

Status Report on Polar MFE Data Processing

May 5, 2005

Incorporation of Hydra magnetic field data

- The programming for processing the combined 54 Hz Hydra-B (SM2) and 8 Hz MFE (SM1) is 90% completed:
 - Finished programming for reading Hydra Level 0 data into UCLA format
 - Finished program for despinning the combined dataset
 - Checking the new procedure and comparing with the data files produced by using MFE data alone
- Comparison between MFE and Hydra-B data:
 - Confirmed the phase lag due to the second low-pass filter onboard
- We remind users of the data that the main advantage of the 54 Hz data is its more rapid cadence. It does not make magnetometer data processing simpler for us as all steps in the processing procedures still need to be performed.

Regular Data Processing

Since last report we have been focusing on the programming for incorporating Hydra-B data. The processed data are up to April 2004 as in last report. Future data products for 2004 and beyond will incorporate Hydra-B data (for SM2 intervals). The table below shows the status of the various segments in processing the MFE data.

	Months Completed	Months in Process	Received not processed	% Complete
Timing Table	98 (up to 4/04)	5/04	5/04 – 2/05	91%
Attitude Data Smoothing	104 (up to 10/04)	11/04	2/05	96%
Offset Calculation	98 (up to 4/04)	5/04	5/04 – 2/05	91%
Level 0 Rotation	98 (up to 4/04)	5/04	5/04 – 2/05	91%
Coupling Matrix Calculation	98 (up to 4/04)	5/04	5/04 – 2/05	91%
Preliminary High-resolution Data	98 (up to 4/04)	5/04	5/04 – 2/05	91%
Data Correction	98 (up to 4/04)	5/04	5/04 – 2/05	91%
Magnetometer Calibration	98 (up to 4/04)	5/04	5/04 – 2/05	91%
Level 1 Processing	98 (up to 4/04)	5/04	5/04 – 2/05	91%
Data Inspection	98 (up to 4/04)	5/04	5/04 – 2/05	91%
Key Parameters	98 (up to 4/04)	5/04	5/04 – 2/05	91%
Web Data Server	98 (up to 4/04)	5/04	5/04 – 2/05	91%

Reprocessing (for 1996-1999 data)

- Finished the reprocessing for 03-05/1996 since last report
- 03-06/1996 data resubmitted