FACT SHEET

MDA FACT SHEET

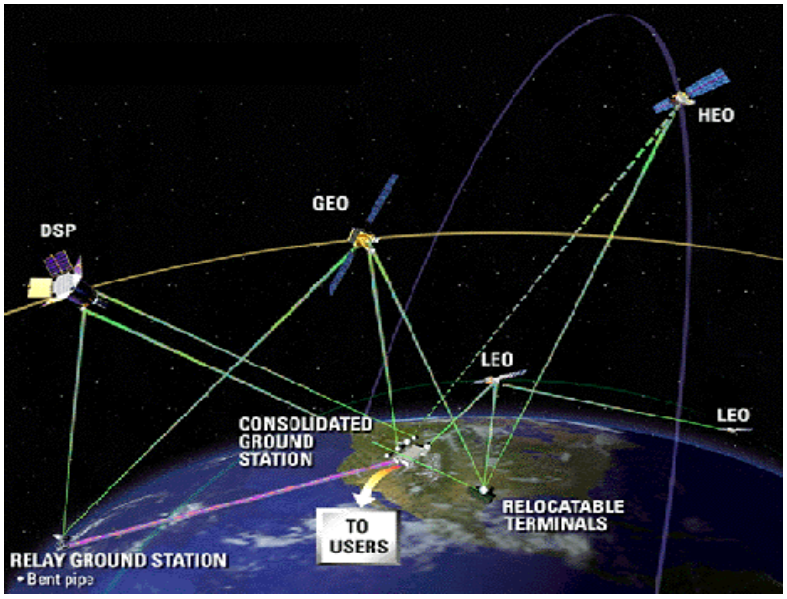
SENSORS

THE SENSOR SEGMENT

The Sensor Segment includes the research and development of technologies and capabilities that enhance ballistic missile detection, midcourse tracking and discrimination. The Sensor Segment is composed of two primary projects: Space Sensors and International Cooperation. Space Sensors project supports the Block 2010 Space Based Infrared System (SBIRS) Increment 3, a constellation of infrared sensing satellites to support of the Ballistic Missile Defense (BMD) System. The International Cooperation project includes the Russian-American Observation Satellite (RAMOS), a Russian-American cooperative research and development to observe the earth's atmosphere and ballistic missile launches. The Sensor Segment will support the Boost, Midcourse and Terminal Defense Segments of the BMD System with both mission and experimental data.

SENSORS: BLOCK 2010 SBIRS INCREMENT 3

SBIRS Increment 3 is the deployment of a Low Earth Orbiting (LEO) infrared sensing satellite constellation and supporting ground processing system. SBIRS Increment 3 will provide booster detection, midcourse tracking and discrimination data to the BMD System. SBIRS Increment 3 is an integrated system composed of Defense Support Program (DSP) satellites, SBIRS High (a constellation of geosynchronous orbit satellites and highly elliptical orbit payloads), SBIRS Low and a consolidated ground processing system. The first launch of SBIRS Low is in 2006 with full constellation deployment of approximately 30 satellites by 2011.

