Noto Station Report and Engineering Programs - Status at November 2, 2004

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Antenna.
driving system and software are now almost completely stable, few problems anyway still exist related to a slow oscillation in azimuth. Vertex has been asked to help in solving for this effect.
In the last part of the year an improvement in the driving software will allow to send point commands with a greater precision for taking into account pointing needs for the 86 GHz receiver.

Receivers.
a) UHF band (500-1000 MHz) in single polarization (L or R), successfully tested for fringes;
b) VHF band (250-500 MHz) in single polarization (L or R), successfully tested for fringes;
c) W band (86 GHz) in single polarization (L), pointing and efficiency are under evaluation, the receiver is expected to be operative for VLBI in April 2005
d) SXL band, is now complete and will be introduced in the last part of the year.

LNA and Microwave Components.
At present two low noise amplifiers are available in L and S band completely realized in the Noto laboratory. Two other projects in C and X band have been stopped due to different duties.
A prototype of criogenic filter developed in Noto in a collaboration with Messina and Rome University is expected for measurement.

Data Acquisition.
The tape recorded after a failure will not be repaired due to the fact the heads are almost to be replaced. The money has been spent for MK5 disk acquisition instead. This caused all the experiments correlated in Socorro cannot be observed because the correlator is not still able to correlate disk-only stations.
More DBBC prototypes are in development for both the EVN and the Chinese Lunar Program. In the last part of this year a VLBI experiment will be realized, while already baseline 0 tests showed good fringes.

RFI.
Observing at low frequency it has been proved as internal emissions are very severe. In particular the guardian central point is using transmitters and an action has been undertaken to stop such activity. Particular care is now given to the internal RFI more than the external because a real mitigation is possible. A determination campaign is planned with the existing structure in the range 50-2000 MHz, to be preliminary for higher frequencies.