

Report from the Noto VLBI Station

G. Tuccari, C. Stanghellini

Abstract

This report describes recent, current and planned changes at the Noto VLBI station. The report also summarizes Noto's 2000 geodetic activities.



Figure 1. The Noto antenna.

1. Changes at the Noto VLBI station

The MKIV formatter is now used as the standard in the VLBA4 Terminal. This avoids manually switching between VLBA and MKIV modes, which requires connecting different cables and changing the setup in the Field System. Such modification is to be considered as a simplification in the station operations, improving the reliability.

The realisation of a new version of TTY distributor to be used in the VLBA4 environment was completed. It has been produced for Cambridge, Effelsberg, Noto, Shanghai, Torun, Metsahovi, Yebes, Pico Veleta, and three units for Haystack.

The assembly of the headstack boards for the Noto recorder and a second station is in progress and at completion the recorder will be upgraded as a full two heads recording system for 1 Gbit/s recordings.

The upgrade program (SXL-UHF receiver construction) was delayed, due to the delay in the CSELT production of the L and S/X band feed systems. Production order was placed before the

end of 1999. The feeds are in construction and some parts realised. The third and last module of the receiver is completed, while the other two have been successfully tested. The cryogenic section is in construction. A new software environment is under development to drive the complex system, operating on the full set of receivers, in primary and secondary focus.

The active surface for the Noto antenna, developed by the Medicina staff, will be installed in the last quarter of 2001. The necessary parts are in the acquisition stage and will be assembled in Medicina then transferred to Noto.

A Heybond bonding machine has been acquired. A study of cryogenic low noise amplifier was undertaken that should produce L, S, C band front-end as first result.

Methods to realise microwave vacuum windows are under evaluation, and a dedicated oven has been acquired to cure the foam.

2. Geodetic Experiments in Noto during 2000

Geodetic experiments in Noto need to deal with the heavy scheduling of the antenna for VSOP experiments: nevertheless the Noto antenna is involved in Europe experiments and could participate in a couple of CORE B experiments. Problems at the correlators also caused the delay and sometimes the deletion of planned geodetic observations.

During 2000 the following geodetic experiments have been done:

Table 1.

EURO53	27 Jan
EURO54	07 Feb
EURO56	15 May
EURO57	07 Aug
EURO58	04 Sep
CB801	12 Jan
CB802	02 Nov