

EIGHT FUNDED* RESEARCH POSITIONS - 2019

<http://www.saa0.ac.za/~matthew/>



SAAO
South African
Astronomical Observatory

ASTRO-OBSERVATION projects

Bursary / Honors Position-2:

Funding Period: 2019

Funding Amount: NASSP

Requirement: Pursuing an undergraduate degree (BSc) in astronomy, astrophysics, or physics.

Closing Date: 22 February 2019

key words: *galaxy structure and evolution; edge-on galaxies; Milky Way counterparts*

Description: We seek applicants to undertake a Honors project to identify edge-on galaxies from optical images of radio (HI) deep-fields observed with the eVLA and MeerKAT. These galaxies will be matched with similar edge-on galaxies in Sloan Digital Sky Survey-IV / MaNGA survey using an interactive web interface to find Milky-Way like counterparts. The outcome of the project will be a publishable catalog of targets suitable for future stacking of HI data-cubes and analysis of the structure and evolution of galaxy disks.

Students wishing to extend their program during their Honors bursary or build on their work the following year in a Masters project can use this sample to estimate the thickness of galaxy disks and how this thickness evolves with cosmic time. Students who wish to go on to do a Masters project and possibly a Ph.D. program may apply in following years to build from this program to stack radio data-cubes to estimate neutral-hydrogen and dynamical masses.

The student will work with Prof M Bershady (SAAO SARCHI), his research team of observers and instrumentalists, and collaborators around the world.

Requirements: Applicants need to be pursuing an undergraduate degree (BSc) in astronomy, astrophysics, or physics. In exceptional cases 3rd year students will be considered.

Application: A statement of interest, curriculum vitae, and name of a professional reference (e.g., current or former instructor) should be sent to mab@saa0.ac.za (Matthew Bershady).

***Professor Bershady** is a South African Research Chair (SARCHI) located at SAAO, and cross-appointed at the University of Cape Town and the University of Wisconsin-Madison. **Inquiries and applications should be sent to mab@saa0.ac.za.**