Table S1. Considered cases, and characteristic background parameters.

№	Date	SW type	S/c in the dayside MSH	S/c at the flank MSH	Start time, UT	End time, UT	Time shifts, sec		θBn, °		Dayside MSH parameters			SW parameters					
							WIND-Spektr-R	Themis-Spektr-R	Dayside MSH	Flank MSH	V/V_A	β_p	α (V,B), °	N, cm^{-3}	V, km/s	|B|, nT	Tp, eV	β_p	α (V,B), °
1	2014-02-08	Ejecta	Themis-A	Spektr-R	00:32	01:06	3440	685	75	75	0.4	0.7	75	6.1	459	11.7	8.4	0.15	61
2	2014-02-09	SLOW	Themis-D	Spektr-R	04:31	04:48	3600	720	56	58	0.5	2.6	150	4.3	431	7.0	2.9	0.10	119
3	2014-02-16	MC	Themis-E	Spektr-R	05:06	05:40	3830	835	80	80	0.5	0.7	64	9.4	405	17.0	3.0	0.04	78
4	2014-02-27	SLOW	Themis-D	Spektr-R	15:25	15:59	3480	720	75	75	0.8	4.3	55	17.4	353	4.7	3.2	1.01	121
5	2014-02-27	CIR	Themis-A	Spektr-R	19:00	19:34	4580	480	85	60	0.7	2.0	82	21.2	472	14.3	21.3	0.89	88
6	2014-07-09	SLOW	Spektr-R	Themis-C	18:09	18:43	3410	-1500	60	80	--	--	--	8.4	351	6.2	4.6	0.40	82
7	2015-03-17	SHEATH	Themis-D	Spektr-R	09:40	10:14	2680	-480	60	45	1.7	3.5	151	24.2	545	21.4	67.1	1.43	136
8	2015-03-17	MC	Themis-E	Spektr-R	20:53	21:10	2840	540	60	60	0.5	1.5	84	9.7	563	18.4	5.6	0.06	62
9	2015-07-04	CIR	Themis-D	Spektr-R	14:05	14:39	3770	162	75	75	1.2	2.2	75	30.5	365	14.5	7.7	0.45	87
10	2016-05-21	CIR	Themis-D	Spektr-R	06:00	06:34	2760	180	80	75	1.9	6.2	109	10.4	493	8.9	8.6	0.46	123
11	2017-11-15	CIR	Themis-D	Spektr-R	15:45	16:19	3230	415	70	70	1.0	3.5	81	27.9	425	9.7	2.6	0.32	102
12	2017-12-04	CIR	Themis-A	Spektr-R	15:50	16:24	4031	712	75	60	2.2	3.8	97	31.8	326	4.9	2.5	1.34	82

Comments on Table S1:

- Time shift dT is defined as follows: $T_i+dT=T_{SpR}$, where T_i is the time of spacecraft i, T_{SpR} is time of Spektr-R; negative values of the shift means that a disturbance is registered first at Spektr-R and than at spacecraft i.
- Dates, Start and End times are defined for Spektr-R spacecraft, for other spacecraft time shifts must be substituted.