

MeerKAT open time call 3 December - Proposal summary

Radio galaxies: probing the relationship between FRI/II morphological classifications and accretion modes	
Proposal number	8
	Thu Jan 31 2019 02:10:07 GMT+0200 (SAST)
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Abstract:

Significant progress has been made in our understanding of radio galaxies in the last decade; there is a picture emerging of two distinct classes of radio galaxy (HERGs and LERGs) which accrete in separate modes and are hosted by galaxies with different properties. However, it is still unclear how these two AGN classes relate to the Fanaroff and Riley (FR) morphological classes of radio galaxy. Additionally, recent work by Whittam et al. (2018) suggests that the dichotomy in accretion rates between the two classes may not be as clear cut as previously thought, suggesting that our current understanding does not tell the full story.

The primary aim of this proposal is to investigate the relationship between the HERG and LERG classes and the FRI/II morphological classes of radio galaxy. Additionally, this proposal will enable us to constrain the influence of environment on these classifications, as well as provide insights about the different feedback effects they have on the host galaxy.

We propose 15 minute snapshot observations of 48 extended radio galaxies selected from the Heywood et al. (2016) JVLA survey of Stripe 82, requiring a total of 16 hours. These sources are a mixture of HERGs and LERGs and display a range of radio morphologies. These observations, together with the multi-wavelength data available, will allow us to separate the factors responsible for the different radio jet morphologies from those driving the accretion modes.

Observation parameters:

Targets	See attached source list.		
Total time	16 in 1 epochs	Dump rate	8 s
Daytime	Nighttime preferred	Variable/Transient	No
Baselines	n/a		

List of files uploaded. Files in order of upload. Usually just revising their proposal, so click the last one, but some people attached several different files, so they may all be useful.

<https://drive.google.com/open?id=1YIOVr6RNPrEzPuXRtoDH8I0T2jCWnUkc>,

<https://drive.google.com/open?id=1eDfqyx-SsoTRH8gL9Nmhf6a7Fvkfopzn> .

File comments:

The target names and positions are included in the attached file "Whittam_source_list.pdf". Night-time observations are preferable but probably not critical as long as the sun is not very close to the field(s).