

1. Project level: Honours
2. Primary supervisor: Dr Kenda Knowles
3. Institution: Rhodes University
4. Co-supervisor: N/A
5. Institution: N/A
6. Contact details: [kendaknowles.astro@gmail.com](mailto:kendaknowles.astro@gmail.com) / [k.knowles@ru.ac.za](mailto:k.knowles@ru.ac.za)
7. Project title: Studying anomalous radio emission in MERGHERS images
8. Project description:

Diffuse radio emission seen in radio survey data can have a variety of origins, for example it could be related to the intracluster medium of a galaxy cluster, old radio jet emission from an active galaxy, or perhaps probing the disk of a spiral galaxy. The MeerKAT Exploration of Relics, Giant Halos, and Extragalactic Radio Sources (MERGHERS) survey (Knowles et al. 2016, 2021) currently contains observations of ~50 square degrees (non-contiguous) of the Southern sky, revealing many different types of sources. In this project, a student will study the observational properties of two large regions of diffuse radio emission, shown below, found in processed images from the tier one MERGHERS survey, and attempt to identify their origin. Familiarity with Python is required.

