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Supplement of

Low-frequency magnetic variations at the high- β Earth bow shock

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Year	month	date	interval	X C3, km	Y C3, km	Z C3, km	dX, C3-C4, km	dY, C3-C4, km	dZ, C3-C4, km	B, nT	Ni, cc ⁻³	Vx, km/s	Ti, K	beta	Θ_{Bn}
2003	12	31	0114-0119	34913	94800	21088				2,6	11,5	-449	59109	14,4	62
2008	1	2	0850-0855	38872	104425	-24685	31,1	28,0	24,5	2,4	11,9	-336	16678	12,1	83
2008	1	3	1213-1224	60288	45510	-73854	24,3	91,1	45,9	1,3	7,4	-326	13685	27,8	54
2008	1	3	1320-1325	58192	39727	-72696	24,7	92,3	42,4	1,2	7,4	-325	18847	31,9	37
2008	1	3	1420-1425	56009	34357	-71282	25,2	93,1	38,8	1,2	7,6	-322	12401	32,7	44
2008	1	3	1432-1436	55508	33199	-70934	25,3	93,2	38,0	1,1	7,6	-321	11216	39,5	47
2008	1	4	1449-1453	33785	96811	-13331	34,2	23,0	13,2	2,6	14,3	-315	9417	11,7	51
2008	1	4	1455-1459	34078	97039	-13669	34,1	23,2	13,6	2,7	14,1	-313	9850	10,9	49
2008	1	4	1558-1603	37528	99509	-17716	33,5	24,2	17,8	2,4	12,5	-313	10945	12,2	39
2008	1	4	1608-1611	37940	99779	-18208	33,3	24,3	18,4	2,7	12,0	-312	10788	9,4	51
2008	1	4	1620-1623	38572	100181	-18967	33,2	24,6	19,2	2,3	12,6	-314	12102	13,3	45
2008	1	4	1624-1628	38778	100309	-19215	33,2	24,6	19,4	2,4	12,1	-314	11656	12,8	48
2008	1	4	1638-1642	39510	100754	-20101	33,1	25,0	20,3	2,4	12,1	-314	11656	12,8	48
2008	1	4	1644-1648	39774	100910	-20422	33,0	25,1	20,7	2,4	12,1	-314	11656	12,8	48
2011	12	18	1436-1440	40843	100471	-65488	-3,9	30,5	19,6	2,5	11,8	-263	11611	10,7	46
2011	12	18	1445-1450	41050	100211	-65159	-4,0	30,5	19,4	2,8	12,0	-263	10238	8,5	52
2011	12	18	1503-1506	41493	99626	-64430	-4,4	30,5	19,1	2,2	12,9	-262	9733	15,1	58
2011	12	18	1507-1510	41599	99479	-64249	-4,5	30,5	19,0	2,5	12,3	-262	8022	11,4	55
2011	12	18	1515-1520	41765	99246	-63964	-4,6	30,4	18,8	2,2	11,7	-261	10406	14,2	57
2012	2	16	1358-1402	50150	44271	-66984	29,7	-1,2	5,2	2,0	16,3	-377	26884	25,8	56
2012	2	16	1416-1420	51675	44373	-67812	29,4	-0,7	5,3	2,4	14,7	-376	24083	14,0	79
2016	3	21	1405-1409	46344	9387	-75310	-106,7	88,9	-82,6	2,6	12,6	-426	38027	7,4	84

Table S1 . dates, solar wind parameters and shock geometry for 22 high-beta shocks observed by closely spaced Cluster spacecraft.

