

CLUSTER/STAFF DATA at CAA.

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LPP: Laboratoire de physique des plasmas

11th Cross-Calibration Meeting, 7-9th April 2010, Goslar.

Content

Data production

- STAFF-SC
- STAFF-SA

Open action items

- Cross Calibration workshop
- 2009 Progress Meeting
- 4th OR

Data delivery plan

Conclusions

STAFF Report

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Data production

STAFF-SC: Both mode

Product	Content	Level	Num. of files	Produced and Delivered to CAA
C?_CP_STA _DWF _NBR/HBR	Decommutated Waveform	1	1 file/ 1 sat/ 24h	<u>Version 02</u> 01 Jan. 2001 to 31 Dec. 2006 <u>Version 03</u> 01 Jan. 2007 to 31 Dec. 2008
C?_CP_STA _CWF _NBR/HBR	Calibrated waveform	2	1 file/ 1 sat/ 24h	None

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STAFF-SC: Both mode

Product	Content	Level	Num. of files	Produced and Delivered to CAA
C?_CP_STA _CS _NBR/HBR	Calibrated Spectra	2	1 file/ 1 sat/ 24h/3h	<u>Version 02</u> 01 Jan. 2001 to 31 Dec. 2005 <u>Version 03</u> 01 Jan. 2006 to 31 Dec. 2008
C?_CP_STA _SC _SPECTRO _NBR/HBR	Spectrograms	3	1 file/ 4 sat/ 3h	01 Jan. 2001 to 31 Jul. 2009

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STAFF-SC

TCOR

We are waiting for time calibrated data for 2009.
Then, DWF and CS will be produced and delivered.

New L2 products CWF

Validation tests are under-progress.
[See P. Robert presentation.](#)

Difference between version 3 and 2

New dataset headers (ceh format).
Completed following cross-cal AI.

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Product	Content	Level	Num. of files	Produced and Delivered to CAA
Science Data				
C?_CP_STA_AGC_	Automatic Gain Control	2	1 file/ 1 sat/ 24h	<u>Version 04</u> 01 Jan. 2001 to 30 Oct. 2009
C?_CP_STA_PSD	Power Spectral Density			
C?_CP_STA_SM	Spectral Matrix			
Auxilliary Data (New)				
C? _CP_STA_SA_NOTS RP_CAVEATS New	NOTSRP Caveat		1 file/ 1 sat/ 24h	<u>Version 01</u> 01 Jan. 2001 to 30 Oct. 2009
C? _CP_STA_SA_PSDN EG_CAVEATS New	PSDNEG Caveat			

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Product	Content	Level	Num. of files	Produced and Delivered to CAA
Science Data (very soon)				
C?_CP_STA _PPP New	Propagation and polarization parameter	3	1 file/ 1 sat/ 24h	
Auxilliary Data (very soon)				
C?_CP_STA_SA _MODESA _CAVEATS New	MODES CAVEAT		1 file/ 1 sat/ 24h	

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Polarization and Propagation Parameters

- Level 3 products
- 1file/day/sat
- Resolution: Same as SM (L2 products)
- New CEF definition: **C?_CP_STA_PPP**

A New frame (B0/MFA) has been requested and added to CAA metadata dictionary.

PPP: **THSVD, PHSVD, ELLSVD, BSUM, PVSIGN, ESUM.**

BSUM and ESUM: for plot thresholds to detect significative regions.

Input

- SM data.
- FGM 5VPS in CDF format from CAA.
- AUX in CDF format from CAA.

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- Caveats associated to this data:

- NOTSRP
- PSDNEG
- MODE: SA, EFW Y/Z (density mode)

Question to EFW team:

As electric field components from EFW are used on board to process STAFF-SA electric components, does it happen that EFW Y and Z are in density mode at the same time?

Note that from EFW failure, no more data for STAFF-SA products dependant on electric field components.

