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# Science and Exploration Research Office Publications and Presentations, January 1–December 31, 2006

*Compiled by*
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31. Enhancing the ATIC Charge Resolution, 36th COSPAR Scientific Assembly, Beijing, China, July 16–23, 2006. T.G. Guzik, J.H. Adams, Jr., H.S. Ahn, G.L. Bashindzhagyan, K.E. Batkov, J. Chang, M.J. Christl, A.R. Fazely, O. Ganel, R.M. Gunasingha, J. Isbert, K.C. Kim, E.N. Kouznetsov, M.I. Panasyuk, A.D. Panov, W.K.H. Schmidt, E.S. Seo, N.V. Sokolskaya, J.W. Watts, J.P. Wefel, J. Wu, and V.I. Zatsepin.

32. The EXIST Mission for High-Energy Astrophysics, 2006 Symposium on Radiation Measurements and Applications, University of Michigan, Ann Arbor, MI, May 23–25, 2006. G.J. Fishman, J.E. Grindlay, and J. Hong.

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33. Exploring the Mineralogy of the Moon with M3, COSPAR: Committee on Space Research, Beijing, China, July 16–23, 2006. C.M. Pieters, J. Boardman, B. Buratti, R. Clark, R. Green, J.W. Head, T.B. McCord, J. Mustard, C. Runyon, M. Staid, J. Sunshine, L. Taylor, and S. Tompkins.

34. Exploring the Production of NOx by Lightning and Its Impact on Tropospheric Ozone, CASA Science Symposium on Nitrogen, Lake Louise, Canada, September 27–29, 2006. N. Gillani, W.J. Koshak, A. Biazar, K. Doty, R. Mahon, M. Newchurch, D. Byun, and L. Emmons.

35. FIREBALL: Fusion Ignition Rocket Engine With Ballistic Ablative Lithium Liner, Space Technology and Applications International Forum (STAIF–2006), Albuquerque, NM, February 12–16, 2006. A.K. Martin, R.H. Eskridge, M.H. Lee, and P.J. Fimognari, III.

36. The First Light Machine, Damon Seminar sponsored by NCAR Mesa Laboratories, Boulder, CO, October 16, 2006. H.P. Stahl.

37. Flextensional Single Crystal Piezoelectric Actuators for Membrane Deformable Mirrors, NASA Technology Days in the Government, Albuquerque, NM, September 17–20, 2006. X. Jiang, R. Sahul, and W.S. Hackenberger.

38. Floating the Ball: Advances in the Technology of Electrostatic Levitation, American Physical Society Meeting, Baltimore, MD, March 13–17, 2006. J.R. Rogers.

39. Galium Electromagnetic (GEM) Thruster Concept and Design, Joint Propulsion Conference, Sacramento, CA, July 9–12, 2006. K.A. Polzin and T.E. Markusic.

40. The GLAST Burst Monitor, 207th Meeting of the American Astronomical Society, Washington, DC, January 8–12, 2006. C. Kouveliotou, C.A. Meegan, G.J. Fishman, R.B. Wilson, W.S. Paciesas, R.D. Preece, M.S. Briggs, N.P. Bhat, G. Lichti, A. von Kienlin, R. Diehl, H. Steinle, and J. Greiner.

41. The GLAST Burst Monitor, Recent Developments in the Study of Gamma-Ray Bursts, The Royal Society, London, United Kingdom, September 18–20, 2006. C.A. Meegan.

42. GOES-R Lightning Mapper (GLM) Research and Applications Risk Reduction, 86th American Meteorological Society Annual Meeting, Second Symposium: Toward a Global Earth Observation System of Systems-Future National Operational Environmental Satellite System, Atlanta, GA, January 29–February 2, 2006. S.J. Goodman, R.J. Blakeslee, D.J. Boccippio, H.J. Christian, W.J. Koshak, and W.A. Petersen.

43. GRMHD Simulations of Jet Formation With a Newly-Developed GRMHD Code, Microquasars and Beyond, Sociera del Casino, Como, Italy, September 18–22, 2006. Y. Mizuno, K.-I. Nishikawa, S. Koide, P.E. Hardee, and G.J. Fishman.

44. A High-Energy Astrophysics Overview, General Colloquium, University of Michigan, Ann Arbor, MI, February 3, 2006. G.J. Fishman.

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45. Highly Engineered Materials Program, NASA Mirror Technology Days in the Government, Albuquerque, NM, September 17–20, 2006. J.M. Carter.

