CURRICULUM VITAE[1] – Evan M. Tilton

Department of Physics & Astronomy, Regis University, Denver, CO 80221
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EDUCATION

Ph.D.; Astrophysics; 2017
University of Colorado - Boulder. Boulder, CO

M.S.; Astrophysics; 2013
University of Colorado - Boulder. Boulder, CO

B.S. with Honors; Physics, Astronomy, and a minor in Anthropology; 2010
University of Florida. Gainesville, FL

EMPLOYMENT & EXPERIENCE

Regis University, Department of Physics & Astronomy, Denver, CO

Assistant Professor Aug 2019 – present
Instructor Aug 2017 – Jul 2019

Teacher of various physics and astronomy courses and labs at both the lower- and upper-division levels and researcher in observational, extragalactic astrophysics (including advising of undergraduate researchers).

University of Colorado, Boulder, CO

Center for Astrophysics & Space Astronomy, Department of Astrophysical & Planetary Sciences

Graduate Researcher Jan 2011 – May 2017
Conducted intergalactic medium and active galactic nuclei spectral research.
Instructor, ASTR1200 "Stars & Galaxies" Jul 2015 – Aug 2015
Teaching Assistant Aug 2010 – Dec 2010
Research mentor for two undergraduate students 2013 – 2015

University of Florida, Gainesville, FL

Undergraduate Research Assistant, Dept. of Astronomy Jan 2009 – Aug 2010
RR Lyrae research in a stellar populations research group headed by A. Sarajedini.
Supplemental Instructor, Teaching Center May 2009 – May 2010

KEY SKILLS

Problem Solving: Highly skilled in creative, analytical problem solving, with extensive experience applying these skills in scientific research.
Data analysis: Experience understanding and simplifying large data sets. Knowledge of advanced physics, mathematics, and statistical techniques, including modern machine learning techniques.
Technical skills: Highly proficient in Python and IDL, especially as applied to data analysis. Experience in Fortran, R, C#, and C++. Familiarity with common scientific software such as photoionization codes (e.g., CLOUDY), LaTeX, `IRAF`, and more, as well as astronomical data reduction techniques in general and in detail for many major NASA missions (e.g., *HST*, *FUSE*, *XMM-Newton*, etc.).
Adaptability: Ability to rapidly learn new technical skills.
Leadership & Communication: Experience leading scientific research projects and teaching in a university setting, as well as training in anthropology.
Writing: Extensive experience writing for publication and competitive proposals.

[1] Last updated 2021-02-01.

AWARDS & HONORS

Chance Irick Cooke Fellowship, 2016.
NASA Earth and Space Sciences Fellowship, 2014-2017. One of nine such astrophysics awards nationally in 2014.
Honorific Fellowship from the Department of Astrophysical and Planetary Sciences, CU-Boulder, 2010 & 2014
Anderson Scholar of High Distinction, 2008

DEPARTMENT & UNIVERSITY SERVICE

Regis University, 2017−present: Ad-hoc Instructor Hiring Committee 2019; Faculty Senate representative 2019−present; Student physics club advisor 2019−present.

University of Colorado, Boulder, 2010−2017: Standing Committee on Research Misconduct 2013−2017, Promoting an Inclusive Community in Astronomy member 2013−2017, Graduate Student Representative to Faculty Meetings 2015−2016, Comprehensive Exams Oversight Committee 2014−2015, Graduate Admissions Committee 2013−2014, National Solar Observatory Joint Faculty Hiring Committee 2013, Faculty Hiring Committee 2012, Graduate Concerns Committee 2010−2011.

PUBLIC OUTREACH

Volunteer for Outreach Events at Regis University, including participation in large events such as a Solar Eclipse outreach event (2017), RU-SciTech summer camp (2019), and Science Sunday (2018−2019).
Volunteer at Friday public observing sessions, CU-Boulder, Sommers-Bausch Observatory, 2010−2017.
Presenter/volunteer at Astronomy Day, CU-Boulder, Sommers-Bausch Observatory, 2016.
Volunteer at Friday public observing sessions, University of Florida, Department of Astronomy, Campus Teaching Observatory, 2007−2010.
Astronomy outreach in Gainesville, FL, including volunteer work with Santa Fe College's Lunar Festival, University of Florida's Student Training in Astronomy Research Skills program, and University of Florida's Starry Night, 2007−2010.

