
Stream Interactions and CMEs in STEREO and THEMIS and Resulting Geomagnetic Activity

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STEREO Science Working Group 21

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Magnetospheric Response in 2010

Storm/Substorm Events in 2010		
Date	Min. Dst (nT)	Min. AL (nT)
25-27 January 2010	-38	-500
14-19 February 2010	-62	-1000
10-13 March 2010	-27	-600
16-18 March 2010	-28	-300

Magnetospheric Response in 2008

Storm/Substorm Events in 2008

Date	Min. Dst (nT)	Min. AL (nT)
31 Jan - 5 Feb 2008	-44	-1012
7-10 March 2008	-72	-1332
27-31 March 2008	-43	-1045
21-27 April 2008	-43	-1463
14-18 June 2008	-40	-733
10-14 July 2008	-40	-689
8-11 August 2008	-41	-716
2-6 September 2008	-51	-1197
15-20 September 2008	-34	-1000
2-5 October 2008	-37	-700
10-17 October 2008	-60	-909
15-17 November 2008	-31	-500
2-9 December 2008	-32	-1000

Magnetospheric Response in 2009

Storm/Substorm Events in 2009		
Date	Min. Dst (nT)	Min. AL (nT)
24-28 January 2009	-32	-600
3-7 February 2009	-48	-1000
12-17 February 2009	-36	-900
12-16 March 2009	-31	-700
19-23 March 2009	-31	-800
8-12 April 2009	-31	-500
27-31 June 2009	-30	-700
17-26 July 2009	-79	-1148
5-7 August 2009	-35	-600
29-31 August 2009	-32	-900
21-27 October 2009	-42	-1200
27-31 October 2009	-37	-500
23-27 November 2009	-30	-700

Magnetospheric Response in 2008

Storm/Substorm Events in 2008

Date	Min. Dst (nT)	Min. AL (nT)
31 Jan - 5 Feb 2008	-44	-1012
7-10 March 2008	-72	-1332
27-31 March 2008	-43	-1045
21-27 April 2008	-43	-1463
14-18 June 2008	-40	-733
10-14 July 2008	-40	-689
8-11 August 2008	-41	-716
2-6 September 2008	-51	-1197
15-20 September 2008	-34	-1000
2-5 October 2008	-37	-700
10-17 October 2008	-60	-909
15-17 November 2008	-31	-500
2-9 December 2008	-32	-1000

Magnetospheric Response in 2007

Storm/Substorm Events in 2007		
Date	Min. Dst (nT)	AL (nT)
28-31 January 2007	-40	-1296
22-27 March 2007	-69	-1032
31 March - 4 April 2007	-63	-813
16-19 April 2007	-47	-584
27 April - 1 May 2007	-56	-942
21-26 May 2007	-63	-1259
10-13 July 2007	-40	-896
13-17 July 2007	-46	-891
25-28 October 2007	-51	-1047
19-23 November 2007	-71	-1552

	2007	2008	2009
$\text{Dst} \leq -50 \text{ nT}$	4	6	2
$-40 \leq \text{Dst} \leq -50 \text{ nT}$	6	3	1
$-30 \leq \text{Dst} \leq -40 \text{ nT}$		4	10

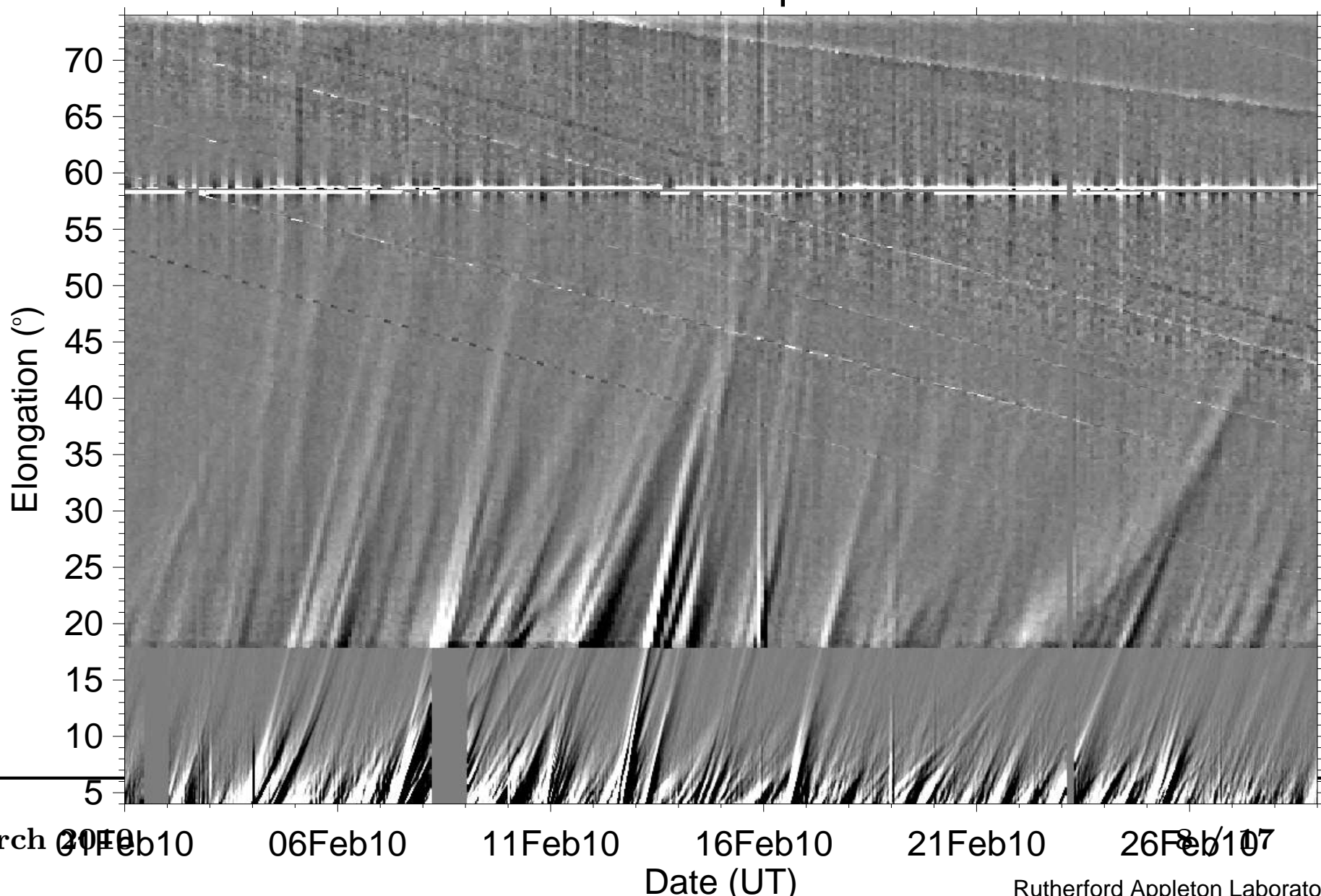
Large storms from **SIR & CME** interactions