46. High-Voltage High-Energy Stretched Lens Array Square-Rigger (SLASR) for Direct-Drive Solar Electric Propulsion, 25th International Symposium on Space Technology and Science/19th International Symposium on Space Flight Dynamics, Kanazawa, Japan, June 4–11, 2006. J.T. Howell, M.J. O'Neill, and J.C. Mankins.

47. Improved Cryogenic Optical Test Capability at Marshall Space Flight Center's X-Ray Cryogenic Test Facility, SPIE International Symposium, Astronomical Telescopes and Instrumentation 2006, Orlando, FL, May 24–31, 2006. J. Kegley, H. Haight, W. Hogue, J. Carpenter, R. Siler, E.R. Wright, R. Eng, M. Baker, and J. McCracken.

48. Initial Testing of New Components and Diagnostics in the High Performance Antiproton Trap (HiTRAP), Space Technology and Applications International Forum (STAIF–2006), Albuquerque, NM, February 12–16, 2006. J.B. Pearson and R.A. Lewis.

49. Initiation of Solar Eruptions: Recent Observations and Implications for Theories, Western Pacific Geophysics Meeting (WPGM), American Geophysical Union, Beijing, China, July 24–27, 2006. A.C. Sterling.

50. In-Space Cryogenic Fluid Management, Transfer and Storage Technologies for Exploration Systems, STAIF 2006, Albuquerque, NM, February 12–17, 2006. J.T. Howell, D.J. Chato, and J.C. Mankins.

51. In-Space Cryogenic Propellant Depot (ISCPD) Architecture Definitions and Systems Studies, 57th International Astronautical Congress, Valencia, Spain, October 2–6, 2006. J.C. Fikes, J.T. Howell, and M.W. Henley.

52. The In-Space Soldering Investigation (ISSI): Melting and Solidification Experiments Aboard the International Space Station, 44th AIAA Aerospace Sciences Meeting and Exhibit, Reno, NV, January 9–12, 2006. R.N. Grugel, L.J. Cotton, P.N. Segre, J.A. Ogle, G. Funkhouser, F. Parris, L.M. Murphy, D.C. Gillies, F. Hua, and A.V. Anilkumar.

53. Interannual Variability of Tropical Ocean Evaporation: A Comparison of Microwave Satellite and Assimilation Results, 86th American Meteorological Society Annual Meeting, 14th Conference on Satellite Meteorology and Oceanography, Atlanta, GA, January 29–February 2, 2006. F.R. Robertson, G. Wick, D. Jackson, and M.G. Bosilovich.

54. Interannual Variability of Tropical Rainfall as Seen From TRMM, 86th American Meteorological Society Annual Meeting, 14th Conference on Satellite Meteorology and Oceanography, Atlanta, GA, January 29–February 2, 2006. F.R. Robertson.

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55. An Investigation of the Low-Latitude Boundary Layer at Mid-Altitudes in the CUSP, Polar Science Workshop, Berkeley, CA, June 7–8, 2006. M.O. Chandler and L.A. Avanov.

56. The Ionizing Radiation Environment on the Moon, 36th COSPAR Scientific Assembly, Beijing, China, July 16–23, 2006. J.H. Adams, Jr., M. Bhattacharya, Z.-W. Lin, and G.N. Pendleton.

57. Lessons From the GP–B Experience for Future Fundamental Physics Missions in Space, 26th Committee on Space Research (COSPAR) Scientific Assembly, Beijing, China, July 16–23, 2006. J.J. Kolodziejczak.

58. Linking Asthma Exacerbation and Air Pollution Data: A Step Toward Public Health and Environmental Data Integration, 3rd National Environmental Public Health Tracking Program Conference/Centers for Disease Control and Prevention, Atlanta, GA, August 9–11, 2006. F. Faruque, R. Finley, G. Marshall, B. Brackin, H. Li, W. Williams, M. Al-Hamdan, J.C. Luvall, D.L. Rickman, W.L. Crosson, C. Watts, L. Walters, and A. Mitra.

59. Liquid Bismuth Feed System for Electric Propulsion, Joint Propulsion Conference, Sacramento, CA, July 9–12, 2006. T.E. Markusic, K.A. Polzin, and B.J. Stanojev.

60. Liquid Metal Delivery and Storage in the Lunar Environment, Habitation Conference, Orlando, FL, February 2–8, 2006. R.R. Juretzko, S. Sen, D.M. Stefanescu, and P.A. Curreri.

