



# Observing Application

Date : Jul, 27 2012  
 Proposal ID : VLA/12A-492  
 Legacy ID : AK796  
 PI : Ashley King  
 Type : Director's Discretionary  
 Time - Target of  
 Opportunity  
 Category : Energetic Transients and  
 Pulsars  
 Total Time : 8.0

## A New X-ray Binary Jet Candidate: MAXI J1910-057

### Abstract:

We have constructed an unprecedented multi-wavelength observing program to study a stellar-mass black hole in the "low/hard" state. Compact, steady radio jets are ubiquitous in this state, but their contribution to the broadband SED in IR and optical bands remains unclear. However, excellent coverage across the full astrophysical bandpass can reveal the relative contributions of jets, and other processes that enhance IR and optical emission, such as irradiation of the outer disk. MAXI J1910-057 (SWIFT J1910.2-0546) is a new black hole candidate that has recently entered into an X-ray "low/hard" state (ATEL #4273). The low column density to this source makes it an ideal target for UV/O/IR study. Approved monitoring observations with Swift and SMARTS will give X-ray, UV, B, V, R, I, J, H, and K fluxes on 50 different occasions. We request a modest JVLA monitoring program to complete this multi-wavelength effort, and to make a definitive test of jet contributions at shorter wavelengths.

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### Related proposals:

We have already accepted Swift and SMARTS contemporaneous campaigns to compliment these radio observations with X-ray, UV, O, and IR.

### Joint:

Not a Joint Proposal

**Observing type(s):**

Continuum, Monitoring

**VLA Resources**

Name	Conf.	Frontend & Backend	Setup
B config, C Band	B	C Band 6 cm 4000-8000 MHz WIDAR OSRO, Full Polarization	Rest frequencies: 5000.0,6000.0 MHz Subband Bandwidth: 128.0 MHz No. of Channels: 64 Poln. products: 4.0 Channel Width: 2000.0 kHz Total Bandwidth: 2,048.00 MHz

Testing Resource Images

**Sources:**

Name	Position		Velocity		Group
MAXI J1910-057	Coordinate System	Equatorial	Convention	Radio	Sources
	Equinox	J2000			
	Right Ascension	19:10:22.78	Ref. Frame	LSRK	
		00:00:00.0			
Declination	-5:47:58.0	Velocity	0.00		
	00:00:00.0				

**Sessions:**

Name	Session Time (hours)	Repeat	Separation	LST minimum	LST maximum	Elevation Minimum
Session 1	1.00	8	3 day	14:30:00	24:00:00	0

**Session Constraints:**

Name	Constraints	Comments
Session 1	We request twice a week observations (2X/Week) but the separation between observations need not be uniform. The requested separation in days is only a suggestion.	

**Session Source/Resource Pairs:**

Session Name	Source	Resource	Time	Figure of Merit	Subarray
Session 1	MAXI J1910-057	B config, C Band	1.0 hour	0.010 mJy/bm	

Present for observation: no

Staff support: None

Plan of Dissertation: yes