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AGU Planetary Sciences Section NEWSLETTER #22

3.August. 2007

1) Whipple Award nominations extended to August 15!
2) Fall AGU abstracts are due September 6
3) Fall meeting special sessions
4) MRO data release

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1) Whipple Award nominations extended to August 15!

The deadline for submission of nominations for the Whipple Award, the primary award of the Planetary Sciences section, has been extended to August 15! Take this opportunity to submit the necessary materials to comprise a complete nomination package for a scientist who you feel deserves this special recognition by our community. Refer to the link below for specific information about the award and the nomination package: http://www.agu.org/sections/planets/psaward.html

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2) Fall AGU abstracts are due September 6

The deadline for submission of abstracts for the Fall meeting is **September 6**, 2359 UT. The AGU web site suggests that as many as 15,000 scientists could participate in this important annual meeting. Consider submitting your abstract to one of the section special sessions that are listed next.

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3) Fall meeting special sessions

Listed below are the special sessions within Planetary Sciences for the Fall meeting. Specific questions about individual sessions can be directed to the conveners, and questions about the Fall meeting in general can be directed to the Program Committee representatives (see contact information for P01). Following the sessions list are the titles of special sessions in other sections that are co-sponsored by Planetary Sciences. On the abstract submission web page, you can search by session code (e.g., P01) using QuickSearch.

P01: Planetary Sciences General Contributions

Conveners: James Zimbelman (zimbelmanj@si.edu) and Jurgen Oberst (juergen.oberst@dlr.de)
Description: This session provides the opportunity for contributions that fall within the broad spectrum of Planetary Sciences, but are not directly appropriate to any of the other Special Sessions proposed for the Planetary Sciences Section.

P02: Lava Flows: A Solar System Perspective
Conveners: James Zimbelman (zimbelmanj@si.edu) and W. Brent Garry (garryw@si.edu)
Description: Lava flows are known to be present on several planetary bodies in the solar system, including the Earth, Mars, the Moon, Venus, and Io. The unique environment on each planetary body provides for a wide range of eruption styles, flow morphologies, flow lengths, and material compositions. This session will focus on lava flow emplacement throughout the solar system, with an emphasis on the analysis of individual lava flows or flow fields.

P03: Enceladus: Possibilites for Water and Life
Conveners: Christopher McKay (cmckay@mail.arc.nasa.gov) and Carolyn Porco (carolyn@ciclops.or)
Description: This special session will review recent data and models for the possibilities of liquid water and life on Enceladus - a moon of Saturn. Enceladus is of interest because of the presence of geysers.

P04: Planetary Rings: Observation and Theory

Conveners: Larry W. Esposito (larry.esposito@lasp.colorado.edu) and Linda.J.Spilker (Linda.J.Spilker@jpl.nasa.gov)
Description: This session will focus on new theoretical and observational studies of planetary rings. Subjects to be covered include the structure, dynamics and composition of the rings; the interaction of the rings with the ionosphere, magnetosphere, and interplanetary meteoroids; and the origin and evolution of the rings. Recently obtained Cassini observations will be highlights, but observations from Earth and HST, theoretical models, and relevant laboratory data are also of interest.

P05: Earth and Moon as a Binary Planet System
Conveners: Lev A. Maslov (ms_leo@hotmail.com) and Yurii N. Avsyuk (avsyuk@ifz.ru)
Description: This session will consider four main points: 1. The origin of the Earth-Moon system. Here, the following hypotheses will be considered: a) capture hypothesis, b) impact hypothesis, c) separation hypothesis. Results of mathematical modeling and critical analysis of these hypotheses will be given 2. The Evolution of the Earth-Moon system. The following problems will be considered: a) evolution of the Earth's figure parameters, b) evolution of the Earth and Moon orbital parameters, c) dynamics of the Earth-Moon barycentre and movements of the Earth's inner core. 3. The Earth's tectonics and geodynamics caused by the gravitational interaction with the Moon, considering a) tidal deformations of the solid Earth, b) transformation of tidal deformations into horizontal movements, c) westward drift of the Earth's lithosphere and deep layers, d) frictional heating of deep layers, e) generation of planetary magnetic field, f) influence of the inner core movements on the Earth's tectonics and

geodynamics, g) climate changes caused by the evolution of the Earth and Moon orbital parameters. 4. The biological and social consequences of the binary Earth-Moon system. Special attention will be paid to the possibility of the Earth and Moon as a binary planet system and not a planet and satellite system. A variety of astronomical, geophysical and geodetic data will be considered in this session for study evolution of the Earth-Moon binary planet system.

