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Strategic Stability and the Problem of False Alarms

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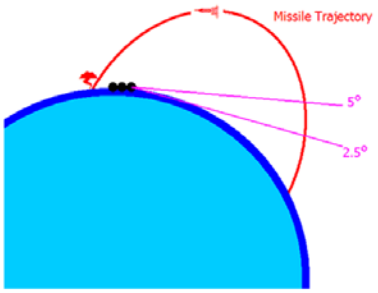
1. The "Logic" of Launch on Warning
2. Inadvertent Nuclear War: the US-Russia Scenario
3. Regional Conflicts and Inadvertent Nuclear War
4. Toward a Globally Shared Missile Launch Surveillance System

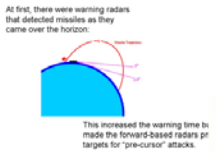
Deterrence **fails** when (multiple) problems occur in tactical warning systems:

At first, there were warning radars that detected missiles as they came over the horizon:



This increased the warning time but made the forward-based radars prime targets for "pre-cursor" attacks.

Deterrence **fails** when (multiple) problems occur in tactical warning systems:



Then the US added visual Confirmation that the radars had not been nuked:

If the radar stopped responding, then a B-52 bomber "orbiting" above the base would radio back that everything was ok.

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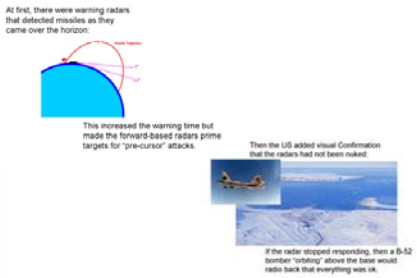


Unfortunately, the B-52 crashed 6 km away from the radar base.

If it had crashed into Thule, it would have started World War III

The "Logic" of Launch on Warning was set by the Time-scale of the Possible Attack:

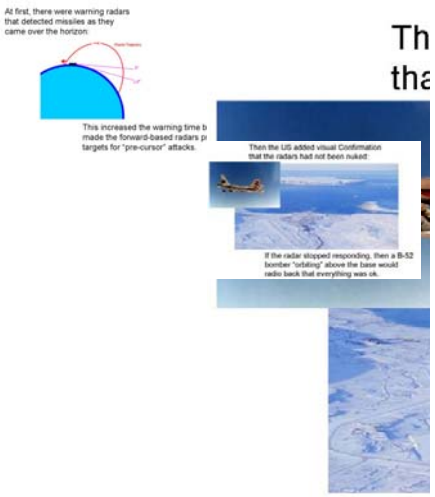
Danger of inadvertently causing a nuclear war because of faulty intelligence

"Danger" of losing <u>command and control</u> so that retaliation would not be possible.

Preemption | Launch on Warning | Ride-out Attack then Launch

This left about 30 minutes for decision and launch. Much effort went into minimizing false alarms

Deterrence **fails** when (multiple) problems occur in <u>tactical warning systems</u>:



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To decrease further the chances of failure, the US introduced the "dual phenomenology" rule

Now, an attack alert must be observed by both radars and satellites…

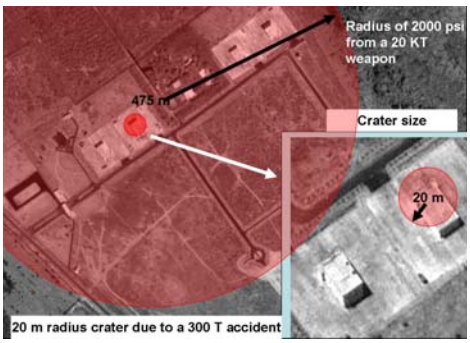
…reduces but does not eliminate the chances of an inadvertent nuclear war.

Regional conflicts are also in danger of inadvertent nuclear war:

Consider, **for instance**, a period of increased tension between India and Pakistan…

…both sides generate their nuclear forces…

Suppose one of those weapons accidentally detonates…



…Does that country think "Oh, an accident" or does it retaliate?

