MeerKAT open time call 3 December - Proposal summary

The MeerKAT view of the Shapley Concentration	
Proposal number 4	Wed Jan 30 2019 11:53:25 GMT+0200 (SAST)
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Abstract:
The goal of this proposal is to study the radio signatures of cluster minor mergers. To this aim, we have chosen the Shapley Concentration, the largest supercluster in the Southern Hemisphere, which encompasses clusters and groups of galaxies of intermediate to low masses in different evolutionary stages, i.e. mergers, pre-mergers, relaxed systems.

The current paradigm of the signatures of cluster mergers on the diffuse cluster scale radio emission and on the radio properties of galaxies is mainly based on massive clusters and minor mergers, while the role of the more gentle, but much more common, minor mergers and group accretion is still unexplored. With the proposed study we will fill this gap in our knowledge. Our main goals are the imaging of the diffuse cluster radio sources in the region
between A3558 and A3562, which are just above the sensitivity level of our observations with other interferometers, and improve the faint end of the radio luminosity function of galaxies by two orders of magnitude, to study the role of minor mergers on the radio galaxy evolution.

The Shapley Concentration is also one of the best candidates to detect radio emission from the cosmic web, and this is one of the main goals of this proposal.

We ask to cover this region with 5 pointings, divided into two separate blocks of 8 hours each, for a total of 16 hours.

Observation parameters:

Targets	A3558 (13h28m -31d42m), A3528 (12h55m -29d40m)			
Total time	16 in 1 epochs		**Dump rate**	8 s
Daytime	Nighttime preferred	**Variable/Transient**	No	
Baselines	No more than one of the nine 'outer ring' antennas may be excluded			

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=1uNHb8XISLMXKev5MqCdVJvJan0AOQOqs .

File comments: