

PUBLICATIONS

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

Bokulic RS, Reinhart MJ, Willey CE, Stilwell RK, Penn JE, Norton JR Jr, Cheng S, DeCicco DJ, and Schulze RC
Advances in deep space telecommunications technology at the Applied Physics Laboratory, in *Proc. Fourth IAA Int. Conf. on Low-Cost Planetary Missions*, Laurel, MD (2–5 May 2000).

Charles HK Jr, Beck TJ (JHU School of Med.), Feldmesser HK, Magee TC, Spisz TS, and Pisacane VL

Precision bone and muscle loss measurements by advanced multiple projection DEXA techniques for space flight applications, in *Proc. 13th IAA Humans in Space Symp.*, Santorini, Greece (2000).

Chin DC, and Biondo AC

Dual neural network models in acoustic propagation, in *Proc. IEEE Ann. Simulation Symp. 2000*, Washington, DC, pp. 333–337 (Apr 2000).

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Multi-model interpolation of range-varying acoustic propagation, in *Proc. Am. Control Conf.*, Chicago, IL, pp. 3008–3012 (Jun 2000).

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PC-based control of hypersonic blowdown wind tunnels, in *Proc. 46th Int. Instrumentation Symp. ISA 397*, pp. 419–427 (2000).

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Reply (Paper 1999JA000444), *J. Geophys. Res.* **105**(A5), 10,779–10,783 (1 May 2000).

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- Li Y (JHMI), Dorsi MJ (JHMI), Meyer RA, and Belzberg AJ (JHMI)**
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- Lui ATY**
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- Lui ATY, Chapman SC, Liou K, Newell PT, Meng C-I, Brittacher M, and Parks GK**
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- Morris MM**
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PRESENTATIONS

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

Charles HK Jr, Beck TJ (JHU School of Med.), Feldmesser HK, Magee TC, Spisz TS, and Pisacane VL

Precision bone and muscle loss measurements by advanced multiple projection DEXA techniques for space flight applications, *13th IAA Humans in Space Symp.*, Santorini, Greece (20–26 May 2000).

Chin DC, and Biondo AC

Dual neural network models in acoustic propagation, *33rd Ann. Simulation Symp.*, Washington, DC (16–20 Apr 2000).

Chin DC, and Maryak JL

An efficient optimization technique for image restoration and image-related modeling, presented at the Center for Imaging Sciences at The Johns Hopkins University (24 Apr 2000).

Cole TD, Cheng AF, Reiter RA, Smith DE, and Zuber M

Flight characterization of the NEAR laser rangefinder, 4034-16, *SPIE Aerosense 2000 Conf.*, Orlando, FL (26 Apr 2000).

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A simulation based acquisition collaborative environment for strike warfare, *6th Ann. Joint Aerospace Weapon Systems, Support, Sensors and Simulation Symp.*, San Antonio, TX (26–30 Jun 2000).

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Davila JM, Sharer PJ, and Rust DM

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Computer models of linearly polarized light propagation through cornea, *4th Ann. Hilton Head Workshop on Computation in Biology*, Hilton Head, SC (21–26 Feb 2000).

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Space mission operations best practices and standards, *AIAA SOSTC Workshop 2000*, Sunnyvale, CA (11–12 Apr 2000). (Invited).

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Simulation optimization of airline delay using simultaneous perturbation stochastic approximation, *33rd Ann. Simulation Symp.*, Washington, DC (16–20 Apr 2000).

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Solar energetic particle events in the rising phase of solar cycle 23: Observations at 1 and 5 AU, *Space and Cosmic Ray Physics Seminar*, University of Maryland, College Park (1 May 2000).

Li Y (JHMI), Dorsi MJ (JHMI), Meyer RA, and Belzberg AJ (JHMI)

Mechanical hyperalgesia following an L5 spinal nerve lesion in the rat is not dependent on input from injured nerve fibers, *AANS 2000*, San Francisco, CA (Apr 2000).

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Effect of field line stretching in field line resonance, *SuperDARN Mtg.*, Beechworth, Australia (23–26 May 2000).