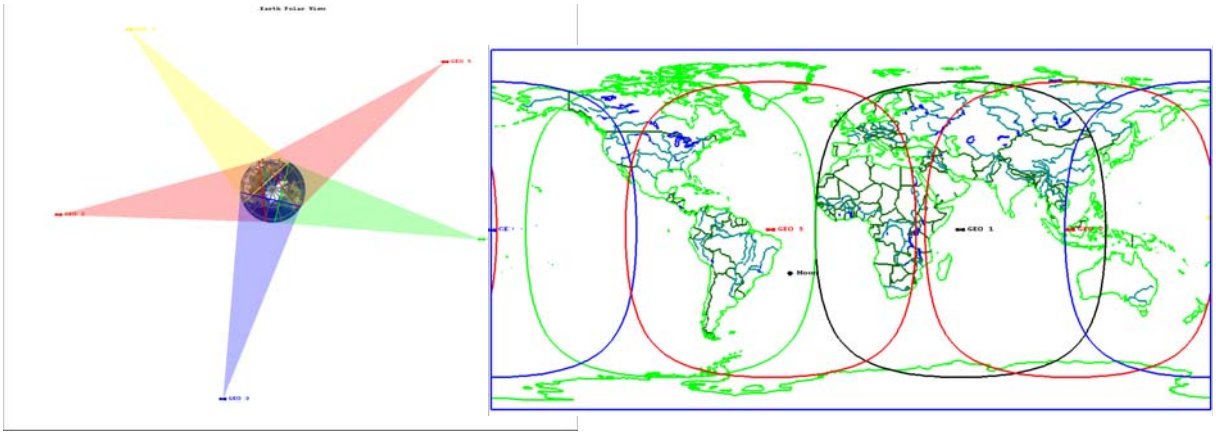
Lesson: The other's nuclear infrastructure can make **him** think **you** are **attacking**!

We all benefit by everyone having as much and as accurate information as possible!

The Best Solution is Abolition of Nuclear Weapons.

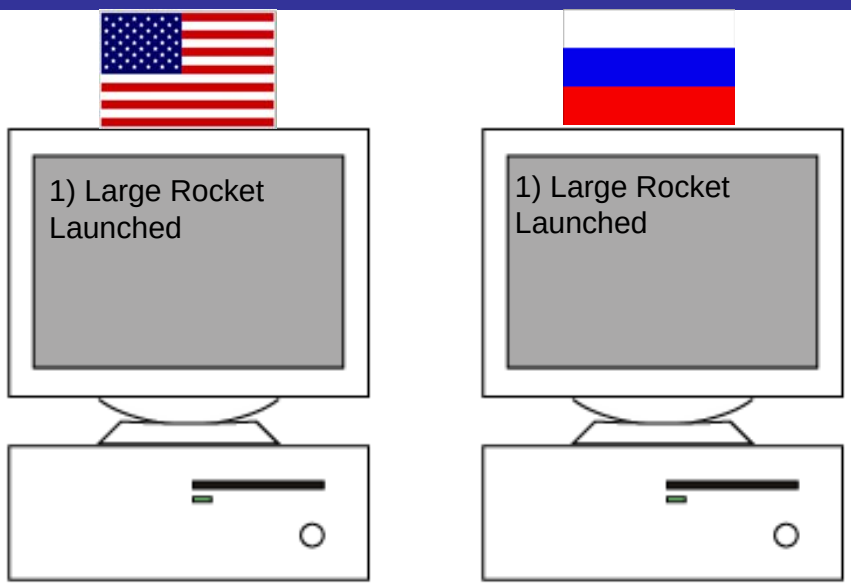
But failing that…

The NEXT Best solution would be a globally shared Missile Launch Surveillance System



Every member country would receive exactly the same raw data on missile launches…

The US-Russia Joint Data Exchange Center (JDEC) was a **Baby Step** in that Direction



But instead of increasing confidence JDEC got mired in post-cold war squabbles.

A Global System using its own, independent sensors would eliminate sensitivities…