

Vitae

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Born: July 3, 1964

Education:

B.S. 1986, Geology, University of California at Berkeley, Berkeley, CA.

Ph.D. 1993, Geophysics, University of Hawai'i at Manoa, Honolulu, HI.

(Dissertation: "Spectral Reflectance Studies and Optical Surface Alteration In The Search For Links Between Meteorites and Asteroids")

Advisor: Dr. F.P. Fanale)

Diplome d'Etudes Spaciales 1991, International Space University Summer Program, Toulouse, France. (Mission Design Project: International Mission to Mars)

Professional Experience:

Assistant Professor, Department of Physics, Ithaca College, 2001-present.

Visiting Professor, Department of Physics, Wells College, 2001-present

Research Associate, Cornell University, Astronomy Department, June 1996 - present.

National Science Foundation Visiting Professor, Lunar and Planetary Laboratory, University of Arizona at Tucson, Sept 1995 to June 1996.

Harlan J. Smith Postdoctoral Fellow, McDonald Observatory, University of Texas at Austin, Oct 1993 to Sept 1995.

Instructor, Astronomy, Austin Community College Department of Math and Sciences, Sept 1994 to June 1995.

Graduate Research Assistant, Planetary Geosciences Division of the Hawai'i Institute of Geophysics, University of Hawaii, July 1988 to Sept 1993.

Instructor, Astronomy of the Solar System, Summer Program for High School Education in the Basic Sciences, University of Hawaii, Summer 1992.

Instructor, Introductory Geology, Freshman Seminar Core Curriculum, University of Hawaii, Fall 1989.

Tutor, Math and Physics, Spring 1989 to Fall 1992.

Service:

Associate Editor, *Meteoritics and Planetary Science*, 2000-present.
CHAIR, Scientific Organizing Committee, 7th International “*Asteroids, Comets, Meteors*” Conference, Cornell University, 1999.
NASA Planetary Systems Science Management Operations Working Group 2000-present.
NASA Mars Exploration Review Panels (two) 2002
NASA Planetary Astronomy Program Management Operations Working Group 1995-2000.
Scientific Organizing Committee, “*Asteroids III*”, Piazza Italy, 1999-2001.
Science Advisor, *Earth & Sky*, Austin Texas 1995-present.
NASA Planetary Geology and Geophysics Review Panel 1997--1999.
HUBBLE Space Telescope Planetary Astronomy Review Panel 1998.
National Science Foundation Planetary Astronomy Review Panel 1998.
NASA Planetary Instrument Definition and Development Review Panel, 1996-1997.
Planetary Data System Data Review Panel, 1996-1997.
NASA Planetary Astronomy Review Panel 1994-1996.
Technical Reporter, Lunar and Planetary Institute Workshop: The Space Environment: Effects on the Optical Properties of Airless Bodies, November 1992.
Graduate Admissions Committee, Geology and Geophysics Department, University of Hawaii, Spring 1992.
Coordinator, Department Seminar Series, Geology and Geophysics Department, University of Hawaii, Fall 1988 - Spring 1990.

Funding:

Principal Investigator, Research Corporation, "Spectroscopy of X-Type Asteroids: Exploration of a Mysterious Class of Objects", \$28K, 2002-2004.
Co-Investigator, NASA Planetary Geology and Geophysics Program, "Spectroscopic Modeling of Hydrated Asteroids", \$1K, Andrew S. Rivkin MIT, PI.
Principal Investigator, NASA Near Data Analysis Program, "Multispectral Terrains on Eros", \$80K, 2002-2004.
Principal Investigator, Space Telescope Science Institute IDEAs Grant: "Real and Other-World Applications of Math, Science, and Technology", \$40K, 2000-2002.
Principal Investigator, NASA Planetary Geology and Geophysics, "Thermal Infrared Spectroscopy of Asteroids", \$20K, 2000-2002.
Principal Investigator, NASA-JPL MUSES-CN Asteroid Sample Return Mission, Rover Near-Infrared Spectrometer, \$218K, 1999-2004.
Principal Investigator, NASA Planetary Geology and Geophysics, “Spectroscopy and Meteorite Linkage of the K-Type Asteroids”, \$40K, 1999-2000.
Affiliate Research Scientist, (J. Veverka PI), NASA-APL Near-Earth Asteroid Rendezvous Mission, Multispectral Imaging and Near-Infrared Spectroscopy, 1996-2001.
Principal Investigator, Space Telescope Science Institute IDEA Grants, “Using a NASA Mission and Media Hype to Focus Attention on Astronomy and Physics”, \$10K, 1999.
Principal Investigator, National Science Foundation, “Asteroid and Meteorite Linkages”, \$60K, 1995-1996.

