

Mercury Exploration Project: Publication List

Mar. 2006

[in press]

- Blomberg, L.G., J.A. Cumnock, Y. Kasaba, H. Matsumoto, H. Kojima, Y. Omura, M. Moncuquet, and J.-E. Wahlund, Electric fields in the Hermean environment, *Adv. Space Res.*, in press, 2005.
- Blomberg, L.G., H. Matsumoto, J.-L. Bougeret, H. Kojima, S. Yagitani, J.A. Cumnock, A.I. Eriksson, G.T. Marklund, J.-E. Wahlund, L. Bylander, L. Ahlen, J.A. Holtet, K. Ishisaka, E. Kallio, Y. Kasaba, A. Matsuoka, M. Moncuquet, K. Mursula, Y. Omura, and J. G. Trotignon, MEFISTO - an electric field instrument for BepiColombo/MMO, *Adv. Space Res.*, in press, 2005.
- Delcourt, D. C., and K. Seki, On the dynamics of charged particles in the magnetosphere of Mercury, *Advances in Geosciences 2005*, in press, 2006.
- Leblanc, F., E. Chassefière, R. E. Johnson, D. M. Hunten, E. Kallio, D. C. Delcourt, R. M. Killen, J. G. Luhmann, A. E. Potter, A. Jambon, G. Cremonese, M. Mendillo, N. Yan, and A. L. Sprague, Mercury's exosphere origins, and relation to its magnetosphere and surface, *Planet. Space Sci.*, in press, 2006.
- Matsumoto, H., J.-L. Bougeret, L. G. Blomberg, H. Kojima, S. Yagitani, Y. Omura, M. Moncuquet, G. Chanteur, Y. Kasaba, J.-G. Trotignon, Y. Kasahara, BepiColombo MMO PWI Team, Plasma/radio wave observations at Mercury by the BepiColombo MMO spacecraft, *Advances in Geosciences 2005*, in press, 2006.
- Miyachi, T., M. Fujii, N. Hasebe, M.N. Kobayashi, G. Kuraza, A. Nagashima, Y. Nakamura, K. Nogami, T. Iwai, S. Sasaki, H. Ohashi, S. Hasegawa, H. Yano, and H. Shibata, Velocity Dependent Response of a Piezoelectric material to Hypervelocity Microparticles, *Adv. Space Res.*, in press, 2006.
- Moncuquet, M., H. Matsumoto, J.-L. Bougeret, L. G. Blomberg, K. Issautier, Y. Kasaba, H. Kojima, M. Maksimovic, N. Meyer-Vernet and P. Zarka, The Radio Waves & Thermal Electrostatic Noise Spectroscopy (SORBET) Experiment on BEPICOLOMBO/MMO/PWI: Scientific Objectives and Performance, *Adv. Space Res.*, in press, 2006.
- Mukai, T., H. Yamakawa, H. Hayakawa, Y. Kasaba, and H. Ogawa, Present Status of the BepiColombo / Mercury Magnetospheric Orbiter, *Adv. Space Res.*, in press, 2006.
- Yoshikawa, I., H. Nozawa, S. Kameda, S. Okano, and H. Misawa, Observation of the Sodium Exosphere from Mercury Magnetospheric Orbiter, *Advance in Space Research*, in press.

[2005]

- Delcourt, D. C., K. Seki, N. Terada, and Y. Miyoshi, Electron dynamics during substorm dipolarization in Mercury's magnetosphere, *Annales Geophys.*, vol. 23, p. 3389, 2005.
- Milillo, A., S. Orsini, D. C. Delcourt, E. Kallio, R. M. Killen, H. Lammer, F. Leblanc, S. Massetti, A. Mura, P. Wurz, S. Barabash, G. Cremonese, I. A. Daglis, E. De Angelis, A. M. Di Lellis, S. Livi, and V. Mangano, Surface-exosphere-magnetosphere system of Mercury, *Space Sci. Rev.*, vol. 117, 397, 2005.
- Miyachi T, Fujii M, Hasebe N, Kobayashi M, Kuraza G, Nagashima A, Nakamura Y, Okudaira O, Yamashita N, Nogami K, Iwai T, Sasaki S, Ohashi H, Hasegawa S, Yano H, Shibata H, Okada N, Tou T: Response from piezoelectric elements appearing immediately after collisions with silver particles. *J Appl Phys* 98: 0141101-0141107, 2005.
- Miyachi T, Fujii M, Hasebe N, Kobayashi M, Kuraza G, Nagashima A, Nakamura Y, Nogami K, Iwai T, Sasaki S, Ohashi H, Hasegawa S, Yano H, Shibata H, Gruen E, Srama R, Okada N, Tou T: Velocity dependent wave forms of piezoelectric elements undergoing collisions with iron particles ranging from 5 to 63 km/s. *J Appl Phys Letters* 86: 2341021-2341023, 2005.
- Miyachi T, Fujii M, Hasebe N, Kobayashi M, Kuraza G, Nagashima A, Nakamura Y, Nogami K, Iwai T, Sasaki S, Ohashi H, Hasegawa S, Yano H, Shibata H: Velocity dependent response of a piezoelectric element to hypervelocity microparticles. *Adv Space Res* 35: 1263-1269, 2005.

