

S. Tony Sohn, Ph.D.

Principal Staff Scientist · Space Telescope Science Institute (STScI)

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EDUCATION

Ph.D. in Astronomy

University of Virginia

May 2004

Charlottesville, VA

- Thesis: *Multi-color Studies of Old Stellar Populations* (Advisors: R.W. O'Connell & S.R. Majewski)

M.S. in Astronomy

University of Virginia

Jan 2002

Charlottesville, VA

- Thesis: *Investigation of Tidal Tails in the dSph Galaxy Leo I* (Advisor: S.R. Majewski)

B.S. in Astronomy

Yonsei University

Mar 1998

Seoul, Korea

PROFESSIONAL EXPERIENCE

Principal Staff Scientist

Space Telescope Science Institute (STScI)

Jan 2021 – Present

Baltimore, MD

- Focal plane lead for James Webb Space Telescope (JWST).
- Telescope pointing characterization & performance improvement for JWST & Roman.
- HST PI for multiple programs measuring proper motions of M31, M32, M33, and satellites.
- HST/JWST Co-PI and Co-I for programs constraining mass/assembly of the Milky Way.

STScI Scientist

STScI

Sep 2016 – Dec 2020

Baltimore, MD

- STIS Pipeline Lead, Calibrations, User Support, STIS Data Handbook; ULLYSES Implementation Team.

Associate Research Scientist

Johns Hopkins University

Aug 2014 – Sep 2016

Baltimore, MD

- HST PI and Co-I for programs improving understanding of Milky Way structure, evolution, and mass.

Postdoctoral Research Associate

STScI

Aug 2009 – Aug 2014

Baltimore, MD

- Conducted the first proper motion measurements of M31 and Leo I.
- Precision astrometry using multi-epoch HST imaging data.

Visiting Scientist in Space Astrophysics

Caltech

Sep 2006 – Jul 2009

Pasadena, CA

- GALEX user support and research on UV properties of extragalactic star clusters.

Research Scientist / Professor

Yonsei University

May 2006 – Jul 2009

Seoul, Korea

Postdoctoral Research Associate

Korea Astronomy & Space Science Inst.

Jun 2004 – Apr 2006

Daejeon, Korea

SELECTED TALKS

The Optical and Pointing Performance of JWST

The Scientific Landscape for Extremely Large Telescopes in Light of JWST

Jun 2024

Sendai, Japan

Proper Motions of M31 Satellite Galaxies

IAU Symposium 379: Dynamical Masses of Local Group Galaxies

Mar 2023

Potsdam, Germany

Dynamical Histories of Dwarf Elliptical Galaxies NGC 147 & 185

Small Galaxies, Cosmic Questions

Aug 2019

Durham, UK

TELESCOPE TIME AWARDED (SELECTED)

HST Cycle 33

- GO-18068: *Dynamically Mapping the Satellite Galaxies in the Milky Way Halo (Co-PI)*
- GO-18032: *The Mysterious Death of a Lonely Dwarf: Who Quenched Cetus? (Co-I)*
- GO-18029: *Proper Motions of the M31 Satellites: 6D puzzle pieces (Co-PI)*
- GO-17926: *Enabling cross instrument proper motions with Draco dSph and NGC 2419 (Co-I)*
- GO-17925: *20 Years of time baseline, The 3D kinematics of Centaurus A (Co-I)*

HST Cycle 31

- GO-17513: *Proper Motions of Galaxies in the M81 Group (Co-PI)*
- GO-17501: *Lone Lion or Part of a Pride: Proper Motions/Orbit of Leo P (Co-PI)*
- GO-17434: *Shedding Light on Dark Matter: Internal PMs in Ursa Minor (Co-PI)*

HST Cycle 30

- GO-17174: *New Kids on the Block? Proper Motions of First Infall Galaxies (Co-I)*

HST Cycle 29

- GO-16737: *Internal Proper Motion Kinematics of Dwarf Spheroidal Galaxies (PI)*
- AR-16625: *Combining HST and Gaia to Measure PMs of Distant Halo Stars (Co-I)*

HST Cycle 28

- GO-16274: *Resolved Proper Motions of M33 (PI)*
- GO-16273: *Andromeda and the Seven Dwarfs (PI)*
- GO-16298: *Enhancing the Astrometric Legacy of HST for Globular Clusters (Co-I)*
- GO-16293: *Near-field Cosmology with Ultra-faint Dwarfs (Co-I)*

HST Cycle 27

- GO-15930: *Cold Dark Matter and the GD-1 Stellar Stream (Co-I)*
- GO-15911: *Orbits of Isolated Dwarfs: Local Group Mass & Quenching (Co-I)*
- GO-15902: *Tracing 6-D Orbital/Formation History of M31 Satellite System (Co-I)*

HST Cycle 26

- GO-15658: *Resolved Proper Motions of M31 and M31-M32 Interaction (PI)*
- AR-15633: *Combining HST and Gaia to Derive Precise Proper Motions of Resolved Stellar Populations (Co-PI)*

HST Cycle 24

- GO-14770: *Proper Motions of the Crater-Leo Group: Testing the Group Infall Scenario (PI)*
- GO-14769: *Proper Motions of Two Local Prototype Dwarf Elliptical Galaxies NGC 147 and 185 (PI)*
- GO-14734: *Milky Way Cosmology: Laying the Foundation for Full 6-D Dynamical Mapping of the Nearby Universe (Co-I)*