

# Mark J. Veyette

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<b>Education</b>	<b>Doctor of Philosophy in Astronomy</b> – Boston University	Expected: 2019
	<b>Master of Arts in Astronomy</b> – Boston University	2015
	<b>Bachelor of Science</b> – University of Washington Majors: Astronomy*, Physics   Minor: Mathematics *Departmental Honors	2012
<b>Research Experience</b>	<b>Graduate Research Assistant</b> – Boston University Advisor: Philip Muirhead Developing empirical methods to determine chemical abundances in M dwarf stars from high-resolution near-infrared spectroscopy and investigating the implications for planet formation theories. Developing the optical and mechanical design for NEWS, a high-resolution near-infrared spectrograph for the Discovery Channel Telescope.	2014-
	<b>Student Researcher</b> – University of Washington Advisor: Julianne Dalcanton Identified and characterized 467 planetary nebulae in M31 from the Panchromatic Hubble Andromeda Treasury. Provided six-filter spectral energy distributions over 0.3-1.6 $\mu\text{m}$ for 130 planetary nebulae.	2011-2013
	<b>Student Researcher</b> – University of Washington Advisor: Željko Ivezić Performed follow-up observations of SX Phoenicis stars identified in the LINEAR photometric catalog. Analyzed light curves and compared with LINEAR results.	2011-2012
<b>Teaching Experience</b>	<b>Teaching Fellow</b> – Boston University AS102 - Intro to Astronomy for non-science majors AS202 - Intro to Astronomy for physical science majors AS109 - Intro to Cosmology for non-science majors AS202 - Intro to Astronomy for physical science majors	Spr. 2015 Fall 2014 Spr. 2014 Fall 2013
	<b>Mentored Students</b> Jack Lichtman - NSF Research Experience for Undergraduates Student Oversaw mechanical design of cryostat for the NEWS spectrograph.	Sum. 2016
	Jia Ye – NSF Research Experience for Undergraduates Student Oversaw optomechanical design for the NEWS spectrograph.	Sum. 2015
<b>Awards</b>	Massachusetts Space Grant Consortium Summer Fellowship (\$2,750) Cool Stars 19 Best Graduate Student Poster Runner-up	2016 2016

	Cool Stars 19 Registration Fee Waiver (\$493)	2016
	AAS International Travel Grant (\$1,400)	2016
	NASA Keck PI Data Award (\$12,500)	2016
	SETI and NASA Astrobiology Institute IAU Travel Grant (\$1,500)	2015
	AAS International Travel Grant (\$983)	2015
	BU Graduate Student Organization Travel Grant (\$500)	2015
<b>Courses &amp; Workshops</b>	BU Science Instrument Facility: Mechanical Design and Machining Zemax Training Course: Optical System Design Using OpticStudio Dunlap Institute Summer School 2014: Intro to Astronomical Instrumentation	
<b>Computational Experience</b>	Languages – Python, IDL, Bash, Java, C++, Javascript, Perl, Fortran, Assembly, AWK, BASIC, PHP, Android Mobile OS Cluster Computing – BU Shared Computing Cluster at MGHPCC Markup Languages – HTML, CSS, LaTeX Reduction/Analysis Software – IRAF/PyRAF, Source Extractor, DS9 (XPA) CAD Software – SolidWorks, AutoCAD Optical System Design – Zemax OpticStudio	
<b>Telescope Time Awarded</b>	MKO 10-meter Keck II (2 nights) – NIR spectroscopy with NIRSPEC MKO 3-meter NASA IRTF (3 nights) – NIR spectroscopy with CSHELL and SpeX Lowell Observatory 4.3-meter DCT (1 night) – NIR spectroscopy with IGRINS Manastash Ridge Observatory 0.8-meter (10 nights) – optical photometry	
<b>Refereed Publications</b>	<b>Veyette</b> , + 3 co-authors (2016). The physical mechanism behind M dwarf metallicity indicators and the role of C and O abundances. <i>ApJ</i> , 828, 95  Dalba, + 5 co-authors incl. <b>Veyette</b> (2015). The Transit Transmission Spectrum of a Cold Gas Giant Planet. <i>ApJ</i> , 814, 154  <b>Veyette</b> , + 10 co-authors (2014). Panchromatic Hubble Andromeda Treasury IX: A Photometric Survey of Planetary Nebulae in M31. <i>ApJ</i> , 792, 121	
<b>Proceedings</b>	<b>Veyette</b> , + 4 co-authors (2016). NEWS: the near-infrared Echelle for wideband spectroscopy. Proceedings of the SPIE, 9908, 99086M  Girardi, + 16 co-authors incl. <b>Veyette</b> (2015). TP-AGB stars in M31: Results from PHAT. ASP Conference Series, 497, 413  Muirhead, Hall, & <b>Veyette</b> (2014). HiJaK: the High-resolution J, H and K spectrometer. Proceedings of the SPIE, 9147, 91477T	
<b>Conference Abstracts</b>	Dalba, + 5 co-authors incl. <b>Veyette</b> (2015). Saturn as a Transiting Exoplanet. AAS/Division for Planetary Sciences Meeting Abstracts, 47, 504.01  <b>Veyette</b> , et al. (2015). Testing the origin of compact exoplanetary systems around M dwarfs. IAU General Assembly, 22, 57462	

**Veyette, et al.** (2015). Accurate Alpha Abundance and C/O of Low-mass Stars. AAS Meeting Abstracts, 225, 138.11

**Veyette, et al.** (2012). The LINEAR Photometric Database: Time Domain Information for SDSS Objects. AAS Meeting Abstracts, 219, 348.19

**Outreach**

Boston University Public Open Night – Weekly Volunteer

The Art of Astrophysics Competition – Volunteer Organizer & Event Photographer

University of Washington Public Open Night – Volunteer