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Multi-wavelength study of large-scale outflows from the Circinus galaxy

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The Circinus galaxy is a composite starburst/Seyfert galaxy which features 3 kpc scale radio lobe outflows along its minor axis. It is located 4 Mpc away, which makes it a unique target to study the physical nature of these outflows. Our task will be to investigate whether they originate from star formation or jets that resulted from an active galactic core. The MeerKAT array can perform 20 arcsecond resolution radio observations, which is in the observed range of the arcminute lobes of the Circinus galaxy. In this work, a multiwavelength analysis of the radio lobe structures will be conducted using MeerKAT and Fermi-LAT data, which will aid in the understanding of the origin of these structures. The results can then be compared to the star-formation driven Fermi bubbles in the Milky Way, which have also been observed in both the gamma-ray and the radio bands to determine any possible connections to these structures.

Apply to be
 considered for a student
   award (Yes / No)?

Yes

Level for award
 (Hons, MSc,
   PhD, N/A)?

MSc

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