

31st COSPAR SCIENTIFIC ASSEMBLY

A STRAC

ADVANCES IN MULTIMISSION NAVIGATION SYSTEMS AT NASA/JPL

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Technology, Pasadena CA, U.S.A.

The Multimission Navigation Program at the Jet Propulsion Laboratory develops and maintains a diverse set of deep space and near Earth mission support capabilities. These include: ephemerides and gravity field estimates for celestial bodies; optical and autonomous navigation systems; precision GPS orbit determination; models for ionospheric and tropospheric delay; timing corrections; observations of polar motion; and a data distribution system for scientists and mission operations teams. Advances in these multimission navigation systems will be reviewed in the context of their contributions to Galileo, Cassini, Mars Global Surveyor, Japan's Institute of Space and Astronautical Science (ISAS), New Millennium, the Near Earth Asteroid Tracking program, and the world-wide astronomy, geophysics, and engineering communities. In addition, a description of a state-of-the-art analysis and operations tool, Micro NAV-Soft, will be given. These systems represent solutions to operational navigation issues associated with the multiple low cost robotic missions that NASA will usher into the new millennium.

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4. No special projection
equipment required
5. Oral presentation
preferred

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6. No financial support
required

2. Panel on Satellite Dynamics
Orbit Determination and Analysis

3. Invited by: R. Kolenkiewicz (U.S.A.)