P06: The State of Martian Water From The Hesperian to Modern Day

Conveners: Scott Murchie (scott.murchie@jhuapl.edu) and Micahel Wolff (wolff@SpaceScience.org)
Description: Results from Mars Odyssey, the Mars Exploration Rovers, Mars Express, and the Mars Reconnaissance Orbiter suggest that since the end of the Noachian era, liquid water on Mars' surface has been progressively more uncommon. Where liquid has occurred, mineralogy of aqueous phases suggests a more acidic environment than in the Noachian. The Martian hydrologic cycle has shifted from one involving liquid to one involving primarily the gaseous and solid states. This session will feature new results on Hesperian and Amazonian water-related deposits, and the present-day cycling of water between the surface and atmosphere, including remote sensing and transport aspects.

P07: Composition, Stratigraphy, and Structure of the Phyllosian/Noachian Crust and Implications for Early Mars

Conveners: John Mustard (John_Mustard@brown.edu) and Jean-Pierre Bibring (jean-pierre.bibring@ias.u-psud.fr)
Description: The Noachian period of Mars is emerging as one of the most dynamic and rich in compositional and mineralogic variation, volcanic and aqueous processes, and tectonic evolution. New data returned by NASA and ESA spacecraft are revealing spectacular insights into this critical early period while theoretical analyses and integrative studies are leading the way to an emerging framework for understanding this critical period. This session seeks to explore the implications of these new discoveries and results for the interaction of water with the crust of early Mars, and consequences for the tectonic and magmatic evolution of the planet.

P08: Mostly Icy, Never Dull: The Diverse Natures of the Outer Planet Satellites

Conveners: Krishan K. Khurana (kkhurana@igpp.ucla.edu) and Candice J. Hansen (Candice.j.Hansen@jpl.nasa.gov)
Description: The continued exploration of the Saturnian system by Cassini and reanalysis of data from previous spacecraft missions to outer planets continues to excite and confound the planetary scientists. The geysers of Enceladus, the magnetic field of Ganymede, continued volcanism on Io and the strange surface of Hyperion are amongst the many fascinating phenomena that are vying for the attention of today’s

planetary scientists. Compelled by these exciting discoveries, both ESA and NASA are studying a variety of options to mount future Jovian and Saturnian system expeditions. This session will explore similarities and differences of the outer planet moons to uncover trends indicative of common and unique origins, and similar and diverse processes. This session will consist of invited and contributed presentations that highlight observations, modeling and data analysis that are indicative of universal processes (tidal and radiogenic heating, orbital resonances, orbital evolutions, tenuous sputtered atmospheres resulting from magnetospheric interactions) and unique phenomena (the south pole anomaly of Enceladus, the high neutral content of the material picked up by Saturn's magnetosphere from Enceladus etc.). Contributions that investigate the origins and evolutions of multiple moons to uncover underlying trends are especially welcome. Contributed papers covering Jovian, Uranian and Neptunian moons are welcome in addition to presentations on the Saturnian satellites.

P09: Laboratory Investigations Related to Analyses of Mars Data

Conveners: Timothy Glotch (tglotch@gmail.com) and Joel Hurowitz (joel.hurowitz@gmail.com)
Description: Laboratory investigations are key to correctly interpreting data returned from space missions. This session will focus on results from laboratory studies designed to aid in analysis of remotely sensed or in situ data acquired by past, currently active, and upcoming Mars missions. Examples include laboratory spectroscopic investigations that aid in interpretation of data from TES, THEMIS, OMEGA, CRISM, and other orbital spectrometers, or Mini-TES and Pancam data acquired by the MER Rover missions. Other examples include laboratory geochemical studies that will aid in the interpretation of MER APXS and Mössbauer data or future Mars Science Laboratory APXS, CheMin, ChemCam, and SAM data. Cross-disciplinary studies that make use of multiple measurement techniques and data sets are especially encouraged.

P10: Recent Climate Change on Mars: Insights From Terrestrial Analogs

Conveners: James W. Head III (james_head@brown.edu) and David R. Marchant (marchant@bu.edu)
Description: Evidence for recent climate change on Mars has been seen in a variety of features including contraction-crack polygons, debris-covered glaciers, gullies, slope streaks, dunes, mantling layers, viscous-flow features, and variable water and carbon dioxide ice deposits. Terrestrial environments analogous in morphology and process provide important insight into the nature of environmental conditions and changing climate on Mars. In this session we solicit contributions on terrestrial analog studies that provide insight into recent climate conditions and change on Mars.

