

The IGS Global Data Center at the CDDIS – an Update

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Abstract: The Crustal Dynamics Data Information System (CDDIS) has served as a global data center for the International GPS Service (IGS) since its start in June 1992, providing on-line access to data from nearly 200 sites on a daily basis. This paper will present information about the GPS and GLONASS data and products archive at the CDDIS. General information about the system and its support of other international space geodesy services (the ILRS, IVS, and future IDS) will also be discussed.

The Crustal Dynamics Data Information System (CDDIS) is a dedicated data center supporting the international space geodesy community, providing easy and ready access to a variety of data sets, products, and information about these data. The data center was established in 1982 as a dedicated data bank to archive and distribute all Crustal Dynamics Project-acquired data and information about these data. Today, the CDDIS continues to serve as the NASA archive and distribution center for space geodesy data, particularly GPS, GLONASS, laser ranging, DORIS and VLBI data. The specialized nature of the CDDIS lends itself well to enhancement to accommodate diverse data sets and user requirements. The CDDIS is operational on a UNIX server with over 550 Gbytes of on-line disk storage. A majority of the archive is devoted to GPS data and products.

The CDDIS serves as one of the primary data centers for the following International Association of Geodesy (IAG) services: the International GPS Service (IGS), the International Laser Ranging Service (ILRS), the International VLBI Service for Geodesy and Astrometry (IVS), the International Earth Rotation Service (IERS), and the International DORIS Service (IDS).

The CDDIS has served as a global data center for the IGS since its start in June 1992, providing on-line access to GPS data from nearly 200 GPS and 50 GLONASS sites on a daily basis as well as the products derived by the IGS Analysis Centers from these data. The CDDIS supports a majority of the working groups and pilot projects within the IGS.

In May 2001, the CDDIS began supporting the IGS Low Earth Orbiter Pilot Project (LEO-PP) by archiving data from a network of approximately forty sites operating at a one-second sampling rate (typically). These data are available in files containing fifteen minutes of data stored in subdirectories by GPS day, hour, and data type. Starting in January 2002, the CDDIS LEO-PP archive expanded to include data from GPS receivers on-board the LEO satellites; currently data from SAC-C and CHAMP are stored in daily files, Hatanaka-compressed RINEX format, in subdirectories by satellite and day. In

2002, this satellite archive will be expanded to include data from ICESat and Jason. The CDDIS is also archiving CHAMP orbit products from associate analysis centers participating in a LEO-PP comparison project.

The CDDIS supported the Ionosphere Working Group's HIRAC/SolarMax campaign in April 2001. This weeklong activity was organized to study the effects of the solar maximum on the Earth's ionosphere using a dense, high-rate GPS tracking network. Data from 104 sites in thirty countries totaling thirteen Gbytes in size were collected and archived.