
Space Race
and
Arms Race

1—A-Bomb v. H-Bomb

Determined to challenge the United States on the world stage, the Soviet Union pooled its best scientists, who created their own atomic bomb in August 1949, well before American experts predicted the Soviets have such capability.

The following year, Truman authorized a program to develop a more destructive hydrogen bomb to one-up the Soviets. A number of well-known scientists vocally opposed the development of the far-more powerful H-bomb, as it was known, including Albert Einstein and J. Robert Oppenheimer. Indeed, an advisory report by the Atomic Energy Commission (AEC) concluded the United States should not develop the H-bomb. Some of Truman's own advisers, most notably George F. Kennan, also disliked the prospect of thermonuclear weapons. Many of these opponents to the H-bomb hoped to halt the further development of nuclear weapons by both sides, proposing a nuclear freeze. Truman maintained, however, that he was forced to support the H-bomb program because of the threat that the Soviets would develop one first. The commitment to meeting and exceeding the Soviet Union's nuclear capabilities set the pattern for the coming decades.

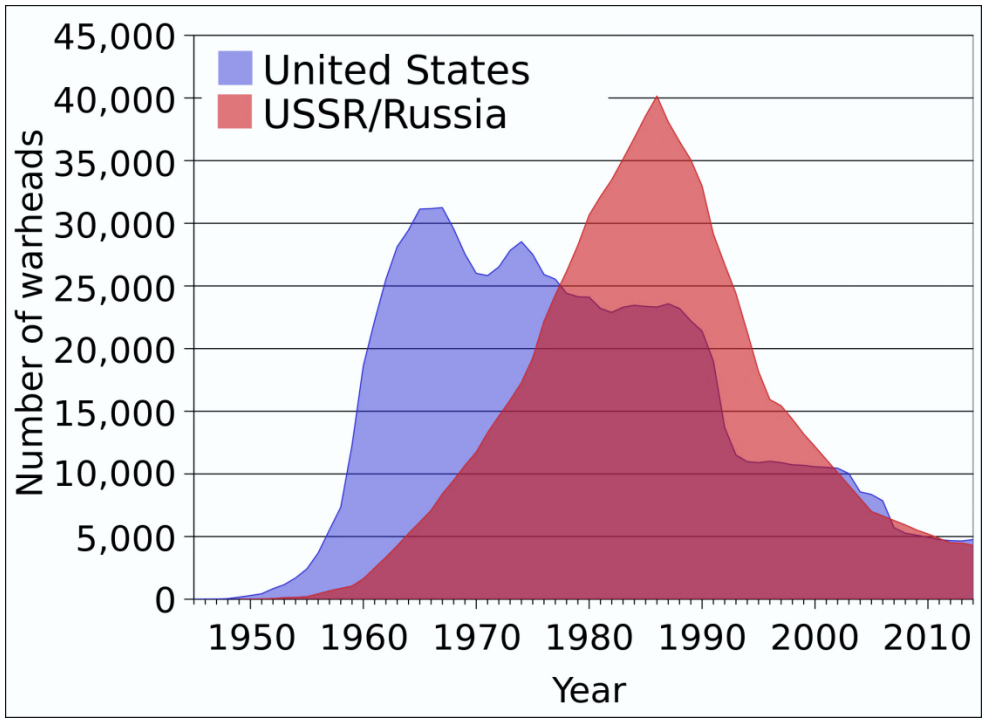
2—NSC-68

U.S. political and military advisers agreed on a policy of massive military build-up, as outlined in National Security Council document 68, known simply as NSC-68. This policy called for fast increases in defense spending to match the forces that the Soviet Union could muster. NSC-68 established a policy that meant massive federal subsidies would go to defense industries and fund a proliferation of nuclear weapons, thus contributing substantially to the arms race.

During the 1950s, politicians and the media raised great concerns over the missile gap—the idea that the Soviet Union's nuclear missile capabilities far exceeded that of the United States. Credence was given to this idea by the Soviet Union's successful launching of the satellite Sputnik into outer space in 1957, an indication that the Soviet effort to conquer outer space had outpaced the U.S. space program.

In reality, no gap existed, but the fear of such a gap led to the construction of hundreds of additional misses.

