Curriculum Vita

Personal Data

John C. Wilson
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Education

8/98–1/02	Cornell University, Ph.D., Applied Physics Thesis Topic: *Infrared Spectroscopy of Low Mass Stars & Brown Dwarfs* Thesis Advisor: Jim Houck
8/95–8/98	Cornell University, M.S., Applied Physics
6/83–5/87	U.S. Naval Academy, B.S., Systems Engineering, *with honors*

Academic Positions

5/10–present	Senior Scientist, University of Virginia
10/02–5/10	Research Scientist, University of Virginia
8/01–9/02	Research Associate, Cornell University

Awards

2017	*The Maria and Eric Muhlmann Award* of the Astronomical Society of the Pacific to John Wilson and the APOGEE Team for important astronomy research results based upon the development of groundbreaking instruments and techniques.

Astronomy Instrumentation Experience

9/18– present	Sloan Telescope Lead Scientist
5/09– present	Instrument Scientist for the Apache Point Observatory Galactic Evolution Experiment-2 (APOGEE-2), one of three surveys for the Sloan Digital Sky Survey IV (SDSS-IV) at the 2.5-meter Sloan Telescope and the du Pont 2.5-meter telescope at Las Campanas Observatory, Chile. The APOGEE survey uses two fiber-fed near-infrared high resolution spectrographs built to study the chemical and kinematic evolution of the Milky Way. The first APOGEE spectrograph has been conducting formal survey operations since Sep 2011. The second spectrograph was delivered to the du Pont Telescope in early 2017 and is now in monthly use.
4/08– 5/09	Deputy Instrument Scientist for APOGEE
9/07– 11/10	Optics lead for LMIRcam, a 3-5 micron camera for imaging the Fizeau focus of the interferometrically-combined light of the Large Binocular Telescope on Mt. Graham, AZ. UVA collaborated with the Univ. of Arizona, Univ. of Minnesota, and Notre Dame to build LMIRcam. The instrument is currently in use for science at the telescope.

10/02–present	Lead development and commissioning for UVA's copy of TripleSpec, a NIR cross-dispersed R 3500 spectrograph at the Apache Point Observatory 3.5-m telescope. UVA, Cornell Univ, Caltech and JPL collaborated on the design and construction of three copies for use on the Palomar 200-inch, Keck 10-m and APO 3.5-m telescopes. Instrument formally accepted by the Astrophysical Research Consortium (ARC) Nov, 2010. Also helped Cornell build a version of Triplespec, named ARCoIRIS, for the National Optical Astronomical Observatory's 4-m Blanco Telescope in Chile. After a couple of years of use, helped modify the fore-optics to permit the instrument's use on the SOAR telescope where it is currently in commissioning.
9/00–9/02	Lead Scientist for the Wide-field Infrared Camera (WIRC), a facility prime-focus instrument for the Palomar 200-inch.
10/98–6/08	Designed, project managed construction and operations of CorMASS (Cornell Massachusetts Slit Spectrograph), a NIR cross-dispersed spectrograph used at the Palomar 60-inch, VATT 1.8-m, APO 3.5-m, and Magellan 6.5-m.
1/97–8/97	Designed, project managed construction of a slit-viewer module upgrade to SCORE (SIRTF Cornell Echelle) MIR Spectrograph at the Palomar 200-inch.

Selected Instrumentation Publications

"The Apache Point Observatory Galactic Evolution Experiment (APOGEE) Spectrographs," J. C. Wilson, F. R. Hearty, M. F. Skrutskie, S. R. Majewski et al., 2019, *PASP,* **131,** 055001

"Design updates and status of the fourth generation TripleSpec spectrograph," E. Schlawin, T. L. Herter, C. Henderson, J. C. Wilson, R. Probst, D. Sprayberry, M. Bonati, P. Schurter, D. James, M. Warner, R. Tighe, J. D. Adams, M. Martínez, 2014, *SPIE*, **9147**, 91472H

"Fabrication and testing of germanium grisms for LMIRcam," P. J. Kuzmenko et al., 2012, *SPIE*, **8450**, 84503P

"Development of a large mosaic volume phase holographic (VPH) grating for APOGEE," J. Arns, J. C. Wilson, M. Skrutskie, S. Smee, R. Barkhouser, D. Eisenstein, J. Gunn, F. Hearty, A. Harding, P. Maseman, J. Holtzman, R. Schiavon, B. Gillespie, & S. Majewski, 2010, *SPIE*, **7739**