80% of moderate storms from **ICMEs**

and 60% of small storms are from **SIRS**, 40% from **ICMEs**

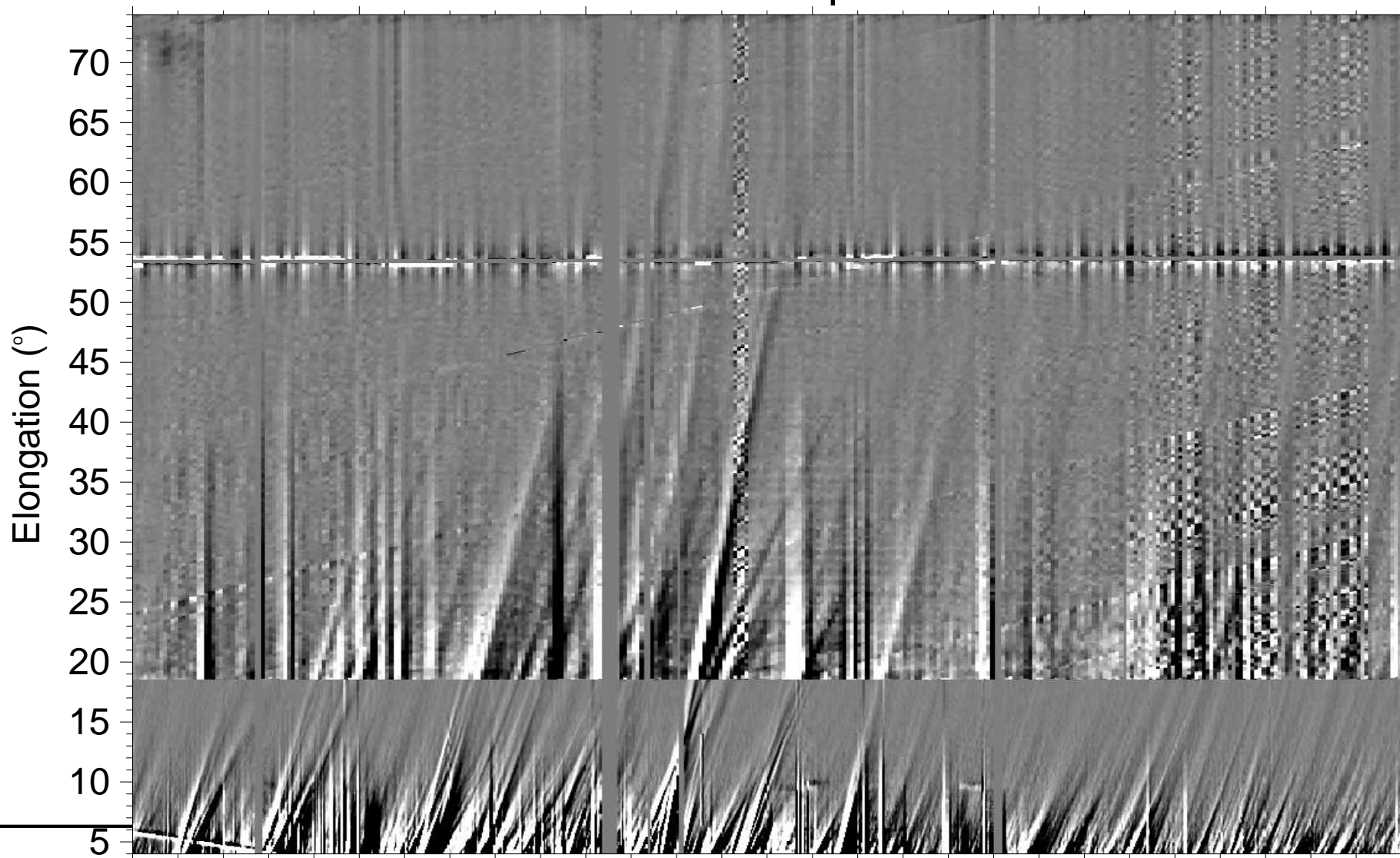
February 2010

