Italy CNR Data Center Report

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Abstract

This report summarizes 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 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 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.

The IRA has started to store VLBI geodetic databases from 1989 but the databases archived here are mostly concerned with data including European antennas, starting from 1987. In particular most of the databases presented here have VLBI data with at least three European antennas.

From 1997 also ITIS started to store the VLBI databases with the same selection effect, but during 1998 we start to define different task at the different sites. We would like to mention that even ITIS is at the same site as the Italian Space Agency Center for spatial geodesy, that is different institution and this data center is different from ASI data center or GEODAF. We are discussing merging in order to avoid duplication, but up to now the two data centers are separate.

We have specialized the Bologna part to store and analyze single databases, in order to produce a final database, that can be stored in a different format (superfile) and used in global solution. This second part is mostly done in Matera at the ITIS.

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 disk as well. The complete list of directories where databases are stored is the following:

1 = /data1/mk3/data1
2 = /data1/mk3/data2
4 = /data/dbase1
6 = /data5/dbase5
5 = /data4/dbase4
7 = /data7/dbase7
8 = /data8/dbase8
9 = /data9/dbase9

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 web.

During 1998 we have also started to work on the possibility of using tropospheric zenith path delay from GPS in order to improve the repeatability of the VLBI geodetic results. For that we have produced, for all the EUROPE databases of 1998, a different copy of the database, with this GPS data stored in the VLBI database as coming from the water vapor radiometer. Also these databases are available on request.

In Matera the main computer is an HP282 computer with internet name hp-j.itis.mt.cnr.it. The database 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 file are stored in two different directories:

/data2/super
/data10/super10

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 to 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 database to optical disk. The area available on a juke box (already installed in Matera) will be of 80 Gb on line.