61. Magnetic Nozzle and Plasma Detachment Experiment—Experiment Status, Space Technology and Applications International Forum (STAIF–2006), Albuquerque, NM, February 12–16, 2006. D.G. Chavers.

62. Magnetospheric-Ionosphere Energy Coupling Processes,Earth-Sun System Exploration: Energy Transfer, Kona, HI, January 16–20, 2006. G.V. Khazanov.

63. Martian Resource Utilization for Habitat Construction, Habitation 2006, Orlando, FL, February 5–8, 2006. S. Carranza, D. Makel, and S. Sen.

64. Materials Requirements for Standard Lunar Highlands Regolith Simulants as Defined by the NASA Simulant Development Program, Planetary and Terrestrial Mining Symposium, Sudbury, Ontario, Canada, June 4–7, 2006. L. Sibille, P.K. Carpenter, D.L. Rickman, C. Owens, R.A. French, and C. McLemore.

65. Mesoscale Modeling of Atlanta, GA Utilizing a New High-Resolution Landcover Data Set, 86th American Meteorological Society Annual Meeting, 14th Conference on Satellite Meteorology and Oceanography, Atlanta, GA, January 29–February 2, 2006. W.L. Crosson, M.G. Estes, S. Kahn, W.M. Lapenta, and D.A. Quattrochi.

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66. Microbial Characterization of Internal Active Thermal Control System (IATCS) Hardware Surfaces After Five Years of Operation in the International Space Station, 36th International Conference on Environmental Systems, Norfolk, VA, July 16–20, 2006. M.C. Roman, N. Weir, M.E. Wilson, and B.H. Pyle.

67. Mirror Technology Roadmap for Optical/IR/FIR Space Telescopes, Astronomical Telescopes and Instrumentation 2006, The International Society for Optical Engineering (SPIE), Orlando, FL, May 24–31, 2006. H.P. Stahl.

68. Mirror Technology Roadmap, Frontiers in Optics 2006, The 90th OSA Annual Meeting Sponsored by Optical Society of America, Rochester, NY, October 8–12, 2006. H.P. Stahl.

69. Modular High-Energy Systems for Solar Power Satellites, 25th International Symposium on Space Technology and Science/19th International Symposium on Space Flight Dynamics, Kanazawa, Japan, June 4–11, 2006. J.T. Howell, C.K. Carrington, N.I. Marzwell, and J.C. Mankins.

70. Modular High-Energy Systems for Solar Power Satellites, International Space Development Conference, Los Angeles, CA, May 4–7, 2006. J.T. Howell, C.K. Carrington, J.C. Mankins, and N.I. Marzwell.

71. Multi-Sensor Perspectives on the Convective and Radiative Properties of the Tropopause Layer Over the Tropical Americas, 86th American Meteorological Society Annual Meeting, 14th Conference on Satellite Meteorology and Oceanography, Atlanta, GA, January 29–February 2, 2006. J.V. Pittman, F.R. Robertson, and T.L. Miller.

72. NASA Defines Mirror Technology Needs for Future Space Telescopes, SPIE Newsroom on-line presentation, 2006. H.P. Stahl.

73. NASA's Lunar Robotic Program, IAU XXVI General Assembly, Prague, Czech Republic, August 16–23, 2006. M.A. McGrath.

74. NASA's Robotic Lunar Exploration Program (RLEP) 2 Mission, 57th International Astronautical Congress, Valencia, Spain, October 2–6, 2006. J.M. Horack, A.R. Lavoie, and P.D. Spudis.

75. NASA's SERVIR Gulf of Mexico Project: The Gulf of Mexico Regional Collaborative (GoMRC), SERVIR Summit, Syracuse, NY, December 3–6, 2006. D.A. Quattrochi, D.E. Irwin, J. Presson, M.G. Estes, S. Estes, and K. Judd.

76. Near Net Manufacturing Using Thin Gage Friction Stir Welding, AeroMat 2006, Seattle, WA, May 15–19, 2006. J. Takeshita, D. Potter, and M. Holguin.

77. Net Shaped Component Fabrication of Refractory Metal Alloys Using Vacuum Plasma Spraying, International Conference on Solidification Science and Processing (ICSSP), Jaipur, India. S. Sen, S.L. O'Dell, S. Gorti, and R. Litchford.

