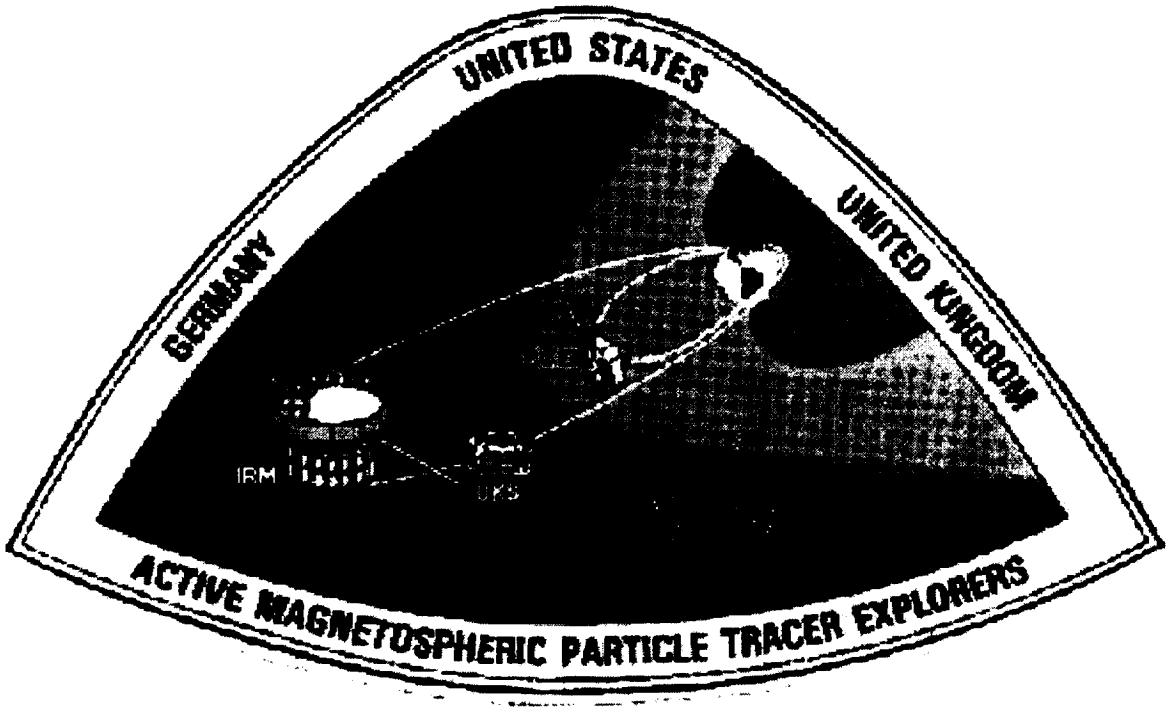
Final Report
NAGW-4913
Substorms and Magnetic Flux Erosion

There were no publications associated with this grant. Instead, we used the funds to place IRM, Prognoz-10, and GOES-5/6/7 data sets on-line. The attached copies of WWW pages indicate the nature of these services at APL. Since the time when the work was performed, a more complete set of IRM data has been placed on-line at the University of New Hampshire.

http://cdaweb.gsfc.nasa.gov/AMPTE/



JHU/APL AMPTE/CCE Science Data Center (SDC)

Introduction

Welcome to the AMPTE/CCE Science Data Center (SDC) Home Page.

The SDC is the central analysis and archive facility for the CCE spacecraft , one of three satellites in the AMPTE mission . The three CCE particle instruments (CHEM , HPCE , MEPA) and two field instruments (MAG , PWE) collected data over the four-year mission of August 1984 to January 1989 in a roughly 8-Re equatorial orbit which precessed over a range of apogee local times .

Choose one of the following topics to find out more about AMPTE/CCE:

- **Summary Images** *last updated: Jan 20, 1997*
- Publications and Presentations
- Data Archive Description
- Interactive GUEST Account
- CCE MAG ASCII and HDF Access Data NEW!

- AMPTE/IRM Data NEW @ Univ New Hampshire SSG
- GOES Data
- Prognoz 10 Data
- Additional JHU/APL Missions (the Projects and Missions hotspot)

Contacts

- Principal Investigator: Dr. Dick McEntire *(richard.mcentire@jhuapl.edu)*
- SDC Manager: Mr. Stuart Nylund *(stuart.nylund@jhuapl.edu)*

Last Revised: Oct 21, 1996

Accesses sinse June 12, 1996

http://sa-www.jhuapl.edu/AMPTE/goes/

GOES Data Files

Files of Zip-compressed ASCII data listings containing Dipole VDH magnetic field data from GOES satellites are available for retrieval. The on-line selection, currently several months of data from 1984, will be expanded in time to cover several years. Decompressed (i.e. ASCII text) data is also available for alternate viewing for **DOY 248** (Sep 4) of 1984.

The files, which are partioned by individual days within subdirectories, are accessible through the following hot spot:

Get **DATA FILES** here.

Zip Data Compression Utility

All data files were compressed using the zip format. A freeware decompression application program, Unzip, is available from the Info-ZIP workgroup which maintains this utility for a range of hardware platforms. Zip and Unzip are compatible with the DOS-based PKZIP by PKWARE, Inc.

