MeerKAT open time call 3 December - Proposal summary

A new look at old devils: imaging classical radio galaxies with MeerKAT and uGMRT	
Proposal number 48	Tue Feb 05 2019 06:21:35 GMT+0200 (SAST)
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Abstract:
The aim of our study is to revisit the FRI and FRII classification of radio galaxies using the much improved capabilities of the current generation of interferometers, in particular MeerKAT and the uGMRT. Does the ”simple” FRI / FRII classification of morphology continue to hold in the era of arrays with very high dynamic range? Does very low brightness emission beyond the known boundaries of radio galaxies exist, which have so far escaped a clear association with the radio galaxy itself? Is it possible that the dominant FRI / FRII classification holds for the current cycle of activity, but low-brightness emission has been blown by winds or buoyancy into more complex (and so far missed) shapes? We plan to address these goals with two parallel proposals, which are being submitted as two separate observing proposals to the MeerKAT and uGMRT TACs.
For our study we carefully selected a sample of 12 radio galaxies belonging to the FRI and FRII morphological types. With the present proposal we ask for 16 hours of MeerKAT time to observe a first set of 4 radio galaxies, 2 FRI and 2 FRII

Observation parameters:

Targets	CGCG021-063 RA 15 16 40.2; DEC +00 15 02; CGCG044-046 RA 13 16 17.0; DEC +07 02 47; 4C12.02 RA 00 04 50.2; DEC +12 48 40; 4C12.03 RA 00 09 52.6; DEC +12 44 05			
Total time	16 in 2 epochs		**Dump rate**	8 s
Daytime	Nighttime preferred	**Variable/Transient**	No	
Baselines	No more than one outer ring antenna excluded from the array.			

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=1dFmRisfi1DFEqvs6T0O9y_yJS79EuIlm .

File comments:
The proposal is intended to test the technical capabilities of the telescope, including the use of novel algorithms, while at the same time asking whether the new generation of high-sensitivity, high DR telescopes changes our understanding of the nature of the jets and lobes in radio galaxies. The astrophysics of jets and lobes is a key to understanding galaxy evolution.