

Curriculum Vitae

Kevin John Walsh

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Education

2006	Ph.D. Astronomy, University of Maryland Advisor: Dr. Derek C. Richardson
2003	M.S. Astronomy, University of Maryland
2000	B.S. Physics and Computing, University of Notre Dame

Refereed Publications

1. Walsh, K. J.. Lightcurves of Small Main Belt Asteroids. In preparation for *Icarus*.
2. Walsh, K. J., and D. C. Richardson 2006. A Steady-State Model of NEA Binaries Formed via Tidal Disruption. *Icarus*, submitted.
3. Knight, M. M., Walsh, K. J., A'Hearn, M. A., Swaters, R. A., Zauderer, B. A. , Samarasinha, N., Vasquez, R., and Reitsema, H. 2006 Ground Based Optical and Near-IR Observations of the Deep Impact Encounter *Icarus* 187 199–207
4. Richardson, D. C. and Walsh, K. J., Eds., Binary Minor Planets V1.0. EAR-A-COMPIL-5-BINMP-V1.0. NASA Planetary Data System, 2006.
5. Richardson, D. C., and K. J. Walsh 2006. Binary Minor Planets. *Ann. Rev. Earth & Planet. Sci.* **34**, 47-81.
6. Walsh, K. J., and D. C. Richardson 2006. Binary near-Earth asteroid formation: rubble pile model of tidal disruptions. *Icarus* **180**, 201-216.
7. Meech, K. J. and 207 colleagues 2005. Deep Impact: Observations from a Worldwide Earth-Based Campaign. *Science* **310**, 265-269.
8. Rettig, T. W., Walsh, K. J., and Consolmagno, G 2001. Implied Evolutionary Differences of the Jovian Irregular Satellites from a BVR Color Survey. *Icarus* **154**, 313-320.

Recent Published Abstracts

1. Walsh, K. J., and D. C. Richardson 2006. Steady-state Population Of The NEA Binaries And YORP Spinup Models. *38th DPS Meeting* , abstract # 53.08.
2. Richardson, D. C., and K. J. Walsh 2006. Forming NEA Binaries: Tidal Disruption May Not Be Enough. *International Astronomical Union. Symposium no. 236* , abstract S236 # 12.
3. Walsh, K. J., and D. C. Richardson 2006. A Steady-State Model of NEA Binaries Formed via Tidal Disruption. *37th DDA Meeting* , abstract # 2.01.
4. Walsh, K. J., and D. C. Richardson 2005. Small Main-Belt Asteroid Lightcurves. *Bull. Am. Astr. Soc.* **37**, 1155.
5. Zauderer, B. A., Walsh K.J., Vazquez R., and H. Reitsema 2005. Deep Impact Observations from San Pedro Martir. *Bull. Am. Astr. Soc.* **37**, 1157.
6. Walsh, K. J., and D. C. Richardson 2005. Binary Near-Earth Asteroid formation: rubble pile model of tidal disruptions. *Bull. Am. Astr. Soc.* **37**, 638.
7. Walsh, K. J., and D. C. Richardson 2004. Near-Earth Asteroid satellite formation via tidal disruption of idealized rubble piles. *Bull. Am. Astr. Soc.* **36**, 1142.
8. Walsh, K. J., and D. C. Richardson 2004. Direct N -body simulations of rubble pile collisions in strong tidal fields: Applies to Saturn's F ring. *Bull. Am. Astr. Soc.* **35**, 1486.
9. Rettig, T. W., and K. J. Walsh 2002. BVR Color Survey of the Jovian Irregular Satellites. *Bull. Am. Astr. Soc.* **34**, 861.
10. Rettig, T. W., and K. J. Walsh 2001. A BVR Colors of Eight Jovian Irregular Satellites – Evolutionary Implications. *Bull. Am. Astr. Soc.* **33**, 1129.

Conference Proceedings

1. Walsh, K. J., D. C. Richardson and T. Rettig 2002. Modeling the breakup of comet Shoemaker-Levy 9. *Astron. Soc. Pacific. Conf. Ser.* **291**, 415.

