PUBLICATIONS

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

Ali Z (Johns Hopkins Medical Inst.), Ringkamp M (Johns Hopkins Medical Inst.), Hartke TV (Johns Hopkins Medical Inst.), Chien HF (Johns Hopkins Medical Inst.), Campbell JN (Johns Hopkins Medical Inst.), and Meyer RA


Anderson CW, and Carlson MA


Bowen JI, and Mitnick RW


Bristow WA, Yee JH, Zhu X, and Greenwald RA

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Chin DC, Spall JC, and Smith R


Cornish TJ, and Bryden WA


Cutchis PN, Smith DG, Ko HW, Wiesmann W (Biostar Inc.), and Pranger Al (Biostar Inc.)


Desai MI, Marsden RG, Sanderson TR, Lario D, Roelof EC, Simnett GM, Gosling JT, Balogh A, and Forsyth RJ


De Silva IPD, Brandt A, Montenegro LM, and Fernando HJS

Gradient Richardson number measurements in a stratified shear layer, *Dynamics of Atmospheres and Oceans* 30, 47–63 (1999).

Dogra VK, Collins RJ, and Levin DA


Elfouhaily TM, Thompson DR, Vandemark D, and Chapron B


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A technology path to distributed remote sensing, in *JAA Proc., Berlin* (May 1999).

Freund DE, and Slaney DH (U.S. Army Center for Health Prom. & Preventive Medicine)


Fuchs PN (Johns Hopkins Medical Inst.), Pappagallo M (Johns Hopkins Medical Inst.), and Meyer RA

Topical EMLA pre-treatment fails to decrease the pain induced by 1% topical capsaicin, *Pain* 80, 637–642 (1999).

Gavrilov, B.G, Podgorny AI, Podgorny IM, Sobyanin DB, Zetzer JI, Erlandson RE, Meng C-I, and Stoyanov BJ


Gilreath HE, Driesman AS, Kroshl WM, White ME, Cartland HE, and Hunter JW


Greenwald RA, Ruohoniemi JM, Baker KB, Bristow WA, Sofko GJ, Villain J-P, Lester M, and Slavin J


Haley DR, and Strikwerda TR


Hayek CS, Pineda FJ, Doss OW III, and Lin JS


Hayek CS, Schurman IW, Sweeney JH, and Boyles CA


Jensen JR


Korotova GI, Sibbeck DG, Moretto T, and Reeves GD

Land HB
‘The data system is always wrong,’ or achieving valid data, in Proc. 45th Int. Instrumentation Symp., Albuquerque, NM and In Tech Online, www.isa.org/journals/intech/feature/1.1773.200.00.html (9 Jun 1999).

Le BQ, Maurer RH, Nhan E, and Lew AL

Evidence for a global disturbance with monochromatic pulsations and energetic electron bunching, J. Geophys. Res. 104, 7011–7023 (1 Apr 1999).

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Possible evidence for current disruption to be a self-organized critical phenomenon, Trans. AGU 80, 17, S273 (1999).

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What is the physics of magnetic storms? History and main problems, Trans. AGU 80, 17, S281 (1999).

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Maryak JL, and Chin DC

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McNutt RL Jr, Lyon J, Goodrich CC, and Wilberberger M

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Newman FC, Biondo AC, Mandelberg MD, Croucher AR, Spall JC, Matthews CC, and Warfield JT

Norton JR

Nose M

Oursler DA

Paxton LJ, Morrison D, Meng C-I, Strickland DJ, Bishop J, and Evans JS

Pendomo MC, Sinex CH, and Yuan RL

Perschy JA

Porter DL, and Thompson DR

Raney RK

Raney RK

Restione DM

Ringkamp M (Johns Hopkins Medical Inst.), Eschenfelder S (Christian-Albrechts Univ.), Grethel EJ (Johns Hopkins Medical Inst.), Häbler H-J (Christian-Albrechts Univ.), Meyer RA, Jänig W (Christian-Albrechts Univ.), and Raja SN (Johns Hopkins Medical Inst.)

