

Noto Station report.

C. Stanghellini 04.02.2016

-subreflector: the moving mechanics of the subreflector was badly worn and at risk of failure. The secondary mirror was also in bad condition with water infiltrations.

Complete overhaul of the moving mechanics has been done, and the replacement of the subreflector with an old one still in acceptable conditions, after repainting.

Works are just finished and the antenna started observations again after a stop of some weeks.

-frequency agility: fast switching between receivers at secondary focus still need several works to be completed. Receivers to be placed in lateral position (2xC,K,Q bands) need modification/addition to the final part of the horn.

Fast frequency switching need also a dedicated electronic control unit that has been designed, and construction will start after purchase of needed components.

A new refrigeration unit is necessary to keep cooled more than one receiver at time. The purchase will be made as soon as possible. The C band receiver for methanol (Cm/7GHz) is now used with the same feed horn of the 5GHz receiver, and it need a new feed horn to be used independently.

- a protecting structure for instrumentation and tools is planned to be placed on the first floor of the antenna.

-elevation motors: the 2 motors of elevation have damaged brakes for some time now, and need maintenance, even if the antenna can still observe, with caution.

Purchase of a new motor and modification of the spare available is under way.

-SXLP receiver: the multifeed receiver to be placed on the primary focus does not work properly, and cannot be used at present for observations.

S/X band observations are done by the old receiver, currently in use, but L band and P band will not be available in the near future.

-the active surface start to show signs of ageing. The actuators need a maintenance of the mechanical part, and also the complete substitution of the electronic parts. Funds are not currently available for this major maintenance.

-the Noto antenna is currently working at C,Cm,S/X,K,Q bands. Half a day is needed to change frequencies at the secondary focus.