

## Refereed Publications

### *Project 1640 Observations of the White Dwarf HD 114174 B*

E. Bacchus, I. R. Parry, R. Oppenheimer, J. Aguilar, C. Beichman, D. Brenner, R. Burruss, E. Cady, S. Luszcz-Cook, J. Crepp, R. Dekany, R. Fergus, A. Gianninas, L. Hillenbrand, S. Hinkley, M. Kilic, D. King, T. G. Lockhart, C. T. Matthews, **R. Nilsson**, T. Pearce, L. Pueyo, E. L. Rice, L. C. Roberts, Jr., A. Sivaramakrishnan, R. Soummer, G. Vasisht, A. Veicht, C. Zhai, N. T. Zimmerman  
MNRAS, 469, 4796, 10 pages, (2017)

### *Project 1640 Observations of Brown Dwarf GJ 758 B: Near-Infrared Spectrum and Atmospheric Modeling*

**R. Nilsson**, A. Veicht, P. A. Giorla Godfrey, E. L. Rice, J. Aguilar, L. Pueyo, L. C. Roberts Jr., R. Oppenheimer, D. Brenner, S. H. Luszcz-Cook, E. Bacchus, C. Beichman, R. Burruss, E. Cady, R. Dekany, R. Fergus, L. Hillenbrand, S. Hinkley, D. King, T. Lockhart, I. R. Parry, A. Sivaramakrishnan, R. Soummer, G. Vasisht, C. Zhai, N. T. Zimmerman  
Astrophysical Journal, 838, 64, 12 pages, (2017)

### *Constraints on the Presence of SiO Gas in the Debris Disk of HD 172555*

T. L. Wilson, **R. Nilsson**, C. H. Chen, C. M. Lisse, M. Moerchen, H.-U. Käufel, A. Banzatti  
Astrophysical Journal, 826, 165, 5 pages, (2016)

### *Characterization of the Companion to $\mu$ Her*

L. C. Roberts Jr., B. D. Mason, J. Aguilar, J. Carson, J. R. Crepp, C. Beichman, D. Brenner, R. Burruss, E. Cady, S. Luszcz-Cook, R. Dekany, L. Hillenbrand, S. Hinkley, D. King, T. G. Lockhart, **R. Nilsson**, R. Oppenheimer, I. R. Parry, L. Pueyo, E. L. Rice, A. Sivaramakrishnan, R. Soummer, G. Vasisht, A. Veicht, J. Wang, C. Zhai, N. T. Zimmerman  
Astronomical Journal, 151, 6, 169, 7 pages, (2016)

### *Know the Star, Know the Planet. V. Characterization of the Stellar Companion to the Exoplanet Host Star HD 177830*

L. C. Roberts Jr., R. Oppenheimer, J. R. Crepp, C. Baranec, C. Beichman, D. Brenner, R. Burruss, E. Cady, S. Luszcz-Cook, R. Dekany, L. Hillenbrand, S. Hinkley, D. King, T. G. Lockhart, **R. Nilsson**, I. R. Parry, L. Pueyo, A. Sivaramakrishnan, R. Soummer, E. L. Rice, A. Veicht, G. Vasisht, C. Zhai, N. T. Zimmerman  
Astronomical Journal, 150, 4, 103, 6 pages, (2015)

### *Reconnaissance of the HR 8799 Exosolar System II: Astrometry and Orbital Motion*

L. Pueyo, R. Soummer, J. Hoffman, R. Oppenheimer, J. R. Graham, N. Zimmerman, C. Zhai, J. K. Wallace, F. Vescelus, A. Veicht, G. Vasisht, T. Truong, A. Sivaramakrishnan, M. Shao, L. C. Roberts Jr., J. E. Roberts, E. Rice, I. R. Parry, **R. Nilsson**, T. Lockhart, E. R. Ligon, D. King, S. Hinkley, L. Hillenbrand, D. Hale, R. Dekany, J. R. Crepp, E. Cady, R. Burruss, D. Brenner, C. Beichman, C. Baranec  
Astrophysical Journal, 803, 31, 23 pages, (2015)

### *Direct Spectrum of the Benchmark T Dwarf HD 19467 B*

J. R. Crepp, E. L. Rice, A. Veicht, J. Aguilar, L. Pueyo, P. Giorla, **R. Nilsson**, S. H. Luszcz-Cook, R. Oppenheimer, S. Hinkley, D. Brenner, G. Vasisht, E. Cady, C. A. Beichman, L. A. Hillenbrand, T. Lockhart, C. T. Matthews, L. C. Roberts Jr., A. Sivaramakrishnan, R. Soummer, C. Zhai  
Astrophysical Journal Letters, 798, L43, 6 pages, (2015)

