U. S.-Soviets Sign START, But ABM Differences Persist

WASHINGTON

Presidents George Bush and Mikhail S. Gorbachev signed the strategic arms reduction treaty July 31, but the Soviet Union continued to link nuclear weapon cutbacks to preservation of the 1972 Anti-ballistic Missile Treaty.

The 700-page treaty, subject to ratification, sets ceilings of 1,600 strategic nuclear delivery vehicles and 6,000 "accountable" nuclear warheads for each superpower. Warhead counting rules favor bombers and cruise missiles (AW&ST July 29, p. 21).

Throughout the nine years of START negotiations, the Soviets have pressed a strict interpretation of ABM treaty provisions, which limit Strategic Defense Initiative testing and deployment options. The Soviets continue to analyze their requirements for offensive systems on a presumption that they will not have to overcome U. S. ballistic missile defenses.

Although SDI proposals were reoriented this year to emphasize protection against limited ballistic missile attacks, the Bush Administration program still includes testing and eventual deployment of space systems prohibited by the ABM treaty. Congressional supporters of near-term, ground-based defenses, intended to comply with the treaty, said its single-site, 100-interceptor limits should be renegotiated (AW&ST July 29, p. 29).

Henry Cooper, director of the Defense Dept.'s SDI Organization, said "a host of questions"—including multiple-site deployments, the number and types of ground-based interceptors, space-based defenses and the distinction between strategic and tactical ballistic missiles—should be negotiated with the Soviets.

After Bush and Gorbachev signed the START treaty during their Moscow summit, however, Soviet Foreign Minister Aleksandr A. Bessmertnykh cautioned against the treaty-compliant proposal. □

U.S. / SOVIET STRATEGIC FORCES BEFORE AND AFTER START

NUMBERS OF WARHEADS

	CURRENT FORCE LEVELS	ESTIMATED POST-START LEVELS
SBLMs	5, 056 2, 810	3, 456 1, 872
ICBMs	2, 450 6, 595	1, 444 3, 028
BOMBS AND SRAMS	2, 608 636	2, 720 960
ALCMs	1, 600 680	1, 860 1, 300
SLCMs	367 100	880 880

SOURCE: ARMS CONTROL ASSN.

USA USSR

Cosmonaut working outside Mir is wearing the same type of helmet and visor that fogged.

Cosmonaut Rescued From Atop Mir Tower During Station EVA

WASHINGTON

A Soviet cosmonaut working outside the Mir station 235 mi. above Earth had to be rescued by a fellow crewman after he was effectively blinded by a fogged space helmet and stranded atop a 46-ft. tower mounted on the station.

The incident occurred July 27 just after cosmonauts Anatoly Artsebarsky and Sergei Kirkalev had completed construction of the 14-meter (46.2-ft.) tower to demonstrate the assembly of large space structures during extravehicular activity (EVA).

Artsebarsky climbed to the top of the tower to secure a Soviet flag. But so much moisture had built up in his spacesuit because of his workload that his helmet visor fogged, preventing him from seeing how to get back down. Artsebarsky called for help, and Kirkalev climbed the tower to guide him down the structure manually and along the length of the space station to the safety of the Mir airlock.

A similar emergency 25 years ago in the U. S. program forced the early termination of an EVA by a Gemini 9 astronaut, Navy Capt. Eugene A. Cernan.

The Mir crew had been outside the station nearly 7 hr. when the emergency occurred.

The EVA was the sixth for this crew launched to the station May 18. During previous EVAs, they erected a U. S. cosmic ray detector and assembled a derrick that will be used during four additional EVAs to reposition solar arrays on the vehicle. The derrick also has been used to swing the cosmonauts from one part of the station's exterior to another, to save the time involved in crawling long distances. □