Continuum => K-band => Total Power

(v1 : 23/06/2017)

$: 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 (< 40 km/h to guarantee a good pointing of the antenna in K-band).

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

   > setupKKG

3) Select the active surface shape (Shaped configuration for K-band observations)

> asSetup=S

4) Insert the Local Oscillator value (in MHz)

   > setLO=[freq]

5) Select the Total Power backend

   > chooseBackend=BACKENDS/TotalPower

6) For each section [sect], insert the bandwidth ([bw]=300, 730, 1250 or 2000 MHz) and the sample rate (in MHz) :

   > setSection=[sect],*, [bw],*,*,[sampleRate],*

   Reminder : in K-band, 7 feeds so 14 sections with [sect]=0,1,2,3,4,5,6,7,8,9,10,11,12,13.

7) If you want to use the multi-feed derotator to prevent field rotation during long acquisition, select the derotator configuration :

   > derotatorSetConfiguration=[config] with [config]=BSC, CUSTOM or FIXED

   - BSC is for Best Coverage Space (automatic rotation of the dewar in order to best cover the scanned area)

   - CUSTOM : the user has to choose the angle of the dewar axis with the y-axis of the scanning frame that will be kept during the whole duration of the acquisition :

     > derotatorSetPosition=[ang]d with [ang] the dewar angle in degrees

   - FIXED : the dewar keeps a fixed postion w.r.t the horizon, no rotation is applied. To specify a static angle :

     > derotatorSetPosition=[ang]d with [ang] the dewar angle in degrees

     To read back the position of the dewar :

     > derotatorGetPosition

8) Put the antenna at 45° of elevation and attenuate the signal for the 14 sections in order to obtain values between 750 and 1100 counts (linear range of the backend) :

   > goTo=*,45d

   > getTpi

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

   > 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]/* .