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78. Newly-Developed 3-D GRMHD Code and Its Application to Jet Formation, New Frontiers in Numerical Relativity, Golm, Germany, July 17–21, 2006. Y. Mizuno, K.-I. Nishikawa, S. Koide, P.E. Hardee, and G.J. Fishman.

79. A Novel Concept for a Deformable Membrane Mirror for Correction of Large Amplitude Aberrations, NASA Mirror Technology Days in the Government, Albuquerque, NM, September 17–20, 2006. J. Moore and B. Patrick.

80. On the 5–50 keV Energy Spectrum of the Unresolved X-Ray Background, 2006 High-Energy Astrophysics Division Meeting, American Astronomical Society, San Francisco, CA, October 4–7, 2005. M.C. Weisskopf, D.A. Swartz, S.L. O'Dell, and B.D. Ramsey.

81. Optical Technology Needs for Future Space Telescopes, Industrial Affiliates Day, University of Central Florida, Orlando, FL, April 21, 2006. H.P. Stahl.

82. Origin of the Sheared Magnetic Fields That Erupt in Flares and Coronal Mass Ejections, 2006 American Astronomical Society Solar Physics Division Meeting, Durham, NH, June 25–30, 2006. R.L. Moore and A.C. Sterling.

83. Over-and-Out Coronal Mass Ejections: Blowouts of Magnetic Arches by Ejective Flares in One Foot, SOHO–17: 10 Years of SOHO and Beyond, Giardini Naxos, Sicily, Italy, May 7–12, 2006. R.L. Moore and A.C. Sterling.

84. Prediction of Composite Pressure Vessel Failure Location Using Fiber Bragg Grating Sensors. SPIE's 13th Annual International Symposium on Smart Structures and Materials/SPIE's 11th Annual International Symposium on NDE for Health Monitoring and Diagnostics, San Diego, CA, February 26–March 2, 2006. S.T. Kreger, F.T. Taylor, N.E. Ortyl, and J. Grant.

85. Preliminary Results of the Fluid Merging Viscosity Measurement Space Station Experiment, 44th American Institute of Aeronautics and Astronautics (AIAA) Conference, Reno, NV., January 9–12, 2006. E.C. Ethridge, W.F. Kaukler, and B. Antar.

86. Production of Glass Fibers for Reinforcement of Lunar Concrete, 44th American Institute of Aeronautics and Astronautics (AIAA) Conference, Reno, NV, January 9–12, 2006. E.C. Ethridge, D.S. Tucker, and H. Toutanji.

87. Projecting Future Urbanization With Prescott College's Spatial Growth Model to Promote Environmental Sustainability and Smart Growth, A Case Study in Atlanta, Georgia, The National Association of Environmental Professionals 2006, Albuquerque, NM, April 23–26, 2006. M.G. Estes, W.L. Crosson, A.S. Limaye, H. Johnson, D.A. Quattrochi, W.M. Lapenta, and M. Khan.

88. Radiation Dose From Lunar Neutron Albedo, Geant 4/SPENNIS Workshop, Pasadena, CA, November 6–10, 2006. J.H. Adams, Jr., M. Bhattacharya, Z.-W. Lin, and G.N. Pendleton.

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89. Rapid Fabrication of SiC Optics Using Reactive Atom Plasma (RAP) Processing, NASA Technology Days in the Government, Albuquerque, NM, September 17–20, 2006. P. Fiske.

90. Relativistic Jets: The Particle Acceleration, Magnetic Field Generation and Emission From Relativistic Jets, University of Nevada, Las Vegas, NV, April 21, 2006. K.-I. Nishikawa.

91. Ring Current Cross-Scale Coupling in the Inner Magnetosphere, SCOSTEP 11th Quadrennial Solar Terrestrial Physics Symposium, "Sun, Space Physics and Climate," Rio de Janeiro, Brazil, March 6–10, 2006. G.V. Khazanov.

92. Ring Current Cross-Scale Electrodynamic Coupling, Global Aspects of Magnetosphere-Ionosphere Coupling, 2006 Yosemite Workshop, Yosemite National Park, CA, February 7–10, 2006. G.V. Khazanov and D.L. Gallagher.

93. The Role of Current Sheets in Solar Eruptive Events: An ISSI International Team Project, Ulysses Science Working Team Meeting, Oxnard, CA, November 5–10, 2006. S.T. Suess and G. Poletto.

