Observing Application

Date: 2006-05-10 Proposal ID: VLA/06A-006
Type: Rapid response science (Target of Opportunity)
Category: Galactic Total time: 36 hours

Monitoring the Remarkable Transient AXP XTE J1810-197

Abstract:

We have discovered bright radio emission from the transient Anomalous X-ray pulsar XTE J1810-197, the first time radio emission has been detected from one of these highly magnetized neutron stars. The emission has a surprisingly flat spectrum, a remarkably high degree of polarization, and is variable by factors of ~3 on timescales of 20 min, and by larger factors on longer timescales. The emission is pulsed at the 5.5s period of the AXP. In order to determine the source's flux and spectrum variability characteristics before it fades from view, we propose a monitoring program over the next few months until a normal June 1 proposal can be reviewed.(This is the end of the abstract)

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Related proposals:

AH899

Observing type(s):

Continuum, Monitoring, Single Pointing(s)

Resources:

Resource name	Tele. Conf. Ant.	Frontend & Backend	Set up
20cm	VLA (Any) All	L Band 20 cm 1.17 - 1.74 GHz VLA Correlator - Single Channel Continuum	Sky frequency: GHz
6cm	VLA (Any) All	C Band 6 cm 4.25 - 5.10 GHz VLA Correlator - Single Channel Continuum	Sky frequency: GHz
3.6cm	VLA (Any) All	X Band 3.6 cm 7.55 - 9.05 GHz VLA Correlator - Single Channel Continuum	Sky frequency: GHz

Sources:

Source name	RA	DEC	System	RA range	DEC range	Velocity/z	Group name
XTE J1810-197	18:09:51.8	-19:43:51	J2000	00:00:00	00:00:00	0.0 Km/s	

Sessions:

Session name	LST Center	Resources	Sources or Groups	Time request
daily20	18:00	20cm(VLA/Any)	XTE J1810-197	1.0 hour x 5 || 1 days
daily6	00:00	6cm(VLA/Any)	XTE J1810-197	1.0 hour x 5 || 1 days
daily3.6	00:00	3.6cm(VLA/Any)	XTE J1810-197	1.0 hour x 5 || 1 days
weekly20	00:00	20cm(VLA/Any)	XTE J1810-197	1.0 hour x 3 || 1 weeks
weekly6	00:00	6cm(VLA/Any)	XTE J1810-197	1.0 hour x 3 || 1 weeks
weekly3.6	00:00	3.6cm(VLA/Any)	XTE J1810-197	1.0 hour x 3 || 1 weeks
monthly20	00:00	20cm(VLA/Any)	XTE J1810-197	1.0 hour x 4 || 25 days
monthly6	00:00	6cm(VLA/Any)	XTE J1810-197	1.0 hour x 4 || 25 days
monthly3.6	00:00	3.6cm(VLA/Any)	XTE J1810-197	1.0 hour x 4 || 25 days

Schedule Constraints:

daily20			
Starting as soon as practical. Any LST when source is visible is acceptable. Each set of sessions (daily, weekly, monthly) is intendedto be using 3 subarrays simultaneously; total req. = 12hrs, not 36			
daily20			
LST limit		I don't know where to add this, but I am going to usethree subarrays for simultaneous observation of the sourceat three frequencies.	
daily6			
As in session 1			
daily6			
LST limit		I don't know where to add this, but I am going to usethree subarrays for simultaneous observationof the sourceat three frequencies.	
daily3.6			
As in session 1			
daily3.6			
LST limit		I don't know where to add this, but I am going to usethree subarrays for simultaneous observation of the sourceat three frequencies.	
weekly20			
As in session 1			
weekly20			
LST limit		I don't know where to add this, but I am going to usethree subarrays for simultaneous observation of the sourceat three frequencies.	
weekly6			
As in session 1			
weekly6			

LST limit		I don't know where to add this, but I am going to usethree subarrays for simultaneous observation of the sourceat three frequencies.	
weekly3.6			
As in session 1			
weekly3.6			
LST limit		I don't know where to add this, but I am going to usethree subarrays for simultaneous observation of the sourceat three frequencies.	
monthly20			
As in session 1			
monthly20			
LST limit		I don't know where to add this, but I am going to usethree subarrays for simultaneous observation of the sourceat three frequencies.	
monthly6			
As in session 1			
monthly6			
LST limit		I don't know where to add this, but I am going to usethree subarrays for simultaneous observation of the sourceat three frequencies.	
monthly3.6			
As in session 1			
monthly3.6			
LST limit		I don't know where to add this, but I am going to usethree subarrays for simultaneous	

		observation of the sourceat three frequencies.	

Present for observation: no Staff support: None