Publications:

- Clark B.E.**, Helfenstein P., Bell III J.F., Peterson C., Veverka J., Izenberg N., Domingue D., Wellnitz W., and McFadden L. (2002) NEAR Infrared Spectrometer Photometry of Asteroid 433 Eros. *Icarus* 155, 189-204.
- Clark, B.E.**, Hapke B., Pieters C., and Britt D., (2002) Asteroid Space Weathering and Regolith Evolution. In *Asteroids III*, (B. Bottke et al. Eds.) Univ of Az. Press, pp.585-599.
- Bell, J.F., **B.E. Clark**, et al. 2002 "Near-IR Reflectance Spectroscopy of 433 Eros from the NIS instrument on the NEAR mission", *Icarus* 155, 119-144.
- Thomas, P., **B.E. Clark**, et al. 2002 "Eros: Shape, Topography, and Slope Processes", *Icarus* 155, 18-37.
- Murchie, S., **B.E. Clark**, et al. 2002 "Color variations on Eros from NEAR multispectral imaging", *Icarus* 155, 145-168.
- Muinonen, K, J. Piironen, Y. Shkuratov, A. Ovcharenko, and **B.E. Clark** (2002) Asteroid Photometric and Polarimetric Phase Effects. In *Asteroids III*, (B. Bottke et al. Eds.) Univ of Az. Press, pp. 123-138.
- Clark B.E.**, Lucey P., Helfenstein P., Bell III J.F., Peterson C., Veverka J., McConnochie T., Robinson M., Bussey B., Murchie S., Izenberg N., and Chapman C. (2001) Space weathering on Eros: Constraints from albedo and spectral measurements of Psyche crater. *Meteoritics and Planetary Science*, 36, 1617-1638.
- Burbine, T. R.P. Binzel, S.J. Bus, and **B.E. Clark** (2001) K Asteroids and CO3/CV3 Chondrites. *Meteoritics and Planetary Science*, 36, 245-253.
- Bell, J.F. III, N. Izenberg, P. Lucey, **B.E. Clark**, C. Peterson, M.Gaffey, J. Joseph, B. Carcich, A. Harch, M. Bell, J. Warren, P. Martin, L. McFadden, D. Wellnitz, S. Murchie, M. Winter, J. Veverka, P. Thomas, M. Robinson, M. Malin, A. Cheng (2002) Near-IR reflectance spectroscopy of 433 Eros from the NIS instrument on the NEAR mission. I. Low phase angle observations. *Icarus* 155, 119-144.
- Thomas, P., J. Joseph, B. Carcich, J. Veverka, **B.E. Clark**, J.F. Bell III, A. Byrd, R. Chomko, M. Robinson, S. Murchie, L. Prokter, A. Cheng, N. Izenberg, M. Malin, C. Chapman, L. McFadden, R. Kirk, M. Gaffey, and P. Lucey (2002) Eros: Shape, Topography, and Slope Processes. *Icarus* 155, 18-37.
- Lucey, P.G., J.L. Hinrichs, M. Kelly , D. Wellnitz , N. I. Izenberg, S. Murchie, M.S. Robinson, **B E. Clark**, J. F. Bell III (2002) Detection of temperature-dependent spectral variation on the asteroid Eros and new evidence for the presence of an olivine-rich silicate assemblage. *Icarus* 155, 181-188.
- Rivkin, A., E.S. Howell, L.A. Lebofsky, **B.E. Clark** and D. Britt (2000) The Nature of M-Class Asteroids from 3-micron Observations. *Icarus* 145, 351-368.
- Clark, B.E.**, P. Thomas, J.Veverka, P. Helfenstein, M. Robinson and S. Murchie (2000) NEAR Lightcurves of Asteroid 433 Eros. *Icarus* 145, 641-644.
- Meibom, A. and **B.E. Clark** (1999) Invited Review: The insignificance of Ordinary Chondritic material in the asteroid belt: Combining meteoritical and astronomical evidence. *Meteoritics and Planetary Science* 34, 7-24.
- Veverka, J. et al. (**B.E. Clark**) (1999) Imaging of asteroid 433 Eros During NEAR's Flyby Reconnaissance. *Science* 285, 562-564.

