

Multi-frequency enabling at the stations of Medicina and Noto

The K-Q-W band receiver, a crucial component for advanced radio astronomy observations, was successfully delivered at the end of 2022. This acquisition was made possible through funding from the Ministry of Research, as part of the PON “Innovation 20-24” program. Upon the definition of the receiver’s operational requirements (first stages of PON project), a comprehensive plan was initiated to upgrade and prepare both Medicina and Noto radiotelescopes for its full integration and functionality. This strategic plan encompassed several key areas:

Medicina Active Surface: Enhancements to the Medicina Active Surface are underway to ensure optimal performance.

Noto Infrastructure: Necessary modifications and upgrades to the Noto infrastructure are being implemented.

Intermediate Frequency Distributor (IFD) System: The IFD system is being refined to efficiently handle the data.

Software: Corresponding software updates and developments are in progress to facilitate seamless control and data processing.

This presentation will detail the current progress of this integration plan. We will highlight the challenges encountered during the upgrade process, discuss the temporary solutions implemented to mitigate these issues, and share our experiences. Furthermore, we anticipate presenting preliminary results obtained from initial operational tests, if available.

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