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New Space-Based Satellite Tracking Capability

In April 1996, the Midcourse Space Experiment satellite was launched. In addition to several Space Defense Initiative related experiments, it also carries a Space-Based Visible sensor designed for conducting space surveillance experiments from a space platform. Introduction of this sensor represents a significant capability leap in the tracking of Earth-orbiting satellites compared to ground-based optical instruments because:

1) It is not restricted to only night-time operations.
2) Its observing field is not limited to a particular longitude band.
3) It is not hampered by cloud cover, wind, or weather.

At the AAS/AIAA Astrodynamics Specialist Conference in August 1997, there was a panel discussion entitled "Space-Based Space Surveillance." The members of the panel each gave short presentations of recent research and experiment results from the Space-Based Visible sensor aboard the Midcourse Space Experiment satellite. This information is presented within the following eight papers in this issue. Collectively they provide an overview of the experiment along with considerable technical details of the data collection and reduction process.

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