CEDAR Data Service

• Mission is to provide:
  – long term archive for observations and models of the Earth's upper atmosphere and geophysical indices and parameters needed to interpret them,
  – browsing capability to survey the data holdings and identify periods, instruments, models, of interest,
  – reliable data access methods that are fast, stable and interactive, and
  – detailed documentation on data acquisition and reduction.

• CEDAR Data Service also supports the CEDAR community which is represented by the CEDAR Scientific Steering Committee consisting of representatives from the community and NSF and meets twice a year.
CEDARWEB features

• Dedicated set of computer and storage facilities at HAO, high speed access via the Internet2 and Abilene networks.
• Resources are nominally available 24 hours a day and all data holdings are backed up in two forms: near-line tape and the NCAR MassStore System (MSS).
• Robust data ingest, cataloging and data browsing (plotting) and retrieval using leading-edge web technologies. Access via SPARC.
TIMED/CEDAR

- Support of Ground-based investigations requires the ability to make data available within 54 hours; ingest within 24 hours of receipt
- Generate Product Availability Notice (for NASA)
- Each dataset has a URL and is available to users
- Accommodates many new data types: multi-channel photometers, images, etc.
- In production since shortly after TIMED launch
- Part of CEDAR DB and SPARC
Mauna Loa Solar Observatory

- Dedicated community observing facility
- Mauna Loa > 11,000 ft, via microwave network
- 6 instruments, operating from ~ sunrise to ~ sunset up to 365 days a year
- Data volume > 5 GB/day, all returned before the next day - uses LDM (Unidata), store/ forward/ retry
- Majority of data processed same day and cataloged, archived and made available to users
Internet Data Delivery

PSPT

ACOS

ECHO

Local LAN

DATA FRONT-END

GRAPHICS FRONT-END

LDM

DATA PROC.

DATA PROC.

WEB SERVER

MLSO

HAO

USERS

WEB SERVER
Earth System Grid

• DOE SciDAC Collaboratory project
• Makes distributed (climate) datasets available in near-real time, handles registration, catalogs, etc.
• Includes Grid services, registration, replica location, metadata, security, data transport, resource management, including offline storage access
• HAO is contributing data access and transport