

2. Possible Soviet Countermeasures: The "Red Team"

Dr. Yonas told the conference that the Strategic Defense Initiative Organization (SDIO) had set up a "Red Team" whose charter it was to defeat the "Blue Team". Their mandate was to devise Soviet countermeasures to SDI which were realistic, credible and effective. The "Red Team" had postulated a number of measures which the USSR could use to counter SDI:

- a) proliferation of boosters and warheads;
- b) hardening of the booster rockets;
- c) deployment of "fast-burn" boosters to shorten the boost phase;
- d) attacking the space-based systems with ASAT weaponry;
- e) using "penetration aids" such as chaff, decoys, and metallic balloons.

Obviously, proliferation of offensive missiles and warheads was one of the simplest countermeasures at the Soviet Union's disposal. Hardening of the boosters had two effects:

- a) increasing the time required to destroy each missile, allowing more missiles to slip through; and
- b) suppressing "kill assessment", that is, preventing the US surveillance system from detecting whether a target had been destroyed.

A shortened boost phase, completed before the missile left the atmosphere, would make it difficult, if not impossible, to destroy Soviet missiles in the boost phase, and thus would overload the later stages of a layered defence. Perhaps the most effective, though highly provocative, measure would be simply to attack the "sitting duck" space-based defence systems.

It was pointed out that the "Red Team", in order to be realistic, must assess the cost of these countermeasures. For example, for deployment of "fast-burn" boosters, the "Red Team" was analyzing two classes of missiles, single-warhead and multiple-warhead, and asking the following questions: What are the effects on accuracy? On missile weight? What technical advances are required? At what cost?

3. Technical Challenges in the Face of Soviet Countermeasures

Dr. Yonas said that, in order to be judged technically feasible, a space-based ballistic missile defence (SBBMD) must be: