

Noto Station Report

From Noto staff (INAF-Institute of Radioastronomy)
To EVN-TOG

16/01/2023

Reference period - - January 2023

1) Antenna.

We had a problem with a final limit switch of the servo system of the secondary mirror. The failure, caused by a water leach, prevented the movement of the sub reflector.

We promptly worked around the problem, and the definitive reparation was completed late in November.

We are experiencing issues with the servo systems, particularly related to the azimuth axis. The Antenna Control Unit stops to communicate to the servo amplifiers and the control computers, when this happens the telescope stops and a hardware reset is required. We suspect the power supply chain or some issues in the power plant, but we're still investigating the problem.

We also plan a new cabling and plants refurbishment of the telescope (power distribution, helium and cooling) and the Vertex room next year. According to our schedule this would imply an idle time for the telescope from two to three months long. More details will be available in two or three months.

INAF has succeeded in a call for funding under the framework the PNRR in agreement with the European Community. As part of the PNRR, Noto will go through several major maintenance in the next three years. The azimuth rail, including the wheels and the bearings, the elevation rack and the secondary mirror will be replaced. The telescope structure coating and the primary mirror painting will be completely refurbished.

2) VLBI terminal

FS Version: 9.13.1-rc2
DBBC fw version: DDC V107, PFB V16
FILa10G fw version: 4.1
Flexbuff sw version: 2.8.1
Flexbuff1 disk space: 360 TB
Flexbuff2 disk space: 512 TB

A DBBC version 3 is available in Noto. We will join any kind technical tests planned by the network.

3) Receivers

The tri-band (K,Q and W) was delivered in August 2022. It will be installed and then commissioned as soon as the refurbishment of the Vertex room is completed.

K- and M- band receivers have both an LNA failure. The issue compromises one of the polarisations.

4) VLBI sessions

Session 3-2021: No known issues