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Mechanical hyperalgesia after spinal nerve ligation in rats is not reversed by intraplantar or systemic administration of adrenergic antagonists, Pain 79, 135–141 (1999).

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Polar cap optical observations of topside (>900 km) molecular nitrogen ions, Geophys. Res. Lett. 26(7), 1023–1026 (1 Apr 1999).

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Scholl PF, Leonardo MA, Rule AM, Carlson MA, Antoine MD, and Buckley TJ


Sheffer CC, and Vaughan FC


Sitnov MI, and Lui ATY

Cross-field current instability as a catalyst of the explosive reconnection in the geomagnetotail, J. Geophys. Res. 104(A4), 6941–6951 (1 Apr 1999).

Solanki SK, Steiner O, Bunte M, Murphy G, and Ploner SRO


Soloviev A, Lukas R, Hacker P, Baker M, Schoberlein H, and Arjannikov A


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Spall JC


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Spall JC, Hill SD, and Stark DR


Stader PA


Strickland DJ, Bishop J, Evans JS, Morrison D, Paxton LJ, and Meng C-I


Thompson GR, Widmer HP, Rice KA, Ball RE, and Sweeney JH


Tran NL, Burke TA, Fox MA, Litt JS, Shalauta NM, and Ruscio BA


Vorobjev VG, Yagodkina OL, Sibeck DG, and Newell PT


Wang I-J, and Jones SD


White ME, and Price WR


Zhu X, Yee JH, Strobel DF, Wang X-L, and Greenwald RA


PRESENTATIONS

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

Badsha SS, Heyler GA, Sharer PJ, and Strikwerda TR

Development of formation deployment and initialization concepts, presented at NASA Goddard Space Flight Center, Greenbelt, MD (18–20 May 1999).

Bettenbaugh TM

Mechanical flight qualification testing of the Advanced Compo-sition Explorer Observatory, Spacecraft and Launch Vehicle Dy-namics Environments Workshop, El Segundo, CA (8–10 Jun 1999).

Brandt A


Cheng A, and Paraniczas C

The following papers were presented at the 1999 American Geophysical Union Spring Meeting, Boston, MA (31 May–4 Jun 1999).

Cardy JF, Likin K, Lui ATY, Newell PT, Meng C-I, Brittnacher M, and Parks G
“Blob” analysis of auroral substorm dynamic.

Cheng A, Farquhar R, Ververka J, Yeomans D
NEAR team, The NEAR mission: Where we have been and where we are going?

Dwyer JR, Mason GM, Mazur JE, Gold RE, and Krinigis SM
Variability of elemental and isotopic solar energetic particle composition as measured by ACE.

Gonzalez P, Cotter PL, and Davis JA
A technology path to distributed remote sensing, 2nd IAA Symp. on Small Satellites for Earth Observation, Berlin, Germany (14 Apr 1999).

Guo Y, and Strikwerda TR

Haley DR and Strikwerda TR
Experiences in precision attitude determination with the Midcourse Space Experiment (MSX), 1999 Flight Mechanics Symp., NASA Goddard Space Flight Center, Greenbelt, MD (18–20 May 1999).

Jacobus PW, and Freeman DE

Krimigis SM, Coughlin TB, and Cameron GE
Johns Hopkins APL Paradigm in SmallSat Management, 2nd IAA Symp. on Small Satellites for Earth Observation, Berlin, Germany (Apr 1999)

Ku HC, and Donohue DJ

LaFrance P

Lew AL
Miniaturization of space electronics, NASA/GSFC Colloquium (5 Apr 1999).

Ling SX
Dynamic assessment of a miniaturized spaceborne command and datahandling in your palm (C&DIHiYP), InterPACK’99, Lahaina, HI (13–18 Jun 1999).

