



Observing Application

Date : Jun, 19 2008
 Proposal ID : VLBA/08C-123
 Legacy ID : BB265
 PI : Andreas Brunthaler
 Type : Rapid Response -
 Exploratory Time
 Category : Astrometry/Geodesy
 Total Time : 4.0

Calibrator search near water masers in the outer Galaxy

Abstract:

We have recently started a project to measure accurate parallaxes and proper motions of water maser sources in the Perseus arm and the outer Galaxy (BM272). Key to the success of high precision astrometry observations is the use of nearby and compact calibrator sources. A previous VLA search yielded several good candidates close to our maser sources. However, for two masers, the VLA data was not conclusive. Here we propose to observe possible calibrators from our VLA search with the VLBA to verify that they can be used as reference sources.

Authors:

Name	Institution	Email	Status
Andreas Brunthaler	Max-Planck-Institut für Radioastronomie	brunthal@mpifr-bonn.mpg.de	
Karl Menten	Max-Planck-Institut für Radioastronomie	kmenten@mpifr-bonn.mpg.de	
Mark Reid	Harvard-Smithsonian Center for Astrophysics	reid@cfa.harvard.edu	

Principal Investigator: Andreas Brunthaler
 Contact: Andreas Brunthaler
 Telephone: +49228525229
 Email: brunthal@mpifr-bonn.mpg.de

Related proposals:

BM272

Joint:

Not a Joint Proposal

Observing type(s):

Continuum

VLBA Resources

Name	Wavelength	Processor	Stations	Observing Parameters	Correlation Parameters

Name	Wavelength	Processor	Stations	Observing Parameters	Correlation Parameters
1.3 cm	1.3 cm	Socorro	VLBA <input checked="" type="checkbox"/> Br <input checked="" type="checkbox"/> Fd <input checked="" type="checkbox"/> Hn <input checked="" type="checkbox"/> Kp <input checked="" type="checkbox"/> La <input checked="" type="checkbox"/> Mk <input checked="" type="checkbox"/> Kp <input checked="" type="checkbox"/> Ov <input checked="" type="checkbox"/> Pt <input checked="" type="checkbox"/> Sc <input checked="" type="checkbox"/> <hr/> HSA Ar Ef GBT VLA-Y27 <hr/> VLA-Y1 <hr/> Geodetic	Bandwidth: 8 MHz Baseband 16 Channels Sample Rate 16 (Msample/s) Bits/Sample 1 Polarization RCP & LCP Agg. Bit Rate 256 (Mbits/sec)	Full Polarization Pulsar Gate Correlator Passes 1 Averaging Time (sec) 2.0 Spectral Points /BBC 16

Sources:

Name	RA / RA Range	Dec / Dec Range	Epoch	Velocity / z	Group
06391+02115	06:39:10.1 00:00:00.0	+02:11:31 00:00:00	J2000	Velocity : 0.00	S283
06412+01025	06:41:14.6 00:00:00.0	+01:02:31 00:00:00	J2000	Velocity : 0.00	S283
06400-00025	06:40:01.1 00:00:00.0	-00:02:35 00:00:00	J2000	Velocity : 0.00	S283
J0641-0320	06:41:23.3 00:00:00.0	-3:20:08 00:00:00	J2000	Velocity : 0.00	S283
J0731-2224	07:31:31.5 00:00:00.0	-22:24:20 00:00:00	J2000	Velocity : 0.00	BBW33
J0725-1904	07:25:50.2 00:00:00.0	-19:04:19 00:00:00	J2000	Velocity : 0.00	BBW33
07318-21038	07:31:49.7 00:00:00.0	-21:03:50 00:00:00	J2000	Velocity : 0.00	BBW33
07300-21245	07:30:03.2 00:00:00.0	-21:24:32 00:00:00	J2000	Velocity : 0.00	BBW33
07298-20022	07:30:03.2 00:00:00.0	-21:24:32 00:00:00	J2000	Velocity : 0.00	BBW33
07302-19569	07:30:13.5 00:00:00.0	-19:56:54 00:00:00	J2000	Velocity : 0.00	BBW33

Sessions:

Name	Session Time (hours)	Repeat	Separation	GST minimum	GST maximum	Elevation Minimum
S283	2.00	1	0 day	00:00:00	24:00:00	0
BBW33	2.00	1	0 day	00:00:00	24:00:00	0

Session Constraints:

Name	Constraints	Comments

Session Source/Resource Pairs:

Session Name	Source	Resource	Time	Figure of Merit
S283	06391+02115 06412+01025 06400-00025	1.3 cm	2.0 hour	1 mJy/bm

Session Name	Source	Resource	Time	Figure of Merit
BBW33	J0731-2224 J0725-1904 07318-21038 07300-21245 07298-20022 07302-19569	1.3 cm	2.0 hour	1 mJy/bm

Staff support: None

Plan of Dissertation: no