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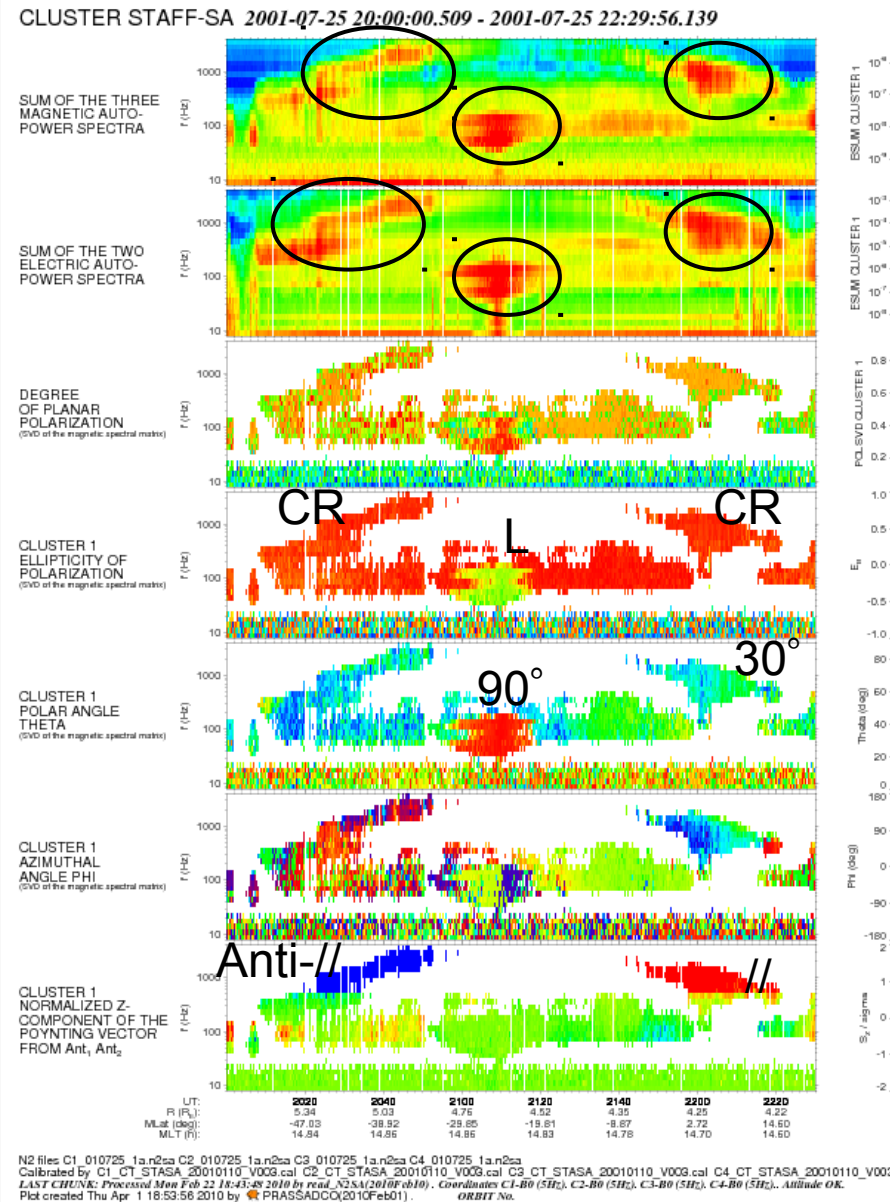
Plot example

BSUM threshold:
1.0E-07 nT²/Hz

Wave polar legend:

CR: circular right
(chorus in the whistler mode)

L: linear wave
(equatorial noise on the
frequency lower than the low
hybrid frequency)



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Cross-Calibration

CC8-AI-45: Open, new date due: ???

Cross calibration study between STAFF-SA and WBD.
O. Santolik has been contacted and will work on it.

STA08-AI-1-2: Close.

- PSD negative values have been removed.
- SM/PSD caveat files: concerning no TSRP (Sun Reference Pulse).

This one will also be attached to PPP.

- SM caveat files: concerning PSD negative values that could be used to calculate the diagonal terms of the spectral matrix.

This one will also be attached to PPP.

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Cross-Calibration

CC10-AI-7-8: Open.

In progress. A version 02 of CR and UG will be delivered (by the middle of May 2010).

STA10-AI-9: Close.

O. Santolik has been contacted to introduce FGM 5VPS in prasadco to process L3 new dataset. The software has been tested and validated.

2009 Progress Meeting

STA09-AI: Close.

All headers have been completed and re-delivered.

• STA10-AI-7: Open.

UG will be soon updated and a version 02 will be delivered (by the middle of May 2010).

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Review Board

R2a: Open, in progress.

- STAFF-SA, PPP, L3

One month (02/2001) of STAFF-SA L3 (PPP) will be soon delivered.

Still waiting for new disks to upload FGM 5VPS from CAA, to produce L3.

- STAFF-SC, CWF, L2

- Tests on NBR mode already done.

- Lot of CPU required.

- Software needs some improvements for productivity.

- Tests on HBR mode remain to be done.

See P. Robert previous presentation.