STEREO Heliospheric Imager
HI-A: Ecliptic



February 2010

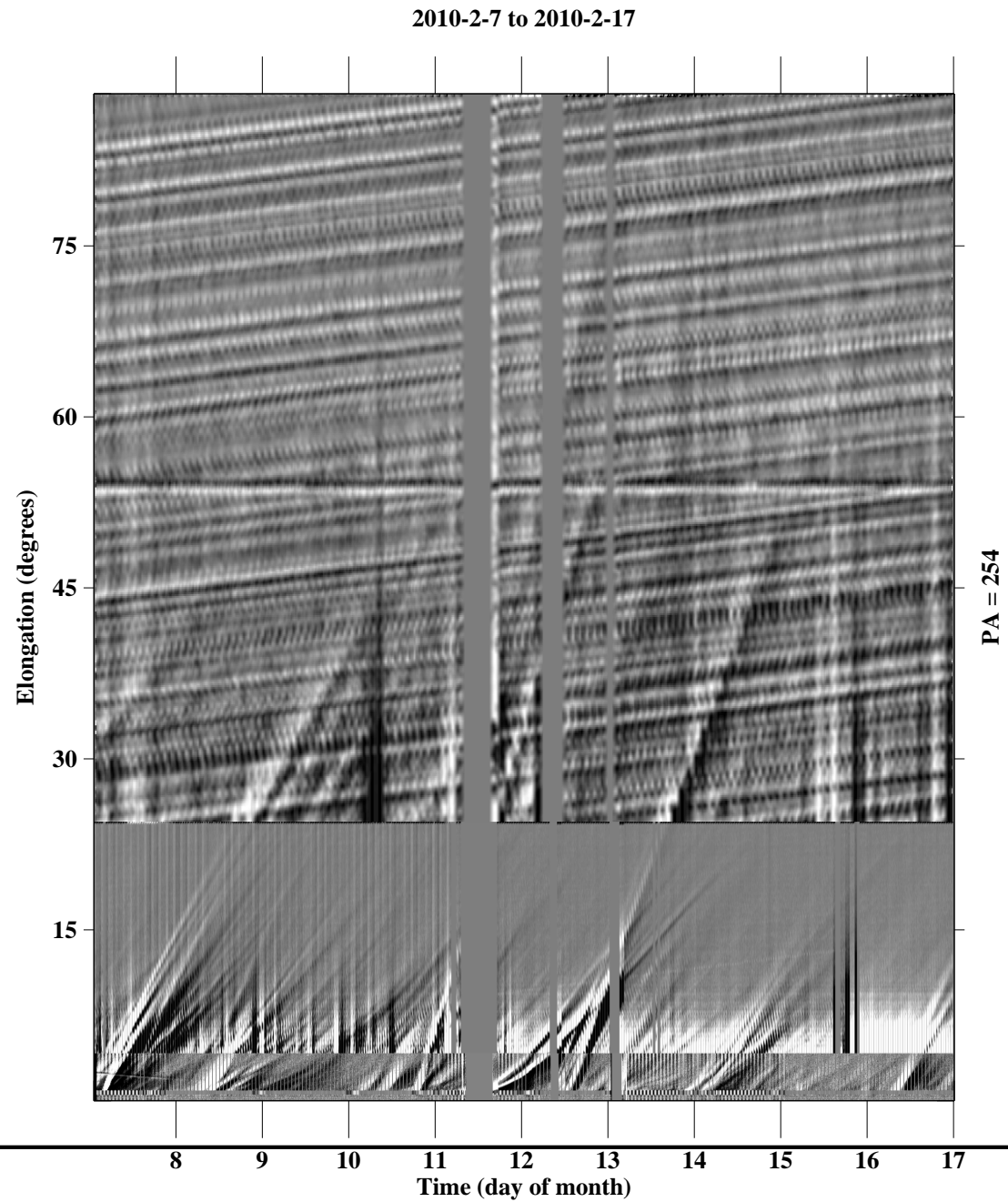
STEREO Heliospheric Imager
HI-B: Ecliptic