Nuclear Stockpiles

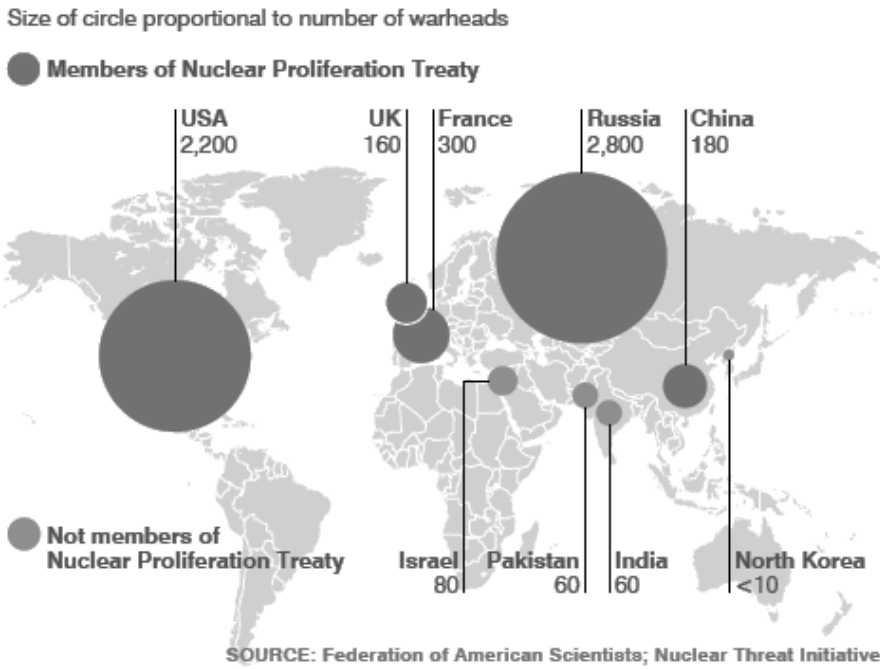


3—Nuclear Warhead Statistics

	Inter-continental missiles	Short-range missiles	Bombs	Awaiting dismant-lement	TOTAL in 2000	TOTAL in 2009
Russia	1355	576	856	8150	21,000	12,987
US	550	1152	500	6700	10,577	9,552
France	-	-	60	-	350	300
Israel	-	-	-	-	0	200
UK	-	-	-	-	185	192
China	121	-	55	-	400	176
Pakistan	-	-	-	-	0	90
India	-	-	-	-	0	75
North Korea	-	-	-	-	0	2

4—Nuclear Warheads Today

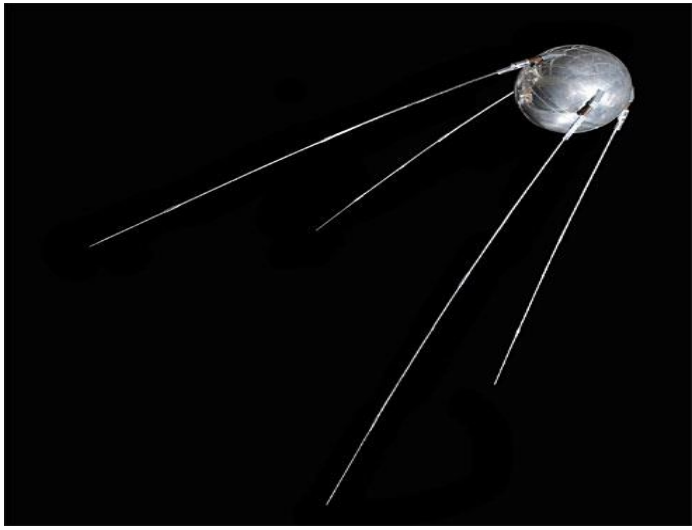
Nuclear Warheads 2016		
Country	**Warheads (Active/Total)**	**Date of first test**
United States	1,900 / 4,500	16 July 1945
Russia	1,780 / 4,700	29 August 1949
Great Britain	150 / 215	3 October 1952
France	290 / 300	13 February 1960
China	n.a. / 260	16 October 1964
India	n.a. / 110–120	18 May 1974
Pakistan	n.a. / 120–130	28 May 1998
North Korea	n.a. / <10	9 October 2006
Israel	n.a. / Suspected 60-400	Unknown (suspected 22 September 1979)

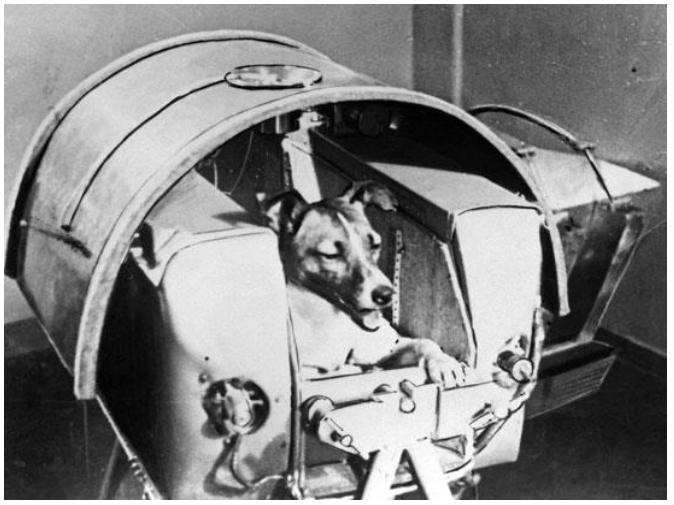


5—Sputnik

In the fall of 1957, the Soviet Union scored its first scientific coup against the Americans by launching a pair of satellites—Sputnik and Sputnik II—that orbited the Earth. The achievement in rocketry that allowed those successful launches suggested to many Americans that the Soviets possessed superior technology that might allow the Soviets to develop the rocket technology for weapons and eventually create military bases in space.

Tension in the United States over the launch of the Sputniks was extremely high and fed into the public's already intense fear of a nuclear war of catastrophic proportions. President Dwight D. Eisenhower, confident that the United States possessed superior missile power, established the National Aeronautics and Space Administration (NASA).



