77398E+12	5.68097E+15	1.43183E-03	-2.84411E+00
1.14476E+00	1.77398E+12	5.73704E+15	1.42695E-03	-2.84559E+00
1.15480E+00	1.79459E+12	5.79248E+15	1.42177E-03	-2.84717E+00
1.16484E+00	1.79459E+12	5.84792E+15	1.41669E-03	-2.84873E+00
1.17488E+00	1.81521E+12	5.90461E+15	1.41140E-03	-2.85035E+00
1.18492E+00	1.79459E+12	5.96102E+15	1.40628E-03	-2.85193E+00
1.19497E+00	1.80249E+12	6.01309E+15	1.40097E-03	-2.85360E+00
1.20501E+00	1.82749E+12	6.07745E+15	1.39489E-03	-2.85546E+00
1.21505E+00	1.80249E+12	6.13553E+15	1.38900E-03	-2.85730E+00
1.22509E+00	1.81521E+12	6.19384E+15	1.38317E-03	-2.85912E+00
1.23513E+00	1.83582E+12	6.25053E+15	1.37782E-03	-2.86081E+00
1.24517E+00	1.85643E+12	6.30755E+15	1.37248E-03	-2.86249E+00
1.25522E+00	1.83582E+12	6.36359E+15	1.36701E-03	-2.86423E+00
1.26526E+00	1.83582E+12	6.42124E+15	1.36113E-03	-2.86610E+00
1.27530E+00	1.87704E+12	6.47896E+15	1.35575E-03	-2.86792E+00
1.28534E+00	1.86783E+12	6.53456E+15	1.35008E-03	-2.86964E+00
1.29538E+00	1.86783E+12	6.59281E+15	1.34438E-03	-2.87148E+00
1.30543E+00	1.87704E+12	6.65075E+15	1.33859E-03	-2.87335E+00
1.31547E+00	1.88801E+12	6.70975E+15	1.33250E-03	-2.87533E+00
1.32551E+00	1.86783E+12	6.76861E+15	1.32653E-03	-2.87723E+00
1.33555E+00	1.87704E+12	6.82894E+15	1.32041E-03	-2.87929E+00
1.34559E+00	1.87704E+12	6.88740E+15	1.31471E-03	-2.88117E+00
1.35563E+00	1.88801E+12	6.94458E+15	1.30930E-03	-2.88296E+00
1.36568E+00	1.90862E+12	7.00212E+15	1.30379E-03	-2.88479E+00
1.37572E+00	1.90862E+12	7.05901E+15	1.29849E-03	-2.88656E+00
1.38576E+00	1.89765E+12	7.11481E+15	1.29347E-03	-2.88824E+00
1.39580E+00	1.90730E+12	7.17235E+15	1.28822E-03	-2.89001E+00
1.40584E+00	1.92879E+12	7.22984E+15	1.28298E-03	-2.89178E+00
1.41588E+00	1.91827E+12	7.28502E+15	1.27768E-03	-2.89358E+00
1.42593E+00	1.89765E+12	7.34417E+15	1.27212E-03	-2.89547E+00
1.43597E+00	1.94897E+12	7.40025E+15	1.26700E-03	-2.89722E+00
1.44601E+00	1.91827E+12	7.45505E+15	1.26201E-03	-2.89894E+00
1.45605E+00	1.93888E+12	7.51144E+15	1.25716E-03	-2.90061E+00
1.46609E+00	1.93888E+12	7.57014E+15	1.25130E-03	-2.90264E+00
1.47613E+00	1.94897E+12	7.62553E+15	1.24638E-03	-2.90445E+00
1.48618E+00	1.95949E+12	7.68021E+15	1.24104E-03	-2.90621E+00
1.49622E+00	1.93888E+12	7.73503E+15	1.23590E-03	-2.90802E+00

EOF