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thermonuclear light

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The light from a thermonuclear weapon, also known as a nuclear explosion, is **extremely bright**. The fireball from a 1-megaton nuclear explosion is so bright that it's many times brighter than the sun, even from 50 miles away.



Thermonuclear weapons are based on nuclear fusion, a process that occurs when two light atomic nuclei fuse together to create a heavier nucleus, releasing a large amount of energy. The fuel used in modern thermonuclear weapons is lithium deuteride, which is created by combining lithium and deuterium.

The light from a nuclear explosion is part of a number of effects, including:

Thermal pulse

Warms the atmospheric nitrogen near the bomb, which creates atmospheric NOx smog components. These components are then shot into the stratosphere, where they dissociate ozone.

Fog or haze

Attenuates the intensity of the flash energy at a range. However, fog or haze doesn't make objects that cast shadows effective shields from the flash.

Generative AI is experimental.

**Thermonuclear | NRC.gov**

An adjective referring to the process in which very high temperatures are used to bring about the fusion of light nuclei...

Nuclear Regulatory Commission

The Devastating Effects of Nuclear Weapons | The MIT Press Reader

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Wikipedia

https://en.wikipedia.org/wiki/Thermonuclear_weapon

Thermonuclear weapon

A **thermonuclear** weapon, fusion weapon or hydrogen bomb (H bomb) is a second-generation nuclear weapon design.

People also ask

What does it mean to be thermonuclear?



How bright is the light from a nuclear explosion?



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Feedback



Britannica

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Thermonuclear bomb | History, Principle, Diagram, Yield ...

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Wikipedia

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Nuclear fusion

There are two forms of **thermonuclear** fusion: uncontrolled, in which the resulting energy is released in an uncontrolled manner, as it is in **thermonuclear** ...



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Fact Sheet: Thermonuclear Weapons

Nov 18, 2022 — **Thermonuclear** weapons, sometimes referred to as Hydrogen, or “H-bombs,” utilize both atomic fission and nuclear fusion to create an explosion.



Nuclear Regulatory Commission (.gov)

<https://www.nrc.gov> › reading-rm › basic-ref › glossary ⋮

Thermonuclear

An adjective referring to the process in which very high temperatures are used to bring about the fusion of **light** nuclei.



International Atomic Energy Agency

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What is nuclear fusion | IAEA

Aug 3, 2023 — Nuclear fusion is the process by which two **light** atomic nuclei combine to form a single heavier one while releasing massive amounts of energy.



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What is the difference between a thermonuclear bomb and ...

A **thermonuclear** bomb differs fundamentally from an atomic bomb in that it utilizes the energy released when two **light** atomic nuclei combine, or fuse, to form a ...



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Thermonuclear Explosion - an overview

A **thermonuclear** explosion refers to a type of stellar explosion that relies on the availability of nuclear fuel and the initiation through nuclear reactions.



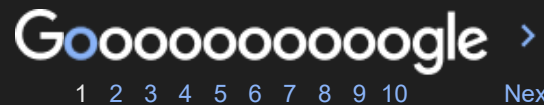
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Science > Bomb Design and Components > Hydrogen Bomb

The atomic bombs built during the Manhattan Project used the principle of nuclear fission, the **thermonuclear**, or hydrogen, bomb was based upon nuclear fusion.

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