Noto Station Status Report

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Abstract The Noto VLBI Station has been operational in the past two years, except for the last part of 2018 due to the S/X receiver degradation. The current status of the antenna is provided.

1 The Noto 32-m Antenna: General Information and Current Status

The Noto 32-m antenna is a Cassegrain radiotelescope in operation since 1989 by the Istituto di Radioastronomia, part of the INAF (Istituto Nazionale di AstroFisica).

The main feature of this instrument is an active surface, allowing continuous correction of gravitational deformation during observations.

The radiotelescope has receivers that span the frequency range of 2.3–45 GHz, but presently the radiotelescope can observe at 5, 6, and 22 GHz.

A new receiver at 1.4–1.6, 2.3, and 8 GHz is nearing completion and will be operating by July 2019. Our 43 GHz receiver had to be checked and is still under evaluation for LNA problems and subreflector performance issues.

The DBBC + FILA10G, is operating for VLBI observations. The ESCS (Enhanced Single-dish Control System) has become DISCOS, that unified the control systems of the antennas of Medicina, Noto, and SRT. Presently, the DISCOS system manages the single dish observations and test, calibration, and configurations of the receivers.

The geodetic observations were stopped in the last part of 2018 due to the heavy degradation of the S/X receiver; it is forecast to resume observations once the new receiver is mounted.

2 Geodetic VLBI Observations

In 2017 and 2018, Noto participated in 28 24-hour routine geodetic sessions: ten IVS-T2, 11 IVS-CRF, four EUROPE, one AUS-AST, and two VITA experiments.

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