P11: The Plasma Environment of Saturn, its Satellites and Rings

Convenesr: Tamas I. Gombosi (tamas@umich.edu) and Kenneth C. Hansen (kenhan@umich.edu)
Description: New results from the instrument suite on the Cassini spacecraft are drastically changing our understanding of the intricate interplay between Saturn's magnetophere and the plasma environments of its satellites and rings. This session will focus on a synthesis of observations, models and theory. It will consist of a combination of invited and contributed talks as well as posters.

P12: Views of an Icy Mars Through the Eyes of MRO

Conveners: Shane Byrne (shane@lpl.arizona.edu), Kathryn E. Fishbaugh (fishbaugh@issibern.ch) and Timothy N. Titus (ttitus@usgs.gov)
Description: The Mars Reconnaissance Orbiter (MRO) has been conducting primary science phase operations since November 2006. As with other recent Mars orbiters, the high-inclination orbit of MRO ensures that the icy polar deposits and high-latitude terrains are disproportionately well-sampled. MRO has obtained unprecedented views of the surface and subsurface of both the northern and southern polar layered deposits and of the residual ice caps. Interpretation of new compositional, morphologic and subsurface radar-reflectivity data of these deposits are revealing details of the effects of current, active polar processes and are providing a more complete understanding of the historical record within these deposits. MRO observations of the south polar seasonal ice cap also show a host of defrosting phenomena with no known terrestrial analogue. In addition, the lead up to the MRO mission saw a growing appreciation of geomorphologic indicators of past and present near-surface ice at non-polar latitudes. MRO observations have revealed a host of remnant-glacial and periglacial landforms in these regions, attesting to the present and historical importance of ice-related processes in shaping the Martian landscape. The role of ice on Mars as both a record of and an influence on climate and as a major player in shaping geomorphology is becoming increasingly better understood. These exciting new data address many outstanding problems while raising intriguing new questions. We solicit presentations that utilize MRO data (both through modeling and observations) to further understand current polar and non-polar ice deposits, the geomorphologic imprint of past icy deposits on Mars, the relationship between these deposits and climate evolution and terrestrial analog studies relevant to these MRO discoveries.

P13: Follow the Oxidants: Chemical Energy for Planetary Environments and Life

Conveners: John F. Cooper(John.F.Cooper@nasa.gov) and Paul D. Cooper (paul.cooper@ssedmail.gsfc.nasa.gov)
Description: The astrobiological potential of planetary environments to evolve and sustain life is not only determined by the presence of liquid water but also by the availability of oxidants and organics in reactive forms to provide chemical energy for life.

The Presence of atmospheric molecular oxygen can be demonstrably beneficial to life, as on Earth, and can be indicative elsewhere, as at Europa, of high astrobiological potential through the chemical contact of oxidized icy surfaces with subsurface liquid water. In astronomical searches for signs of life on earth-like extrasolar planets, also supplemented by in-situ surface and atmospheric measurements on Mars, the relative abundances of oxidants and organics are potentially diagnostic of biological sources and consumers. If, however, the observationally accessible surface environments are highly oxidized, as likely for Mars and Europa, the rapid destruction of organic biosignatures by oxidation presents a major challenge in the search for detectable signs of life. Conversely, the hydrocarbon-rich atmosphere of Titan, and of early Earth in some models, assures short lifetimes and correspondingly low abundances for oxidants arising from external sources, e.g. the oxygen loaded magnetosphere of Saturn for Titan and atmospheric photolysis driven by solar ultraviolet irradiation for Earth. Finally, the exogenic influx and in-situ surface production of abiotic oxidants can potentially modify the chemical and physical structure of near-surface planetary environments with significant consequences for life. We invite contributions on the Follow the Oxidants theme with relevance to the chemical evolution, surface and subsurface conditions, atmospheres, and astrobiological potential of planetary environments within and beyond the solar system. Suggested topics include measurements and models for space environment inputs to surface and atmospheric oxidation; observations, laboratory measurements, and theoretical models for oxidant formation on planetary and extrasolar bodies; transport of oxidants to, and impact on, subsurface environments including liquid water and mixed fluid reservoirs and oceans; chemical interactions and reaction products of oxidants and organics; oxidant connections to evolution and survival of life; and oxidant effects on the survival and recognizability of biosignatures. Contributions for instrument and mission concepts related to oxidant production and loss, organic interactions, and astrobiological impact are particularly encouraged.

