Kyle J. Van Gorkom

CONTACT

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EDUCATION

Ph.D. in Optical Sciences — **University of Arizona**
Expected 2023

B.S. in Physics and Philosophy — **Brandeis University**
Mathematics minor, highest honors, *summa cum laude*, GPA 3.92 — May 2014
"Investigating Optical Continuum Flux as a Measure of Quasar Central Engine Power"

RESEARCH POSITIONS

Space Telescope Science Institute
Research and Instrument Analyst II — 2015-2017
Research and Instrument Analyst I — 2014-2015
Instruments Division, Telescopes Group

- Phase retrieval for Hubble focus maintenance. PI of the *HST Cycle 24 Focus & Optical Monitor* calibration program.
- Pipeline development, analysis, and data collection support of Center of Curvature interferometry of the Webb primary
- Point-spread function simulations and algorithm development for the Webb coronagraphy pipeline and exposure time calculator
- Exoplanet simulations to quantify and reduce planet-planet confusion for direct imaging missions

Brandeis Radio Astronomy Group
Undergraduate Research Assistant — 2012-2014
Investigated the robustness of optical continuum flux as a measure of quasar central engine power as part of an ongoing project aimed at placing constraints on quasar jet orientation

University of Michigan, Ann Arbor
REU Intern — Summer 2013

- Satellite dynamics modeling in the development of the Miniature Tether Electrodynamics Experiment (MiTEE).
- Numerically characterized the on-orbit behaviors of a coupled cubesat, femtosat, and non-rigid conducting tether by use of existing and new code.

HONORS AND AWARDS

STScI Team Achievement Award	2017
Phi Beta Kappa	2014
Physics Faculty Prize	2014
Cariana Prize in Philosophy	2012

TEACHING EXPERIENCE

Brandeis University
Teaching Assistant for *Introductory Astronomy* — Fall 2013

SKILLS

Python, MATLAB, Mathematica, LabVIEW, LaTeX, Java, IDL, IRAF

EXTRA-CURRICULARS

Vice President, Astronomy Club, Brandeis University

PUBLICATIONS

B. Saif, D. Chaney, P. Greenfield, M. Bluth, **K. J. Van Gorkom**, K. Smith, J. Bluth, L. Feinberg, J. C. Wyant, M. North-Morris, & R. Keski-Kuha, Appl. Opt. 56, 6457-6465, 2017. *Measurement of picometer-scale mirror dynamics*

B. N. Saif, D. M. Chaney, P. E. Greenfield, **K. J. Van Gorkom**, K. J. Brooks, W. Hack, M. Bluth, J. Bluth, J. Sanders, K. Z. Smith, L. B. Carey, S. M. Chaung, R. Keski-Kuha, L. Feinberg, S. C. Tournois, W. S. Smith, & V. Kradinov. 2017. Proc. SPIE10401. *JWST center of curvature test method and results*

C. Stark, **K. J. Van Gorkom**, & L. Pueyo, JWST-STScI-004707, November 2015. *How to Implement a JWST Coronagraphic Observation Sequence in APT*

C. Stark & **K. J. Van Gorkom**, JWST-STScI-004706, November 2015. *An APT Implementation of the JWST Coronagraph SODRM*

K. J. Van Gorkom, J. F. C. Wardle, A. P. Rauch, & D. B. Gobeille, 2015. MNRAS 450, 424, *Comparing different indicators of quasar orientation*

PRESENTATIONS

M. W. McElwain, **K. J. Van Gorkom**, C. W. Bowers, T. M. Carnahan, R. A. Kimble. J. S. Knight, P. Lightsey, P. G. Maghami, D. Mustelier, & M. B. Niedner, 230th AAS. June 2017. *JWST Point Spread Function Quality and Stability: Ground Testing, Integrated Modeling, and Space Validation* (Contributed Poster)

K. J. Van Gorkom & C. Stark. High Contrast Imaging in Space Workshop, November 2016. *Quantifying Confusion in the Hunt for ExoEarths* (Contributed Talk)

K. J. Van Gorkom, L. Pueyo, C.-P. Lajoie, & the JWST Coronagraphs Working Group, 228th AAS, June 2016. *Improving JWST Coronagraphic Performance with Accurate Image Registration* (Contributed Poster)

M. D. Perrin, J. D. Long, , N. T. Zimmerman, & **K. J. Van Gorkom**. 228th AAS, June 2016. *An Update on Simulating Imaging, Spectroscopic, and Coronagraphic PSFs for JWST (and WFIRST too!)* (Contributed Poster)