**Miscellanea**

**PUBLICATIONS**

APL staff members were authors or co-authors of the following recently published unclassified books and technical articles:


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Improving correctional officer safety: Reducing inmate weapons, *Corrections Today* pp. 68–70 (Feb 2006).


Carlson HC, Moen J, Oksavik K, Nielsen CP, McCrea IW, Pedersen TR, and Gallop P  

Chabot NL, Campbell AJ, Jones JH, Humayun M, and Lauer HV  

Cornish TJ, Antoine MD, Ecelberger SA, and Demirev PA  

Demirev PA, Feldman AB, Kowalski P, and Lin JS  


**Fink RA**  

**Freund DE, Woods NE, Ku HC, and Awadallah RS**  

**Georgoulis MK, and LaBonte BJ**  

**Gersh JR, Lewis BY, Montemayor J, Piatko CD, and Turner RJ**  

**Guo Y, and Farquhar R**  

**Hahn DV, Thomas ME, and Blodgett DW**  

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**Jones KB, and Loesch JE**  

**Liu K, and Ruohoniemi JM**  

**Lui S, Petrosian V, and Mason GM**  


**Maurer RH, Kinnison JD, and Roth DR**  

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Wesolek DM, and Gerke DR

Wesolek DM, Hererro FA, Osander R, and Garrison Darrin MA

Yoon PH, and Lui ATY

Yoshimura M, Wu Q, Takahashi K, Nakamura S, and Furukawa K

Zhu D, Billings SA, Balikhin M, Wing S, and Coca D

PRESENTATIONS

APL staff members were among those who gave the following presentations:

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Broadwater JB, Meth R, and Chellappa R

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Chabot NL
Iron meteorites and insights into planetary cores, Mtg. of the Geological Soc. of Washington, DC (Feb 2006).

Chavis JS
Web services and service oriented architectures: An overview, University Lecture, Columbia, MD (Dec 2005).

Chavis JS
Agile software overview, University Lecture, Laurel, MD (Apr 2006).

Chen DK

Miniature time-of-flight mass spectrometry (TOF-MS) for field portable analysis of hazardous agents, Pittsburgh Conf., Orlando, FL (Mar 2006).

Csutak A, Silver DM, Tozsér J, Steiber Z, Hassan Z, and Berta A

Csutak A, Silver DM, Tózsér J, Steiber Z, Hassan Z, and Berta A
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Desai MI, Mason GM, Mazur JE, and Dwyer JR
Dombard AJ, Johnson CL, Richards MA, and Solomon SC
Coronae on Venus as products of magmatic loading of the crust over transient plume heads: Consequences for surface deformation and volcanism, AGU Chapman Conf. on Exploring Venus as a Terrestrial Planet, Key Largo, FL (Feb 2006).

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Georgoulis MK
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Gorman BM, and Boniface DE

Hibbitts CA

Huyyn TB

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Mason GM
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Mason GM
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Maurer RH, Zeitlin CJ, Haggerty DK, Roth DR, and Goldstein JO
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Murchie SL

O'Shaughnessy DJ, Vaughan RM, Haley DR, and Shapiro HS
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Paranicas C

Rust DM
Investigating the sources of irradiance variation on the Sun, Physics and Astronomy Dept., The Johns Hopkins University, Baltimore, MD (Feb 2006).

Saksena A, and Lucarelli D
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Silver DM, and Quigley HA

Spall JC, and Hill SD

Takahashi K

Takahashi K
Normal mode magnetospheric seismology, Space Science Seminar, Kyung Hee University, Suwon, Korea (Feb 2006).

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Takahashi K, Ukhorskiy AY, and Yumoto K
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Wing S
Plasma sheet remote sensing, Los Alamos National Laboratory, Los Alamos, NM (Feb 2006).

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Radiation tolerant mixed signal microcontroller for Martain surface applications, 2005 NASA Symp. on VLSI, Coeur d'Alene, ID (Oct 2005).

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The following papers were presented at the AGU Fall Mtg., San Francisco, CA (Dec 2005):

IMF control of high latitude electromagnetic energy flux.

Observation of the spectrum and angular distribution of trapped protons in Saturn’s inner magnetosphere: Implications for sources, transport, and loss.

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Baker JB, Greenwald RA, Paxton LJ, Zhang Y, Ruohoniemi JM, and Oksavik K
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NARMAX approach to the magnetospheric system.