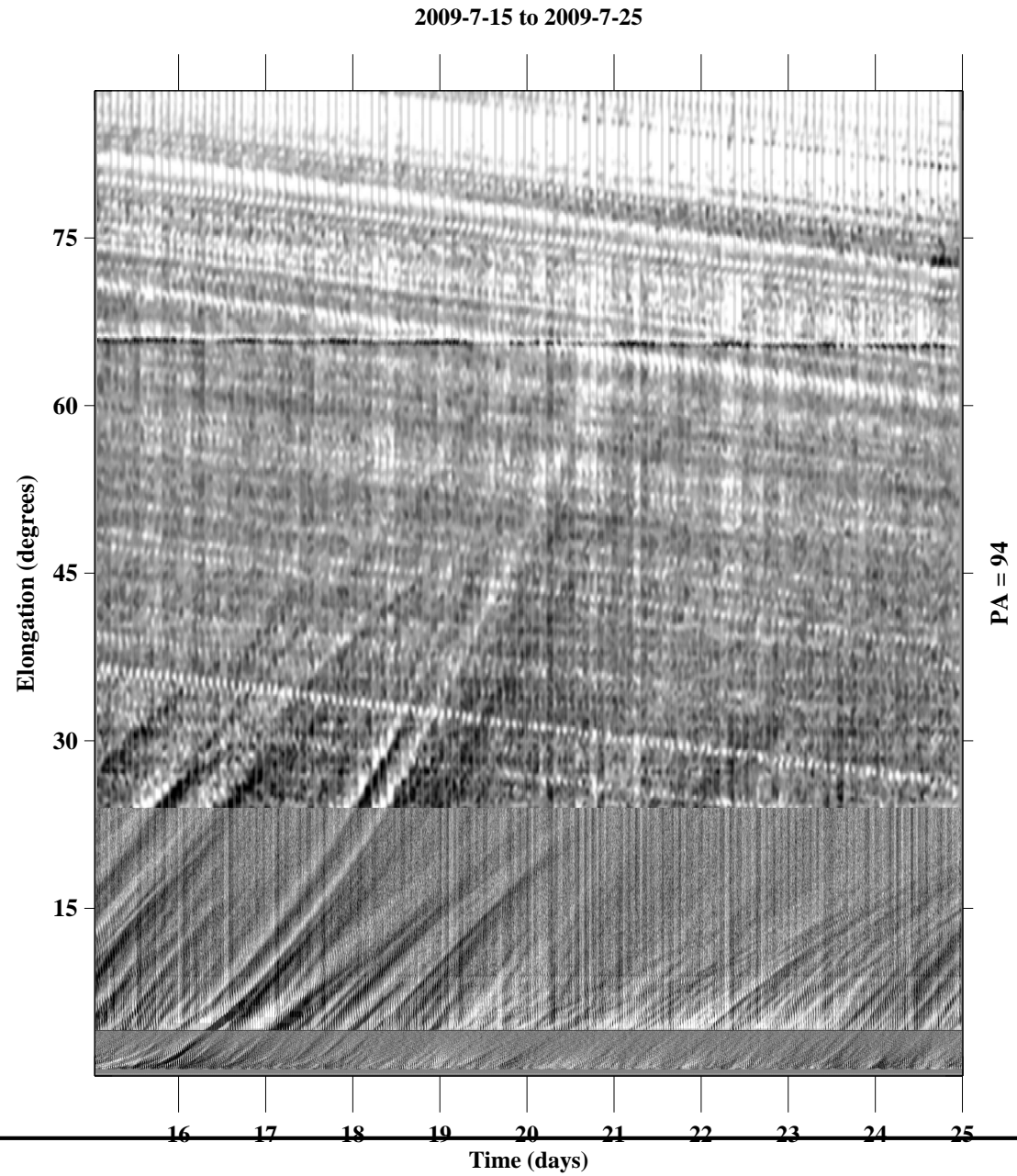


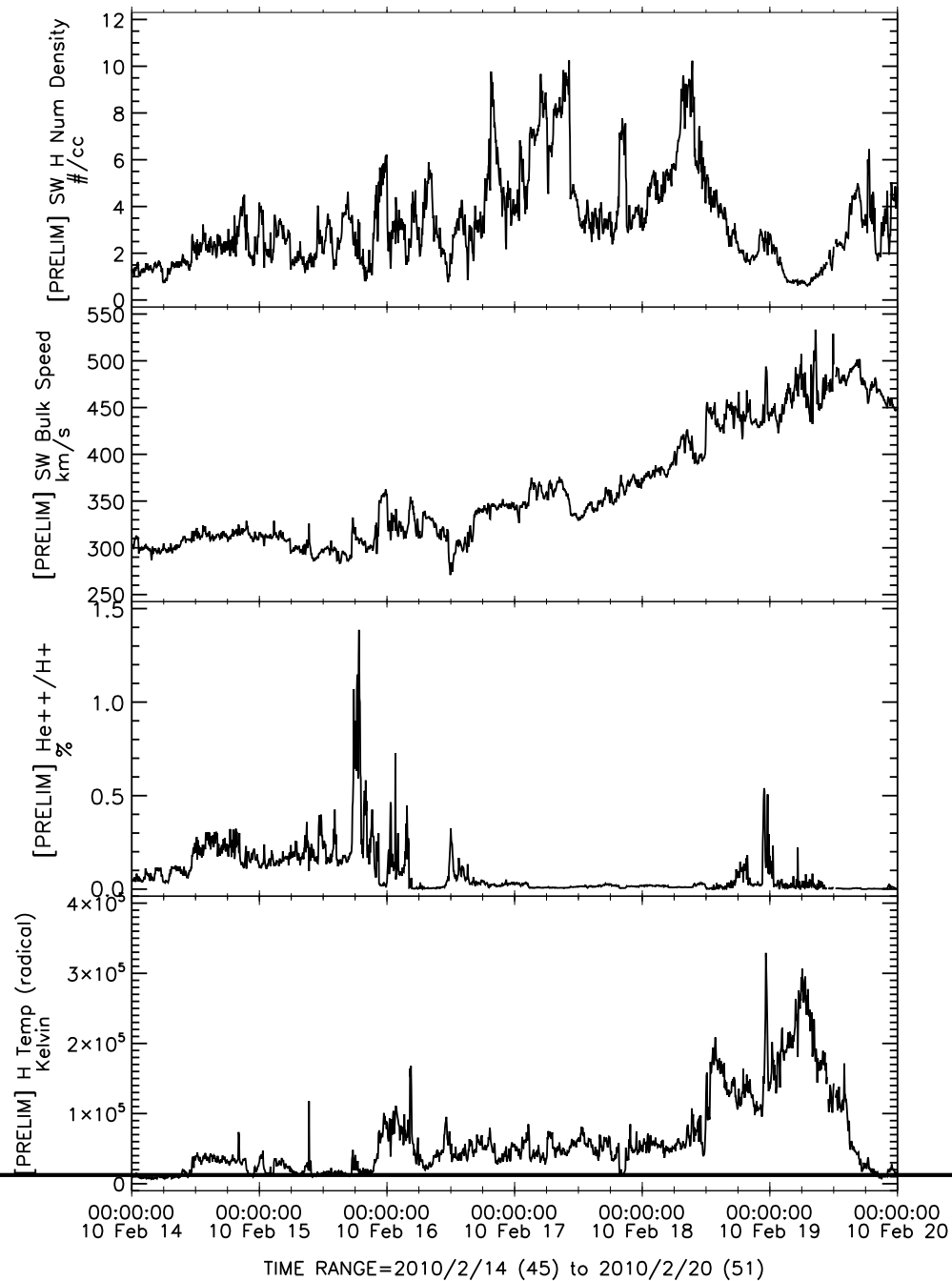
22-26 March 2010 20 Feb 10 06 Feb 10 11 Feb 10 16 Feb 10 21 Feb 10 26 Feb 10

