



# Observing Application

Date : Mar, 03 2010  
 Proposal ID : VLA/10A-247  
 Legacy ID : AS1037  
 PI : Lorant Sjouwerman  
 Type : Rapid Response -  
 Exploratory Time  
 Category : Galactic  
 Total Time : 26.0

## 36.2 GHz Methanol in the Galactic center region

### Abstract:

This is a resubmission of the previously approved AS994 program (with priority B), which due to many reasons (ToOs, make-up time, WIDAR testing, weather) did not get observed in late 2009. Referring to the pressure on dynamic time diagrams, and with a resource adjusted for WIDAR (OSRO2), we request unallocated Galactic center time in any (D-ish) array configuration in this 2010A trimester.

We propose to map the Galactic center area in the 36.2 GHz line of methanol with the new Ka-band receivers. Our main goal is to study the small scale distribution of the gas and investigate the potential of this transition to trace shock excited regions compared to using 1720 MHz OH masers, and whether the small scale structure unambiguously shows that indeed (and how) gas is transported inward from the surrounding molecular clouds to the circumnuclear disk.

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### Related proposals:

AS994, AS987

### Joint:

Not a Joint Proposal

### Observing type(s):

Spectroscopy, Grid Mapping/Mosaicing

### VLA Resources

Name	Conf.	Frontend & Backend	Setup
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Name	Conf.	Frontend & Backend	Setup
osro2	Any	Ka Band 0.9 cm 26500 - 40000 MHz WIDAR OSRO2: 1 Subband/Dual polz	Rest frequencies: 36196.265 MHz Bandwidth: 16.0 MHz No. of Channels: 256 Poln. products: 2.0 Channel Width: 62.5 kHz

### Sources:

Name	Position		Velocity		Group
cnd+gmcs	Coordinate System	Equatorial	Convention	Radio	GC area
	Equinox	B1950			
	Right Ascension	17:42:32.5	Ref. Frame	LSRK	
		00:00:17.5			
Declination	-29:01:00	Velocity	30.0		
	00:05:00				

### Sessions:

Name	Session Time (hours)	Repeat	Separation	LST minimum	LST maximum	Elevation Minimum
any	2.00	13	0 day	15:00:00	20:00:00	0

### Session Constraints:

Name	Constraints	Comments
any		any array

### Session Source/Resource Pairs:

Session Name	Source	Resource	Time	Figure of Merit	Subarray
any	cnd+gmcs	osro2	2.0 hour	5 mJy/bm	

Present for observation: no

Staff support: None

Plan of Dissertation: no