"LMIRcam: an L/M-band imager for the LBT combined focus," J. C. Wilson, P. M. Hinz, M. F. Skrutskie, T. Jones, E. Solheid, J. Leisenring, P. Garnavich, M. Kenworthy, M. J. Nelson, & C. E. Woodward, 2008, *SPIE,* **7013**

"'Mass Producing' an efficient NIR spectrograph," J.C. Wilson, C.P. Henderson, T.L. Herter, K. Matthews, M.F. Skrutskie, J.D. Adams, Dae-Sik Moon, R. Smith, N. Gautier, M. Ressler, B.T. Soifer, S. Lin, J. Howard, J. LaMarr, T.M. Stolberg, & J. Zink, 2004, *SPIE,* **5492,** 1295

"A Wide-Field Infrared Camera for the Palomar 200-inch Telescope," J. C. Wilson, S. S. Eikenberry, C. P. Henderson, T. L. Hayward, J. C. Carson, B. Pirger, D. J. Barry, B. R. Brandl, J. R. Houck, G. J. Fitzgerald & T. M. Stolberg, 2003, *SPIE,* **4841,** 451

"CorMASS: A Compact and Efficient NIR Spectrograph for Studying Low-Mass Objects," J.C. Wilson, M.F. Skrutskie, M.R. Colonno, A.T. Enos, C.E. Henderson, J.D. Smith, J.E. Gizis, D.G. Monet, & J.R. Houck, 2001, *PASP,* **113,** 227

Selected Science Publications

"Companions to APOGEE Stars. I. A Milky Way-spanning Catalog of Stellar and Substellar Companion Candidates and Their Diverse Hosts," N. W. Troup et al., 2016, *AJ*, **151**, 85

"Chemical Cartography with APOGEE: Metallicity Distribution Functions and the Chemical Structure of the Milky Way Disk," M. R. Hayden et al., 2015, *ApJ*, **808**, 132

"First Light LBT AO Images of HR 8799 bcde at 1.6 and 3.3 μm: New Discrepancies between Young Planets and Old Brown Dwarfs," A. J. Skemer et al., 2012, *ApJ*, **753**, 14

"Near-Infrared Photometry of the Type IIn SN 2005ip: The Case for Dust Condensation," O. Fox, M. F. Skrutskie, R. A. Chevalier, S. Kanneganti, C. Park, J. Wilson, M. Nelson, J. Amirhadji, D. Crump, A. Hoeft, S. Provence, B. Sargeant, J. Sop, M. Tea, S. Thomas, & K. Woolard, 2009, *ApJ,* **691,** 650

"Discovery of a Young Substellar Companion in Chamaeleon," K. L. Luhman, J. C. Wilson, W. Brandner, M. F. Skrutskie, M. J. Nelson, J. D. Smith, D. E. Peterson, M. C. Cushing & E. Young, 2006, *ApJ,* **649,** 894

"Spectrum of a Habitable World: Earthshine in the Near-Infrared," M. C. Turnbull, W. A. Traub, K. W. Jucks, N. J. Woolf, M. R. Meyer, N. Gorlova, M. F. Skrutskie & J. C. Wilson, 2006, *ApJ*, **644,** 551

"Near-infrared spectra of the leading and trailing hemispheres of Enceladus," A. J. Verbiscer, D. E. Peterson, M. F. Skrutskie, M. Cushing, P. Helfenstein, M. J. Nelson, J. D. Smith, & J. C. Wilson, 2006, *Icarus,* **182,** 211

"Infrared Observations of the Candidate LBV 1806-20 and Nearby Cluster Stars," S. S. Eikenberry, K. Matthews, J. L. LaVine, M. A. Garske, D. Hu, M. A. Jackson, S. G. Patel, D. J. Barry, M. R. Colonno, J. R. Houck, J. C. Wilson, S. Corbel, J. D. Smith, 2004, *ApJ,* **616,** 506

"Three Wide Separation L-dwarf Companions from the Two Micron All Sky Survey: Gl 337C, Gl 618.1B, and HD 89744B," J.C. Wilson, J. Davy Kirkpatrick, J.E. Gizis, M.F. Skrutskie, D.G. Monet, & J.R. Houck, 2001, *AJ,* **122,** 1989

"Discovery of a Bright Field Methane (T-type) Brown Dwarf by 2MASS," A.J. Burgasser, J.C. Wilson, J.D. Kirkpatrick, M.F. Skrutskie, M.R. Colonno, A.T. Enos, J.D. Smith, C.P. Henderson, J.E. Gizis, M.E. Brown, & J.R. Houck, 2000, *AJ,* **120,** 1100

April 10, 2019