

Answer on Question #63656, Physics / Atomic and Nuclear Physics

What is the amount of energy given by atom bomb? How large area it can destroy?

Solution:

The amount of energy given by atom bomb is measured in a trotyl equivalent (TNT equivalent). It is a number of trinitrotoluol. The "kiloton of TNT" is a unit of energy equal to 4.184 terajoules; the "megaton of TNT" is a unit of energy equal to 4.184 petajoules.

Nuclear weapons has been divided into five groups by power:

very small (less than 1 kiloton);

small (1 kiloton - 10 kiloton);

medium (10 kiloton - 100 kiloton);

large (100 kiloton - 1 megaton);

very large (more than 1 megaton).

The area of destruction depends from the power of the atomic bomb. Explosion of 20 kiloton atom bomb creates zone of full destruction about 1 km radius. Explosion of 20 megaton bomb creates zone of full destruction about 10 km radius.

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