Observing Application

Date :	Jul, 05 2013
Proposal ID :	VLA/13A-538
Legacy ID :	AD676
PI :	Ryan Duffin
Type :	Director's Discretionary Time - Target of Opportunity
Category :	Active Galactic Nuclei
Total Time :	1.0

Double-Lobed Radio Source Hosted by a Grand Design Spiral

Abstract:

We have found the best example so far of a grand-design spiral associated with a ~100 kpc radio double as the result of a cross-correlation of SDSS spiral galaxies and the NVSS/FIRST radio sources. Radio galaxies are almost invariably hosted by elliptical galaxies in the local Universe, with only one confirmed exception to date. Consequently, the discovery of this source is significant. Our target galaxy was identified as a spiral in GalaxyZoo user classifications, and FIRST survey data show a well-defined double-lobed radio structure surrounding the galaxy. This is the only known double-lobed radio source hosted by a spiral with clearly visible arms. Here, we propose EVLA X-band observations of this enigmatic source in the current C-array to classify its morphology, measure its spectral index, and derive its physical properties.

Authors:

Name	Institution	Email	Status
Ryan Duffin	National Radio Astronomy Observatory	rduffin@nrao.edu	Graduating: 2016 Thesis: false
Minnie Mao	National Radio Astronomy Observatory	mmao@nrao.edu	
Frazer Owen	National Radio Astronomy Observatory	fowen@nrao.edu	

Principal Investigator: Ryan Duffin
Contact: Ryan Duffin
Telephone: 5405355875
Email: rduffin@nrao.edu

Related proposals:

Joint:

Not a Joint Proposal

Observing type(s):

Continuum, Single Pointing(s)

VLA Resources

Name	Conf.	Frontend & Backend	Setup

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X-Band	C	X Band 3.6 cm 8000 - 12000 MHz WIDAR OSRO, Full Polarization	Rest frequencies: 8500.0,9500.0 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

Sources:

Name	Position		Velocity		Group
J164924.01+263502.6	**Coordinate System**	Equatorial	**Convention**	Radio	Target
	Equinox	J2000			
	Right Ascension	16:49:24.01	**Ref. Frame**	LSRK	
		00:00:00.0			
	Declination	+26:35:02.6	**Velocity**	0.00	
		00:00:00.0			
	Calibrator	No			

Sessions:

Name	Session Time (hours)	Repeat	Separation	LST minimum	LST maximum	Elevation Minimum
Observation	1.00	1	0 day	12:00:00	21:00:00	25

Session Constraints:

Name	Constraints	Comments

Session Source/Resource Pairs:

Session Name	Source	Resource	Time	Figure of Merit	Subarray
Observation	J164924.01+263502.6	X-Band	1.0 hour	.007 mJy/bm	

Present for observation: yes Staff support: None Plan of Dissertation: no