Observing Application

Date:Aug 7, 2007
Proposal ID:VLA/07C-238
Legacy ID:AC908
PI: Brian Cameron
Type:Rapid Response
Exploratory Time
Category: Galactic
Total time: 1.0 hour

A Hard X-Ray Flare from SAX J1810.8-2609

Abstract:

At 2007-08-05 11:27 UT, the Swift spacecraft detected a bright hard X-ray burst from the neutron star X-ray binary SAXJ1810.8-2609 (V4722 Sgr). Its short duration in gamma-rays of ~5s and hard X ray spectrum suggest that it might be a member in a new class of sources -- fast X-ray nova. The other two members of this class are V4641 Sgr (the most superluminal source yet observed) and the recently discovered GRB070610 (Swift J195509.6+261406). However, V4722 Sgr is unique since it is the only one of the three objects to have a neutron star primary and not a black hole. We request one hour of X-band and L band imaging to detect the likely synchrotron emission from this source. Since the VLA is currently in the A configuration with excellent spatial resolution, this would complement our search for a NIR/Optical counterpart at the Keck and Palomar observatories.

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Joint:

Not a Joint Proposal

Observing type(s):
Triggered Transient, *

Resources:

Resource name	Tele. Conf.	Frontend & Backend	Set up
X Band	VLA A	X Band 3.6 cm 8080 - 8750 MHz VLA Correlator - Single Channel Continuum	Bandwidth: 50 MHz Rest frequencies: 8435.1,8485.1 MHz
L Band	VLA A	L Band 20 cm 1200 - 2000 MHz VLA Correlator - Single Channel Continuum	Bandwidth: 50 MHz Rest frequencies: 1464.9,1385.1 MHz

Sources:

Source name	RA / RA Range	DEC / DEC Range	System	Velocity/z	Group name
V4722Sgr	18:10:44.6 00:00:00.0	-26:09:02 00:00:00	J2000	0 km/s	

Sessions:

Session Name	Session Time	Repeat	Separation	LST Minimum	LST Maximum	Elevation Minimum
V4722Sgr	1.0 hour	1	0 day	00:00:00	24:00:00	0

Session Constraints:

Session Name	Constraint	Comments
V4722Sgr		

Session Source/Resource Pairs:

Session Name	Source	Resource	Time	Figure of Merit
V4722Sgr	V4722Sgr/	X Band	0.5 hour	0.01mJy/bm
V4722Sgr	V4722Sgr/	L Band	0.5 hour	0.01mJy/bm

Total Time per Configuration:

Configuration	Total Time
A	1.0