P14: Laboratory Investigations Into the Compositions of Solid Surfaces From the Asteroid Belt to the Oort Cloud

Conveners: Charles A. Hibbitts (karl.hibbitts@jhuapl.edu) and Thomas Orlando (thomas.orlando@chemistry.gatech.edu)
Description: The compositions of surfaces in the outer solar system can be influenced by many processes including internal geologic activity, impact cratering, solar, cosmic, and magnetospheric radiation, and micrometeoroid bombardment. This session solicits an intentionally wide range of laboratory investigations related to understanding the compositions of solid surfaces in the outer solar system in part to foster greater communications between diverse areas of research. This session is particularly interested in exploring the general physical and chemical processes that help explain phenomena observed in telescopic and spacecraft measurements.

P15: Probing the Mysteries of Iapetus

Conveners: Amanda Hendrix (arh@jpl.nasa.gov) Rosaly Lopes (Rosaly.M.Lopes@jpl.nasa.gov)
Description: Iapetus, the Saturnian moon known for its dramatic hemispheric albedo dichotomy and equatorial ridge, is one of the most fascinating objects in the solar system. The Cassini flyby of Iapetus on September 10, 2007 promises to provide fascinating results on topics such as the composition of Iapetus' dark terrain, the albedo dichotomy, the mountainous equatorial ridge, and interior. This session provides an opportunity for presentation of new Iapetus result to the community. Earth-based Iapetus results are also welcomed in this session.

P16: Geophysics and Geodesy Experiments on the Moon

Conveners: Bruce Banerdt (bruce.banerdt@jpl.nasa.gov) and Jürgen Oberst (Juergen.Oberst@dlr.de)
Description: The instrument packages that the US astronauts left on the Lunar surface provided some of the most valuable data from the Apollo era, with analyses continuing up to the present day. As NASA is preparing for a new Lunar exploration initiative, there are now good prospects for a return to the Lunar surface either by robotic missions or by astronauts in the near future. In the wake of this initiative, there is new interest in Lunar surface experiments in geophysics and geodesy, which leads us to propose this special session. We welcome contributions that deal with the existing Apollo surface data or concept studies for Lunar surface instruments for geoscience on-, of-, or from the Moon on coming missions.

P17: A New Spin on Saturn? Recent Results of the Atmosphere and Interior From Cassini and Earth-Based Observations

Conveners: Kevin H. Baines (blueskies4321@yahoo.com) and Christopher T. Russell (ctrussell@igpp.ucla.edu)
Description: New advances in understanding the enigmatic rotation rate of Saturn and the nature of Saturn's circulation, dynamics, aurorae, and chemistry have been made during this third year of Cassini Orbiter investigations. This session focuses on new observations and results dealing with Saturn's interior and atmosphere utilizing the comprehensive suite of instruments onboard the Cassini orbiter. Both invited and contributed presentations on these topics will be highlighted. Recently obtained Cassini observations will be emphasized, but observations from Earth and HST, and theoretical models are also welcome.

P18: Geomorphic Evidence for Water On Mars: Origin and Implications for Martian Channels

Conveners: Sanjoy M. Som (sanjoy@u.washington.edu) and David R. Montgomery

(dave@ess.washington.edu)
Description: The diversity of instruments available for planetary remote sensing has led to increasing evidence for liquid water flow on the surface of Mars, from giant Noachian outflow channels, to recent, crater bound gullies. In this session, contributions are solicited that address the geomorphology of landscapes that testify to the activity of liquid water on Mars. Discussions regarding their origin, age, duration, morphology, and relationships to their environment of formation are particularly desired.