For **MacIntosh** Netscape users, place your Unzip application program in your Netscape Helpers folder if you download it from the Info-ZIP workgroup site. When you click on the first GOES zip file, Netscape will inform you that it is does not know this format and will allow you to pick an application to interpret it. Choose Unzip from the Netscape Helpers folder. Afterwards make sure to set Unzip in Helpers of the General Preferences (Options pull-down) to have Mime type: application, Subtype: zip, Extensions: zip, File type: .zip, and optionally Action: Launch Application.

Data File Descriptions

There are files of two **time resolutions** for each day:

- High resolution (Master) data: 3-second resolution with filename *MGnnyrdoyA.zip*
- Low resolution (Summary) data: 60-second resolution with filename *SGnnyrdoyA.zip*

where descriptive components within the filename are:

- *nn* is the GOES-nn **satellite number** (e.g. GOES-5, GOES-6, GOES-7),
- *yr* is the **year** of the data,
- *doy* is the **day** of year of the data.

For example, MG0584248A.zip contains compressed 3-second magnetic field data from the GOES-5 satellite for September 4, 1984.

Data File Contents

Each ASCII data file contains:

- A single header line containing:
  - the GOES satellite name
  - the two-digit year of the file
  - the three-digit day of year (DOY) of the file
  - the satellite longitude in geographic coordinates

    - the data descriptor *1-m Dipole VDH* for the subsequent data
- Multiple lines of measurement data, each containing:
    - the seconds of day for the data
    - the V data component
    - the D data component
    - the H data component

Each file usually contains 24 hours of data.

Here's an example of a 60-second GOES-5 resolution data listing for **DOY 248** (Sep 4) of 1984.

Stipulations

- Users with scientific questions may contact either David Sibeck at APL (*david.sibeck@jhuapl.edu*) or Howard Singer at SEL (*hsinger@sec.noaa.gov*) .
- Users wishing to order data sets for other intervals and other satellites should contact the NGDC. For information, see the GOES Web page at *http://www.ngdc.noaa.gov:80/stp/GOES/goes.html* .

[AMPTE/CCE Main Page]

http://sd-www.jhuapl.edu/RPI/PTE/prognoz-10/index.html

Prognoz-10 Data Files

Two sets of files of Zip-compressed ASCII data listings containing magnetic field and plasma data observations at 10-sec time resolution from the Prognoz-10 spacecraft are available for retrieval. The on-line selection currently contains ~5 months of data from mid 1985. Decompressed (i.e. ASCII text) data is also available for alternate viewing for a shortened 1-day file of **Plasma** for Apr 30, 1985 and for an 11-day file of **Magnetic Field** for Oct 23-Nov 3, 1985.

The files are accessible through the following hot spot:

Anonymous ftp access to Prognoz-10 DATA FILES.

Zip Data Compression Utility

All data files were compressed using the zip format. A freeware decompression application program, Unzip is available from the Info-ZIP workgroup which maintains this utility for a range of hardware platforms. Zip and Unzip are compatible with the DOS-based PKZIP by PKWARE, Inc.

For **MacIntosh** Netscape users, place your Unzip application program in your Netscape Helpers folder if you download it from the Info-ZIP workgroup site. When you click on the first GOES zip file, Netscape will inform you that it is does not know this format and will allow you to pick an application to interpret it. Choose Unzip from the Netscape Helpers folder. Afterwards make sure to set Unzip in Helpers of the General Preferences (Options pull-down) to have Mime type: application, Subtype: zip, Extensions: zip, File type: .zip, and optionally Action: Launch Application.

Data File Descriptions

Each **Plasma** file has a name of the form PLA_*MMYY* .zip where

- *MM* is the two-digit **month** within the year of the data,
- *YY* is the two-digit **year** of the data.

For example, PLA_0585.zip contains compressed 10-second Plasma data from the Prognoz-10 satellite for May, 1985. When a Plasma file is decompressed, each line within the resultant ASCII file contains the following items:

- month,
- day,
- year,
- hour,
- minute,
- second,
- North/South flow angle (deg),
- East/West flow angle (deg),
- flux nv (10**6/cm**2-s),

A 31-day file of data will be approximately 1Mbyte in size.

Each **Magnetic Field** file has a name of the form MF_*MMDDYY* .zip where

- *MM* is the two-digit **month** within the year of the data,

- *DD* is the two-digit **day** within the month of the data,
- *YY* is the two-digit **year** of the data.

For example, MF_052785.zip contains compressed 10-second Magnetic Field data from the Prognoz-10 satellite for the latter part of May, 1985. When a Magnetic Field file is decompressed, each line within the resultant ASCII file contains the following items:

- clock (not of use),
- Bx (GSE),
- By (GSE),
- Bz (GSE),
- B,
- day,
- month,
- year (2-digit),
- hour,
- minute,
- second,

A 10-day file of data will be approximately 1.2Mbytes in size.

Stipulations

For permission to use these data or answers to scientific questions, contact

- David Sibeck at APL (*david.sibeck@jhuapl.edu*);
- Georgy Zastenker, PI for plasma observations (*gzastenk@esoc1.iki.rssi.ru*); or
- V. Styazhkin, PI for magnetometer observations (*styazhkin@izmiran.rssi.ru*).

[AMPTE/CCE Main Page]