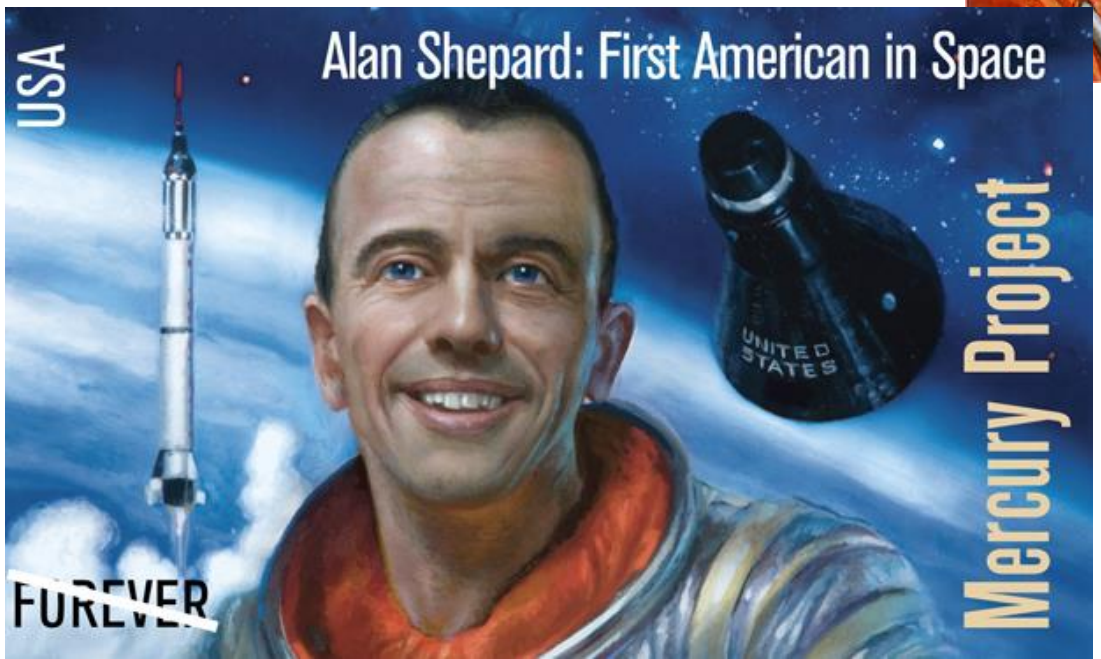


Laika, the dog, was the first live animal in orbit aboard Sputnik II.

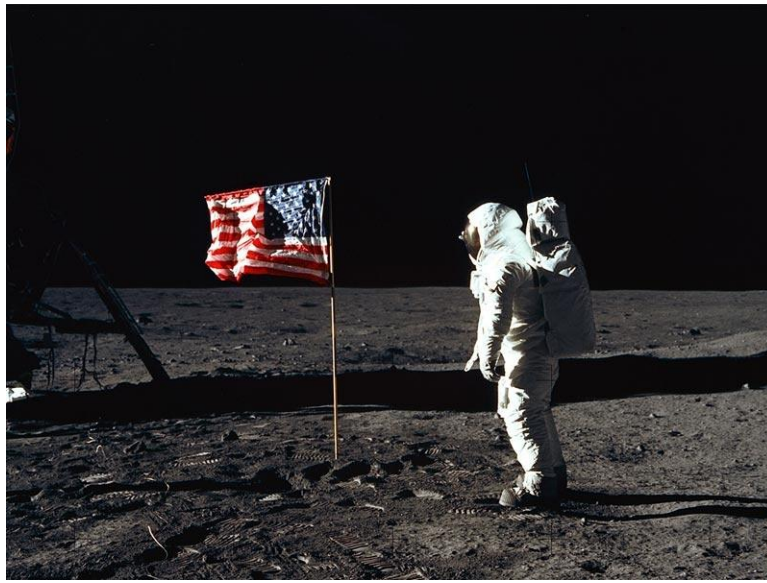
6—Men in Space

Despite that new U.S. effort, the Soviets once again beat them to the punch by launching cosmonaut Yuri Gagarin into earth's orbit in April 1961, the first person to accomplish such a feat. Within a month, the United States had responded by launching Alan Shepard into space on May 5, 1961, although he did not orbit the earth. Gus Grissom followed Shepard in a similar flight on July 21, 1961.

Cosmonaut Yuri Gagarin



7—The Moon



NASA proceeded with the Apollo program in 1967, which promised to realize the ultimate goal of sending a man to the moon and returning him to Earth. Although NASA was encouraged by Gemini's successes, the Soviet Union's successful landing of a lunar probe pushed Americans to redouble their efforts.

After nearly a decade of labor on a moon landing, NASA launched the Apollo 11 mission on July 16, 1969. Days later, astronauts Aldrin and Neil Armstrong landed a lunar module, called Eagle, on the surface of the moon. Armstrong announced to the world, "The Eagle had landed." On July 20, 1969, Armstrong stepped out of the module and walked on the moon and said, "That's one small step for man, one giant leap for mankind."