- Clark, B.E.**, J. Veverka, P. Helfenstein, P.C. Thomas, J.F. Bell III, A. Harch, M.S. Robinson, S.L. Murchie, L.A. McFadden, C.R. Chapman (1999) NEAR Photometry of Asteroid 253 Mathilde. *Icarus* 140 53-65.
- Murchie, S.L., M.S. Robinson, S.E. Hawkins III, A. Harch, P. Helfenstein, P.C. Thomas, K. Peacock, E.H. Darlington, R. Gold, **B.E. Clark**, J.F. Bell III, W. Merline, N. Izenberg, J. Veverka (1999) Inflight Calibration of the NEAR Multispectral Imager. *Icarus* 140, 66-91.
- Veverka, J., P.C. Thomas, A. Harch, **B.E. Clark**, J.F. Bell III, B. Carcich, J. Joseph, C.R. Chapman, W. Merline, M.S. Robinson, M. Malin, L.A. McFadden, S.L. Murchie, R. Farquhar, N.R. Izenberg, A. Cheng (1999) NEAR's Encounter With 253 Mathilde: Overview. *Icarus* 140, 3-16.
- Clark, B.E.**, J. Veverka, P. Helfenstein, M. Ockert-Bell, P.E. Geissler, C.B. Phillips, A.S. McEwen, R. Greeley, R. Sullivan, G. Neukum, T. Denk, K.P. Klaasen and the Galileo Imaging Team. (1998) Multispectral Terrain Analysis of Europa from Galileo Images. *Icarus* 135, 95-106.
- Greeley, R., R. Sullivan, J. Klemaszewski, J.W. Head, R.T. Pappalardo, J. Veverka, **B.E. Clark**, T.V. Johnson, K.P. Klaasen, M. Belton, J. Moore, E. Asphaug, M.H. Carr, G. Neukum, T. Denk, C.R. Chapman, C.B. Placher, P.E. Geissler, R. Greenberg, R. Tufts (1997) Europa: Initial Galileo Geological Observations. *Icarus* 135, 4-24.
- Geissler, P.E., R. Greenberg, G. Hoppa, P. Helfenstein, A. McEwen, R. Pappalardo, R. Tufts, M. Ockert-Bell, R. Sullivan, R. Greeley, M.J.S. Belton, T. Denk, **B.E. Clark**, J. Burns, J. Veverka (1998) Evidence for Non-Synchronous Rotation of Europa. *Nature* 391, 368-371.
- Helfenstein, P., N. Currier, **B.E. Clark**, J. Veverka, M. Ockert-Bell, R. Sullivan, R. Greeley, R. Pappalardo, J.W. Head, T. Jones, K. Magee, K. Klaasen, P. Geissler, A.S. McEwen, C.B. Phillips, T. Colvin, M. Davies, T. Denk, M. Belton and the Galileo Imaging Team. (1998) Galileo Observations of the European Opposition Effect. *Icarus* 135, 41-63.
- Rivkin, A.S., **B.E. Clark**, D.T. Britt and L.A. Lebofsky (1997) Infrared Spectrophotometry of the NEAR Flyby Target 253 Mathilde. *Icarus* 127, 255-257.
- Veverka, J., P.C. Thomas, A. Harch, **B.E. Clark**, J.F. Bell III, B. Carcich, J. Joseph, C.R. Chapman, W. Merline, M.S. Robinson, M. Malin, L.A. McFadden, S.L. Murchie, R. Farquhar, N.R. Izenberg, A. Cheng (1997) NEAR's Flyby of Mathilde: The First Look at a C-Type Asteroid. *Science* 278, 2109-2114.
- Clark, B.E.** and R.E. Johnson (1996) Interplanetary Weathering: Surface Erosion in Outer Space. *EOS* 77, No.15, 141-145.
- Clark, B.E.** (1995) Spectral Mixing Models of S-Type Asteroids. *J.Geophys.Res.* 100, No.E7, 14,443-14,456.
- Clark, B.E.**, J.F. Bell, F.P. Fanale and D.J. O'Connor (1995) Results of the Seven-Color Asteroid Survey: Infrared Spectral Observations of 50-km sized S, K, and M-type Asteroids. *Icarus* 113, 387-402.
- Helfenstein, P., J. Veverka, P. Lee, D. Simonelli, P. Thomas, M. Davies, A. McEwen, J. Head, S. Murchie, F. Fanale, M. Robinson, **B.E. Clark**, J. Granahan, H. Garbeil, K. Klaasen, T. Johnson, G. Neukum, S. Motolla, R. Wagner, M.J.S. Belton, C. Chapman, D. Morisson (1994) Galileo Photometry of Asteroid 951 Gaspra. *Icarus* 107, 37-60.
- Hapke, B., **B.E. Clark**, G. Benedix, D. Domingue, and M. Cintala (1993) Workshop on the Space Environment: Effects on the Optical Properties of Airless Bodies. LPI Technical Report Number 93-01, Houston, Texas.