Date (UT)

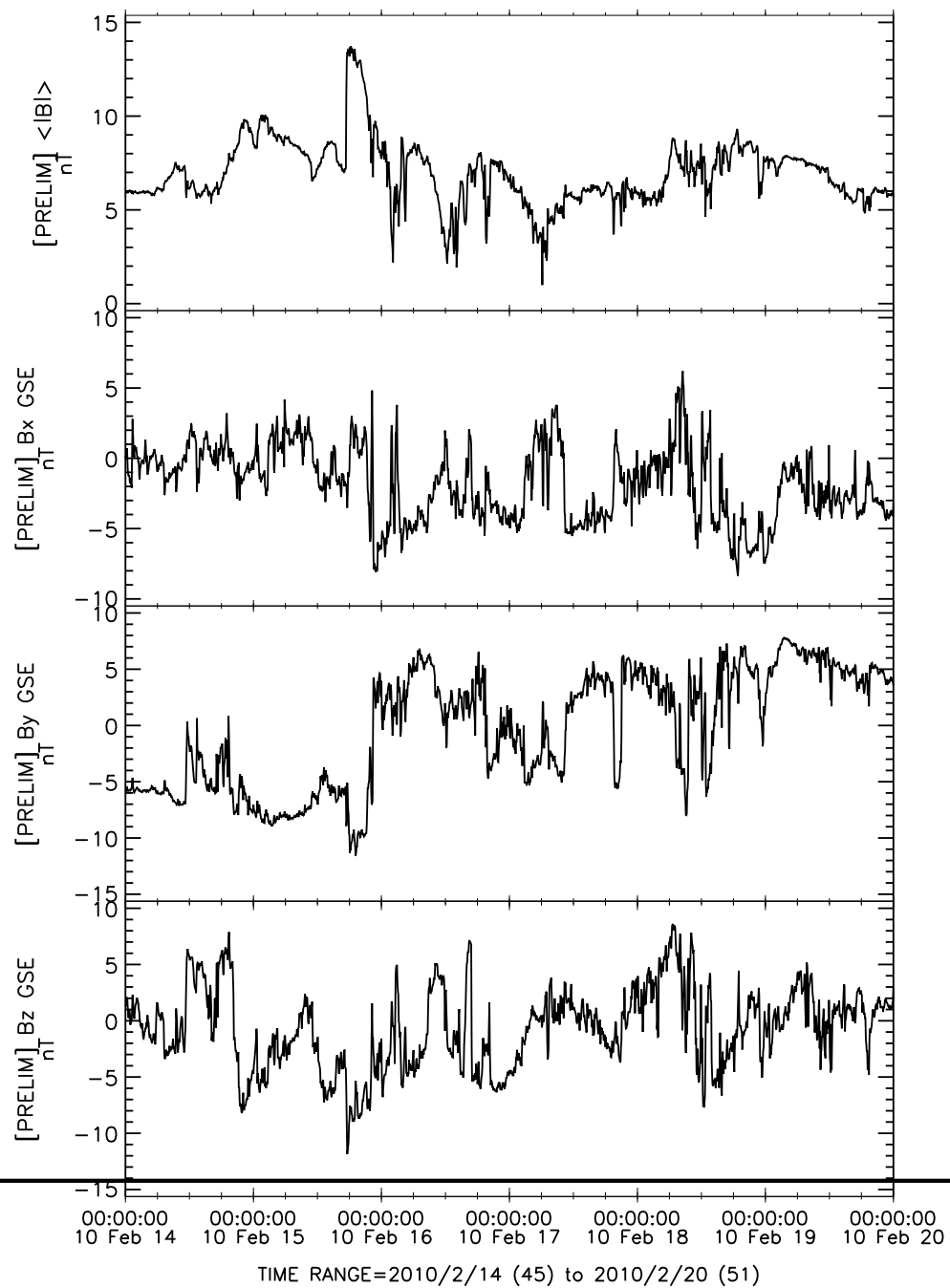
Rutherford Appleton Laboratory