### *The $\kappa$ Andromedae System: New Constraints on the Companion Mass, System Age & Further Multiplicity*

S. Hinkley, L. Pueyo, J. K. Faherty, B. R. Oppenheimer, E. Rice, E. E. Mamajek, A. L. Kraus, M. J. Ireland, T. David, L. A. Hillenbrand, G. Vasisht, E. Cady, D. Brenner, A. Veicht, **R. Nilsson**, R. Fergus, N. Zimmerman, I. R. Parry, C. Beichman, R. Dekany, J. E. Roberts, L. C. Roberts Jr., C. Baranec, J. R. Crepp, R. Burruss, J. K. Wallace, D. King, C. Zhai, T. Lockhart, M. Shao, R. Soummer, A. Sivaramakrishnan, L. A. Wilson  
Astrophysical Journal, 779, 153, 14 pages, (2013)

### *Reconnaissance of the HR 8799 Exosolar System I: Near IR Spectroscopy*

B. R. Oppenheimer, C. Baranec, C. Beichman, D. Brenner, R. Burruss, E. Cady, J. R. Crepp, R. Dekany, R. Fergus, D. Hale, L. Hillenbrand, S. Hinkley, D. W. Hogg, D. King, E. R. Ligon, T. Lockhart, **R. Nilsson**, I. R. Parry, L. Pueyo, E. Rice, J. E. Roberts, L. C. Roberts, Jr., M. Shao, A. Sivaramakrishnan, R. Soummer, G. Vasisht, A. Veicht, F. Vescelus, J. K. Wallace, C. Zhai, N. Zimmerman  
Astrophysical Journal, 768, 24, 16 pages, (2013)

### *VLT Imaging of the $\beta$ Pictoris Gas Disk*

**R. Nilsson**, A. Brandeker, G. Olofsson, K. Fathi, P. Thébault, R. Liseau  
Astronomy & Astrophysics, Volume 544, id.A134, 12 pages, (2012)

### *Polarimetric Coronagraphy of BD+31° 643*

G. Olofsson, **R. Nilsson**, H-G. Florén, A. Djupvik, M. Aberasturi  
Astronomy & Astrophysics, Volume 544, id.A43, 9 pages, (2012)

### *Kuiper Belts Around Nearby Stars*

**R. Nilsson**, R. Liseau, A. Brandeker, G. Olofsson, G. L. Pilbratt, C. Risacher, J. Rodmann, J.-C. Augereau, P. Bergman, C. Eiroa, M. Fridlund, P. Thébault, G. J. White  
Astronomy & Astrophysics, Volume 518, id.A40, 15 pages, (2010)

*The HADES Mission Concept - Astrobiological Survey of Jupiter's Icy Moon Europa*

T. Böttcher, L. Huber, L. Le Corre, J. Leitner, D. McCarthy, **R. Nilsson**, C. Teixeira, S. Vaquer Araujo, R. C. Wilson, F. Adjali, M. Altenburg, G. Briani, P. Buchas, A. Le Postollec, T. Meier  
International Journal of Astrobiology, 8, pp.321-329, (2009)

*A Submillimetre Search for Cold Extended Debris Disks in the  $\beta$  Pictoris Moving Group*

**R. Nilsson**, R. Liseau, A. Brandeker, G. Olofsson, C. Risacher, M. Fridlund, G. L. Pilbratt  
Astronomy & Astrophysics, Volume 508, Issue 2, pp.1057-1065, (2009)

*$q^1$  Eri: a Solar-Type Star with a Planet and a Dust belt*

R. Liseau, C. Risacher, A. Brandeker, C. Eiroa, M. Fridlund, **R. Nilsson**, G. Olofsson, G. Pilbratt, P. Thébault  
Astronomy & Astrophysics, Volume 480, Issue 3, pp.L47-L50, (2008)

*Astronomical Applications of Quantum Optics for Extremely Large Telescopes*

C. Barbieri, D. Dravins, T. Occhipinti, F. Tamburini, G. Naletto, V. Da Deppo, S. Fornasier, M. D'Onofrio, R. A. E. Fosbury, **R. Nilsson**, H. Uthas

Journal of Modern Optics, 54:2, pp.191-197, (2007)

*New Pulsating White Dwarfs in Cataclysmic Variables*

**R. Nilsson**, H. Uthas, M. Ytre-Eide, J-E. Solheim, B. Warner  
MNRAS Letters, 370, L56-L60, (2006)

## Non-Refereed Publications

*Astronomical Quantum Optics with Extremely Large Telescopes*

D. Dravins, C. Barbieri, R. A. E. Fosbury, G. Naletto, **R. Nilsson**, T. Occhipinti, F. Tamburini, H. Uthas, L. Zampieri  
The Scientific Requirements for Extremely Large Telescopes, Proceedings of the 232nd Symposium of the International Astronomical Union, Held in Cape Town, South Africa, November 14-18, 2005, Edited by Patricia Ann Whitelock; Michel Dennefeld; Bruno Leibundgut. Cambridge: Cambridge University Press, pp.502-505, (2006)