Research Experience

- 2003–2006 *Graduate Research Assistant, Department of Astronomy, University of Maryland.* Studies of tidal disruption as a formation mechanism for forming binary NEAs, including N -body simulations and observations at Kitt Peak National Observatory of asteroid lightcurves.
- 2002–2003 *Visiting Graduate Research Assistant, Department of Physics & Astronomy, University of Notre Dame.* Continued N -body tidal disruption simulations, including those of rubble pile collisions in Saturn's F-ring.
- 2002 *Summer Research Assistant, Department of Physics & Astronomy, University of Notre Dame.* Performed N -body simulations of comet Shoemaker-Levy 9's tidal disruption.
- 2001 *Summer Research Assistant, Laboratory for High-Energy Astrophysics, Goddard Space Flight Center.* Research on thin-foil grazing incidence X-ray mirrors.

- 1999 *REU, Department of Physics & Astronomy, Northern Arizona University.* Data reduction and analysis of the broad-band optical colors of irregular Uranian satellites.
- 1998–2000 *Undergraduate Research Assistant, Department of Physics & Astronomy, University of Notre Dame.* Observation, reduction of data and analysis of the broad-band optical colors of the irregular Jovian satellites.

Observing Experience

- KPNO 4m Kitt Peak, AZ: 1 night observing small Main Belt Asteroid Lightcurves in optical wavelengths.
- SPM 1.5m San Pedro Martir, Mexico: 4 nights imaging Deep Impact in optical wavelengths.
- KPNO 2.1m Kitt Peak, AZ: 22 nights imaging small Main Belt Asteroid Lightcurves in optical wavelengths.
- VATT 2m Mt. Graham AZ: 5 nights imaging irregular Jovian Satellites and TNOs in optical wavelengths.

Teaching/Outreach Experience

- 2007– Lecturer, Astronomy 330, Department of Astronomy, University of Maryland
- 2002– Science Fair Judge/Career Day Speaker, Elsie Whitlow Stokes Community Freedom Public Charter School
- 2001–2002 Instructor, Astronomy 111, Department of Astronomy, University of Maryland
- 2000– Telescope operator and assistant at University of Maryland observatory Open House.
- 2000–2001 Teaching Assistant, Astronomy 120/121, Department of Astronomy, University of Maryland
- 1997–2000 Undergraduate Teaching Assistant, Department of Physics & Astronomy, University of Notre Dame

Other Activities

- Referee for journal *Icarus* (3 articles)
- Graduate rep, Dept. of Astronomy Computer Committee, 2003–2006
- Administrator of Department CONDOR cluster of desktop computers, 2002–2006

Popular Articles/Citations/Media Appearances

1. “Asteroid 2004 MN4: A Really Near Miss!” *Sky & Telescope* (online) Feb. 4, 2005.

Honors

Fall 2006 Dean's Dissertation Fellowship, University of Maryland Graduate School
Spring 2006 DDA Student Stipend Award, 37th DDA meeting, Halifax
Fall 2005 Student travel grant, 37th DPS meeting, Cambridge
Spring 2004 Student travel grant, Asteroid Dynamics Workshop, Arecibo Observatory
2001–2002 Center for Teaching Excellence Distinguished Teaching Assistant
2000–2001 Center for Teaching Excellence Distinguished Teaching Assistant

Talks

1. Fall 2005 “NEA Binary Formation and Rubble Pile Dynamics” Applied Physics Lab, Columbia, Maryland
2. Summer 2005 “Deep Impact” Colloquium, El Instituto de Astronomia, Ensenada, Mexico.
3. Fall 2004 “Tidal Disruption of Rubble Pile Asteroids” Planetary Astronomy Lunchtime Seminar, University of Maryland.
4. Spring 2004 “Tidal Reshaping of the Near-Earth Asteroid Population” Asteroid Dynamics Workshop, Arecibo Observatory.
5. Fall 2003 “VAMPIRE; Very Awesome Multi-Processor Interconnected Research Environment” Astronomy Lunchtime Seminar, University of Maryland.
6. Spring 2003 “CONDOR; Computing, Not Birds“ AMSC 662: Advanced Computer Science, University of Maryland.
7. Spring 2003 “CONDOR“ LINUX Administrators Forum, University of Maryland.

References

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