

Italy CNR Data Center Report

P. Tomasi

Abstract

This report summarizes the situation of the Italy CNR VLBI data center. It will give fundamental information about the structure of the center, its locations, and its activities.

1. Introduction

The Italy CNR VLBI data center has been the joint effort of two institutes of Consiglio Nazionale delle Ricerche (CNR) to improve, working together, the capability of VLBI data storage in Italy. The two institutes are:

a) the Istituto di Radioastronomia (Institute of Radio Astronomy, IRA) located in Bologna, where the main research activity is carried out, both in radioastronomy and geodesy, and the two VLBI antennas in Medicina (near Bologna) and Noto (in Sicily) are managed;

b) the Istituto di Tecnologia Informatica Spaziale (Institute of Information and Technology for Space, ITIS), located in Matera at the Center of Spatial Geodesy (of the Italian Space Agency), where a VLBI antenna, a laser ranging telescope, a permanent GPS receiver and a PRARE antenna are located.

However the two institutes mentioned above are now a single institute, the “Istituto di Radioastronomia”, and the ITIS is a section located in Matera. The new CNR institute is carrying on the same commitment to IVS as the previous two institutes. We have specialized the Bologna part to store and analyze single databases, using CALC/SOLVE software. We are also using F-solve regularly updated. The IRA has started to store VLBI geodetic databases from 1989, but the databases archived in Bologna mostly contain data including European antennas, starting from 1987. In particular most of the databases present here have VLBI data with at least three European antennas. However we are also storing all the databases with the Ny-Ålesund antenna data. During 2002, we have stored in Matera all the 2001 and 2002 databases available on the IVS data centers. All the databases have been processed and saved with the best selection of the parameters for the final arc solutions.

In some cases we have introduced the wet delay coming from GPS into the European databases (at present only for EUROPE experiments for the years 1998 and 1999), as if it was produced by a WVR. Also these databases are available and stored with a different code from the original databases. For this we have produced a modified version of DBCAL, available to external users. In Matera we have stored part of the databases and all the superfiles. In fact, we are using the faster computer there mostly for global solutions. The F-solve version we are using there is regularly updated.

2. Computer Availability and Routing Access

In Bologna the main computer is still an HP715/80 workstation. The internet address of this computer is boira6.ira.cnr.it and the databases are stored in different directories and in different disks as well. A new HP 785/B2600 has been installed. The internet address is boira3.ira.cnr.it. The complete list of directories where databases are stored is the following:

1 = /data1/mk3/data1
2 = /data1/mk3/data2
3 = /AREA/geo/data
4 = /data6/dbase6
6 = /data5/dbase5
5 = /data4/dbase4
7 = /data7/dbase7
8 = /data8/dbase8
9 = /data9/dbase9
10 = /GEO/data
11 = /GEO/1999
12 = /GEO/2000

The username for accessing the database at the moment is geo. The password can be requested by sending an e-mail to tomasi@ira.cnr.it.

In Matera the main computer is an HP282 computer with internet name hp-j.itis.mt.cnr.it. The databases are stored in different directories and the full list follows:

1 = /data1/mk3/data1
2 = /data1/mk3/data2
6 = /data5/dbase5
5 = /data4/dbase4
7 = /data8/dbase8
8 = /data10/dbase10
9 = /data13/dbase13
10 = /data14/dbase14

The super files are stored in different directories:

/data2/super
/data10/super10
/data9/super9
/data8/super8

The list of superfiles is stored in the file /data1/solve_files/SUPCAT. The area for data storage has been enlarged to 250 gigabytes with the installation of a new server. The data can be accessed using the username geo, and the password can be requested from tomasi@ira.cnr.it.