MPPE Low Energy Particle Meeting Agenda

19 May 2016

1) CDF　Data Format of L1 Data

CDF Skelton

CDF　file name?

Separate Files for different data (ex. multiple L-mode data files)?

Integrated files for L-mode/M-mode/H-mode?

File unit? 1day or 1rev.?

1day? Data download date?

Observatio date?

Time information?

(These should be discussed also at MMO\_SWG to be held in fall 2016.)

HK　data　in CDF file?

Decoded HK or not decoded HK?

If decoded HK, does 1bit HK have to use 1byte?

2D/3D data array sequence?

Sequence of Items in CDF: Time -> HK -> Data ?

2) Action Item Status

<MPPE MODE>

AI-20150415-13

Consider how to use MSA Table E for M-mode data. If additional macro command is necessary, one of the MSA macro commands may be converted to MPPE mode change macro command. -> CLOSE

MSA will use 2 macro commands:

1. Initiate MSA & threshold setup
2. MCP check

Table E: ration of event stream increases

Event stream: used for magnetospheric science

Changing to table-E mode requires 2 commnads. They will be put into one of the MPPE macro commands (one of the 5 MPPE macro-commands) or use two discrete commands.

AI-20150911-1

MSA team will send ISAS the information about 2 MSA macro-commands and commands to change to / recover from table-E mode.

Status 20160519:

Not started

AI-20150415-1

ISAS will send “MPPE DATA MODE ver 2.00 20150413 (After 2nd Integration Test@ISAS)” to MEA/MIA/MSA teams. -> CLOSE

AI-20150415-2

MEA/MSA/MIA teams will check the contents of “MPPE DATA MODE ver 2.00 20150413 (After 2nd Integration Test@ISAS)” and send comments to ISAS by 15 May. -> CLOSE

AI-20150911-2

Y. Saito will start talking with SERENA team in order to mutually understand the operation / data mode.

Status 20160519:

MPPE has started talking SERENA at HEWG meeting @ Rovaniemi (submitted data/operation information with other instruments on MMO)

<Data Management>

AI-20150415-3

MSA will test download data from ISAS data server using SDTP.

IRAP will help. -> CLOSE

AI-20150415-4

Level0 data format will be decided by negotiation between ISAS and IRAP.I RAP will transfer the information to LPP. -> OPEN

ISAS made a header file to make MIA Level0 data (see “2) MPPE LEP Data Management”). The detail of the data format (including the necessity of the common information) will be determined through the comparison of CDF skeleton file between the teams.

Status 20160519:

in progress

AI-20150415-5

ISAS will check the requirement on CDF data format (relating with the future conversion to PDS 4.0). -> CLOSE

<status>

Conversion from CDF to PDS4 will be automatically made by a conversion

software, that imposes some limitations on the CDF format. Therefore CDF

should not be made freely.

The structure of CDF should be simple.

Simple time series 2D or 3D data are preferable.

(In this sense, there will be no problem with magnetic field, velocity

moments.

There will be some problem with energy spectra of ions/electrons, when

(for example) energy step number, FOV resolution, observation timing etc.

will change depending on the observation(data) modes.

One possibility is to prepare all the data format into one CDF and put

invalid data to the data for unused data mode or prepare multiple CDF

files (one CDF for each observation(data) mode).

The detail of the CDF->PDS conversion limitation will be informed in the

near future.

AI-20150415-6

IRAP will make proposal about the CDF data format. Based on the information and negotiation between IRAP/ISAS/LPP, the detailed CDF data format will be decided. (MEA, MIA, MSA CDF file format should be similar.) -> CLOSE (Change to a new AI)

Based on the information (two files concerning the requirements to be compatible with PDS4.0; MMS CDF format specification) and the requirements to be compatible with “auto-plot”/SPEDAS, MEA, MIA, MSA teams will make CDF skeleton file for Level1 data and compare / modify the skeleton file. Comparison will star from MSA<-> MIA (CDF file for ion data should have much similarity), then MSA/MIA <-> MEA.

AI-20150911-3

MEA team will circulate MMS CDF format specification document to MSA(LPP), MIA(ISAS).

Status 20160519:

not started

AI-20150911-4

Based on the information (two files concerning the requirements to be compatible with PDS4.0; MMS CDF format specification) and the requirements to be compatible with “auto-plot”/SPEDAS, MEA, MIA, MSA teams will make CDF skeleton file for Level1 data and compare / modify the skeleton file. Comparison will start from MSA<-> MIA (CDF file for ion data should have much similarity: within ~4 months), then MSA/MIA <-> MEA (by next LEP meeting in April 2016).

Status 20160519:

not started comparison between MSA <-> MIA

AI-20150415-7

ISAS will talk with MGF team about inclusion of MGF data in the “data storage for internal use”. Low time resolution / direction only data will also be OK if the full resolution data is difficult. -> OPEN

<status>

Y.Saito talked with A. Matsuoka (Co-PI of MGF)

There will be no problem but official request should be sent to the MGF PI in the future.

Status 20160519:

not started talking with MGF PI

AI-20150415-8

TI <-> real time conversion is better to be common to MEA/MIA/MSA.

Need further discussion at MMO SWG. -> OPEN

Status 20160519:

MMO SWG will be held in Fall 2016.

<ESTEC TEST>

AI-20150415-9

ISAS will send the participants information to MMO project by 17 April. -> CLOSE

<Initial Check>

AI-20150415-10

MSA team will send HV & LV initial check plan to ISAS by 22 April. -> CLOSE

AI-20150415-11

MEA team will send LV initial check plan to ISAS by 22 April. -> CLOSE

The HV initial check procedure should take into account the data block loss (due to the clock timing difference between MPO and MMO). If data block loss is found, it is necessary to wait for about 30minuts.

MEA will revise HV initial check procedure in order to reduce the risk of high voltage discharge.

In order to reduce the risk of high voltage discharge during the initial high voltage check, high voltage should be powered on with low voltage (in order to heat up and outgass) for some time before start raising high voltage.

AI-20150911-5

MEA will revise HV initial check procedure in order to reduce the risk of high voltage discharge. MEA team will send ISAS revised HV initial check procedure by around 20 Sep 2015.

Status 20160519:

not started

<Others>

AI-20150415-12

MEA MIA and MSA teams will have next data management meeting at SWT meeting in September 2015. -> CLOSE

1. SWT information
2. Schedule

５) Other Business

Next LEP meeting ?