

Data Center at Communications Research Laboratory

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Abstract

Functions of the IVS Data Center at Communications Research Laboratory is integrated in the Key Stone Project VLBI data analysis system. Databases and analysis results of the Key Stone Project VLBI experiments are archived and disseminated to researchers from the data server.

1. Introduction

As a data center of the IVS, Communications Research Laboratory (CRL) holds and archives data obtained from the geodetic VLBI experiments organized by CRL. Major parts of the data are from the Key Stone Project VLBI experiments [1] but other regional and international VLBI experiments are also included. The analysis results of the experiments performed before October 1992 were summarized in a data analysis report published by CRL [2]. The VLBI experiments with the Key Stone Project VLBI stations began in August 1994 and the analysis results and databases are archived and disseminated to interested users over the network.

2. Data Products

The first Key Stone Project VLBI experiment was performed in August 1994, and the almost daily experiments began in January 1995. At the beginning of the daily observations, duration of the experiments was about six hours. The duration of the experiments was increased to about 23.5 hours to improve the quality of the results in September 1997. At the same time, the frequency of the experiments was decreased from daily to alternate days, instead. Table 1 and Figure 1 show how the number of experiments and valid number of observed delay for each year. Number of experiments was decreased in 1998 but the number of observations was increased substantially.

Table 1. Number of experiments and observed delay used in the data analysis as of March 1, 1999.

Year	Number of experiments	Number of valid observed delays
1994	2	261
1995	172	15837
1996	344	66005
1997	306	287452
1998	183	473864
1991	29	81780
Total	1036	925199

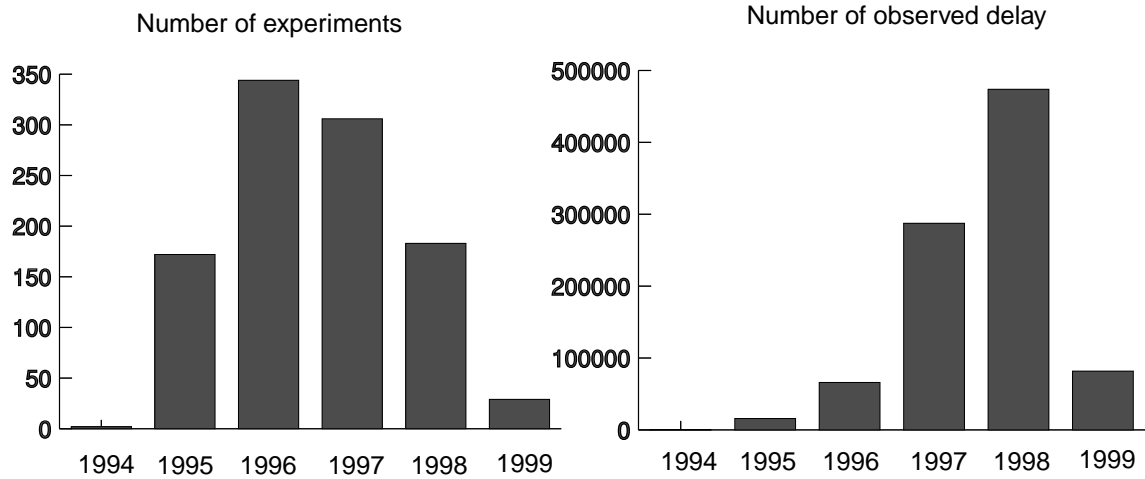


Figure 1. Number of experiments and observed delay used in the data analysis as of March 1, 1999.

3. Technical Staff for the KSP VLBI Data Center

Technical staff members who are contributing data analysis at the CRL are listed below. In principle, no operations are necessary for the regular VLBI observations of the Key Stone Project VLBI network.

- Tetsuro Kondo, Responsible for overall operations and performance.
- Yasuhiro Koyama, Development of various software.
- Jun Amagai and Kouichi Sebata, Maintenance of data server system.
- Naoki Goto and Muneo Takeda, Operator at Koganei station, Space Engineering Development Co., Ltd.

4. Current Status and Future Plans

CRL is also maintaining a mirror site of the WWW homepage for IVS. Those who are geographically close to Japan are encouraged to access the mirror site at <http://ivs.crl.go.jp/mirror/>. The analysis results and detailed explanations of the Key Stone Project are available at <http://ksp.crl.go.jp/>. From the site, the rapid estimates of the Earth's rotation parameters and the variation of the flux densities of the observed sources in the term of correlated amplitudes are also available. At present, the analysis results are described in a format defined by CRL, but the use of the SINEX (Solution Independent Exchange) format is currently planned as of March 1999.

References

- [1] Taizoh Yoshino: Overview of the Key Stone Project, J. Commun. Res. Lab., Vol. 46, No. 1, pp.3-6, March 1999

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- [4] Yasuhiro Koyama, Kosuke Heki, and Yukio Takahashi: KSP VLBI System; Data Analysis Software, *J. Commun. Res. Lab.*, Vol. 46, No. 1, pp.77-81, 1999