[2004]

- Hayakawa, H., Y. Kasaba, H. Yamakawa, H. Ogawa, and T. Mukai, The BepiColombo/MMO model payload and operation plan, *Adv. Space Res.*, 33, 12, 2142-2146, 2004.
- Miyachi T., N. Hasebe, H. Ito, T. Masumura, H. Okada, H. Yoshioka, K. Nogami, T. Iwai, H. Shibata, Y. Hamabe, S. Sasaki, S. Sugita, S. Hasegawa, H. Yano, H. Ohashi, K. Muranaga, M. Sato, and T. Tou, Real-time detector for hypervelocity microparticles using piezoelectric material, *Adv. Space Res.*, 34, 935-938, 2004.
- McNutt Jr., R.L., S.C. Solomon, R. Grard, M. Novara, T. Mukai, An international program for Mercury exploration: Synergy of MESSENGER and BepiColombo, *Adv. Space Res.*, 33, 12, 2126-2132, 2004.
- Mukai, T.; Ogasawara, K.; Saito, Y., An empirical model of the plasma environment around Mercury, *Adv. Space Res.*, 33, 12, 2166-2171, 2004.
- Nishida, A., Driving mechanisms of magnetospheric dynamics of planets and satellites, *Adv. Space Res.*, 33, 11, 1848-1858, 2004.
- Sasaki, S., and E. Kurahashi, Space weathering on Mercury, *Adv. Space Res.*, 33, 2152-2155, 2004.
- Yamakawa, H., H. Ogawa, Y. Kasaba, H. Hayakawa, T. Mukai, and M. Adachi, Current status of the BepiColombo/MMO spacecraft design, *Adv. Space Res.*, 33, 12, 2133-2141, 2004.
- Yoshikawa, I., A. Yamazaki, T. Murachi, S. Kameda, H. Sagawa, S. Okano, T. Okada, and M. Nakamura, Development of an Extreme Ultraviolet Imaging Spectrometer for the BepiColombo Mission, *Adv. Space Res.*, 33, 12, 2195-2199, 2004..
- Yoshikawa, I., A. Yamazaki, T. Murachi, S. Kameda, S. Okano, and M. Nakamura, Development of an extreme ultraviolet spectrometer for the mercury mission, *Proc. SPIE in San Diego*, vol.5193, 164-171, 2004.

[2003]

- Delcourt, D. C., S. Grimald, F. Leblanc, J.-J. Berthelier, A. Millilo, A. Mura, S. Orsini, and T. E. Moore, A quantitative model of planetary Na⁺ contribution to Mercury's magnetosphere, *Annales Geophys.*, vol. 21, p. 1723, 2003.
- Leblanc, F., D. C. Delcourt, R. E. Johnson, and M. Liu, Mercury's sodium exosphere : Magnetospheric ion recycling, *J. Geophys. Res. (Planets)*, vol. 108, doi: 10.1029/2003JE002151, 2003.
- Ogawa, H., H. Yamakawa, and K. Goto, Thermal protection system for BepiColombo/Mercury Magnetospheric Orbiter, *4th European Workshop on Hot Structure and Thermal Protection Systems for Space Vehicles*, ESA-SP-521, 109-115, 2003.
- Sasaki, S., E. Kurahashi, C. Yamanaka, and K. Nakamura, Laboratory simulation of space weathering: changes of optical properties and TEM/ESR confirmation of nanophase metallic iron, *Adv. Space Res.*, 31, 2537-2542, 2003.

[2002]

- Novara, M., The BepiColombo ESA Cornerstone mission to Mercury, *Acta Astronautica*, 51, 1-9, 387-395, 2002.
- Yamakawa, H., H. Ogawa, Y. Kasaba, H. Hayakawa, T. Mukai and M. Adachi, ISAS Feasibility Study On The BepiColombo/MMO Spacecraft Design, *Acta Astronautica*, 51, 1-9, 397-404, 2002.

[1999]

- Yamakawa, H., ISAS Mercury Orbiter Mission Trajectory Design Strategy, *RBCM (Revista Brasileira de Ciencias Mecanicas) – J. Brazilian Soc. Mech. Sci.*, 21, Special Issue, 270-279, 1999.

[1998]

- Yamakawa, H., Solar Electric Propulsion Mercury Orbiter Mission Design, *J. Space Tech. Sci.*, 14, 1, 1-10, 1998.

[1996]

H. Yamakawa, J. Kawaguchi, K. Uesugi and H. Matsuo, Frequent Access to Mercury in the Early 21st Century: Multiple Mercury Flyby Mission via Electric Propulsion, *Acta Astronautica*, 39, 1-4, 133-142, 1996.

Mercury Exploration Project: Thesis Papers

[Master's Thesis]

永島敦, 圧電(PZT)素子を用いた超高速微粒子のインパルス応答, 早稲田大, 2003.

Takamizawa, H., Distribution of Herman Sodium Atmosphere, Tohoku Univ., 2000.

吉岡秀樹, PZT 素子による超高速微粒子の速度の計測, 修士論文, 早稲田大, 2003.