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BIOGRAPHICAL SKETCH

Together with collaborators, I use adaptive optics (AO) on large telescopes to observe small bodies in the solar system. We search for satellites [2,8] and analyze the shape and rotation of the primary [4,5,6,7,9]. Our improved volume estimates lead to better estimates of composition [4]. Our discovery of a satellite orbiting (41) Daphne [8] resulted in a more accurate density estimate for that object [9]. Our main focus has been on the main belt and outer solar system, however we resolve [3], and detect [10] satellites around, near-Earth asteroids as well.

As AO systems lead for the LBT LINC-NIRVANA project, and previously as instrument master for the Keck near-infrared camera, NIRC2, I combine my research efforts with my technical efforts to improve that instrument. I also apply my technical background to develop methods for observing solar system objects from ground-based observatories [11,12].

EDUCATION

Doctor of Philosophy in Computer Science, University of California at Santa Cruz, 1994

Master of Science in Computer Science, University of California at Berkeley, 1977

Bachelor of Science in Mathematics, University of California at Berkeley, 1975

APPOINTMENTS

2010-present: AO Systems Lead, Max Planck Institute for Astronomy, Koenigstuhl 17, Heidelberg

2003 – 2010: Support Astronomer, W.M. Keck Observatory, 65-1120 Mamalahoa Hwy, HI

SELECTED PUBLICATIONS

1. Archinal, B. A., et al. *Report of the IAU/IAG Working Group on Cartographic Coordinates and Rotational Elements: 2012*, CM, in preparation
2. Merline, W.J., et al, *A Keck Search for Faint Satellites of Pluto in Support of New Horizons*, Bull. AAS **44**, 304.09 (2012)
3. Merline, W.J., et al, *Keck Adaptive-Optics Imaging of Near-Earth Asteroid 2005_YU55 During its 2011 Close Flyby*, LPI 1667,6372 (2012)
4. Merline, W.J., et al, *The Resolved Asteroid Program – Size, shape, and pole of (52) Europa*, Icarus **225**, 794 (2013)
5. Drummond, J.D., Conrad, A.R., et al. *Physical properties of the ESA Rosetta target asteroid (21) Lutetia. I. The triaxial ellipsoid dimensions, rotational pole, and bulk density*, A&A **523**, 93 (2010)
6. Conrad, A.R., et al. *Recent Results From Imaging Asteroids With Adaptive Optics*, Proc. LPSC **40**, 2414 (2009)
7. Conrad, A. R., et al. *Direct Measurement of the size, shape, and pole of 511 Davida with Keck AO in a single night*, Icarus **191**, 616 (2007)
8. Conrad, A. R., et al. *S/2008 (41) I* (satellite discovery), IAUC **8930**, 1 (2008)
9. Conrad, A. R., et al. *Shape and Size of Asteroid (41) Daphne from AO imaging*, Bull. AAS **40**, 438 (2008)
10. Merline, W.J., Conrad, A.R., et al. *S/2008 (35107) I* (1st optical imaging of an NEO binary), IAUC **8977**, 2 (2008)
11. Conrad, A. R., et al. *Keck observations of Solar System objects: Perspectives for Extremely Large Telescopes (ELT)*, EMP **105**, 115 (2009)
12. Conrad, A. R., et al. *Keck Meets the Solar System*, Bull. AAS **39**, 3406 (2007)

SYNERGISTIC ACTIVITIES

I serve on the IAU working group that defines conventions for solar system bodies. I currently lead a subcommittee to determine criteria for determining which small bodies should be included in the report [1].