

# Excerpt No. 4

## OF THE DEADLY SNOW

### Chapter 21

#### “The Atomic Age”

THE ATOMIC AGE BEGAN with a flash “brighter than the sun and hotter than an oven” at 5:30 a.m. on July 14, 1945, at White Sands Proving Ground in southeast New Mexico. The detonation was first planned for 4 a.m., but at that hour a lightning-laced rainstorm raged at the test site. This posed a risk of accidentally firing the device, so the shot was delayed.

Because such a weapon had never been fired before, no one knew what to expect. The worst case might be the ignition of the atmosphere and suffocation of life worldwide. Some physicists thought the entire state of New Mexico might go up in flames.

Potential observers organized betting pools, and predicted results that ranged from zero (a complete dud) to an explosion equal to 45,000 tons (45 kilotons) of TNT to setting afire the atmosphere and incinerating the entire planet. At worst, the prospects were terrifying.

The so-called “Gadget” was carefully hoisted to the top of a 100-foot steel tower. The device was given this name so it would not be recognized as a weapon and the scientists avoided using the term bomb to mislead potential spies.

Afterwards the yield of the Gadget, also named Project Trinity, was estimated at 18 kilotons of TNT. It was a test of an implosion-design plutonium device, using the same conceptual design as the Fat Man bomb detonated over Nagasaki, Japan, on August 9, 1945. The gadget was put together at the nearby George McDonald ranch house on July 13, after the components had arrived on July 12. After assembly, it was carefully winched up the tower the following day.

Most top-level scientists and military officers watched the blast from about 10 miles southwest of the test tower.

Many other observers were located about 20 miles away, and some others were scattered at different distances, some in more informal situations. At 05:29:45 a.m., the device exploded. It left a crater covered with radioactive glass that was 10 feet deep and 1,100 feet across. At the time of detonation, the surrounding mountains were lighted up “brighter than daytime” for one to two seconds, and the heat was reported as “being as hot as an oven” at the base camp.

Observers said the colors of the flash ranged from purple to green and eventually to white. The roar of the shock wave took 40 seconds to reach the observers. It was felt over 100 miles away, and the mushroom cloud reached an altitude of 7.5 miles.

**Hiroshima and Nagasaki**—The bombing of these two Japanese cities were the most widely known aerial attacks of World War II. First, they were the only targets of atomic bombs in WWII and second, they were instrumental in ending the war.

At 8:15 a.m. on August 6, 1945, a B-29 Super-fortress bomber flew over Hiroshima at an altitude of 31,060 feet and released a 13-kiloton bomb named Little Boy.

It took slightly more than 40 seconds for the 9,700- pound bomb to fall to an elevation of approximately 2,000 feet above the ground, where it exploded. Those seconds allowed the plane, to travel 11.5 miles from the point of releasing the bomb before the crew felt the shock waves of the blast.

Between 70,000 and 80,000 persons in Hiroshima died instantly in the explosion that generated heat up to 7,000 degrees F. and wounded another 70,000 humans. The plane that carried Little Boy was called the Enola Gay, the name of the pilot’s mother.

On August 9, 1945, three days later, another atomic bomb was released over Nagasaki, a city about 185 miles southwest of Hiroshima. The B-29 that delivered the bomb was called Bockscar. The name of the bomb was Fat Man, dropped from an elevation of about 32,000 feet. It was rated at 20 kilotons and killed between 40,000 and 75,000 persons instantly.

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