94. Self-Consistent Ring Current Modeling With Propagating Electromagnetic Ion Cyclotron Waves in the Presence of Heavy Ions, 2006 Huntsville Workshop, Nashville, TN, October 2–6, 2006. G.V. Khazanov, K.V. Gamayunov, D.L. Gallagher, J.U. Kozyra, and M.W. Liemohn.

95. Self-Consistent Ring Current Modeling With Propagating Electromagnetic Ion Cyclotron Waves in the Presence of Heavy Ions, GEM 2006 Workshop, Snowmass, CO, June 25–30, 2006. G.V. Khazanov.

96. SERVIR's Contributions and Benefits to Belize Through Spatial Data Infrastructure (SDI) Development, Geographic Information System (GIS) Day/Belize's Ministry of Natural Resources and the Environment, The University of Belize, Belmopan, Belize, November 13, 2006. D.E. Irwin.

97. SLMS for Ultraviolet and Extreme Ultraviolet Imaging Applications Phase II SBIR Contract Number NASA–02114, NASA Mirror Technology Days in the Government, Albuquerque, NM, September 17–20, 2006. M. Jacoby.

98. Solar Activity and Solar Eruptions, Total Solar Eclipse: Astronomy and Culture Conference, Cape Coast, Ghana, Africa, March 27–31, 2006. A.C. Sterling.

99. The Solar Influence on the Heliosphere and Earth's Environment: Recent Progress and Prospects, International Living With a Star Meeting, Goa, India, February 16–24, 2006. J.F. Spann, Jr.

100. Spatial Growth Modeling and High Resolution Remote Sensing Data Coupled With Air Quality Modeling to Assess the Impact of Atlanta, Georgia on the Local and Regional Environment, Earth Observation for Urban Planning and Management, The Hong Kong Polytechnic University, Hong Kong, November 20–21, 2006. D.A. Quattrochi, M.G. Estes, and M. Khan.

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101. Standard Lunar Regolith Simulants for Space Resource Utilization Technologies Development: Effects of Material Choices, 44th American Institute of Aeronautics and Astronautics (AIAA) Aerospace Sciences Meeting, Reno, NV, January 8–12, 2006. L. Sibille and R. Schlagheck.

102. Standard Lunar Regolith Simulants for Space Resource Utilization Technologies Development: Effects of Materials Choices, 37th Lunar and Planetary Conference, League City, TX, March 13–17, 2006. L. Sibille and P.K. Carpenter.

103. Status of MSFC X-Ray Shell Optics Fabrication Capability, NASA Mirror Technology Days in the Government, Albuquerque, NM, September 17–20, 2006. H.P. Stahl, M.V. Gubarev, B.D. Ramsey, D. Engelhaupt, and C.O. Speegle.

104. Storm Scale Forecasts and Observations of a North Alabama Hailstorm on December 10, 2004, 86th American Meteorological Society Annual Meeting, Symposium on the Challenges of Severe Convective Storms, Atlanta, GA, January 29–February 2, 2006. S.J. Goodman, W.M. Lapenta, K.M. LaCasse, E.W. McCaul, Jr., and W.A. Petersen.

105. Summary of Imaging Mini-Workshop, Global Aspects of Magnetosphere-Ionosphere Coupling, Yosemite National Park, CA, February 7–10, 2006. J.F. Spann, Jr.

106. Summary of NASA Advanced Telescope and Observatory Capability Roadmap, 2006 IEEE Aerospace Conference, Big Sky, MT, March 4–11, 2006. H.P. Stahl and L. Feinberg.

107. Temperature Effects in the ATIC BGO Calorimeter, 36th COSPAR Scientific Assembly, Beijing, China, July 16–23, 2006. J. Isbert, J.H. Adams, Jr., H.S. Ahn, G.L. Bashindzhagyan, K.E. Batkov, J. Chang, M.J. Christl, A.R. Fazely, O. Ganel, R.M. Gunasingha, T.G. Guzik, K.C. Kim, E.N. Kouznetsov, M.I. Panasyuk, A.D. Panov, W.K.H. Schmidt, E.S. Seo, N.V. Sokolskaya, J.W. Watts, J.P. Wefel, J. Wu, and V.I. Zatsepin.

108. Thermal Imaging Applied to Cryocrystallography: Cryocooling and Beam Heating (Part I), The Fourth International Workshop on X-Ray Damage to Biological Crystalline Samples, Harima, Japan, March 7–8, 2006. E.H. Snell, H. Bellamy, G. Rosenbaum, M.J. van der Woerd, and M. Kazmierczak.