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Planning for the second phase

Product	Year	Until now	2010
SC DWF	2008	2008	2009
SC Complex spectra			
SC Images	08/2009	2009	2009
SC CWF New	NBR expected soon	2002 - 2009	
SA AGC/ PSD / SM	01/2001 — 09/2009	2009	
SA Polarisation/ Propagation New	02/2001 expected very soon	2002-2009	

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Priority

As P. Robert was implied on other projects, priority has been defined on STAFF-SA favor : an intense effort has been done on L3 STAFF-SA delivery, new version L2 STAFF-SA and associated caveats.

STAFF-SA

- A version 04 of L2 has been delivered recently: New headers, psd negative values removed, caveats added.
- A version 01 of L3 for 02/2001 will be soon delivered to CAA for test ingestion.
- A new caveat will be attached. We are still working on the definition of this new caveat. Information on EFW Y/Z on density mode needed.

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STAFF-SC

- Waiting for TCOR 2009 to produce DWF and CS.
- Still some work to be done to produce CWF.
But work in progress.

Documentation

A big effort to produce updated UG, CR and ICD will be done in April 2010.

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Orbit position

S/C #

- 1
- 2
- 3
- 4

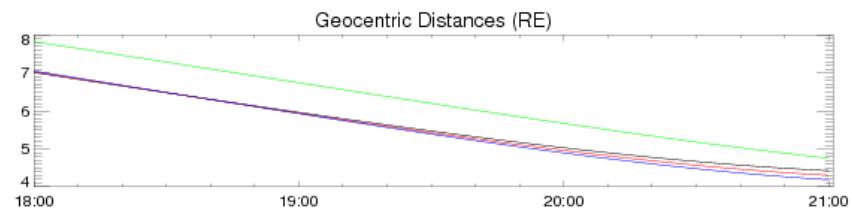
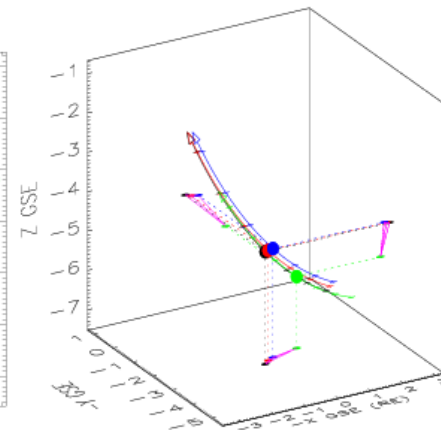
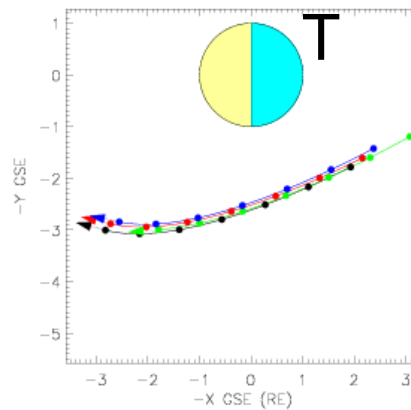
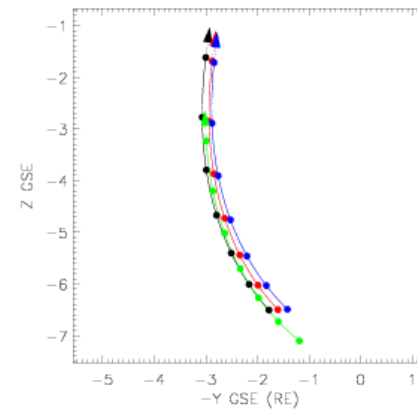
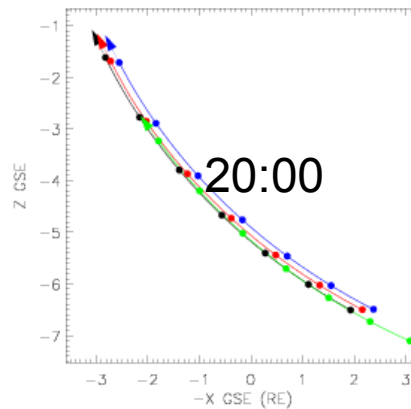
CLUSTER / Positions in GSE

Julian Day 571: 25/July/2001

Period : 25/Jul/2001 18:00:00 - 25/Jul/2001 21:00:00

(Jul. Day 571 - 571)

Duration: 0 day(s) 03:00:00 dt= 30 m.



Orbit position

S/C #

- 1
- 2
- 3
- 4

