

## SECTION 6 - DATA CENTER REPORTS

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### 6.1 CDDIS REPORT

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#### INTRODUCTION

The Crustal Dynamics Data Information System (CDDIS) has supported the archive and distribution of laser ranging data (both lunar and satellite) since its inception in 1982. This report summarizes the activities for the year 2001 and future plans of the CDDIS with respect to the International Laser Ranging Service (ILRS). General CDDIS background and system information can be found in the CDDIS data center summary included in the 1999 ILRS Annual Report.

The CDDIS laser data archive consists of data (SLR on-site normal points, SLR full-rate, and LLR normal points), information about these data, and products derived from these data. The CDDIS is located at NASA Goddard Space Flight Center and is operational on a dedicated UNIX server. The CDDIS archive of laser ranging data and products are accessible to the public via anonymous ftp and the WWW at address:

<ftp://cddisa.gsfc.nasa.gov/pub/slr> and <ftp://cddisa.gsfc.nasa.gov/pub/reports>

#### DEVELOPMENTS IN 2001

##### *SLR DATA AND PRODUCTS ARCHIVE*

A summary of all data received during 2001 can be found in Section 8.

During 2001, the CDDIS continued the archive of daily and hourly SLR data files, augmenting the archive as required for new missions. The daily files are archived by satellite and year:

[ftp://cddisa.gsfc.nasa.gov/pub/slr/slrql/satname/yyyy/new\\_qlyymmddt.allsat](ftp://cddisa.gsfc.nasa.gov/pub/slr/slrql/satname/yyyy/new_qlyymmddt.allsat)

The hourly files can be found in the yearly *allsat* directories on CDDIS:

[ftp://cddisa.gsfc.nasa.gov/pub/slr/slrql/allsat/yyyy/new\\_qlyymmddt.allsat](ftp://cddisa.gsfc.nasa.gov/pub/slr/slrql/allsat/yyyy/new_qlyymmddt.allsat)

where *satname* is the satellite name, *yyyy* is the four-digit year, *yy* is the two-digit year, *mm* is the two-digit month, *dd* is the two-digit day, and *h* is the hour (a through x). All data available in the hourly files will be delivered the following day in the daily *allsat* file as well as the individual satellite files. The hourly files are retained on-line on the CDDIS for three days after which time they are deleted. The CDDIS staff continues to create and augment merged, time-sorted, monthly satellite files as daily files are delivered each day. The monthly files contain data for the specific month and satellite; therefore users can easily retrieve data for a particular time span.

The CDDIS staff continued to migrate older SLR full-rate data from magnetic tape to on-line. Monthly files of full-rate data are created from the daily station files approximately six months after the observation month.

The CDDIS continued to support the ILRS Analysis Working Group (AWG) pilot projects by archiving solutions from ILRS Analysis Centers (ACs) and Associate Analysis Centers (AACs). These solutions were deposited in the CDDIS by the ACs and AACs and copied to public disk areas within the SLR data directories.

The file of SLR eccentricity information was modified in 2001. The new format accommodates large eccentricity values amounting up to several kilometers, includes the Cartesian eccentricities corresponding to the local vectors, and includes all known DOMES numbers for the SLR sites.

*SUPPORT OF THE ILRS CENTRAL BUREAU*

The CDDIS staff continued to maintain the e-mail distribution lists (or exploders) to aid communication within the ILRS infrastructure. A list of these exploders and their members can be viewed at URL:

[http://ilrs.gsfc.nasa.gov/ilrs\\_exploders.html](http://ilrs.gsfc.nasa.gov/ilrs_exploders.html).

These e-mail exploders are maintained in an automated fashion, updated when any changes are made to the data base of personnel information.

The CDDIS computer facility hosts the Web site for the ILRS:

<http://ilrs.gsfc.nasa.gov>

The CDDIS staff also assisted the ILRS Central Bureau in preparation and publication of the 2000 ILRS Annual Report.

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## 6.2 EDC 2001 GLOBAL DATA CENTER REPORT

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### INTRODUCTION

Since November 1998 the EDC serves as one of the two ILRS Global Data Centers. All SLR data and information continue to be available to the public via our ftp server and/or at the Web server of DGFI at the addresses mentioned at the end.

The EDC hardware components reported in the ILRS Annual Report 2000 have not changed.

### DEVELOPMENTS IN 2001

The maintenance and monitoring of the SLRmail and SLReport mail exploder for communication within the ILRS was performed, and some minor errors were eliminated. The same was done for the backup procedures for time bias functions and predictions. The SLR station change and configuration log files were also updated when the stations sent their changes in the appropriate way.

The hourly NP data exchange procedure was updated several times, and is well established now. All data files at our ftp server are updated hourly, and additionally the corresponding summary files are updated too. The hourly updated files are available at the ftp server in the directories:

pub/laser/qldata/satname (e.g.satname lageos1)

and the hourly updated summary files in:

pub/laser/summaries/sum\_yymmdd.edc  
 sum\_yymmdd.htsi  
 sum\_yymmdd.global

where: *yy is the year, mm is the month, and dd the day of the month.*

The hourly transferred NP files from EDC, CDDIS/HTSI, and the summaries of both are available at:

pub/laser/qldata/hourly (for EDC)  
 hourly\_htsi (for CDDIS/HTSI)  
 hourly\_global (for both)

The same was done for the daily and subdaily predictions. The procedures were updated due to new requests and/or new satellites. Predictions are stored at:

pub/laser/predictions (predictions of HTSI)  
 pub/laser/predictions/DPAF-PRED (predictions of ERS-2 from D-PAF/GFZ)  
 RGO\_PRED (predictions of RGO/NERC)  
 CHAMP\_PRED (predictions of CHAMP from D\_PAF/GFZ)  
 GRACE\_PRED (predictions of GRACE from D\_PAF/GFZ)  
 MCC\_PRED (predictions of MCC/Moscow)  
 NASDA\_PRED (predictions of NASDA/Japan)

Backup procedures for routine operations are in place if the primary responsible institutions are not available.

### FUTURE PLANS

Procedures need to be extended to handle two-color NP SLR data files. A quality check of all incoming NP files has to be executed before delivery to CDDIS/HTSI, and the SLR stations should be informed about blunders in their data for resubmission of these incorrect data.

Furthermore, the procedures for controlling the data contents at both ILRS global data centers have to be updated to guarantee the same content at both sites. Most of EDC's effort comes from new requests and new satellite projects.

## REFERENCES

Seemueller, W., EDC Report, In: Pearlman, M., Taggert, L. (eds.), International Laser Ranging Service 1999 Annual Report, pp. 148-150, NASA/TP-2000-209969, 2000.

Seemueller, W., EDC Report, In: Pearlman, M., Taggert, L., and Torrence, M. (eds.), International Laser Ranging Service 2000 Annual Report, pp. 6-7 to 6-8, NASA/TP-2001-209987, 2001.

See also reports at former CSTG SLR/LLR Subcommittee and ILRS General Meeting reports at the ILRS Web pages.

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EDC Web Page <http://www.dgfi.badw-muenchen.de/edc/edc.html>  
anonFTP <ftp.dgfi.badw-muenchen.de> (anonymous)  
ILRS Web Pages (mirror of ILRS Web pages at CDDIS):  
[http://www.dgfi.badw-muenchen.de/edc/ilrs/ilrs.gsfc.nasa.gov/ilrs\\_home.html](http://www.dgfi.badw-muenchen.de/edc/ilrs/ilrs.gsfc.nasa.gov/ilrs_home.html)