

Italy INAF Data Center Report

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Abstract This report summarizes the activities of the Italian INAF VLBI Data Center. Our Data Center is located in Bologna, Italy and belongs to the Institute of Radioastronomy, which is part of the National Institute of Astrophysics.

1 Introduction

The main analysis activity and storage is concentrated in Bologna, where we store and analyze single databases, using CALC/SOLVE. The vSolve software has been installed but not routinely used yet.

The IRA started to store geodetic VLBI databases in 1989; at the very beginning the databases archived in Bologna mostly contained data including European antennas from 1987 onward. In particular, most of the databases available here had VLBI data with at least three European stations. Additionally, we stored all the databases with the Ny-Ålesund antenna observations. In 2002, we decided to store the complete set of databases available on the IVS Data Centers, although we limited the time span to the observations performed from 1999 onwards. All the databases were processed and saved with the best selection of parameters for the final arc solutions. In order to perform global solutions, we have computed and stored the superfiles for all the databases. In some cases we have introduced GPS-derived wet delays into the European databases (1998 and 1999 EUROPE sessions, for the time being), as if

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they were produced by a WVR. These databases are available and stored with a different code from the original databases. In order to produce these databases, we have modified DBCAL, and this new version is available to external users.

Moreover, few Italian VLBI (VITA) experiments have been performed in the last years and the relevant databases are available.

2 Computer Availability and Routing Access

To date, the main computer is a Linux workstation, on which the latest release of the Mark 5 Calc/Solve is installed and to which all VLBI data analysis was migrated. The Internet address of this computer is `geovlbi.ira.inaf.it`. Since 2016, a new server with a storage capacity of 11 TB has been available, and therefore all experiments performed in the previous years were downloaded and archived, thus completing the catalog. The older experiments will be analyzed in order to perform global long-term analysis. At present, the databases are stored in the following directories:

- 1 = `/iranet/geo/dbase1`
- 2 = `/iranet/geo/dbase2`
- 3 = `/iranet/geo/dbase`
- 4 = `/iranet/geo/dbase3`
- 5 = `/iranet/geo/dbase4`

The superfiles are stored in: `/iranet/geo/super1`. The list of superfiles is stored in the file `/iranet/geo/solve/mk5/save_files/SUPCAT`. The username for accessing the databases is `geo`. The password may be requested by sending an e-mail to `negusini@ira.inaf.it`.