

The Effects Of Thermonuclear Weapons

CHANGE 1
Field Manual No 101-31-1

NUCLEAR WEAPONS EMPLOYMENT DOCTRINE AND PROCEDURES

Radius of vulnerability (emergency risk criterion: 5% combat ineffectiveness)

Figure 54. Radii of Vulnerability.

Yield (KT)	PERSONNEL (LL) IN— (Based on Governing Effect)					Yield (KT)
	Open	Open Foxholes	APCs	Tanks	Earth Shelter	
Radii listed are distances at which a 5 percent incidence of effect occurs. HOB used is $60W^{1/3}$ meters. (Distances are in meters)						
0.1	700	600	600	500	300	0.1
1	1200	900	900	800	500	1
10	3200	1300	1300	1250	900	10
20	4000	1500	1450	1400	1000	20
100	8000	1900	1800	1800	1400	100
200	12000	2000	1900	1900	1500	200
300	14000	2100	1950	1950	1600	300

Protective factor = ratio of
area of effect in the open, to
area of effect for shelter

Example: for 300 kt, the protective
factor of open foxholes is equal to
 $(14,000)^2 / (2,100)^2 = 44$.

Open	Open Foxholes	APCs	Tanks	Earth Shelter	Yield (KT)
1	1.36	1.36	1.96	5.44	0.1
1	1.78	1.78	2.25	5.76	1
1	6.06	6.06	6.55	12.6	10
1	7.11	7.61	8.16	16.0	20
1	17.7	19.8	19.8	32.7	100
1	36.0	39.9	39.9	64.0	200
1	44.4	51.5	51.5	76.6	300

Calculation of the injury-averting protective factors by simple open foxholes and earth shelters, as a function of weapon yield. Most countermeasures are relatively ineffective against tactical nuclear weapons (due to the predominating neutron radiation effect at 0.1 kt yield), but are extremely effective against strategic nuclear weapons with yields of 100, 200 and 300 kt (protective factors of 44 to 77).

The definition of protective factor used here is the factor by which casualties numbers are reduced.

Much of the destruction caused by a nuclear explosion is due to blast effects. The range for blast effects increases with the explosive yield of the weapon and also depends on the burst altitude. Direct effects - Thermal radiation - Indirect effects - Summary of the effects. The Effects of Nuclear Weapons. Blast, thermal radiation, and prompt ionizing radiation cause significant destruction within seconds or minutes of a nuclear detonation. The delayed effects, such as radioactive fallout and other environmental effects, inflict damage over an extended period ranging from hours to years. Blast, thermal radiation, and prompt ionizing radiation cause significant destruction within seconds or minutes of a nuclear detonation. The delayed effects, such as radioactive fallout and other possible environmental effects, inflict damage over an extended period ranging from hours to years. 16 Apr - 59 sec - Uploaded by chutchutney warfare atomic bomb nuclear weapons. effects of thermonuclear weapons. chutchutney. Learn about the catastrophic effects of nuclear weapons both long- and short- term, with evidence drawn from the bombings of Hiroshima and USA, First "staged" thermonuclear weapon test (not deployable). Aug 12, Joe 4, Union of Soviet Socialist Republics USSR, First fusion weapon test by . THE EFFECTS OF NUCLEAR WEAPONS by Russell D. Hoffman. First Thermonuclear Explosion, November 1st, Eniwetok Proving Grounds (color. Development of Thermonuclear Weapon Concepts Note that the effect on the reaction rate in a fixed quantity of fusion fuel only increases linearly with. Read chapter 6 Human and Environmental Effects: Underground facilities are used extensively Effects of Nuclear Earth-Penetrator and Other Weapons (). Nuclear weapon - The effects of nuclear weapons: Nuclear weapons are The prompt effects of a nuclear explosion and fallout are well known through data A test of a U.S. thermonuclear weapon (hydrogen bomb) at Eniwetok atoll in the. Fission weapons are commonly referred to as atomic bombs. Fusion weapons are also referred to as thermonuclear bombs or, more commonly, hydrogen. The explosions used in thermonuclear weapons are often described as a nuclear exchange could kill millions of people, cause severe climate effects, and . Learn more about Thermonuclear weapon . weapon. 4 Enhanced radiation weapons (neutron bombs) were later developed to minimize the effects of blast and. ospekuny.com: The Effects of Thermonuclear Weapons (): James A. Green: Books. Exploring Thermonuclear Weapons Operation Crossroads was intended to give information about the effect of the atomic bomb on naval.

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