

# MeerKAT open time call 3 December - Proposal summary

Non-thermal emission from classical novae	
<b>Proposal number</b> 32	Thu Jan 31 2019 11:21:56 GMT+0200 (SAST)
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## Abstract:

Recent observations have shown that non-thermal emission (gamma-rays detections and radio synchrotron emission) is common in classical novae - a discovery that came as a surprise given the relatively low ejecta velocities (ranging from a few hundred to a 'few' thousand km/s) and low circumstellar densities of nova explosions. Experience has shown that non-thermal emission is easily detected at early times after optical outburst and at lower frequencies (< 2 GHz). One of the mechanism producing the emission is thought to be shocks internal to the ejecta or with external circumstellar material, although this is not well understood. Studies have shown that at least two gamma-ray novae are detected every year since 2012. Monitoring of these systems at lower radio frequencies, where we expect excess non-thermal emission to be dominant, is rare. The MeerKAT observing frequency range and sensitivity makes it an ideal instrument to observe Fermi-detected novae in an effort to trace and understand shock interactions in these systems.

## Observation parameters:

<b>Targets</b>	Gamma-ray detected nova, co-ordinates to be provided after Fermi/LAT telescope detection. We are looking to study one target for this proposal.		
<b>Total time</b>	16 in 18 epochs	<b>Dump rate</b>	8 s
<b>Daytime</b>	Nighttime required	<b>Variable/Transient</b>	Variable or Transient
<b>Baselines</b>	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=1V3QWj\\_6gTPH9uloyUCuyUQ9t41NFUI2f](https://drive.google.com/open?id=1V3QWj_6gTPH9uloyUCuyUQ9t41NFUI2f) .

## File comments:

This is the correct version of the MeerKAT open time proposal. (Version 2)