- Lui ATY, Liou K, Newell PT, Meng C-I, and Mukai T**
On the optical signatures of fast plasma flows in the magnetotail, *Int. Conf. on Substorms-5*, St. Petersburg, Russia (16–20 May 2000).
- McCally RL, and Matsuzawa M (JHU)**
Technique to measure light scattering from mouse cornea, *Ann. Mtg. of the Assoc. for Research in Vision and Ophthalmology*, Fort Lauderdale, FL (30 Apr–5 May 2000).
- Mechtcl DM (US Naval Acad.), Charles KH Jr, and Franco-macaro AS**
Application of electro-optic polymers to improve MCM design and testability, *102nd Ann. Mtg. and Exposition of the American Ceramic Soc.*, St. Louis, MO (30 Apr–3 May 2000).
- Meyer RA**
The peripheral neural mechanisms of heat pain sensation, *3rd Int. Workshop on Semiconductor and Solid State Lasers in Medicine*, St. Petersburg, Russia (26–27 May 2000).
- Moore RC**
An overview of space flight software engineering, *Mtg., AIAA Technical Committees on Computer Systems and Software Systems*, Boston, MA (17–18 May 2000). (Invited)
- Nelson CV, and Smith DG**
Handheld time-domain electromagnetic identification (TEMID) sensor system, *EUROEM 2000*, Edinburgh, Scotland (1 Jun 2000).
- Norton JR**
The versatile uses of quartz in instrumentation, *46th Int. Instrumentation Symp.*, Bellevue, WA (3 May 2000). (Tutorial)
- Ohtani S-I**
Ionospheric roles in the formation of dayside field-aligned current systems, *Western Pacific Geophysics Mtg.*, Tokyo, Japan (25–30 Jun 2000). (Invited)
- Ohtani S-I, Nosé M, Lui ATY, Liou K, Rostoker G, Nakamura M, and Singer H**
Storm-substorm relationships: Near-Earth substorm processes and the storm recovery phase, *Western Pacific Geophysics Mtg.*, Tokyo, Japan (25–30 Jun 2000).
- Ohtani S-I, Nosé M, Lui ATY, Rostoker G, Nakamura M, and Singer H**
Storm-substorm relationships: Near-Earth dipolarization and storm recovery phase, *NSF/GEM Workshop*, Snowmass, CO (2000).
- Persons DF, Mosher LE, and Hartka TJ**
The NEAR and MESSENGER spacecraft: Two approaches to structure and propulsion design, *41st AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conf.*, Atlanta, GA (2–6 Apr 2000).
- Peter JJ**
Experience using group systems decision support system software, presented to Towson Univ. Decision Support Systems Class, Towson, MD (25 Apr 2000).
- Poland DD, and Fogel SA**
Application of COTS in the submarine environment, *COTSCON East 2000*, Washington, DC (18 Apr 2000).
- Raney RK**
Initial results from the D2P airborne flight trials, briefing to the CryoSat Science Advisory Group, ESA ESTEC, Noordwijk, The Netherlands (15 May 2000).
- Raney RK, Porter DL, Gasparovic RF, and Fountain GH**
WITTEX: A constellation of three small satellite radar altimeters, briefing to the Oceanographer of the Navy (23 Jun 2000).
- Romenesko BM, Charles HK Jr, Cristion JA, and Siu BK (Simpex Technol., Inc.)**
Gold aluminum wirebond interface testing using laser-induced ultrasonic energy, *50th Elect. Components and Technol. Conf. (ECTC)*, Las Vegas, NV (21–24 May 2000).
- Romenesko BM, Charles HK Jr, Cristion JA, and Siu BK (Simpex Technol., Inc.)**
Microelectronic wirebond evaluation by laser-induced ultrasonic energy, *Int. Conf. on High Density Packaging and Multichip Modules (MCMs)*, Denver, CO (Apr 2000).
- Rust DM**
The Sun: The other Y2K problem, presented to The North Carolina School of Science and Mathematics, Durham, NC (27 April 2000).
- Sadegh P (Tech. Univ. of Denmark), and Spall JC**
Optimal sensor configuration for complex systems with application to signal detection in structures, *17th IEEE Instrumentation and Measurement Technology Conf.*, Baltimore, MD (1–4 May 2000).
- Sikora TD, O'Marr EO, and Gasparovic RF**
Anomalous cloud lines off the East Coast of the United States, *10th Conf. on Interaction of the Sea and Atmosphere*, Fort Lauderdale, FL (29 May–2 Jun 2000).
- Smith DG, and Nelson CV**
Algorithms for identifying landmines using the time-domain electromagnetic identification (TEMID) sensor system, *EUROEM 2000*, Edinburgh, Scotland (2 Jun 2000).
- Spall JC, Hill SD, and Stark DR**
First results on formal comparison of several stochastic optimization algorithms, *33rd Ann. Simulation Symp.*, Washington, DC (16–20 Apr 2000).
- Stadter PA, Bristow JO, and Leitner JA**
Expanding Earth and space science through distributed spacecraft systems, *Living with a Star Workshop*, NASA/Goddard Space Flight Center, Greenbelt, MD (10–12 May 2000). (Poster)
- Swaminathan PK**
APEX North Star: High speed plasma jet optical data interpretation, presented to the Institute for Dynamics of Geosphere, RAS, Moscow, Russia (3 May 2000).
- Takahashi K, Toth BA, and Olson JV**
Improvement of near-real time K_p estimates: A UPOS project, *2000 Space Weather Week Conf.*, Boulder, CO (1–5 May 2000).
- White ME**
Missile propulsion, briefing to NSA, JHU/APL, Laurel, MD (18 Apr 2000)
- White ME, D'Alessio SM, and Fuller ST (NAVAIR)**
High-speed, air-breathing propulsion technology development—Dual combustor ramjet, presented at The Beckman Center, Irvine, CA (15 Jun 2000).
- Wienhold PD, Lennon AM, Roberts JC, Rooney M, Kercher AK (JHU-CNDE), Nagle DC (JHU-CNDE), and Sorathia U (NSWC-CD)**
Characterization of carbonized wood core for use in FRP sandwich ship structures, *SAMPE ISSE Mtg.*, Long Beach, CA (21–25 May 2000).
- Yahnin AG, Kornilov IA, Kornilov TA, Sergeev VA, Lui ATY, Liou K, Meng C-I, and Pajunpaa A**
Do the observations confirm the high-speed flow braking model for substorms?, *Int. Conf. on Substorms-5*, St. Petersburg, Russia (16–20 May 2000).
- The following papers were presented at the 25th European Geophysical Society (EGS) Mtg., Nice, France (25–29 Apr 2000):
- Brinckerhoff WB, Cornish TJ, McEntire RW, Cheng AF, Benson RC, and Krimigis SM**
Miniature laser time-of-flight mass spectrometers.
- Lui ATY**
Physics at the interface of tail and outer magnetosphere.
- Lui ATY, and Meng C-I**
Transition of research result to operational environment: Judging the practical need of space weather products.

Lui ATY, Liou K, McEntire RW, Meng C-I, Newell PT, Williams DJ, Brittnacher MJ, Parks GK, Christon SP, Eastman TE, and Kokubun S

First identification of the ionospheric signature of a magnetic flux rope in the magnetotail.

Swaminathan PK, and Strobel DF

Review of thermospheric/mesospheric nitric oxide abundance.

Wing SP, and Newell PT

The particle precipitation signatures of high and low latitude merging.

The following papers were presented at the 4th IAA Int. Conf. on Low-Cost Planetary Missions, Laurel, MD (2–5 May 2000):

Bokulic RS

Advances in deep space telecommunications technology at the Applied Physics Laboratory.

Brinckerhoff WB, Cornish TJ, McEntire RW, Cheng AF, and Benson RC

Miniature time-of-flight mass spectrometers for *in situ* composition studies.

Cole TD, Cheng AF, Guo Y, Zuber MT, and Smith DE

Flight characterization of the NEAR laser rangefinder.

Fort D

The CONTOUR remote imager and spectrograph.

Holdridge ME

Applying successful NEAR mission operations approaches and refining for CONTOUR mission operations.

Mueller J, Guo Y, von Mehlem U, and Cheng A

Aladdin mission concept.

The following papers were presented at the 2000 Spring Mtg. of the American Geophysical Union, Washington, DC (30 May–3 Jun 2000):

Baker DN, Acuna MH, Cheng AF, Gloeckler G, Gold RE, McClintock WE, McNutt RL Jr, Slavin A, and Zurbuchen TH
MESSENGER: A new look at the magnetosphere and atmosphere of Mercury, P51A-05.

Bernasconi PN, Rust DM, Eaton HA, and Murphy GA

First results from the January 2000 Flare Genesis flight.

Boynton WV, Solomon SC, McClintock W, McNutt RL Jr, Murchie SL, Robinson MS, and Trombka JI

Geochemical investigations of the MESSENGER mission to Mercury, P51A-07.

Carbary JF, Morrison D, and Romick GJ

The spectra of polar mesospheric clouds, SA32B-10.

Chapman CR, Thomas PC, Merline W, Joseph J, Izenberg NR, Veverka J, Robinson MS, Malin M, and Bell JF III

Cratering on Eros: Early NEAR characterization, P21A-05.

Cheng AF, and Beisser KB

The Near Earth Asteroid Rendezvous (NEAR) education and public outreach program, ED22A-08.

Cheng AF, Garvin J, Zuber MT, and Smith DE

Geologic features of Eros from NLR altimetry, P21A-09.

Demagistris T, Gatsonis NA, and Erlandson RE

APEX North Star: MGD modeling of magnetic field and density perturbations from an artificial plasma jet, SM51C-09.

Erlandson RE, and Ukhorsky AJ

Simultaneous observations of ion cyclotron waves and pitch angle diffusion during geomagnetic storms.

Erlandson RE, Meng C-I, Stoyanov BJ, Swaminathan PK, Kumar CK, Dogra VK, Zetzer JI, Gavrilov BG, Kiselev YN, Stenbaek-Nielsen HC, Delamere PA, Pfaff R, Lynch KA, Torbert R, and Gatsonis NA

The APEX North Star artificial plasma jet experiment.

Gavrilov BG, Kiselev YN, Podgorny IN, Sobyenin DB, Zetzer JI, Erlandson RE, Meng C-I, Stenbaek-Nielsen HC, Pfaff RF Jr, and Lynch K

Ionospheric interaction of the North Star artificial plasma jets injected perpendicular to the magnetic field.

Hamilton DC, Gloeckler G, Krimigis SM, Mitchell DG, and Dandouras J

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