

Monitoring an active long-period radio transient

Abstract

New long-period radio transients have recently been detected, and their existence challenges previous understanding of pulsar and magnetar emission mechanisms. A monitoring campaign with the Murchison Widefield Array has detected a new long-period radio transient with a repeating timescale of ~ 21 minutes. Follow-up with MeerKAT and other telescopes has illuminated its broadband spectral and polarisation behaviour, and enabled precise timing measurements. Here, we request continuous monitoring of this source with MeerKAT to better unravel its dynamic spectrum at high time resolution, to examine the complex polarisation behaviour that may better determine how these long-period objects produce radio emission.