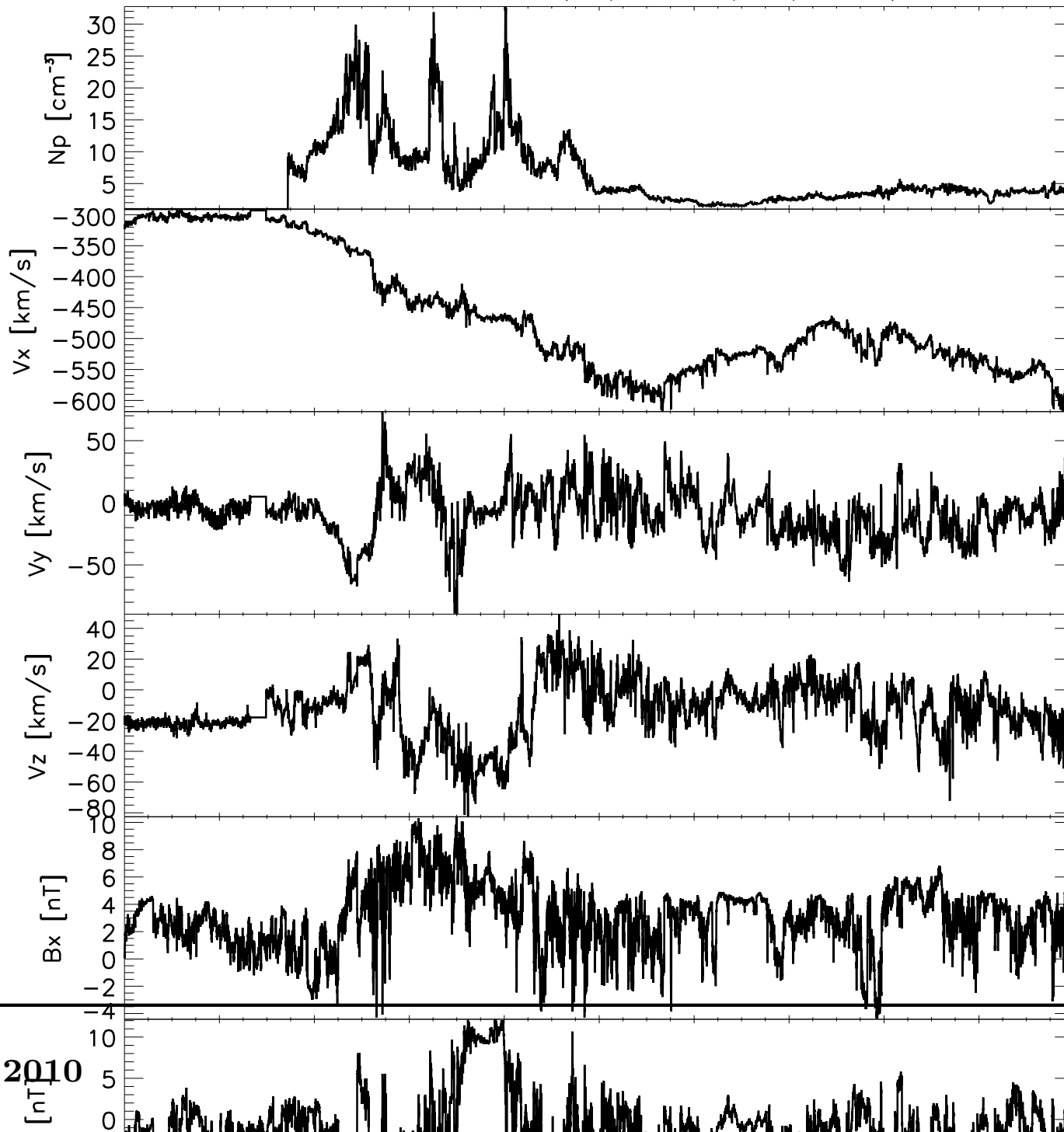


AC MFI>ACE Magnetic Field Instrument K0>5-min Key Parameter [PRELIM]