Brandt PC, Mitchell DG, Hill ME, Mauk BH, Paranicas CJ, Roelof EC, and Krimigis SM
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Brandt PC, Zheng Y, Ukhorskiy A, and Mitchell DG
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Buczkowski DL, Prockter LM, and Barnouin-Jha OS
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Carberry JF
Re-examination of PMC scattering in the middle ultraviolet: Is the ice index of refraction wrong?

Chi PJ, Ohtani S-I, Russell CT, and Singer HJ
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Christensen AB, Kozyra J, Paxton LJ, Talaat E, and Yee J
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Christon SP, Hamilton DC, Mitchell DG, and Krimigis SM
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Comberiate J, Kamalabadi F, and Paxton LJ
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Cramer WD, Turner NE, Brandt PC, and Mitchell DG
Ring current asymmetry as observed by ground magnetometers, in situ, and space-based remote sensing data.

Craven JD, Christensen AB, Meier RR, Paxton LJ, and Strickland DJ
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Criss A, Zhu X, Yee J, Talaat ER, Mlynczak M, Gordley L, Mertens C, and Russell JM
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Vertical structure of the thermosphere and ionosphere during geomagnetic storms in May 2002.

Decker RB, Krimigis SM, Roelof EC, and Hill ME
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Comparisons of electron density profiles derived from TIMED/GUVI data with ionosonde measurements.

Ellis AT, Lessard MR, Kintner P, Klett E, Lynch K, Moen J, Yahnin A, Oksavik K, and Ogawa Y
ULF waves in the cusp region as observed by the SERSIO sounding rocket and on the ground at Barentsburg, Svalbard.

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Fox NJ, Mauk BH, and Blake JB
Quantifying the role of non-adiabatic processes in the creation of the outer radiation belts.

The exosphere of Titan and its interaction with the Kronian magnetosphere: MIMI observations and modeling.

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Herrera F, Wing S, and Jaramillo C
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Kil H, Paxton LJ, Zhang Y, Su S, and Oh S
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Kim K, Lee D, Takahashi K, Russell C, Moon Y, and Yumoto K
Pi2 pulsations observed from the polar satellite outside the plasmapause.

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Chandra observations of Comet 2P/Encke 2003: First detection of a collisionally thin, fast solar wind charge exchange system.

Lloyd SA
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The energetic particle investigation for the SMART magnetospheric multiscale mission.


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Meng C, Wing S, and Johnson JR

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Low latitude precipitation of energetic neutral atoms reflects the ring current pitch angle distribution during storms.

Sotirelis T, Newell PT, and Meng C

A survey of reconnection signatures in auroral oval ion precipitation.

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 Calibration/validation of the SSUSI instrument on DMSP F16: Overview and nightside analysis.

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Tuzla-Johnson IN, Johnson JR, and Wing S

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Equatorial distributions of the plasma sheet ions, their magnetic and electric drifts, and magnetic fields under different IMF B condition.

Wing S, Johnson JR, Newell PT, and Meng C-I
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Wolven BC, and Paxton LJ
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Energy conversion in magnetic reconnection.

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Zou S, Lyons L, Boudouridis A, and Ruohoniemi J
External triggers of sawtooth events identified by dayside convection changes.

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Abe S, Mukai T, Hirata N, Barnouin-Jha OS, Cheng AF, Mizuno T, Nakamura R, Scheeres D, Yoshikawa M, Gaskell H, Demura T, Hashimoto T, Kubota T, and Matsuoka M
Determination of gravity and density of asteroid 25143 Itokawa by light detection and ranging instrument on Hayabusa spacecraft.

Baloga SM, and Barnouin-Jha OS
Formation of Mars impact crater ramparts by volatile degassing of the overland ejecta flow.

Barnouin-Jha OS, Cheng AF, Mukai T, Hirata N, Abe S, Nakamura R, Saito S, Gaskell B, Demura H, Miyamoto H, and Fijiwara A
Small-scale topography on 25143 Itokawa from the Hayabusa LIDAR.

Barnouin-Jha OS, Yamamoto S, Toriumi T, Sugita S, and Matsu T
Non-intrusive measures of crater growth.

Bixler RP, Thomas CA, Demeoe FE, Tokunaga A, Rivkin AS, and Bus SJ
The MIT-Hawaii-IRTF joint campaign for NEO spectral reconnaissance.

Buczkowski DL
Surface relief and geographic distribution of QCDs on the northern plains of Mars and implications toward lowland material thickness.

Buczkowski DL, Prockter L, and Barnouin-Jha OS
Mapping lineaments on 433 Eros: Process, results, and implications.

Chabot NL, and Righter K
Sulfur in Earth’s mantle and its behavior during core formation.