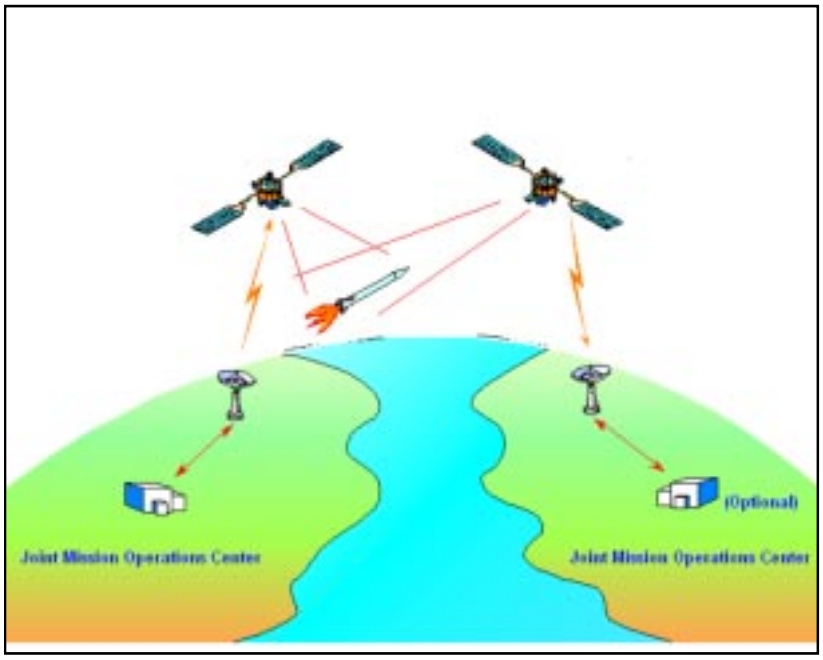


SBIRS INCREMENT 3: "PROVIDING BIRTH TO DEATH THREAT TRACKING"

The SBIRS Low satellites will be deployed in multiple orbit planes to provide continuous global coverage in support of the BMD System's Boost, Midcourse and Terminal Defense Segments. SBIRS Increment 3 will provide these segments precision cueing and prevent threat complexes from overwhelming the BMD System radar with countermeasures. In addition to supporting the BMD System, SBIRS Increment 3 provides enhanced missile warning of a ballistic missile attack on the U.S., its deployed forces and its Allies; technical intelligence; and battle space characterization. SBIRS Increment 3 provides the BMD System a robust solution against complex threats while providing significant added value to other mission areas.

INTERNATIONAL COOPERATION: RAMOS

The Russian-American Observation Satellite (RAMOS) project is an innovative U.S. – Russian space-based sensor research and development program addressing ballistic missile defense and national security. This program engages Russian developers of early warning satellites in the joint definition and execution of aircraft and space experiments. The RAMOS program will design, build, launch and operate two satellites that will provide stereoscopic observations of the earth's atmosphere and ballistic missile launches. RAMOS will operate in the short wavelength and mid-to-long wavelength infrared bands. Preliminary experiments designed to support program definition occurred between 1995 and 1999 using existing U.S. and Russian space and aircraft platforms to collect imagery. The U.S. Midcourse Space Experiment (MSX) and the Miniature Sensor technology Integration (MSTI-3) satellites were used to collect nearly simultaneous stereo imagery with the Russian RESURS 01 satellite. Joint experiments using U.S. and Russian prototype sensors were flown aboard the U.S. Flying Infrared Signatures Technology Aircraft (FISTA), demonstrating our ability to jointly plan, execute and analyze RAMOS type experiments.



RAMOS: Stereoscopic Observations of Missile and Earth Background

The RAMOS team entered the Preliminary Design phase of the program in the Fall of 2000. The RAMOS system consists of two co-orbital satellites each with a sensor suite consisting of an infrared imaging radiometer, a visible wide-angle photometer and a visible camera. Additionally, one satellite will carry a short waveband infrared polarimeter and the other an ultraviolet photometer. Current plans call for Russia to provide the launch capability, satellite platforms, and ground processing and control equipment while the U.S. will provide the infrared sensors. The satellites are scheduled for launch in FY04 with a nominal two-year on-orbit life expectancy.

Both the Block 2010 SBIRS Increment 3 and RAMOS programs are under the direction of the Missile Defense Agency (MDA). Responsible for ensuring an integrated and interoperable missile defense, MDA supports the research and development of innovative technologies necessary to provide boost phase, midcourse and terminal ballistic missile defense. SBIRS Increment 3 contributes to this effort as part of a layered, capability-based BMD System. RAMOS, by engaging Russia in missile defense related technologies, establishes the groundwork for future cooperative efforts between the U.S. and Russia on technical defense research programs.

Missile Defense Agency, External Affairs
7100 Defense Pentagon
Washington, D.C. 20301-7100
(703) 697-8472
http://www.acq.osd.mil/bmdo/bmdolink/html/