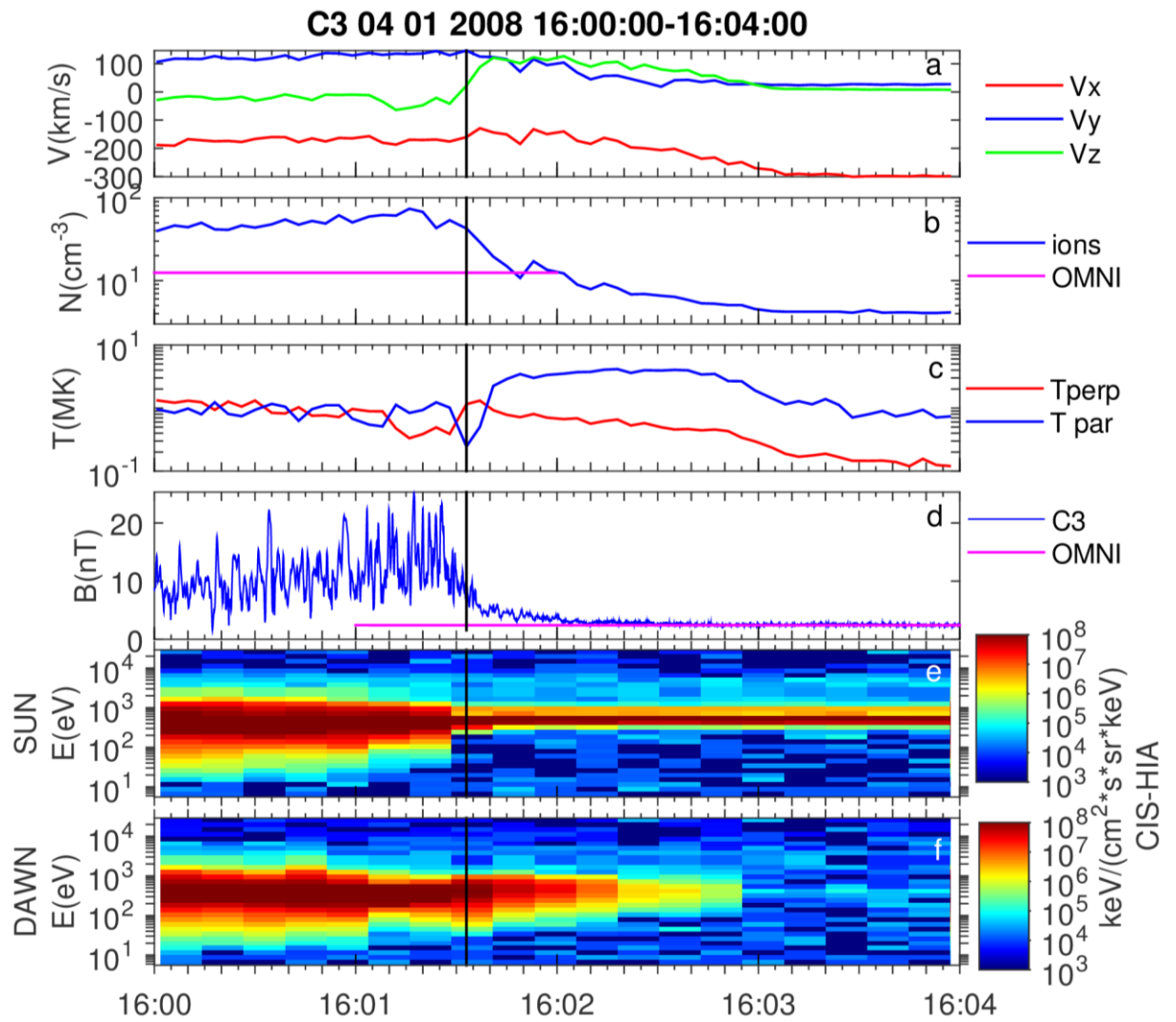


Fig. S1. Overview of C3 magnetic and plasma (HIA) measurements for event 04 January 2008. (a) ion velocity, (b) ion density and OMNI solar wind density, (c) ion parallel and perpendicular temperature, (d) magnetic field magnitude and OMNI IMF magnitude, (e,f) ion spectrograms for the sunward and downward looking sectors.

