

Nuclear weapons accidents

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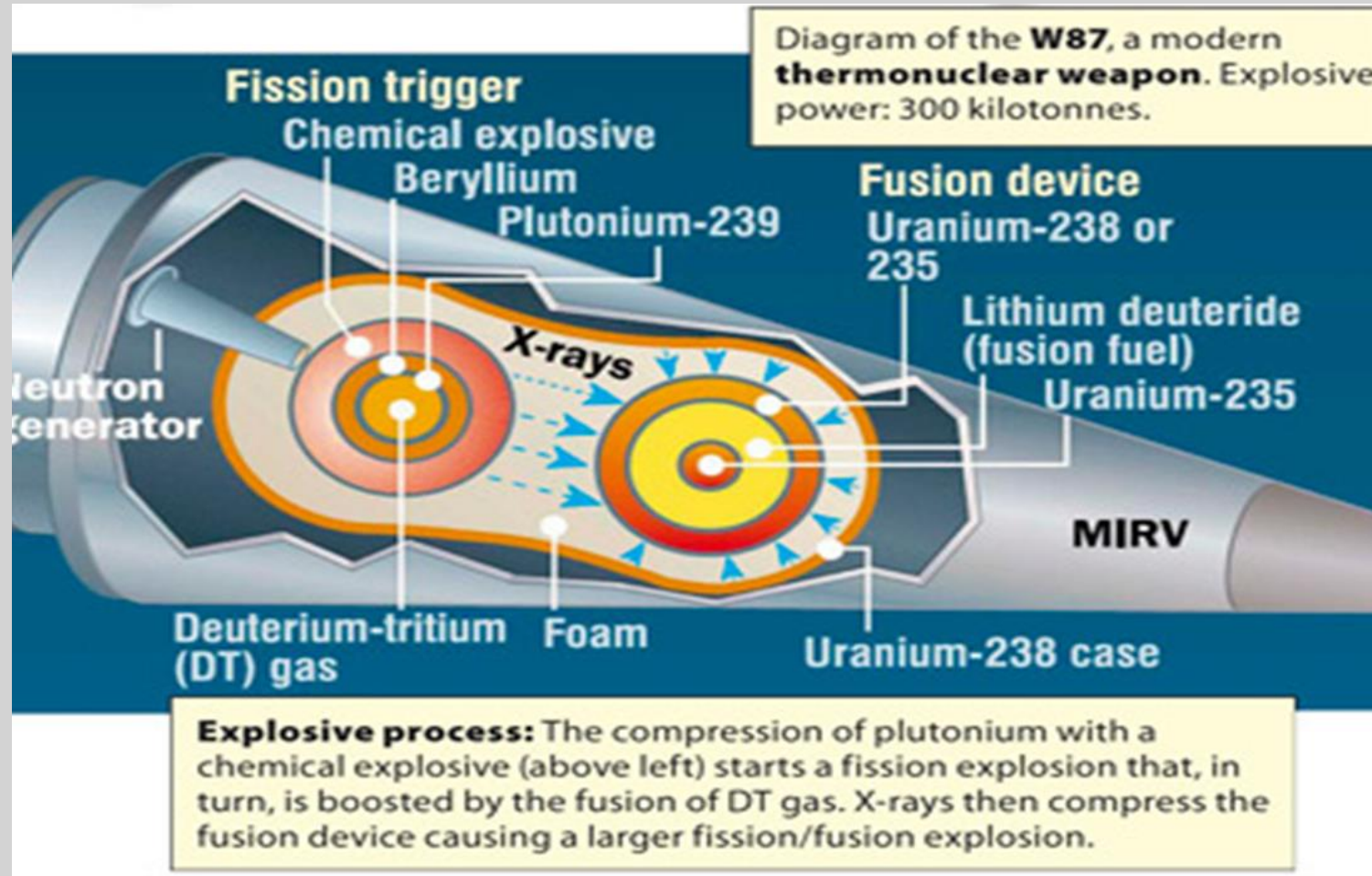
What we often refer to as “accidents”

- Physical accidents
 - Crashes, fires etc.
- Mishaps following security challenges
 - Security breaches
 - Poor security culture
- Near use
 - Miscommunication
 - Misperception of situation
 - Misinterpretation of data
 - Technical errors

Physical accidents



No nuclear detonations are known to have occurred by accident



But a few known examples where..

Nuclear gravity bombs were accidentally released from aircrafts or crashed

→ And in some cases, arming mechanisms began activating or security design to some degree failed

Goldsboro, North Carolina, 1961

- B-52 Aircraft had a fuel leak and spun out of control
- Two nuclear weapons fell from the bomb bay
- One weapon landed safe with its parachute
- The other crashed
- Six out of seven steps towards detonation had engaged



And several examples of..

- Accidents where weapons carrying nuclear warheads were lost
 - Some carried by submarines that were lost
- Accidents where conventional payload exploded due to impact or fire
 - Quite low yield
 - Nuclear material spread in some cases

Palomares, Spain 1966



Palomares, Spain 1966

- Two US Air Force planes collided
- Four unarmed nuclear weapons were dropped
- Two of these ruptured
- Plutonium was scattered
- Another was recovered intact, and another found at sea
- The US has implemented clean-up and monitoring programs in the Spanish region
- Soil was removed and brought to the US for storage

And many more examples of..

- Accidents with aircrafts carrying weapons without warheads or with dummy nuclear capsules or no nuclear capsules installed in the warheads
- Minor accidents with aircrafts and submarines carrying nuclear weapons, but where the weapons were not affected

Mishaps following security challenges



Examples of security challenges

- Concerns regarding alcohol and drug-abuse in workers
- Concerns regarding personnel incompetence
- Faulty procedures and security control mechanisms
- Overall poor security culture
- Risk of inside threat
- Unstable national security situation

B-52 flight armed with weapons in 2007

- B-52 bomber flown from Minot Air Force Base to Barksdale Air Force Base
- The pilot and crew unaware it was armed with nuclear cruise missiles
- No authorization had been given



Near use



Examples of near use

Date	Incident	States involved	Cause
October 1962	Operation Anadyr	Soviet Union	Miscommunication
27 October 1962	British nuclear forces during the Cuban missile crisis	United Kingdom	Conflict escalation
27 October 1962	Black Saturday	United States	Conflict escalation and miscommunication
22 November 1962	Penkovsky false warning	Soviet Union	Espionage
October 1973	1973 Arab–Israeli war	Israel	Conflict escalation
9 November 1979	NORAD: Exercise tape mistaken for reality	United States	Exercise scenario tape causes nuclear alert
3 June 1980	NORAD: Faulty computer chip	United States	Faulty computer chip
25 September 1983	Serpukhov-15	Soviet Union	Technical error
7–11 November 1983	Able Archer-83	Soviet Union, United States	Misperception of military training exercise
18–21 August 1991	Failed coup	Soviet Union	Loss of command and control structure
25 January 1995	Black Brant scare	Russia	Mistaken identity of research rocket launch
May–June 1999	Kargil crisis	India, Pakistan	Conflict escalation
December 2001–October 2002	Kashmir standoff	India, Pakistan	Conflict escalation

Black brant scare, Andøya, 1995

- Norwegian research rocket was launched from Andøya rocket base
- Information about this launch had not reached the right people in Russia
- Rocket was initially interpreted as a US missile
- Nuclear suitcase was bought to then-president Boris Yeltsin
- Cancelled at the last minute. Rocket fell in the ocean.



Ring the bells that still can ring
Forget your perfect offering
There is a crack, a crack in everything
That's how the light gets in

Leonard Cohen