



The 1.28 GHz SARAO MeerKAT Galactic Plane Survey

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MeerKAT is an interferometer consisting of 64 antennas, 13.5 m in diameter each, distributed in a 8 km wide region in the Karoo Desert, Northern Cape, South Africa. Inaugurated in July 2018 and managed by the South African Radio Astronomy Observatory (SARAO), MeerKAT is, at the moment, the most sensitive interferometer operating in the southern hemisphere. Observing time on MeerKAT is open to the international community and is being allocated to both large survey and smaller PI driven proposals. There are also 3 SARAO Legacy Surveys, managed by SARAO-led Consortiums. One of them is the SARAO MeerKAT Galactic Plane Survey (SMGPS, [1]), that surveyed, with a mosaic pointing scheme that achieves 1 hour integration time per pointing, a thin strip of the Southern Galactic Plane (4th quadrant, and also portions of the 3rd and 1st: $248^\circ < l < 61^\circ$, $|b| < 1.5^\circ$).

The unique characteristics of MeerKAT of unprecedented sensitivity, due to the large number of antennas, and the design of the array, with a compact core that allows to reveal extended sources with low brightness, has allowed to capture details of Galactic radio sources never seen before. The survey overview and highlights paper, along with the first data release on the SARAO repository, is underway. In this talk information about the project and on its status will be provided. Some of the science highlights from the survey to illustrate the data quality, scientific results and the different source populations discovered in MGPS, will also be presented.

References

[1] Goedhart S. et al., submitted, <https://arxiv.org/abs/2312.07275>