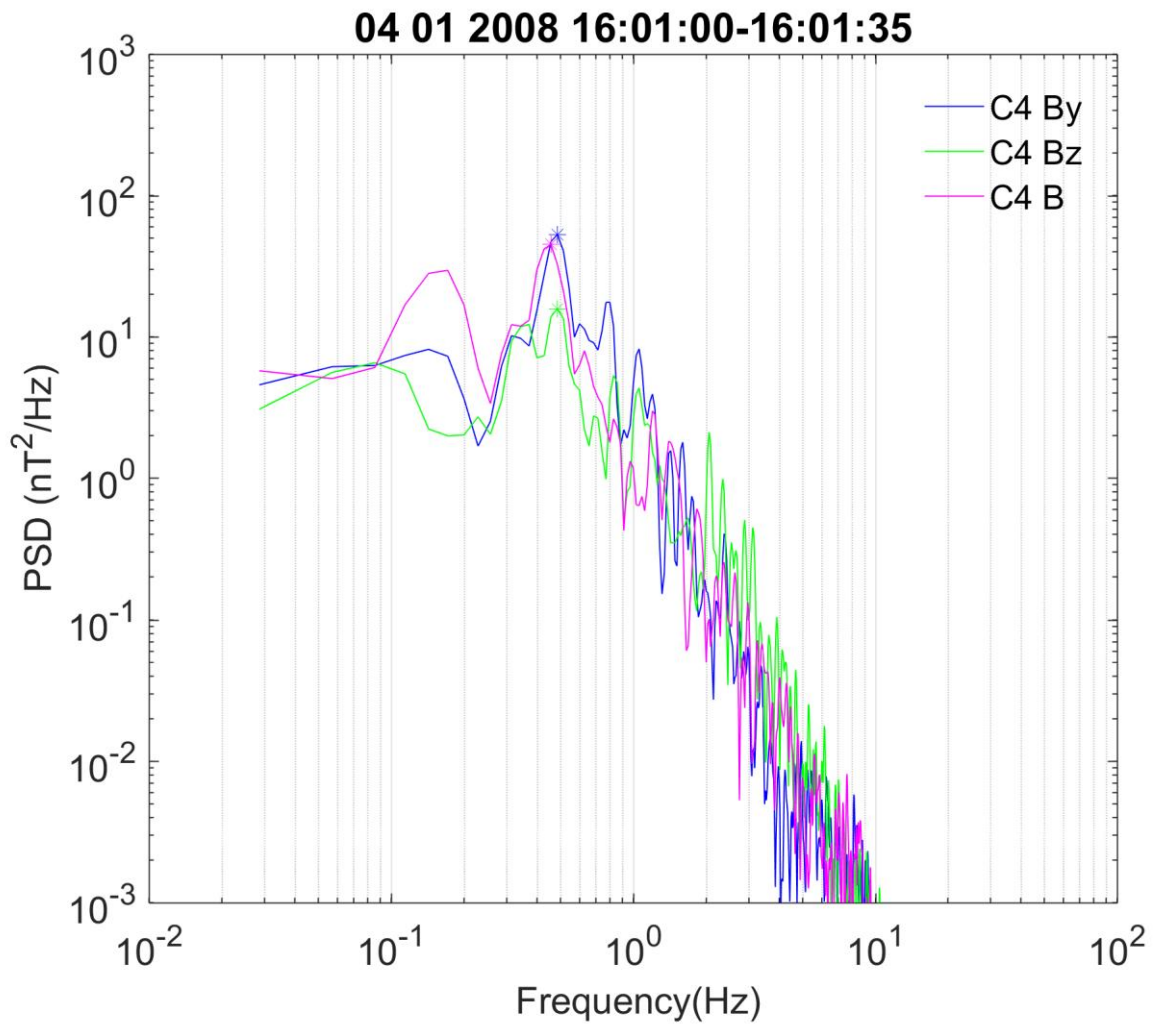


Fig. S2 C4 frequency spectra for By, Bz magnetic components and magnetic field magnitude for shock 04 January 2008.

