

GAGANDEEP S. ANAND

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EDUCATION

Institute for Astronomy, University of Hawaii PhD in Astronomy Thesis: Tip of the Red Giant Branch Distances to Nearby Galaxies Advisor: Professor R. Brent Tully	<i>Expected- 2021</i>
Institute for Astronomy, University of Hawaii M.S. in Astronomy	<i>December 2018</i>
Boston University M.A. in Astronomy	<i>May 2017</i>
Vassar College A.B. in Astronomy & Physics, Minor in Mathematics	<i>May 2015</i>

RESEARCH POSITIONS

Graduate Research Assistant, University of Hawaii	Aug. 2017 – Present
Visiting Graduate Research Fellow, IPAC/Caltech	Feb. 2020 – July 2020
Visiting Scholar, W.M. Keck Observatory	July 2017 – Aug. 2017
Graduate Researcher, Boston University	July 2015 – May 2017
Summer Researcher, Colby College	May 2014 – Aug. 2014
Observatory Assistant, Vassar College	Sept. 2011 - May 2015

HONORS/AWARDS

George and Mona Elmore Award for Research in Astronomy	ARCS Foundation, 2020
IPAC/Caltech Visting Graduate Fellowship	IPAC/Caltech, 2020
Keck Visiting Scholar	Keck Observatory, 2017
Departmental Honors in Astronomy	Vassar College, 2015
Internship Grant Award	Vassar College, 2014
Vera Rubin Fund for Students in Physics & Astronomy	Vassar College, 2014

COMPUTATIONAL SKILLS

Operating Systems	Windows, MacOS/OS X, UNIX/Linux
Computer Languages	IDL, L ^A T _E X, Python
Astronomical Software	CIAO, DOLPHOT, DrizzlePac, DS9, GALFIT, IRAF, XSPEC
Miscellaneous Software/Tools	Git, Lightroom, Photoshop

PUBLICATION SUMMARY

[NASA/ADS Link to All Publications](#)

10 Refereed Publications (4 as first author)

4 Papers Under Review (1 as first author)

70+ Citations (45+ as first author)

MEDIA COVERAGE

Cosmic Cinnamon Bun	ESA/Hubble, To Appear
Hubble Catches a Cosmic Cascade	NASA/Hubble, 2020
A Waterfall of Stars	ESA/Hubble, 2020
ARCS Scholar Awards	University of Hawaii, 2020
Hubble Views a Galaxy on the ‘Dark Side’	NASA/Hubble, 2020
Dark Matter Surplus	ESA/Hubble, 2020
Galaxy Clusters Offer Clues to Dark Matter and Dark Energy	Boston University, 2017

PROFESSIONAL MEMBERSHIPS

American Astronomical Society	Junior Member, September 2016–Present
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PROFESSIONAL SERVICE

Referee	Astrophysical Journal (2+ papers), July 2018–Present
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TEACHING EXPERIENCE

Department of Astronomy	Sept. 2015 –May 2017
<i>Teaching Fellow</i>	<i>Boston University</i>

- Astronomy 203- Principles of Astronomy II (Spring 2017)
- Astronomy 109- Cosmology (Fall 2015/Fall 2016)
- Astronomy 105- Alien Worlds (Spring 2016)

Department of Physics & Astronomy	Sept. 2014 –May 2015
<i>Astronomy Academic Intern</i>	<i>Vassar College</i>

- Astronomy 105- Stars, Galaxies, & Cosmology (Spring 2015)
- Astronomy 101- Solar System Astronomy (Fall 2014)

FIRST AUTHOR PUBLICATIONS

The Extragalactic Distance Database: Color-Magnitude Diagrams and Tip of the Red Giant Branch Distances

Anand, G. S., Rizzi, L., Tully, R. B., et al. *In Preparation for AJ*

Abell 623: Home to a Merger Induced Wide-Angle Tail Radio Source?

Anand, G. S., Blanton, E. L., et al., *In Preparation for ApJ*

Distances to PHANGS Galaxies: New Tip of the Red Giant Branch Measurements and Adopted Distances

Anand, G. S., Lee, J., Van Dyk, S., et al. *Submitted to MNRAS*

Peculiar Velocities of Galaxies Just Beyond the Local Group

Anand, G. S., Tully, R. B., Rizzi, L., Shaya, E., & Karachentsev, I. D., 2019, [ApJ](#)

The Distance and Motion of the Maffei Group

Anand, G. S., Tully, R. B., Rizzi, L., & Karachentsev, I. D., 2019, [ApJL](#)