Cheng AF, and Dombard AJ
Viscous relaxation on comets.

Corrigan CM, McCoy TJ, Chabot NL, and McDonough W
Trace element partitioning in the Fe-Ni-P system: Applications to P-rich iron meteorites.

Domingue D, and Vilase F
Photometric effects on spectral interpretations: A lunar case.

Global properties of 25143 Itokawa observed by Hayabusa.

The lunar geologic mapping program and status of Copernicus Quadrangle mapping.

Preliminary site report for the 2005 ICDP-USGS deep corehole in the Chesapeake Bay impact crater.

Hawke BR, Giguerre TA, Blewett DT, Gillis-Davis JJ, Hagerty JJ, Lawrence DJ, Lacey PG, Peterson CA, Smith GA, Spudis PD, and Taylor GJ
Ancient volcanism in the Schiller-Schickard region of the moon.

Hibbitts CA, and Szanyi J
Physiosorption of CO2 on non-ice materials of relevance to icy satellites.

Morphology of craters on Itokawa and its possible implication.

Honesto J, McDonough WF, Walker RJ, Corrigan CM, McCoy TJ, Chabot NL, and Ash RD
187Re-187Os isotopic and highly siderophile element systematics of group IVB irons, and ungrouped irons Chinga, Tishomingo and Willow Grove.

Izenberg NR, and Barnouin-Jha OS
Laboratory simulation of surface seismic effects on low gravity bodies.

Izenberg NR, Murray GM, van Houten K, Strauch L, Hofstra A, and Uy OM
Development of astrobiological molecularly imprinted polymer sensors.

Distribution of icy particles across Enceladus’ surface.

Spectrophotometric modeling of soils and rocks at the Opportunity landing site.
Li J-Y, Hearne MF, McFadden LA, Sunshine JM, Crockett CJ, Farnham TL, Lisse CM, Thomas PC, and the Deep Impact Science Team
Deep impact photometry of the nucleus of Comet 9P/Tempel 1.

Bracketing the end of the Martian dynamo: The ages and magnetic signatures of Hellas and Ladon basins.

Lisse CM, and the Deep Impact Spitzer Science Team
Spitzer space telescope observations of the nucleus and dust of deep impact target Comet 9P/Tempel 1.

Titan: Surface composition from Cassini VIMS.

Retrieval of surface Lambert albedos from the Mars Reconnaissance Orbiter CRISM data.

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van Houten KA, Strauch LR, Murray GM, and Izenberg NR
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Wyrick DY, and Buczkowski DL
Understanding regolith distributions on 433 Eros using analyses of pit chains and grooves.

Yang J, Goldstein JL, Sherman B, Corrigan CM, McCoy TJ, Walker RJ, Chabot NL, and McDonough WF
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Telemetry recovery and uplink commanding of a spacecraft prior to three-axis attitude stabilization.

Fraeman ME, Meitzler RC, Martin MN, Millard WP, Wong YL, Meller JD, Bowles-Martinez JN, Strohbehn K, and Roth DR
Radiation tolerant mixed signal microcontroller for Martian surface applications.

Haskins CB, Millard WP, and Jensen JR
Flexible coherent digital transceiver for low power space missions.

Ling SX
Reliability assessment of COB technology for extreme low temperature environment.

Martin MN, Strohbehn K, Millard WP, Meitzler RC, Fraeman ME, and Jaskulek SE
Power remote input output ASIC (PRIO).

Return to Mercury: The MESSENGER spacecraft and mission.

CONFERENCES WITH PROCEEDINGS

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Bitman WR

Boo ND, Olson JS, Nan N, Shami NS, and Johnston E

Broadwater JB, Meth R, and Chellappa R

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Haskins CB, Millard WP, and Jensen JR

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Patchan RM, and Prendergast DT

Saksena A, Lucarelli D, and Wang I-J

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COLLOQUIA

The following topics were presented at the weekly APL Colloquia in 2006:

3 Nov
Transforming the Way DoD Shares Information, M Krieger, Office of the DoD, Chief Information Officer

16 Nov
Productive Deterrence: Preserving America at Modernity’s End, M Vlahos, JHU/APL

1 Dec
The Next Steps in Human Space Exploration: What Are the Alternatives? R Farquhar, JHU/APL, and J Veverka, Cornell University

8 Dec
Taking a Long-Term Perspective on U.S. Navy ASW Objectives, Capabilities, and Trends (Historical Survey and Projections, 1940–2020), J Benedict Jr., JHU/APL

15 Dec