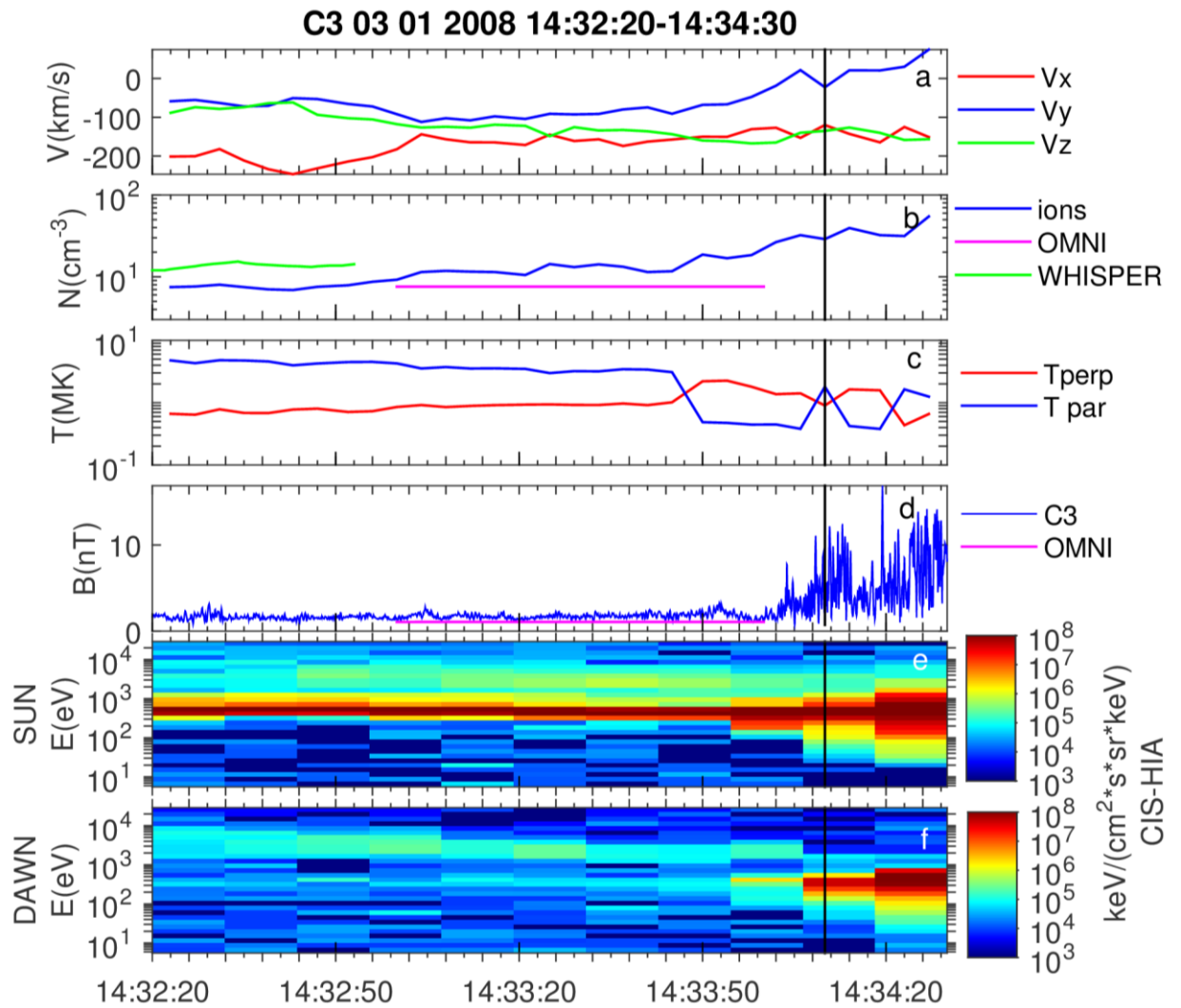


Fig. S3. Overview of C3 magnetic and plasma (HIA) measurements for event 03 January 2008. (a) ion velocity, (b) ion density and OMNI solar wind density, (c) ion parallel and perpendicular temperature, (d) magnetic field magnitude and OMNI IMF magnitude, (e,f) ion spectrograms for the sunward and dawnward looking sectors.

