

## Technical Page

Proposal Type: Regular  
 General Category: Pulsars  
 Observation Category: Galactic  
 Total Time Requested: 18 Hours  
 Minimum Useful Time: 30 min

**Proposal Title:** Phase-coherent timing of an LMXB-MSP transition object

**ABSTRACT:**

The bright, nearby, eclipsing millisecond pulsar J1023 appears to have had an accretion disk as recently as 2001, making it an important “missing link” in the evolution of low-mass X-ray binaries into radio millisecond pulsars. Phase-coherent timing promises to elucidate the dynamics and the energetics of this system, and ongoing VLBI parallax observations promise to produce, among other results, a neutron-star mass measurement. We request L- or C-band observations every three weeks for a year to extend our timing baseline and to support the VLBI parallax observations by allowing pulsar gating.

Name	Institution	E-mail	Phone	Student
Anne M Archibald	McGill University	aarchiba@physics.mcgill.ca	(514)245-0621	G

### Remote Observing Request

- Observer will travel to AO
- Remote Observing
- In Absentia (instructions to operator)

### Instrument Setup

L-wide                      C

### Atmospheric Observation Instruments:

**Special Equipment or setup:** none

### RFI Considerations

### Frequency Ranges Planned