Continuum => L-band => Total Power

(v1 : 22/06/2017)

$: commands to insert in a shell
> : commands to insert in the operatorInput panel

Before observing

1) On nuraghe-mng :

   - Check that all of the 32 containers are active on ACS,
   - the active surface is green on AS,
   - the jlog is opened in order to track possible error messages,
   - the interface of the Meteo client is opened to check the wind velocity in real time (< 60 km/h).

2) On nuraghe-obs1 :

   - Check the presence of the 8 panels :
     - **operatorInput**
     - **AntennaBoss**
     - **GenericBackend**
     - **Mount**
     - **Observatory**
     - **Receivers**
     - **Scheduler**
     - **MinorServo**

   - Upload your shedule and check it :

     $ cd /archive/schedules/[projectID]
     $ scheduleChecker schedulename.scd

Start the observations

In the operatorInput panel :

1) Insert your project number

   > project=[projectID]

2) Initial setup

   > antennaReset

   > setupLLP

3) Select the receiver Mode :

> receiversMode=[mode]

- ➢ receiversMode=XXC1
- ➢ receiversMode=XXC2
- ➢ receiversMode=XXC3
- ➢ receiversMode=XXC4
- ➢ receiversMode=XXC5
- ➢ receiversMode=XXL1
- ➢ receiversMode=XXL2
- ➢ receiversMode=XXL3
- ➢ receiversMode=XXL4
- ➢ receiversMode=XXL5

C is for Circular, L for Linear polarization
1 : all band, 1300-1800 MHz (no filter)
2 : 1320-1780 MHz
3 : 1350-1450 MHz
4 : 1300-1800 MHz (band-pass)
5 : 1625-1715 MHz

4) Select the active surface shape (Parabolic for L-band observations)

> asSetup=P

5) Insert the Local Oscillator value (in MHz)

> setLO=[freq]

6) Select the Total Power Backend

> chooseBackend=BACKENDS/TotalPower

7) Insert the bandwidth for the focus selector (always 2000 MHz in L-band) and choose the sample rate (in MHz) :

> setSection=0,*,2000.000000,*,*,[sampleRate],*
> setSection=1,*,2000.000000,*,*,[sampleRate],*

8) Put the antenna at 45° of elevation and attenuate the signal in order to obtain values between 750 and 1100 counts (linear range of the backend) :

> goTo=*,45d

> getTpi

> setAttenuation=0,[att]   with [att] between 0 and 15 dB
> setAttenuation=1,[att]

> getTpi

9) Check the tsys (typical values)

> tsys

10) Begin the schedule by indicating the start scan [N] or subscan [N_n] in the SCD file :

> startSchedule=[projectID]/[schedulename].scd,[N]

During the observations

1) On nuraghe-obs2, check that the data are written in your project section :

$ cd /archive/data/[projectID]/

2) Quick-look of the data :

$ idl
IDL> .r fitslook
IDL> fitslook

At the end of the observations

1) Stop the schedule

> stopSchedule   or   > haltSchedule

2) Park the minor servo, active surface and antenna

> goTo=180d,89d
> servoPark
> asPark
> antennaPark

Download the data

$ scp -r [projectID]@nuraghe-obs2:/archive/data/[projectID]/* .