Lui ATY
Haggerty DK, Roelof EC, Hawkins SE III, Smith CW, and Tokar RL
Observations of upstream events at the L1 point by the ACE Spacecraft.

Hamilton DC, Hill ME, Decker RB, and Krimigis SM
ACR response in the outer heliosphere to the onset of the new solar cycle.

Higuchi T, and Ohtani S-I
Statistical characteristics of nightside field-aligned currents.

Hirsch KL, Spence HE, and Wing S
A mid-altitude highly inclined spacecraft survey of plasma number densities and pressures in the plasma sheet.

Ho GC, Roelof EC, SE Hawkins III, Gold RE, Krimigis SM, Mason GM, Dwyer JR, and Mazur JE
Elemental abundance variations observed by ACE during the August 1998 solar energetic particle event.

NEAR'S near infrared spectrometer at the Eros flyby.

Ku H, and Sibeck DG
Three-dimensional MHD simulations of the magnetosheath plasma and magnetic field.

Lagg A, Mauk BH, McEntire RW, and Williams DJ
Energetic ions at Jupiter: Evidence for a neutral gas torus at Europa's orbit.

Lui ATY
Possible evidence for current disruption to be a self-organized critical phenomenon.

Lui ATY, and Meng C-I
What is the physics of magnetic storms?: History and main problems.

Lui ATY, Liou K, Newell PT, Meng C-I, Parks, G, Mukai T, Tsuruda, K, Kokubun S, and Stauning P
Ionospheric signatures of bursty bulk flows in the mid-tail region.

Mason GM, Dwyer JR, Mazur JE, Gold RE, and Krimigis SM
Special forms in 3He-rich solar particle events.

McNutt RL Jr., Lyon J, Goodrich CC, and Wilberger M
The solar wind/VLISM interaction problem: Dependence on charge-exchange formulations.

Morrison D, Carberry JF, Romick GJ, Paxton LJ, and Meng C-I
Middle ultraviolet imager observations of the distributions of polar mesospheric clouds.

Nosé M, Lui ATY, Ohtani S-I, McEntire RW, Williams DJ, and Kokubun S
Ionospheric ions in the near-earth magnetotail during substorms.

Ohtani S-I, Takahashi K, Lui ATY, Mitchell DG, and Sarris T
Tail current intensification prior to current disruption.

Romick GJ, Yee J-H, Morgan MF, and Morrison D
Vibrational and rotational altitude distributions of molecular nitrogen ions in sunlight at altitudes above 300km.

Sibeck, D, Ivchenko N, Korotova G, Ku H, Phan T, Kokubun S, Lin R, Mukai T, and Williams D
Geotail and wind observations of the equatorial magnetopause and magnetosheath.

The foreshock's effect on solar wind input into the magnetosphere.

Wing S, and Newell PT
Plasma sheet plasma pressure contribution to Birkeland currents.

Substorm onset as observed from the ground and space.

Spacebased remote sensing of ozone using stellar occultation techniques.

The following papers were presented at the 1999 American Control Conference, San Diego, CA (2–4 Jun 1999).

Chin DC, Spall JC, and Smith R

Maryak JL, and Chin DC
Efficient global optimization using SPSA.

Spall JC
Adaptive model fitting with time-varying input variables.

Wang I-Jeng, and Spall JC
A constrained simultaneous perturbation stochastic approximation algorithm based on penalty functions.

COLLOQUIA

The following topics were recently presented at the weekly APL Colloquium:

1 October 1999
Innovative Battery Technologies, JJ Suter, APL

8 October 1999
Future of the Physical Sciences: A View from Washington, RA Eisenstein, National Science Foundation

15 October 1999
Physics from Fisher Information, R Frieden, University of Arizona

22 October 1999
Annotating Whole Genomes, S Salzberg, Institute for Genomic Research

29 October 1999
Computers with Common Sense, DB Lenat, Cycorp