- Spencer, J.R., **B.E. Clark**, L.M. Woodney, W.M. Sinton and D. Toomey (1993) Io Hot Spots in 1991: Results from Europa Occultation Photometry and Infrared Imaging. *Icarus* 107, 195-208.
- Clark, B.E.**, F.P. Fanale and J.W. Salisbury (1992) Meteorite-Asteroid Spectral Comparison: The Effects of Comminution, Melting, and Recrystallization. *Icarus* 97, 288-297.
- Fanale, F.P., **B.E. Clark** and J.F. Bell (1992) A Spectral Analysis of Ordinary Chondrites, S-Type Asteroids and Their Component Minerals: Genetic Implications. *Jour. Geophys. Res.* 97, 20,863-20,874.
- Spencer, J.R., R.R. Howell, **B.E. Clark**, D.R. Klaasen and D.J. O'Connor (1992) Volcanic Activity on Io at the Time of the Ulysses Encounter. *Science* 257, 1507-1510.
- Hawke, B.R., **B.E. Clark** and C.R. Coombs (1992) Lunar Pyroclastic Deposits: An Important Economic Resource. *Proceedings of the National Space Society* 8th, 592-598.
- Hawke, B.R., **B.E. Clark** and C.R. Coombs (1990) Ilmenite-Rich Pyroclastic Deposits: An Ideal Lunar Resource. In *Proceedings of the Conference on Lunar and Planetary Science* 20, 249-258. Lunar and Planetary Institute, Houston, Texas.

Recent Abstracts and Reviews:

- Abstract: Clark et al. 2002 "Spectroscopic Exploration of the X-Type Asteroids", *Bulletin of the American Astron. Soc.* Vol 34, No. 3.
- Review: Clark, B.E. 2002 "Review of *New Cosmic Horizons*, by David Leverington", *Meteoritics and Planetary Science*, vol. 37.
- Abstract: Lim et al. 2002 "The Cornell MID-Infrared Asteroid Spectroscopic (MIDAS) Survey", *Bulletin of the American Astron. Soc.* Vol 34, No. 3.
- Abstract: Clark, B.E., J. Veverka, P. Thomas, J. Joseph, B. Carcich, P. Helfenstein, S. Murchie, D. Domingue, M. Robinson, W. Owen, and W.J. Merline (1999) NEAR Lightcurves of Eros: Evidence for Albedo Variations at Longitudes 240-300. *Bulletin of the American Astron. Soc.* 31, 1071.
- Abstract: Clark, B.E. J. Veverka, P. Helfenstein, P.C. Thomas, J.F. Bell III, A. Harch, B. Carcich, M.S. Robinson, S.L. Murchie, A. Cheng, N. Izenberg, L.A. McFadden, C.R. Chapman, W. Merline, M. Malin (1998) Near Photometry of C-Type Asteroid 253 Mathilde. *Lunar and Planet. Sci. Conf. XXIX*.