109. Transient Filling of a Micro Protein Trap Chip Considering Surface Effect, AIAA 36th Fluid Dynamic Conference, San Francisco, CA, June 5–9, 2006. B. Johnson, C.P. Chen, A. Jenkins, S. Spearing, L.A. Monaco, A. Steele, and G. Flores.

110. Transient Flow Dynamics in Optical Micro Well Involving Gas Bubbles, 4th International Conference on Nanochannels, Microchannels and Minichannels/American Society of Mechanical Engineers, Limerick, Ireland, June 19–21, 2006. B. Johnson, C.P. Chen, A. Jenkins, S. Spearing, L.A. Monaco, A. Steele, and G. Flores.

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111. Ultra-Lightweight, Low Scatter, Large Mirror Technology, NASA Mirror Technology Days in the Government, Albuquerque, NM, September 17–20, 2006. H.E. Bennett.

112. The Use of ATLAS Data to Quantify Surface Radiative Budget Alteration Through Urbanization for San Juan, Puerto Rico, 2006 Caribbean Climate Symposium/University of Puerto Rico, Mayaguez, PR, April 23–25, 2006. J.C. Luvall, D.L. Rickman, J. Gonzalez, and S. Schiller.

113. Use of High-Resolution WRF Simulations to Forecast Lightning Threat, 23rd Severe Storms Conference, American Meteorological Society, St. Louis, MO, November 6–10, 2006. E.W. McCaul, Jr., K.M. LaCasse, and S.J. Goodman.

114. Using SOHO to Understand CME-Producing Quiet-Region Filament Eruptions, SOHO–17: 10 Years of SOHO and Beyond, Giardini Naxos, Sicily, Italy, May 7–12, 2005. A.C. Sterling, R.L. Moore, and L.K. Harra.

115. Utilizing Solar Power Technologies for On-Orbit Propellant Production, International Space Development Conference, Los Angeles, CA, May 4–7, 2006. J.C. Fikes, J.T. Howell, and M.W. Henley.

116. Viability of Sulfur "Concrete" On the Moon: Environmental Considerations, 44th AIAA Aerospace Sciences Meeting and Exhibit, Reno, NV, January 9–12, 2006. R.N. Grugel and H. Toutanji.

117. Wormhole Growth and Evolution During Directional Solidification in Small Cylindrical Channels, 44th AIAA Aerospace Sciences Meeting and Exhibit, Reno, NV, January 9–12, 2006. M.C. Cox, A.V. Anilkumar, R.N. Grugel, and W.H. Hofmeister.

118. X-Ray Detector Research at MSFC for Space Applications, *Proceedings of 2006 Symposium on Radiation Measurements and Applications*, University of Michigan, Ann Arbor, MI, May 23–25, 2006. J.A. Gaskin.

119. X-Ray Mapping of Europa Surface Elemental Abundances, Europa Focus Group Workshop, Ann Arbor, MI, February 27–28, 2006. R.F. Elsner, B.D. Ramsey, D.A. Swartz, J.A. Gaskin, J.H. Waite, Jr., J. Westlake, G. De Geronomo, P. Rehak, Z. Li, and J.F. Cooper.

120. X-Ray Mapping of Terrestrial and Extraterrestrial Materials Using the Electron Microprobe: A Progress Report, Microscopy and Microanalysis 2006 Meeting, Chicago, IL, July 30–August 3, 2006. P.K. Carpenter.

121. The Zero-Degree Detector System, Symposium on Radiation Measurements and Applications, Ann Arbor, MI, May 23–25, 2006. J.H. Adams, Jr., M.J. Christl, L.W. Howell, and E.N. Kouznetsov.

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**PRESENTATIONS**

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**13. ABSTRACT** *(Maximum 200 words)*

This Technical Memorandum (TM) lists the significant publications and presentations of the Science and Exploration Research Office during the period January 1-December 31, 2006. Entries in the main part of the document are categorized according to NASA Reports (arranged by report number), Open Literature and Presentations (arranged alphabetically by title). Most of the articles listed under Open Literature have appeared in refereed professional journals, books, monographs, or conference proceedings. Although many published abstracts are eventually expanded into full papers for publication in scientific and technical journals, they are often sufficiently comprehensive to include the significant results of the research reported. Therefore, published abstracts are listed separately in a subsection under Open Literature. Questions or requests for additional information about the entries in this report should be directed to Dr. J.F. Spann, Jr. (VP60; 961-7512) or to one of the authors.

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