2007A-A023 science (standard)

Observations of the Magnetic Field Structure in OMC1 and NGC1333 IRAS2A

Ramprasad Rao

SMA Observing Report

Obs ID 377

Summary	
Source(s)	OMC1BNKL
Requested weather	PWV<2.5mm
Start - End (UT)	2008 Jan 06, 03:41:45 - 2008 Jan 06, 17:18:28 UTC
Observing script	2007A-A023_20080105.pl
Data Directory	080106_03:51:46 (1.5G)
Associated data?	None
Tuning RxA	LO (GHz): 341.450 Rest (GHz): 345.796
Antennas	2 3 4 5 6 7 8
Array configuration	compact
Data assessment	satisfactory
Scheduler feedback	Ram confirms this track was successfulGP

Setup & Scheduling Notes

345 GHz USB polarization

Ram will get the tuning and script information if the waveplates get installed.

The script will run from 18:00 HST to 07:00 HST.

Ηi	me	lin	ıe

	Ti	ime is lost	Data possibly affected	Data unaffected
Time (UTC)	Event			
03:41	observing report opened			
03:42	ipoint -m after correlatorResume on 3c454.3 Average: Ant 2 AzOff = 1.2 ElOff = 5.3 deltaAz = 0.0 deltaEl = -0.1 Ant 3 AzOff = -2.1 ElOff = 5.9 deltaAz = -8.1 deltaEl = 6.1 Ant 4 AzOff = -6.7 ElOff = 3.6 deltaAz = -5.4 deltaEl = 1.1 Ant 5 AzOff = -4.6 ElOff = 6.4 deltaAz = -4.9 deltaEl = 2.8 Ant 6 AzOff = -6.9 ElOff = 7.1 deltaAz = -8.2 deltaEl = 6.2 Ant 7 AzOff = -3.2 ElOff = 12.3 deltaAz = -2.2 deltaEl = 9.1 Ant 8 AzOff = -1.0 ElOff = 0.4 deltaAz = 2.3 deltaEl = 7.9			
03:35	Visual inspection of the array upon arrival showed that the ar and there were no obstructions or intruders that would hinde antennas.			
03:52	We start the script. It will do one loop on 3c454.3, which we'l check for correlator leakage we see none.	ll use to		
04:12	Ant 8 Dewar reaches 5K. We disable flagging, and if it goes a	ny higher w	e'll zero bfields.	
04:57	polarPattern -p -2 correlatorResume /usr/home/dmarrone/setAll.csh R ipoint -m on 0528+134 Average: Ant 2 AzOff = 1.2 ElOff = 5.6 deltaAz = -0.0 deltaEl = 0.3 Ant 3 AzOff = 0.8 ElOff = 3.0 deltaAz = 2.9 deltaEl = -2.9 Ant 4 AzOff = -9.9 ElOff = 1.5 deltaAz = -3.2 deltaEl = -2.1 Ant 5 AzOff = -1.8 ElOff = 4.5 deltaAz = 2.9 deltaEl = -1.8 Ant 6 AzOff = -1.1 ElOff = 2.9 deltaAz = 5.8 deltaEl = -4.2 Ant 7 AzOff = -7.3 ElOff = 5.2 deltaAz = -4.1 deltaEl = -7.1 Ant 8 AzOff = -1.4 ElOff = -4.3 deltaAz = -0.4 deltaEl = -4.7			
05:05	take one polarPattern -p 1 -w -c 1 on 3c454.3 to check for le	akage.		
05:11	no leakage seenresume script.			
06:46 - 06:50	Type : tune6 stale Data : lost Ants : 2 Description : ant 2 (note: during reboot all ants flagged for IRIG time.)	goes stale		

06:50 - 06:54	Type : chopper won't home Data : possibly lost Ants : 2 Description : Ant 2 chopper does not come up properly after reboot.
17:10	Ram verifies that the data looks good, so we kill the script, stow, standby, and endProject. Thanks, Ram, for checking in.
17:18	observing report closed

Priming Report

(Report logged at 04:06:32, 05 Jan 2008,)

dopplerTrack -r 345.795990 -l -s5

colossus wasn't reporting CSO Tau and then crashed, thanks Billie for getting it back

locked: 3,5,8 not locked: 2,4,6,7

2,4,6 locked easily with rfpower and t joy

ant 7 had several problems that eventually worked out, but it locked with a low PLL ratio

the chopper was also not reset from yesterdays test

optimization was fine for 2-6 7's optimization was not great

8 started to warm, so I zeroed the bfields and it's optimization is now poor

the wrap came back for ant 7,delay -w -p 9 -A -v -1.5 was used to correct it after setIFLevels the wrap returned and I used \pm 1.5 this time

Turned off ant 8 flaging to show data as good, due to the dewar being at 5k

started an ipoint with ant 2-7

offsets:

Ant 2 AzOff = 1.2 ElOff = 5.1 deltaAz = -0.0 deltaEl = -0.1

Ant 3 AzOff = 2.9 ElOff = 4.1 deltaAz = -1.2 deltaEl = -6.4

Ant 4 AzOff = -2.8 EIOff = 4.2 deltaAz = 2.7 deltaEl = -9.6

Ant 5 AzOff = -0.0 EIOff = 3.2 deltaAz = -1.2 deltaEl = -7.8

Ant 6 AzOff = -0.5 EIOff = 3.2 deltaAz = -5.1 deltaEl = -8.3

Ant 7 AzOff = 0.3 ElOff = 13.1 deltaAz = 0.3 deltaEl = 13.1