

A-84-019
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DATE

[Handwritten signature]
NO GREEN
DOT.

History of 10,000 Ton Gadget

The attached chart was prepared for the purpose of orientation. The numerical values are highly tentative. This is particularly true for the ball of fire. It is quite possible that the ball of fire will be as much as two or three times the indicated size and due to turbulence and radiation it may be much cooler than indicated here.

The notation is as follows:

- Δt is the time interval in milliseconds
- t is the length of time after initiation in milliseconds
- R is the radius of the shock front in meters
- P_s is the pressure at the shock front in bars
- T_s is the temperature at the shock front in degrees absolute
- R_1 is the radius of the isothermal sphere which becomes the ball of fire
- P_1 is the pressure in the isothermal sphere
- T_1 is the temperature inside the isothermal sphere
- ρ/ρ_0 is the ratio of the density inside the isothermal sphere to the normal density of air
- \dot{R} is the velocity of the shock front

2
3
2
2
6
2

Joseph O. Hirschfelder

Classification changed to UNCLASSIFIED
 by authority of the U. S. D. O. E.,
 Per W. Lang 05-6 7-22-86
 (Person authorizing change in classification) (Date)
 By _____
 (Signature of person making the change, and date)

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