

Tuesday, March 13, 2007
POSTER SESSION I: FUTURE MISSION CONCEPTS
6:30 p.m. Fitness Center

Abell P. A. Korsmeyer D. J. Landis R. R. Lu E. Adamo D. Jones T. Lemke L. Gonzales A. Gershman B. Morrison D. Sweetser T. Johnson L.

Scientific Exploration of Near-Earth Objects Via the Crew Exploration Vehicle [#2292]

A study by the Advanced Programs Office within NASA's Constellation Program is examining the feasibility of sending a Crew Exploration Vehicle to a near-Earth object. This mission will return a wealth of scientific information about these objects.

Meyer T. R. LeCompte M. A. McKay C. P. Durda D. D.

Near-Earth Asteroid Rendezvous Missions with the Orion Crew Exploration Vehicle [#2083]

Development of the Ares launch system and Orion Crew Exploration Vehicle open up a number of possible opportunities in the inner solar system for human exploration. Of particular interest in this regard are near-Earth objects (NEOs).

Hildebrand A. R. Tedesco E. F. Carroll K. A. Cardinal R. D. Matthews J. M. Kuschnig R. Walker G. A. H. Gladman B. Kaiser N. R. Brown P. G. Larson S. M. Worden S. P. Wallace B. J. Chodas P. W. Muinonen K. Cheng A. Gural P.

The Near Earth Object Surveillance Satellite (NEOSSat) Mission Enables an Efficient Space-Based Survey (NESS Project) of Interior-to-Earth-Orbit (IEO) Asteroids [#2372]

The NEOSSat microsatellite will be used to discover and track NEOs with an emphasis on interior-to-Earth-orbit objects.

Kletetschka G. Adachi T. Mikula V.

Electromagnetic Spacecraft Used for Magnetic Navigation Within Asteroid Belt, Mining Concepts and Asteroid Magnetic Classification [#1093]

Application of expandable/collapsible magnetic coil increases/decreases spacecraft velocity without using chemical propellants, allows effective mining of metals from asteroids and is used for the first order classification of asteroids.

Reinert R. Dissly R. Benson S.

Propulsion Options for Near Earth Object Characterization Missions [#2087]

This presentation will compare the performance capabilities of space propulsion approaches, both chemical and electric propulsion, to identify their relative cost effectiveness in supporting future NEO characterization missions.

Ebbets D. Reinert R. Dissly R.

Small Landing Probes for In-Situ Characterization of Asteroids and Comets [#2104]

This poster describes a design concept for a small landed probe to enable characterization of both the surface and interior of asteroids or comets.

Watson A. Strong S. Dawson O. Likar J. Balint T. Aubrey A. Bramall N. Chereck A. Dominguez G. Hultgren E. Levy J. Liu T. Elwood Madden M. Plesko C. Sigel D. Soderlund C. Takahashi Y. Thompson S. Thomson B. J. Wiese D.

Dual Probes to Saturn: A New Frontiers Class Mission Design Concept [#1199]

NASA's 18th Planetary Science Summer School Program participants designed a probe mission to Saturn to quantify the O/H ratio in the planet's atmosphere as well as parameterize the photochemistry, cloud properties, and atmospheric structure.

Banerdt W. B. Smrekar S.

Geophysics and Meteorology from a Single Station on Mars [#1524]

One lander on Mars, using instruments and analysis techniques specific to a single station, can provide groundbreaking measurements resulting in a significant leap in our understanding of the deep interior, near-subsurface and atmosphere of Mars.

Tapley B. D. Bettadpur S. V. Weinberg J. D. Dissly R. Carter R. C. Kant S.
Mars Gravity Recovery, Atmosphere and Climate Experiment (MarsGRACE) — A Mars Scout Mission Concept [#2285]

This poster presents a Scout mission concept to fly the highly successful GRACE mission around Mars. Precise gravity measurement will enable a wealth of atmospheric and geophysical martian science.

Leblanc F. Langlais B. Chassefiere E. Sotin C. Barabash S. Dehant V. Dougherty M. Lammer H. Manda M. Vennerstrom S.

MEMO: Mars Escape and Magnetic Orbiter [#1581]

MEMO is a new orbiter devoted to the characterization of present atmospheric escape and of the fossil magnetic field. The low periapsis (~130 km) is required to detect and quantify atoms and molecules involved in the escape, and to measure the magnetic field with an unprecedented spatial resolution.

Chassefière E. Aplin K. Fercencz C. Imamura T. Korabiev O. Leitner J. Lopez-Moreno J. Marty B. Titov D. Wilson C. Witasse O. VEP Mission Team

The Future of Venus Space Exploration — The Venus Entry Probe (VEP) Initiative [#2386]

The Venus Entry Probe (VEP) initiative is Europe's future concept for venusian space exploration. It is proposed within the framework program of ESA Cosmic Vision 2015–2025.