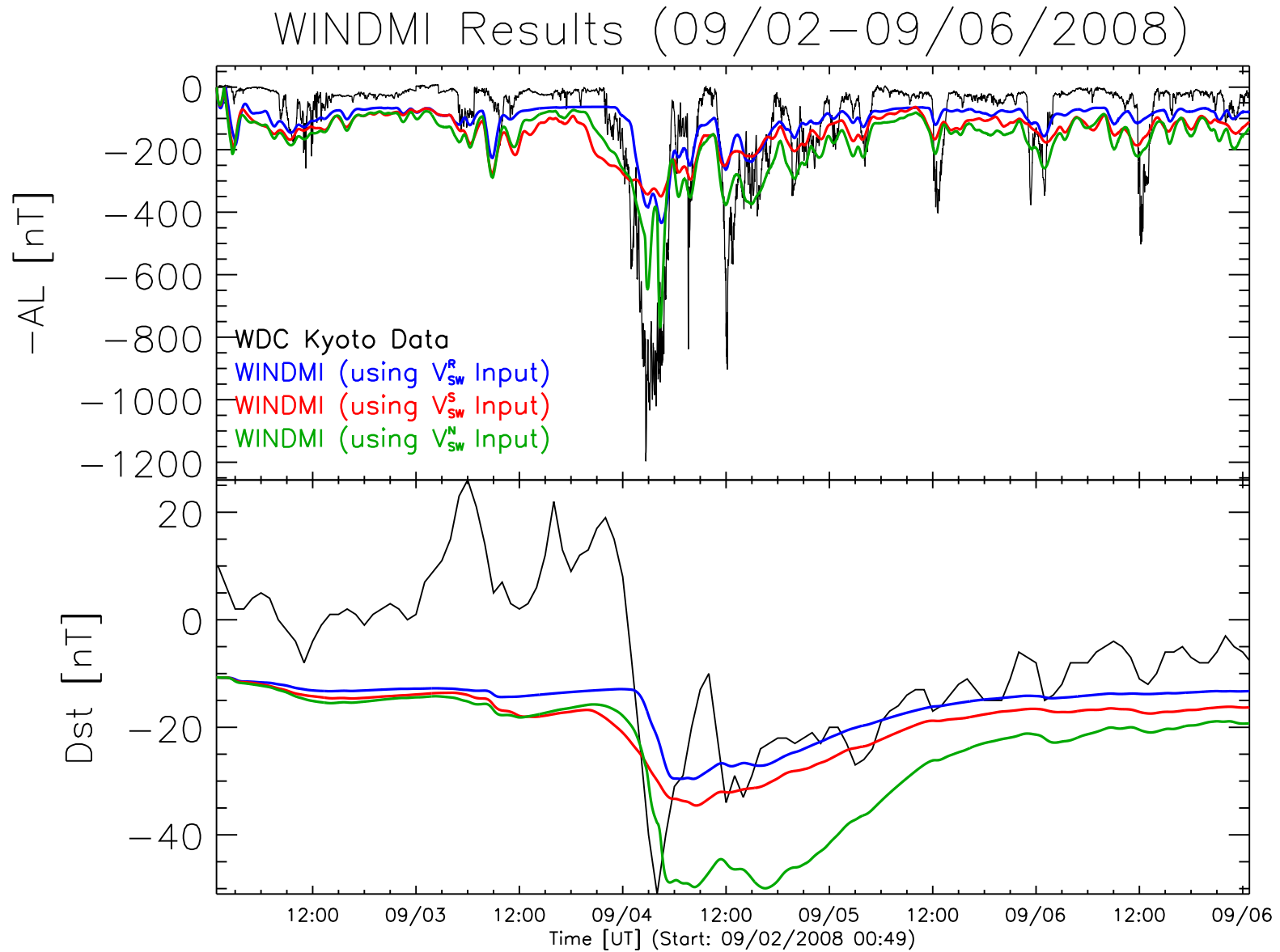


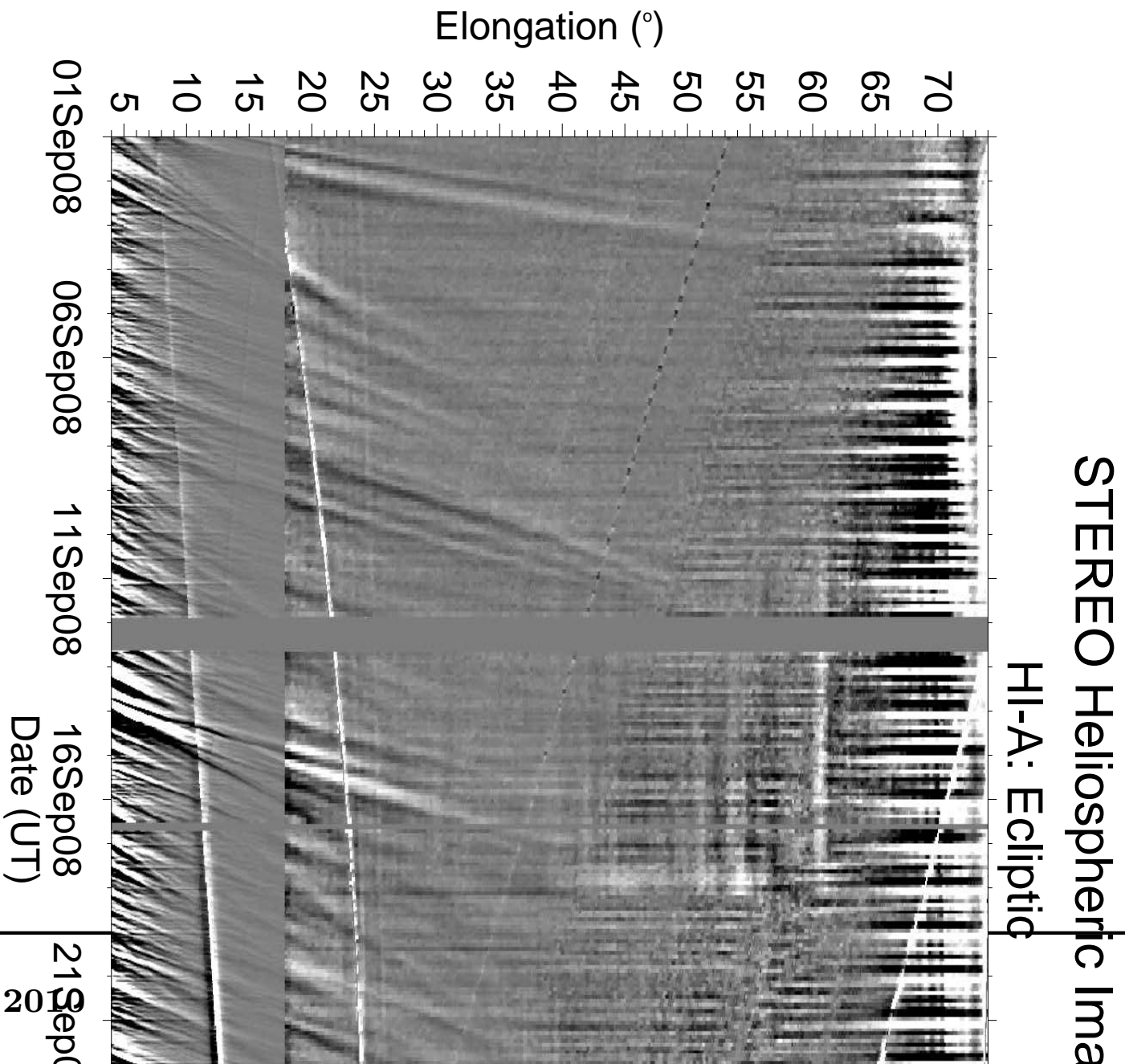
September 2008

Level2 ACE Data (09/02-09/06/2008)



22-26 March 2010