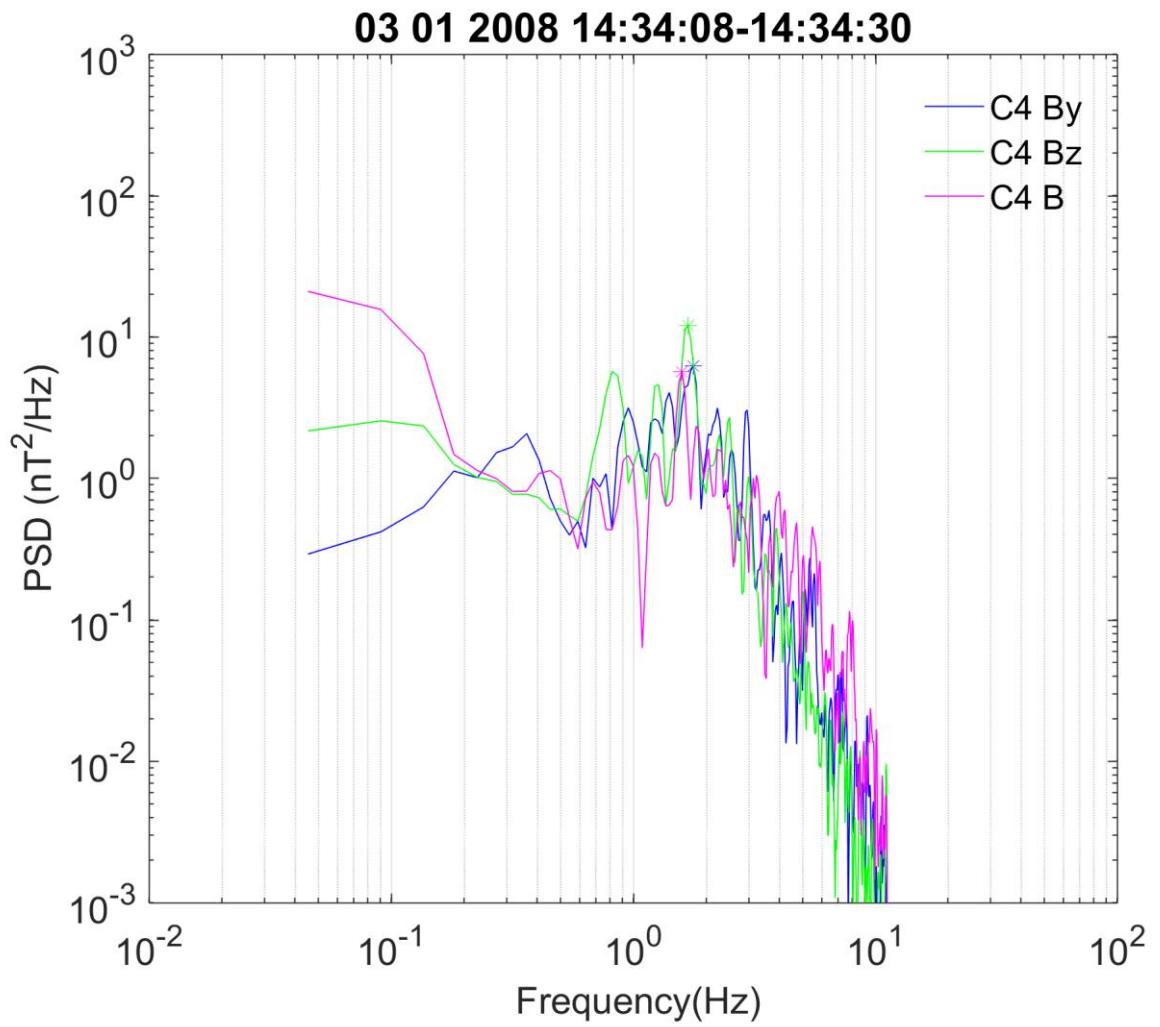


Fig. S4 C4 frequency spectra for By, Bz magnetic components and magnetic field magnitude for shock 03 January 2008.