P19: Mars Weather and Climate: View From the Current Missions

Conveners: Stephen W. Bougher (bougher@umich.edu) and Richard W. Zurek (Richard.W.Zurek@jpl.nasa.gov)
Description: The Mars Reconnaissance Orbiter (MRO) has been observing the atmosphere, surface and subsurface of Mars since the fall of 2006. Prior to that, MRO probed upper atmosphere structure on 450 orbits. The aerobraking phase spanned northern spring and the MRO primary science phase picked up in northern mid-summer, so that the MRO atmospheric and climate observations have now spanned more than one-half of the Mars year. MRO brings new capabilities to observations of seasonal changes in the atmosphere and on the surface; these build on the climatological record compiled by Mars Global Surveyor (MGS) over its long mission and augmented by Mars Odyssey (ODY) and Mars Express (MEX) observations. This session will focus on new data acquired during the last Mars year and resulting implications for understanding the seasonal cycles of dust, water, and carbon dioxide, atmospheric structure and circulation. Presentations from models of the current climate and implications for recent climate change are also welcome.

P20: Rendezvous at Venus

Conveners: Sean C. Solomon (scs@dtm.ciw.edu), Jörn Helbert (joern.helbert@dlr.de), and Håkan Svedhem hakan.svedhem@esa.int
Description: The European Space Agency's Venus Express spacecraft, in orbit around Venus for more than a year and a half, has already substantially increased our understanding of Venus. June 2007 saw a trans-Atlantic rendezvous at Venus with the flyby of NASA's MESSENGER spacecraft. Both missions jointly probed the planet over the three days bracketing the flyby, and a ground-based observing campaign spanned the same period. This session will focus on initial results from this two-spacecraft exploration, but it is open to any presentation on a recent study of Venus.

P21: Saturn's Titan: An Integrated Perspective

Conveners: Robert M. Nelson (robert.m.nelson@jpl.nasa.gov), Rosaly M. Lopes (Rosaly.M.Lopes@jpl.nasa.gov), Elixabeth P. Turtle (Elizabeth.Turtle@jhuapl.edu), and Jonathan I. Lunine (jlunine@lpl.arizona.edu)

Description: Papers are solicited that will address problems related to Titan's interior, surface, atmosphere and exosphere from either of two perspectives. The first perspective is one based on integrated data analyses of information from more than one source such as ground-based and space-based observations, and different missions. The second perspective is one that addresses relationships between two or more regimes on Titan (e.g. interior to surface, surface to atmosphere, or atmosphere to exosphere.

P22: Geomorphology of Mars: Insights From MRO into the Processes That Shape the Martian Surface

Conveners: Mindi Searls (mindi.searls@lasp.colorado.edu) and Alfred McEwen (mcewen@pirl.lpl.arizona.edu)
Description: A rich history of processes occurring at present and throughout time is recorded in the morphology of the Martian surface. With the arrival of the Mars Reconnaissance Orbiter (MRO) and the High Resolution Imaging Science Experiment (HiRISE) and Context Imager (CTX), we have been able to analyze the Martian surface with unprecedented scale and coverge. With a scale of less than 30 cm/pixel, HiRISE provides new insight into the processes that carve the landscape of Mars today and in the recent and ancient past. New information on aeolian, mass-wasting, and impact processes in the present day help us to better understand all of Mars' geologic history. In this session we solicit discussions that tie the observed surface morphology into the larger scope of the climatic, impact, volcanic, fluvial, and aeolian history of Mars.

P23: Radar Sounding Investigations of Planetary Ice

Conveners: John W. Holt (jack@ig.utexas.edu), Jeffrey J. Plaut (plaut@mail.jpl.nasa.gov), Hugh F.J. Corr (HFJC@bas.ac.uk), and Duncan A. Young (duncan@utig.ig.utexas.edu)
Description: Icy deposits on planets hold clues to past climate, hold large fractions of the water budgets and may harbor life in subsurface environments. Radar sounding studies have provided much of our knowledge about Earth's major ice sheets and glaciers – especially thickness, internal layering, past flow, and the character of sub-ice interfaces, including the presence of water. Radar sounding techniques are becoming standard tools for the exploration of other icy deposits in our solar system. Two radar sounders are currently orbiting Mars -- MARSIS on Mars Express and, most recently, SHARAD on Mars Reconnaissance Orbiter. While MARSIS provided our first look into the interior of the polar layered deposits, SHARAD is starting to provide high-resolution views of stratigraphy within the layered deposits. Plans are also being formulated to send radar sounders to the icy moons of the outer planets. A major goal of this session is to bring together the various cryosphere and radar communities in order to share new findings, techniques, and objectives so that synergisms may be identified. The conveners therefore solicit presentations that describe existing or planned radar

sounding investigations of icy deposits on any planetary body, relevant laboratory or theoretical studies, and data analysis techniques.

