LUCY F. G. LIM

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Current Employment

- Physical Scientist, NASA/Goddard Space Flight Center, 2005–present

Education

- **Cornell University** Ithaca, NY
  Ph. D., Astronomy January 2005
  Dissertation Title: *Asteroid Spectroscopy. I. A Thermal Infrared Survey of Asteroids. II. X-ray Fluorescence Spectroscopy of 433 Eros.*
  Advisor: Professor Steven W. Squyres
- **Massachusetts Institute of Technology** Cambridge, MA
  Bachelor of Science, Earth, Atmospheric, and Planetary Sciences June 1998
  Minors in Physics and Literature

NASA Missions and Space Telescope Programs

- Assistant Project Scientist, OSIRIS-REx Asteroid Sample Return Mission (New Frontiers 3, PI: D. Lauretta), 2010–present.
- PI, Spitzer Program 20481: IRS Spectroscopy of M Asteroids (13.5 hours)
- PI, Spitzer Program 50259: IRS Spectroscopy of Basaltic Asteroids: Vestoids, 1459 Magnya, and Other Non-Vestoid Basaltic Asteroids (19.1 hours)
- Co-I, Spitzer Programs 70163 and 80232: Physical Characterization of Near-Earth objects: OSIRIS-REx targets (PI: J. Emery)

Selected Publications and Conference Papers

- "Modeling orbital gamma-ray spectroscopy experiments at carbonaceous asteroids." Lim, L. F., R. D. Starr, L. G. Evans, A. M. Parsons, M. E. Zolensky, & W. V. Boynton, *Meteorit Planet Sci.* **52**: 174–190, 2017. doi:10.1111/maps.12786
- "Elemental composition of 433 Eros: New calibration of the NEAR-Shoemaker XRS data." Lim, L. F. & L. R. Nittler, *Icarus* **200**, 129–146, 2009.
- "X-ray fluorescence measurements of the surface elemental composition of asteroid 433 Eros." Nittler, L. R., R. D. Starr, L. Lim, T. J. McCoy, T. H. Burbine, R. C. Reedy, J. I. Trombka, P. Gorenstein, S. W. Squyres, W. V. Boynton, T. P. McClanahan, J. S. Bhangoo, P. E. Clark, M. E. Murphy, & R. Killen, *Meteoritics & Planetary Science* **36** , 1673–1695, 2001.
- "Regolith X-Ray Imaging Spectrometer (REXIS) Aboard the OSIRIS-REx Asteroid Sample Return Mission. " Masterson, R. A., M. Chodas, L. Bayley, B. Allen, J. Hong, P. Biswas, C. McMenamin, K. Stout, E. Bokhour, H. Bralower, D. Carte, S. Chen, M. Jones, S. Kissel, F. Schmidt, M. Smith, G. Sondecker, L. F. Lim, D. S. Lauretta, J. E. Grindlay, & R. P. Binzel, *Space Science Reviews* **214**, 48–2018
- "OSIRIS-REx: Sample Return from Asteroid (101955) Bennu. " Lauretta, D. S., S. S. Balram-Knutson, E. Beshore, W. V. Boynton, C. Drouet d'Aubigny, D. N. DellaGiustina, H. L. Enos, D. R. Golish, C. W. Hergenrother, E. S. Howell, C. A. Bennett, E. T. Morton, M. C. Nolan, B. Rizk,

H. L. Roper, A. E. Bartels, B. J. Bos, J. P. Dworkin, D. E. Highsmith, D. A. Lorenz, L. F. Lim, R. Mink, M. C. Moreau, J. A. Nuth, D. C. Reuter, A. A. Simon, E. B. Bierhaus, B. H. Bryan, R. Ballouz, O. S. Barnouin, R. P. Binzel, W. F. Bottke, V. E. Hamilton, K. J. Walsh, S. R. Chesley, P. R. Christensen, B. E. Clark, H. C. Connolly, M. K. Crombie, M. G. Daly, J. P. Emery, T. J. McCoy, J. W. McMahon, D. J. Scheeres, S. Messenger, K. Nakamura-Messenger, K. Righter, & S. A. Sandford, *Space Science Reviews* **212**, 925–984, 2017

- "An Active X-Ray Spectrometer Proposed for the SELENE-2 Rover." Kim, K. J., Y. Amano, W. V. Boynton, G. Klingelhöfer, J. Brückner, N. Hasebe, D. Hamara, R. D. Starr, L. F. Lim, G. Ju, T. J. Fagan, T. Ohta, & E. Shibamura, *Japan Society of Aeronautical Space Sciences Transactions* **12**, 35, 2014.
- "The NEAR-Shoemaker x-ray/gamma-ray spectrometer experiment: Overview and lessons learned." Trombka, J. I., L. R. Nittler, R. D. Starr, L. G. Evans, T. J. McCoy, W. V. Boynton, T. H. Burbine, J. Brückner, P. Gorenstein, S. W. Squyres, R. C. Reedy, J. O. Goldsten, L. Lim, K. Hurley, P. E. Clark, S. R. Floyd, T. P. McClanahan, E. McCartney, J. Branscomb, J. S. Bhangoo, I. Mikheeva, & M. E. Murphy, *Meteoritics & Planetary Science* **36** , 1605–1616, 2001.
- "Mineralogy and thermal properties of V-type Asteroid 956 Elisa: Evidence for diogenitic material from the Spitzer IRS (5-35 μm) spectrum." Lim, L. F., J. P. Emery, & N. A. Moskovitz, *Icarus* **213** , 510–523, 2011.
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- "Triplicity and physical characteristics of Asteroid (216) Kleopatra." Descamps, P., F. Marchis, J. Berthier, J. P. Emery, G. Duchêne, I. de Pater, M. H. Wong, L. Lim, H. B. Hammel, F. Vachier, P. Wiggins, J.-P. Teng-Chuen-Yu, A. Peyrot, J. Pollock, M. Assafin, R. Vieira-Martins, J. I. B. Camargo, F. Braga-Ribas, & B. Macomber, *Icarus* **211**, 1022–1033, 2011.

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- “Pulsed neutron generator system for astrobiological and geochemical exploration of planetary bodies.” Akkurt, H., J. L. Groves, J. Trombka, R. Starr, L. Evans, S. Floyd, R. Hoover, L. Lim, T. McClanahan, R. James, T. McCoy, & J. Schweitzer, *Nuclear Instruments and Methods in Physics Research B* **241** , 232–237, 2005.
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