Italy CNR Data Center Report

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Abstract

This report summarises the situation of the Italian CNR VLBI data center. It will give the fundamental information about the structure of the center, its locations, and its activity.

1. Introduction

The Italy CNR VLBI data center is 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 Institute 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, but also managing the two VLBI antennas in Medicina (near Bologna) and Noto (in Sicily);

b) the Istituto di Tecnologia Informatica Spaziale (Institute of Informatica and Technology for Space ITIS), located in Matera at the Center of Spatial Geodesy (of the Italian Space Agency), where VLBI antenna, laser ranging telescope, permanent GPS receiver and PRARE antenna are located. Also a different data center is located here (GeoDAF). All these structures are properties of the Italian Space Agency and run by Telespazio.

However the two institutes mentioned above will become quite shortly a single institute, the "Istituto di Radioastronomia", with a section located in Matera. The new CNRs institute will carry on the same commitment to IVS as the previous two institutes. We have specialised the Bologna part to store and analyse single databases, using CALC/SOLVE software. In Bologna we have introduced CALC9.1 and all the databases stored here have been reCALCed. We are also using f-solve (release Nov. 2000) and that means a complete new series of superfiles have been produced, according to the new format introduced. This point is only of interest for CALC/SOLVE users. The IRA has started to store VLBI geodetic databases from 1989 but the databases archived in Bologna are mostly concerned with 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. All the databases have been processed and saved with the best selection of the parameters for final arc solution.

In some cases we have introduced the wet delay coming from GPS in the European databases (at present only for EUROPE experiments for the year 1998), as if it was produced by WVR. Also these databases are available and stored with a different code from the original database. 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. However at the moment the f-solve version we are using there is the June 2000 version of f-solve, with superfiles format not compatible with the ones produced in Bologna. We will move quite soon to a new version of f-solve also in Matera and then also there we will have the superfiles in the new format.

2. Computer Available and Routing Access

In Bologna the main computer is HP715/80, the computer name is boira6.ira.bo.cnr.it and the databases are stored in different directories and in different disks as well. 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

As you can see, comparing the previous annual report, a new big area (/GEO), has been added. At the moment this storing area is subdivided into three directories and its total storing area is about 35 Gbytes.

The username for accessing the database at the moment is geo. Password can be asked by sending a mail to tomasi@ira.bo.cnr.it. In the near future the database will be accessed by anonymous ftp.

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 will follow:

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
/data14/super14

and the list of superfiles is stored in the file /data1/solvefiles/SUPCAT. The data can be accessed using the username geo, and the password can be asked of tomasi@ira.bo.cnr.it.

For the moment all the data are stored on magnetic disk, but we are planning to move the whole catalog of databases to optical disk. The area available on a jukebox (already installed in Matera) will be of 80 Gb on line.