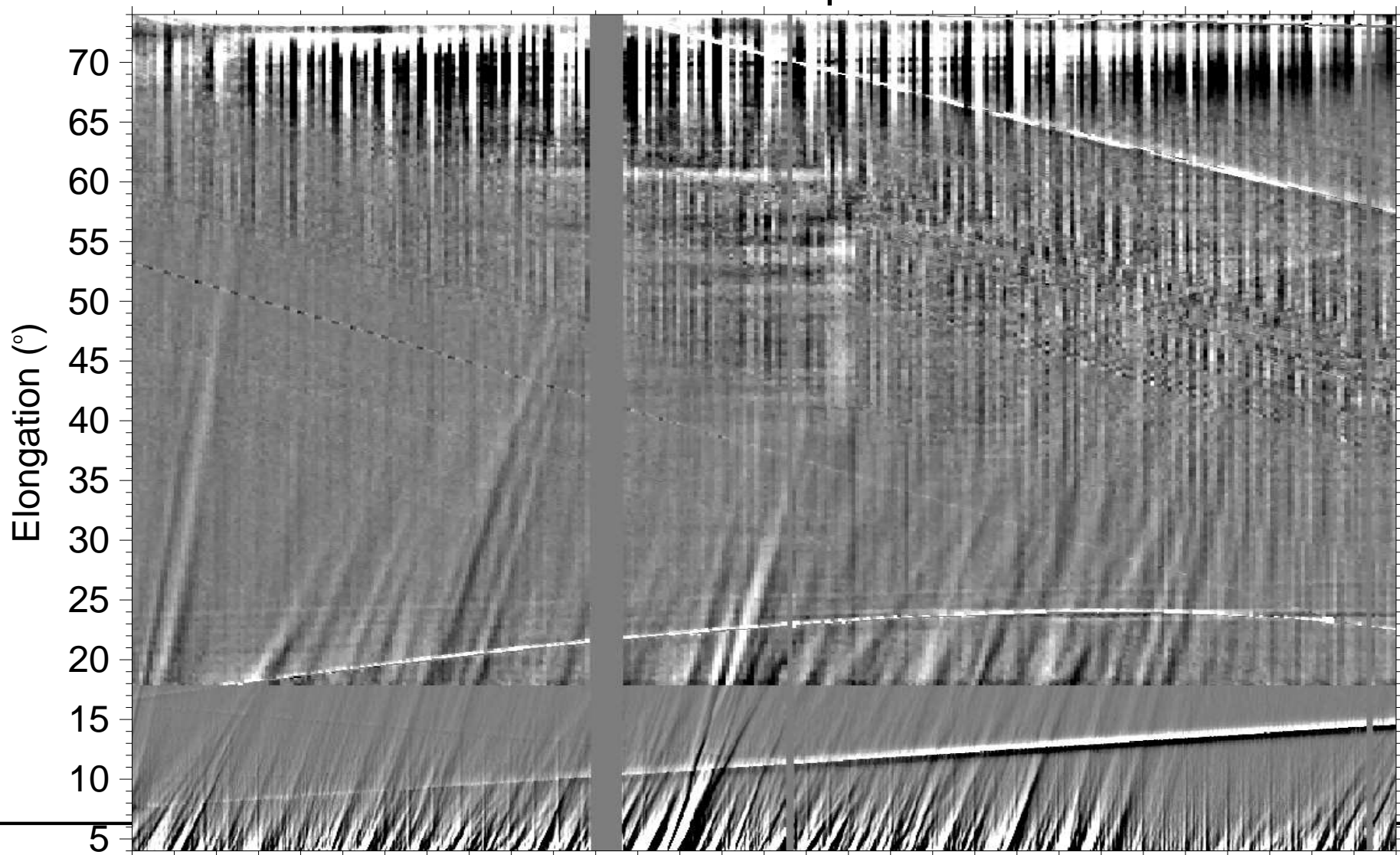




September 2008

STEREO Heliospheric Imager

HI-A: Ecliptic



22-26 March 2008 01Sep08 06Sep08 11Sep08 16Sep08 21Sep08 26Sep08 / 10 Oct 08

Date (UT)