

Wenlong Yuan

Department of Physics & Astronomy
Johns Hopkins University
Baltimore, MD 21218

☎ (xxx) xxx-xxxx
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EDUCATION & POSITIONS

Postdoc Fellow**2017 – present**

Department of Physics and Astronomy, Johns Hopkins University
Supervisor: Adam Riess

Ph.D., Physics**2012 – 2017**

Department of Physics and Astronomy, Texas A&M University
Advisor: Lucas Macri

B.S., Physics**2008 – 2012**

School of Physics, Shandong University

RESEARCH INTERESTS KEYWORDS

Observational Cosmology: Hubble Constant, Extragalactic Distance Scale

Variable Stars: Time-series Surveys, Classical Cepheids, Long-period Variables

Distance Calibration: Period–Luminosity Relations, Parallax, Tip of the Red Giant Branch

SCIENTIFIC AND TECHNICAL SKILLS

Photometry: Multi-year experience in *HST* image reduction, PSF photometry & calibration

Methods: Skilled in linear algebra & machine learning algorithm for astronomical dataset

Programming: Proficient in Python and R

Computing: Capable of handling large scale computation with SLURM-based supercomputer

SERVICES AND PUBLIC OUTREACH

Johns Hopkins University Astrocoffee journal club co-organizer

2017 – 2019

Texas A&M Public Star Parties

Spring 2013, 2016

Texas A&M Physics and Astronomy Festival

April 2013 – 2016

RESEARCH PROJECTS AS INVESTIGATOR

1. PI: Refining the Mira Distance Scale and Hubble Constant for the Era of JWST and WFIRST (HST-GO-16250)
2. Co-I: A Mira Distance to M101: Towards a Sub-3% Measurement of the Hubble Constant with Miras (HST-AR-16132)
3. Co-I: From Masers to Coma, A Single Step Measurement of the Hubble Constant and a Reservoir of New SNe Ia (HST-GO-16198)
4. Co-I: Tension at the Breaking Point: Uncovering New Physics Through a Two-Rung Distance Ladder Measurement of the Hubble Constant (HST-GO-16269)
5. Co-I: The Hubble Constant to 1%: Physics beyond Λ CDM (HST-GO-15145)
6. Co-I: A New Threshold of Precision, 30 μ as Parallaxes and Beyond (HST-GO-15146)
7. Co-I: The Search for New Physics Amid the Hubble Constant Tension (HST-GO-15640)
8. Co-I: A Measurement of the Gaia Offset to Build a Superior Distance Ladder and Resolve the Origin of the Hubble Tension (HST-SNAP-15879)
9. Co-I: Towards a 2% Measurement of H_0 : Near-infrared Light Curves of Galactic Cepheids (NOAO 2014A-0410, 2015A-0150)

TALKS AND POSTERS

1. **Poster**@ UCSB KITP: Tensions Between the Early and the Late Universe, 07/2019
The Calibration of the Tip of the Red Giant Branch in the Large Magellanic Cloud on the Hubble Space Telescope Photometric System
2. **Talk**@ Johns Hopkins University Wine and Cheese Seminar, 04/2018
Period-Luminosity Relations of Mira Variables and Their Application to the Extragalactic Distance Scale
3. **Dissertation Talk**@ AAS Meeting #229, 01/2017
A Search for Miras in M33 Using Sparsely-Sampled Time Series Photometry
4. **Poster**@ AAS Meeting #229, 01/2017
Mira Period-Luminosity Relations at Near-Infrared
5. **Poster**@ SAMSI ASTRO Workshop, 08/2016
Mira Identification in M33 with Sparse Time Series

6. **Talk@** Indo-US Variable Star Workshop, 06/2015
A Search for Miras in M33
7. **Poster@** Joint Meeting of the Texas Section of the APS, 10/2014
Mega-SH0ES: Near Infrared Cepheid P-L Relation from Milky Way to M101
8. **Talk@** MIAPP Extragalactic Distance Scale Workshop, 06/2014
The Cepheid P-L Relation at Near-Infrared Wavelengths: M101 and the Milky Way
9. **Poster@** AAS Meeting #223, 01/2014
Mega-SH0ES: A Cepheid Distance to M101 Based on WFC3 H-band Photometry

Published Journal Articles

ADS link: https://ui.adsabs.harvard.edu/public-libraries/QBFJLG0pS_qQcUjTkrx14w

FIRST-AUTHOR PAPERS (CITED: ~100)

1. The Cepheid Distance to the Seyfert 1 Galaxy NGC 4151
W. Yuan, M. Fausnaugh, S. Hoffmann, L. Macri, B. Peterson, A. Riess *and 5 more*
eprint arXiv:2007.07888 (2020); Submitted
2. Consistent Calibration of the Tip of the Red Giant Branch in the Large Magellanic Cloud on the Hubble Space Telescope Photometric System and a Re-determination of the Hubble Constant
W. Yuan, A. Riess, L. Macri, S. Casertano & D. Scolnic
The Astrophysical Journal (2019)
3. Near-infrared Mira Period–Luminosity Relations in M33
W. Yuan, L. Macri, A. Javadi, Z. Lin, J. Huang
The Astronomical Journal (2018)
4. Large Magellanic Cloud Near-infrared Synoptic Survey. V. Period–Luminosity Relations of Miras
W. Yuan, L. Macri, S. He, J. Huang, S. Kanbur & C. Ngeow
The Astronomical Journal (2017)
5. The M33 Synoptic Stellar Survey. II. Mira Variables
W. Yuan, S. He, L. Macri, J. Long & J. Huang
The Astronomical Journal (2017)

CONTRIBUTED PAPERS (CITED: ~2000)
