



Observing Application

Date : Apr, 20 2010
 Proposal ID : VLA/10A-260
 Legacy ID : AK746
 PI : Miriam Krauss
 Type : Rapid Response - Target of Opportunity
 Category : Stellar, Galactic
 Total Time : 3.5

Monitoring the New Accretion-Powered Millisecond Pulsar Swift J1749.4-2807

Abstract:

The newly discovered accretion-powered millisecond pulsar (AMSP) Swift J1749.4-2807 is one of only 13 such sources currently known. It is also unique among AMSPs: it is the only eclipsing system, and the only source to pulsate at twice the neutron star's spin frequency, indicating that both magnetic poles are visible. We propose an EVLA monitoring campaign of Swift J1749.4-2807, adding radio data to the ongoing multi-wavelength observations. Radio flux and variability measurements can help constrain the emission mechanism, energetics, and associated timescales, especially when evaluated in conjunction with high-energy data.

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Related proposals:

Joint:

Not a Joint Proposal

Observing type(s):

Continuum, Monitoring

VLA Resources

Name	Conf.	Frontend & Backend	Setup
C-band	D	C Band 6 cm 4000-8000 MHz WIDAR OSRO1: 2 Subbands/Full polz	Rest frequencies: 4800.0, 7000.0 MHz Bandwidth: 128.0 MHz No. of Channels: 64 Poln. products: 4.0 Channel Width: 2000.0 kHz

Sources:

Name	Position		Velocity		Group
Swift J1749.4-2807	Coordinate System	Equatorial	Convention	Radio	AMSP
	Equinox	J2000			
	Right Ascension	17:49:31.89	Ref. Frame	LSRK	
		00:00:00.0			
Declination	-28:08:02	Velocity	0.00		
	00:00:00				

Sessions:

Name	Session Time (hours)	Repeat	Separation	LST minimum	LST maximum	Elevation Minimum
Monitoring	0.50	7	2 day	14:00:00	21:00:00	0

Session Constraints:

Name	Constraints	Comments

Session Source/Resource Pairs:

Session Name	Source	Resource	Time	Figure of Merit	Subarray
Monitoring	Swift J1749.4-2807	C-band	0.5 hour	0.016 mJy/bm	

Present for observation: yes

Staff support: None

Plan of Dissertation: no