Observing Application

Date:Sep 15, 2006
Proposal ID:VLA/07C-101
Legacy ID:AR614
PI: Gordon Richards
Type:Rapid Response
Exploratory Time
Category: Extragalactic, Galactic
Total time: 2.0 hour

The Largest Separation Lensed Quasar; SDSS J1029+2623

Abstract:

We propose to take sensitive VLA images of the field of SDSS J1029+2623, which is the new record holder for the largest separation gravitationally lensed quasar. The two quasar images are separated by 22.5 arcseconds. While the lensing hypothesis appears quite robust, image B is a 20 cm radio source detected by the VLA FIRST survey, whereas image A is not. Were it not for the possibility that image A is just below the FIRST detection limit, this fact would otherwise rule out the lensing hypothesis. Furthermore, clean interpretation of the X-ray flux near the expected center of the lensing potential is clouded by the possiblity of X-ray coming from a unrelated bright radio source. Thus, deeper VLA images are needed to confirm the lensing nature of this system in order for it to reach its full diagnostic potential.

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Joint:
Not a Joint Proposal

Observing type(s):
Continuum, *

Resources:

Resource name	Tele. Conf.	Frontend & Backend	Set up
6cm Image	VLA B	C Band 6 cm 4500 - 5000 MHz VLA Correlator - Single Channel Continuum	Bandwidth: 50 MHz Rest frequencies: 4885.1,4835.1 MHz

Sources:

Source name	RA / RA Range	DEC / DEC Range	System	Velocity/z	Group name
SDSS J1029+2623	10:29:14.9 00:00:00.0	+26:23:29 00:00:00	J2000	z = 2.2	

Sessions:

Session Name	Session Time	Repeat	Separation	LST Minimum	LST Maximum	Elevation Minimum
Session1	2.0 hours	1	0 day	00:00:00	00:00:00	0

Session Constraints:

Session Name	Constraint	Comments
Session1		Ideally we would like the highest resolution possible. CnB would be OK, but B array would be better -- even if that means that we could only get ~30 minutes instead of 2 hours.

Session Source/Resource Pairs:

Session Name	Source	Resource	Time	Figure of Merit
Session1	SDSS J1029+2623/	6cm Image	2.0 hour	0.02mJy/bm

Total Time per Configuration:

Configuration	Total Time
B	2.0

Present for observation: no Staff support: None