*QuantEYE: A Quantum Optics Instrument for Extremely Large Telescopes*

G. Naletto, C. Barbieri, D. Dravins, T. Occhipinti, F. Tamburini, V. Da Deppo, S. Fornasier, M. D'Onofrio, R. A. E. Fosbury, **R. Nilsson**, H. Uthas, L. Zampieri

Ground-based and Airborne Instrumentation for Astronomy. Edited by McLean, Ian S.; Iye, Masanori. Proceedings of the SPIE, Volume 6269, pp.62691W, (2006)

*QuantEYE: The Quantum Optics Instrument for OWL*

D. Dravins, C. Barbieri, R. A. E. Fosbury, G. Naletto, **R. Nilsson**, T. Occhipinti, F. Tamburini, H. Uthas, L. Zampieri  
Proceedings from meeting 'Instrumentation for Extremely Large Telescopes', held at Ringberg Castle, (T.Herbst, ed.), (2005)

## Conference Contributions & Outreach

*WIRCPOL: A Near-IR Spectro-Polarimetric Imager at Palomar Observatory*, poster presented at the 229th AAS Meeting, Grapevine TX, USA, January 3-7, 2017

*Astrobiology: From Molecules to Robots in Space*, talk given at Astronomy on Tap, Pasadena, USA, November 21, 2016

*WIRCPOL: A Near-IR Spectro-Polarimetric Imager at Palomar Observatory*, talk given at ExSoCal2016, California Institute of Technology, Pasadena, USA, September 22-23, 2016

*Confirmation of Directly Imaged Substellar Companions with NIRC2 and the Vortex Coronagraph*, poster presented at Keck Science Meeting 2016, California Institute of Technology, Pasadena, USA, September 15-16, 2016

*Searching for Substellar Companions with ExAO Coronagraphic Hyperspectral Imaging at Palomar*, poster presented at Cool Stars 19, Uppsala University, Uppsala, Sweden, June 6-10, 2016

*High-Contrast Imaging of Exoplanets and Brown Dwarfs with Project 1640*, talk given at ExSoCal2015, California Institute of Technology, Pasadena, USA, September 24-25, 2015

*High-Contrast Hyperspectral Imaging with P1640: the First Near-IR Spectrum of Brown Dwarf GJ 758 B*, poster presented at the Emerging Researchers in Exoplanet Science Symposium, Pennsylvania State University, State College, USA, May 28-29, 2015

*High-Contrast Imaging and Planet Detection with Project 1640*, poster presented at the Sagan Exoplanet Workshop, California Institute of Technology, Pasadena, USA, July 21-25, 2014

*P1640 – Direct Imaging and Spectroscopy of Nearby Exoplanets and Brown Dwarfs*, invited seminar, Space Telescope Science Institute, Baltimore, USA, February 28, 2014

*Panning for Planets in Stellar Glare: Methods for High-Contrast Imaging with Project 1640*, poster presented at the 5th Subaru International Conference on Exoplanets and Disks, Kona, Hawai'i, USA, December 8-12, 2013

*VLT Imaging of the  $\beta$  Pictoris Gas Disk*, invited seminar, Onsala Space Observatory, Chalmers University of Technology, Göteborg, Sweden, April 4, 2012

*VLT Imaging of the  $\beta$  Pictoris Gas Disk*, invited seminar, Department of Astrophysics, American Museum of Natural History, New York, USA, February 7, 2012

*Extrasolar Comet Belts: the Search for and Characterization of Cold Debris Disks*, talk given at Astrobiology symposium, Institute for Astronomy, University of Hawai'i, Honolulu, USA, January 23, 2011

*Submillimeter Observations of Extrasolar Comet Belts*, talk given at STC meeting, Nordic Optical Telescope, Santa Cruz de La Palma, Spain, November 15, 2010

*Submillimeter Observations of Extrasolar Comet Belts*, invited seminar, Onsala Space Observatory, Chalmers University of Technology, Göteborg, Sweden, May 26, 2010

*Circumstellar Debris and Its Impact on Life: A Solution to Fermi's Paradox*, Astrobiology Hot Topic Seminar, Nordic Institute for Theoretical Physics, Stockholm, Sweden, April 23, 2010

*Exoplanets: the Search for New Earths*, talk given (in Swedish) at Telescope Show, AlbaNova, Stockholm, Sweden, November 28, 2009

*Observations of Cool Dusty Debris in Extended Disks - Characterization Beyond Infrared Data*, poster presented at the 5th Spitzer Science Conference, Pasadena, CA, USA, October 26-30, 2009

*Observability of Pulsar and Neutron-Star Structures with Very Large Telescopes*, talk given at Workshop "Detection of Optical Transients from the Ground", Copenhagen, Denmark, April 27, 2005

*Observability of Pulsar and Neutron-Star Structures with OWL*, talk given at conference regarding conceptual studies of quantum optical instrumentation for OWL, Padua, Italy, March 22-23, 2005