

Technical Page

Proposal Type: Long-term
 General Category: Pulsars
 Sub-Category: Continuum
 Observation Category: Galactic
 Total Time Requested: 190 Hours

Proposal Title: Timing the PSR J1741+1354 binary system

ABSTRACT:

Using the Arecibo telescope we have recently determined the timing solution of PSRJ1741+1351, a 3.74-ms pulsar in a 16-day binary system discovered three years ago with the Parkes telescope. The timing has yielded intriguing results: the detection of the Shapiro delay and what could be by far the largest pulsar mass ever detected. If confirmed with further observations and the use of coherent dedispersion, this result could revolutionize our understanding of matter at supra-nuclear densities. We also emphasize the extraordinary timing precision already achieved, which, when improved with the use of coherent dedispersion, might make this the most precisely timed pulsar ever.

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Service Observing Request

- None
- All of the observing run.
- Part of the observing run.
- Queue Observing

Remote Observing Request

- No
- Maybe
- Yes

Instrument Setup

430 G L-wide S-low

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

426-434
1120-1220
1395-1495
2700-3100