A Robust Tip of the Red Giant Branch Distance to the Fireworks Galaxy (NGC 6946)

Anand, G. S., Rizzi, L., & Tully, R. B., 2018, [AJ](#)

The Distance to the Galaxy Coma P

Anand, G. S., Tully, R. B., Karachentsev, I. D., Makarov, D. I., Makarova, L.; Rizzi, L.; Shaya, E. J., 2018, [ApJL](#)

CO-AUTHOR PUBLICATIONS

PHANGS-ALMA Data Processing and Pipeline

Leroy, A., Hughes, A., Liu, D., [16 authors], **Anand, G. S.**, [47 authors], *Submitted to ApJ*

The Electron-capture Origin of Supernova 2018zd

Hiramatsu, D., Howell, D. A., Van Dyk, S. D., [19 authors], **Anand, G. S.**, [7 authors], [Submitted to Nature](#)

SN2019yvq Does Not Conform to SN Ia Explosion Models

Tucker, M. A., Ashall, C., Shappee, B. J., Vallely, P. J., Kochanek, C. S., Huber, M. E., **Anand, G. S.**, Keane, J. V., Hsiao, E. Y., Holoien, T. W. S., [Submitted to ApJ](#)

The Properties of Dwarf Spheroidal Galaxies in the Cen A Group: Stellar Populations, Internal Dynamics, and a Heart-Shaped H α Ring?

Müller, O., Fahrion, K., Rejkuba, M., Hilker, M., Lelli, F., Lutz, K., Pawlowski, M. S., Coccato, L., **Anand, G. S.**, & Jerjen, H., [A&A](#)

Distance and Mass of the M104 (Sombrero) Group

Karachentsev, I. D., Makarova, L. N., Tully, R. B.; **Anand, G. S.**; Rizzi, L., Shaya, E. J., 2020, [A&A](#)

KKH 22, The First Dwarf Spheroidal Satellite of IC 342

Karachentsev, I. D., Makarova, L. N., Tully, R. B.; **Anand, G. S.**; Rizzi, L., Shaya, E. J., Afanasiev, V. L., 2020, [A&A](#)

Cosmicflows-4: The Calibration of Optical and Infrared Tully-Fisher Relations

Kourkchi, E.; Tully, R. B., **Anand, G. S.**, Courtois, H. M., Dupuy, A., Neill, J. D., Rizzi, L., Seibert, M., 2020, [ApJ](#)

Does Gravity Fall Down? Evidence for Gravitational-wave Deflection along the Line of Sight to GW170817

Rubin, D., Szapudi, I., Shappee, B. J., **Anand, G. S.**, 2020, [ApJL](#)

The High-Redshift Clusters Occupied by Bent Radio AGN (COBRA) Survey

Paterno-Mahler, R., Blanton, E. L., Ashby, M. L. N., Brodwin, M., Wing, J. D., Decker, B., Golden-Marx, E., & **Anand, G. S.**, 2017, [ApJ](#)

TALKS

PHANGS-HST: New Tip of the Red Giant Branch Distances

IPAC Colloquium- July 2020

Tip of the Red Giant Branch Distances to Nearby Galaxies

Caltech Tea Talk- June 2020

Visiting Scholars Talk, W.M. Keck Observatory- August 2017

Peculiar Velocities of Galaxies Just Beyond the Local Group

Constrained Local Universe Simulations 2019 Meeting, University of Lyon- September 2019

Exploring the Structural Evolution of Massive Quiescent Galaxies

Keck Northeast Astronomy Consortium- November 2014

Colby Undergraduate Summer Research Retreat- July 2014

Observations and Analysis of Orbital Period Changes in Contact Binaries

Keck Northeast Astronomy Consortium- October 2013

CONFERENCE POSTERS

PHANGS-HST: New Tip of the Red Giant Branch Distances

236th Meeting of the American Astronomical Society- June 2020

The Extragalactic Distance Database: Color-Magnitude Diagrams and Tip of the Red Giant Branch Distances

235th Meeting of the American Astronomical Society- January 2020

Tip of the Red Giant Branch Distances to Nearby Galaxies

Stars: Birth and Death, GMT Community Science Meeting- September 2018

The 21st Century HR Diagram, Space Telescope Science Institute- April 2018

Chandra Observation of the WAT Radio Source/ICM Interaction in Abell 623

229th Meeting of the American Astronomical Society- January 2017

Chandra Science for the Next Decade, Harvard-Smithsonian Center for Astrophysics- August 2016

Observations and Analysis of Orbital Period Changes in Contact Binaries

Vassar Undergraduate Research Summer Institute- July 2013