P24: Return to Europa

Conveners: Robert Pappalardo (robert.pappalardo@jpl.nasa.gov), John D. Rummel (jrummel@hq.nasa.gov), William McKinnon (mckinnon@wustl.edu), and James L. Green (James.L.Green@nasa.gov)
Description: This session will address the current state of scientific knowledge regarding Jupiter's most compelling satellite, Europa, and will outline steps being taken to prepare for its continued exploration. After a decade of interpretation and modeling of Galileo data, understanding of Europa has reached a high level of maturity, and Europa is considered a high priority for future spacecraft investigation. This session will consider what we know, how we know it, and where we go from here in understanding and exploring Europa. Topics to be covered include: summaries of scientific knowledge on all aspects of the satellite including interior, surface, and external environment; results from analog studies to test techniques and capabilities for exploring an Europan ocean and related science targets on Earth; and studies of future flight missions that will establish and exploit access to the Europan surface and subsurface.

P25: New Horizons and the Upheaval at Jupiter

Conveners: William B. McKinnon (mckinnon@wustl.edu), Jeffrey M. Moore (jeff.moore@nasa.gov), Glenn S. Orton (go@scn.jpl.nasa.gov), and Michael H. Wong (mikewong@astro.berkeley.edu)
Description: The New Horizons spacecraft executed a gravity assist at Jupiter this February, accelerating toward its 2015 rendezvous with the Pluto system. Thirty-four Gb of data were returned to the ground, including stunning new images of the “Little” Red Spot, volcanic eruptions on Io, the jovian ring, and more. In the past year, moreover, Jupiter's atmosphere has hosted a burst of transient events that are being collectively described as a global upheaval. This session will showcase New Horizons encounter results for atmosphere and satellite imaging and composition, the jovian aurora and ring, as well as theoretical studies and HST, FUSE, Chandra, Rosetta-Alice, and ground-based observations acquired during the encounter and throughout the upheaval.

Sessions co-sponsored by Planetary Sciences -

AE06: Planetary Atmospheric Electricity and Lightning
C04: In Situ Life Detection and Characterization in Icy Environments on Earth and in the Solar System
DI03: Structure and Dynamics of Earth's Core
GC06: Gas Hydrates: Global and Planetary Reservoirs for Water and Carbon
GP02: Geodynamics and Statistical Properties of Terrestrial and Planetary Magnetic Fields

H40: Interactions Between Fluids and Fractures
IN12: Building Community and Governance within Earth and Space Science Content Models
MR05: Shock Metamorphism and Mineral Physics of Dynamic Compression
MR07: Multidisciplinary Approaches in the Study of Planetary Ices
MR11: Advances in Computational Studies of Earth Materials
PP11: Sea Level Change Over the Last Two Million Years: Constraints on Ice-Sheet Response to Global Climate Change
SM03: Magnetotails of Jupiter and Saturn
T35: New Perspectives on Crustal Heat Generation and Lithospheric Thickness in Precambrian Terrains
V14: Saucer-Shaped Sills, Injected Sands and Related Structures: Formation Mechanisms, Examples, and Extra-Terrestrial Analogues
V26: Mud Volcanoes and Their Eruption Dynamics
V34: Innovations in Isotope Mass Spectrometry in Geochemistry
V36: New Developments in Geochronology

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4) **MRO data release**

On June 8, 2007, the Planetary Data System announced its first release of science data from the Mars Reconnaissance Orbiter (MRO) mission. The release includes data acquired during areobraking, transition, and typically the first 30 days of observation, November 8 - December 7, 2006. Data sets from these experiments are now available: CRISM (Compact Reconnaissance Imaging Spectrometer for Mars), HiRISE (High Resolution Imaging Science Experiment), Gravity/Radio Science, CTX (Context Imager), MARCI (Mars Color Imager), MCS(Mars Climate Sounder), and the Accelerometer. Data from SHARAD, the Shallow Radar experiment, will also be released shortly as the team resolves processing problems encountered during the early days of mapping. SPICE kernels for all instruments are available. MRO data are archived at the PDS Geosciences, Imaging, Atmospheres, and NAIF Nodes, and can be accessed from these nodes' web sites and from the main PDS home page, http://pds.nasa.gov. Interested users should use the Subscription Manager on this site to subscribe to email announcements of future MRO releases. The next release will occur in September 2007, with subsequent releases every three months.

For future newsletter items please contact: Section Secretary Jim Zimbelman, zimbelmanj@si.edu
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