

# Paris Observatory (OPAR) Data Center

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## Abstract

This report summarizes the OPAR Data Center activities in 2012. Included is information about functions, architecture, status, future plans, and staff members of OPAR Data Center.

## 1. OPAR Data Center Functions

The Paris Observatory (OPAR) has provided a Data Center for the International VLBI Service for Geodesy and Astrometry (IVS) since 1999. The OPAR, as well as CDDIS and BKG, is one of the three IVS Primary Data Centers. Their activities are done in close collaboration for collecting files (data and analysis files) and making them available to the community as soon as they are submitted.

The three Data Centers have a common protocol and each of them:

- has the same directory structure (with the same control file),
- has the same script,
- is able to receive all IVS files (auxiliary, database, products, and documents),
- mirrors the other ones every three hours, and
- gives free FTP access to the files.

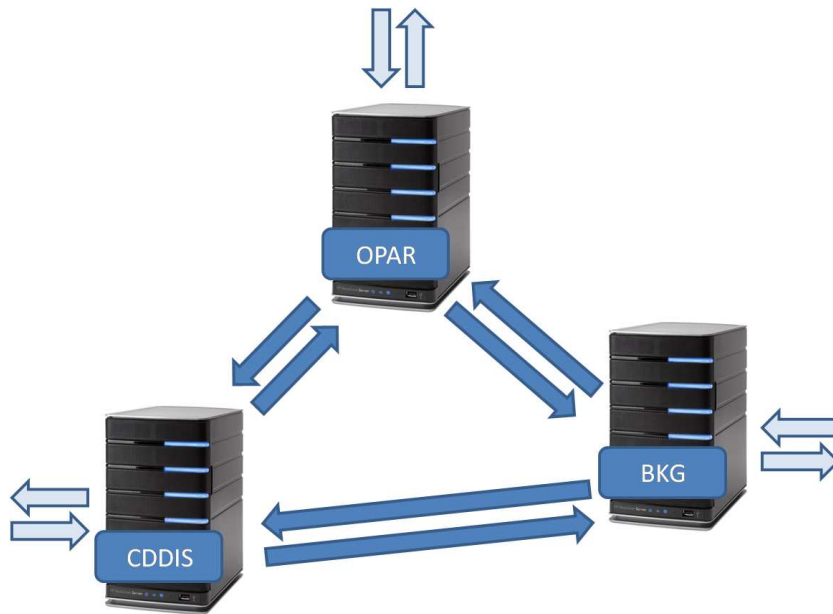


Figure 1. Mirroring among the primary IVS Data Centers.

This protocol gives the IVS community transparent access to a Data Center through the same directory and permanent access to files in case of a Data Center breakdown.

## 2. Architecture

To be able to put a file in a Data Center, Operational and Analysis Centers have to be registered by the IVS Coordinating Center. The file names have to conform to the name conventions. A script checks the file and puts it in the right directory. The script undergoes permanent improvement and takes into account the IVS components' requests.

The structure of IVS Data Centers is:

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RECENT/           : used for the new mirror method
ivscontrol/      : provides the control files needed by the data center
                  (session code, station code, solution code...)
ivsddocuments/   : provides documents and descriptions about IVS products
ivsdata/         : provides files related to the observations:
  aux/           : auxiliary files (schedule, log...)
  db/            : observation files in database CALC format
  ngs/           : observation files in NGS format
  sinex/         : observation files in SINEX format
ivsproducts/     : provides results from Analysis Center:
  eopi/          : Earth Orientation Parameters, Intensive sessions
  eops/          : Earth Orientation Parameters, sessions of 24h
  crf/           : Celestial Reference Frame
  trf/           : Terrestrial Reference Frame
  daily_sinex/   : Time series solutions in SINEX format of Earth
                  orientation and site positions
  int_sinex/     : Daily Intensive solution in SINEX format, mainly
                  designed for combination
  trop/         : Tropospheric time series (starting July 2003)

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## 3. Current Status

The OPAR Data Center is operated actually on a PC Server (PowerEdge 2800 - Xeron 3.0 GHz) located at Paris Observatory and running the Fedora Linux operating system.

To make all IVS products available on-line, the disk storage capacity was significantly increased, and the server is equipped now with a RAID 3 TB disk extensible up to 4.7 TB.

The OPAR server is accessible 24 hours per day, seven days per week through Internet connections with 2 Mbit/s rate. Users can get the IVS products by using the FTP protocol. Access to this server is free for users.

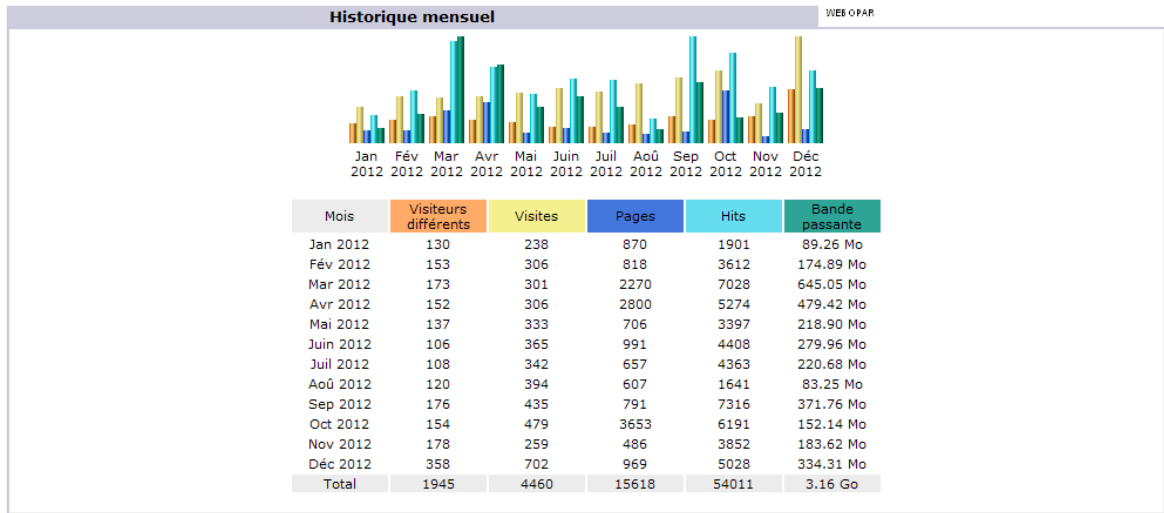


Figure 2. Monthly access of the OPAR Data Center during 2012. For each month listed in column 1, columns 2 through 6 show the number of different visitors, the total number of visits, the number of pages viewed, the number of hits, and the downloaded bandwidth in Megabytes (Mo) or Gigabytes (Go).

FTP access:

ivsopar.obspm.fr  
 username: anonymous  
 password: your e-mail  
 cd vlbi (IVS directory)

This year, from July to September, the OPAR was disconnected from the CDDIS Data Center because of the new mirror method installation using lftp.

#### 4. Future Plans

The OPAR staff will continue to work with the IVS community and in close collaboration with the two other Primary Data Centers in order to provide public access to all VLBI related data.

To obtain information about the OPAR Data Center please contact: [ivs.opa@obspm.fr](mailto:ivs.opa@obspm.fr)