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 and the newer νSolve software.

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 experiments, for the time being), as if 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, a few Italian VLBI (VITA) experiments were performed in the last years, and the relevant databases are available.

2 Computer Availability and Routing Access

To date, we have two Linux workstations where all VLBI data was migrated. One computer, on which the latest release of the Mark 5 Calc/Solve is installed, has the internet address geovlbi.ira.inaf.it. The νSolve software is installed on a more recent Linux workstation, and its internet address is antartide.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/super_c11.
The list of superfiles is stored in the file /iranet/geo/solve/mk5/save_files/SUPCAT.

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The username for accessing the databases is geo. The password may be requested by sending an e-mail to negusini@ira.inaf.it.