PUBLICATIONS

The Low-redshift Intergalactic Medium as Seen in Archival Legacy *HST*/STIS and *FUSE* Data.
Evan M. Tilton, Charles W. Danforth, J. Michael Shull, & Teresa L. Ross. 2012, The Astrophysical Journal, 759, 112.

Ultraviolet Emission-Line Correlations in Hubble/COS Spectra of Active Galactic Nuclei: Single-Epoch Black Hole Masses.
Evan M. Tilton & J. Michael Shull. 2013, The Astrophysical Journal, 774, 67.

***HST*-COS Observations of AGNs. II. Extended Survey of Ultraviolet Composite Spectra from 159 Active Galactic Nuclei.**
Matthew L. Stevans, Charles W. Danforth, J. Michael Shull, & *Evan M. Tilton.* 2014, The Astrophysical Journal, 774, 75.

Tracing the Cosmic Metal Evolution in the Low-redshift Intergalactic Medium.
J. Michael Shull, Charles W. Danforth, & *Evan M. Tilton.* 2014, The Astrophysical Journal, 796, 49.

The Metagalactic Ionizing Background: A Crisis in UV Photon Production or Incorrect Galaxy Escape Fractions?
J. Michael Shull, Joshua Moloney, Charles W. Danforth, & *Evan M. Tilton.* 2015, The Astrophysical Journal, 811, 3.

***HST*-COS Observations of AGNs. III. Spectral Constraints in the Lyman Continuum from Composite COS/G140L Data**.
Evan M. Tilton, Matthew L. Stevans, J. Michael Shull, & Charles W. Danforth. 2016, The Astrophysical Journal, 817, 56.

An *HST*/COS Survey of the Low-redshift Intergalactic Medium. I. Survey, Methodology, and Overall Results.
Charles W. Danforth, Brian A. Keeney, *Evan M. Tilton*, et al. 2016, The Astrophysical Journal, 817, 111.

A Possible *Chandra* and *Hubble Space Telescope* Detection of Extragalactic WHIM towards PG 1116+215.
Massimiliano Bonamente, Jukka Nevalainen, *Evan M. Tilton*, et al. 2016, Monthly Notices of the Royal Astronomical Society, 457, 4236.

Characterization of the warm-hot intergalactic medium near the Coma cluster through high-resolution spectroscopy of X Comae.
Massimiliano Bonamente, J. Ahoranta, *Evan M. Tilton*, et al. 2017, Monthly Notices of the Royal Astronomical Society, 469, 3984.

An Ultraviolet Survey of Low-Redshift Partial Lyman-Limit Systems with the HST Cosmic Origins Spectrograph
J. Michael Shull, Charles W. Danforth, *Evan M. Tilton*, Joshua Moloney, & Matthew L. Stevans. 2017, The Astrophysical Journal, 849, 106.

To be or not to be: hot WHIM absorption in the blazar PKS 2155-304 sight line?
J. Nevalainen, E. Tempel, J. Ahoranta, L. J. Liivamagi, M. Bonamente, *E. Tilton*, J. Kaastra, T. Fang, P. Heinamaki, E. Saar, & A. Finoguenov, A. 2019, Astronomy & Astrophysics, 621, A88

Hot WHIM counterparts of FUV OVI absorbers: The evidence in the line-of-sight towards quasar 3C 273
Jussi Ahoranta, Jukka Nevalainen, Natasha Wijers, Alexis Finoguenov, Massimiliano Bonamente, Elmo Tempel, *Evan M. Tilton*, Joop Schaye, Jelle Kaastra, & Ghassem Gozaliasl. 2020, Astronomy & Astrophysics, 634, A106.

CONFERENCES

The Low-Redshift Intergalactic Medium as Seen in Legacy Hubble/STIS and FUSE Data, Poster, UV Astronomy: HST and Beyond, Kaua'i, Hawai'i, 2012

Variable Star Period Determination for Datasets with Sparse Time Sampling, Poster, AAS Winter Meeting, Washington D.C., 2010