

The main parameters of cosmic rays, solar wind, interplanetary magnetic field, and geomagnetic activity for different types of interplanetary disturbances

Date	Date and time of the beginning of the event
Time	
AF, %	Forbush Decrease (FD) magnitude
t_{\min}, h	Time to the FD minimum from the beginning of the event
$A_{xy\max}$, %	Maximum equatorial cosmic ray (CR) anisotropy
$t_{A_{xy\max}}$, h	Time of registration of maximum equatorial CR anisotropy from the beginning of the event
B_{\max}, nT	Maximum interplanetary magnetic field (IMF) value
$t_{B_{\max}}$, h	Time of registration of maximum IMF value from the beginning of the event
V_{\max}, km/s	Maximum solar wind (SW) velocity
$t_{V_{\max}}$, h	Time of registration of maximum SW velocity from the beginning of the event
Kp_{\max}	Extreme values of geomagnetic indices Ap , Kp , Dst in the event
Ap_{\max}	
Dst_{\min}, nT	
$VmBm$	The parameter, which characterizes the disturbance of the solar wind and normalized as follows: $VmBm = (V_{\max} \times B_{\max}) / (V_0 \times B_0)$, where V_0 and B_0 are the parameters of the undisturbed interplanetary medium (usually $V_0 = 400 \text{ km s}^{-1}$ and $B_0 = 5 \text{ nT}$)
Type of interplanetary disturbance	ICME (+ HSS) – an ICME followed by an HSS from CH (ICME + HSS group); HSS (+ ICME) – an HSS from CH, before which an ICME were registered (ICME + HSS group); ICME1 – the first ICMEs from an interacting pair of ICMEs; ICME2 – the second ICMEs from an interacting pair of ICMEs; HSS1 – the first HSS from CHs in the interacting pair HSS1 + HSS2; HSS2 – the second HSS from CHs in the interacting pair HSS1 + HSS2; ICME – isolated ICME (control group) HSS – isolated HSS from CH (control group)

Date	Time	$AF, \%$	t_{\min}, h	$A_{xy\max}, \%$	$t_{A_{xy\max}}, \text{h}$	B_{\max}, nT	$t_{B_{\max}}, \text{h}$	$V_{\max}, \text{km/s}$	$t_{V_{\max}}, \text{h}$	Kp_{\max}	Ap_{\max}	Dst_{\min}, nT	$VmBm$	Type of interplanetary disturbance
1995.01.01	19:40:00	0.9	36	1.1	22	14.4	24	707	69	5.3	56	-42	5.09	HSS1
1995.01.04	21:00:00	0.9	47	0.92	8	6.8	28	675	5	4.3	32	-43	2.29	HSS2
1995.01.08	13:00:00	0.5	-1	0.73	29	8.1	55	585	0	3.3	18	-22	2.37	ICME
1995.01.15	13:00:00	0.6	29	1.28	2	8.3	30	366	25	4.3	32	-39	1.52	ICME(+HSS)
1995.01.16	22:00:00	1.5	24	1.2	31	18.2	27	523	49	6.3	94	-95	4.76	HSS(+ICME)
1995.01.28	18:47:00	0.2	1	0.7	1	8.1	7	320	2	2	7	11	1.3	ICME(+HSS)
1995.01.29	3:00:00	1.2	44	0.97	32	19.3	13	708	32	6.3	94	-56	6.83	HSS(+ICME)
1995.02.07	23:00:00	0.9	6	1.18	11	12.6	16	477	0	5.3	56	-80	3.01	ICME1
1995.02.09	1:00:00	0.8	2	1.26	19	10.1	7	414	4	2.7	12	-30	2.09	ICME2
1995.03.23	10:37:00	1.2	15	1.47	8	11	7	343	10	2.7	12	-6	1.89	ICME
1995.03.26	4:00:00	1.3	41	1.11	24	17.8	10	511	42	5.7	67	-107	4.55	ICME
1995.04.01	17:20:00	0.8	11	0.99	21	10.4	34	394	3	5.7	67	-67	2.05	ICME1
1995.04.03	6:00:00	0.7	12	1.22	35	10.3	14	349	-1	2.7	12	-21	1.8	ICME2
1995.05.21	2:00:00	0.5	46	0.58	-1	5.9	13	422	-1	2.7	12	-35	1.24	ICME
1995.05.29	5:00:00	1.1	12	0.92	1	14.1	8	448	8	4.3	32	-17	3.16	ICME(+HSS)
1995.05.30	5:00:00	1.3	30	1.11	39	16.2	3	766	34	5.7	67	-46	6.2	HSS(+ICME)
1995.06.01	19:00:00	0.5	12	1.11	23	7.4	12	689	24	4.7	39	-45	2.55	ICME
1995.06.25	8:00:00	1	23	0.8	21	14.5	19	571	15	4.7	39	-40	4.14	ICME(+HSS)
1995.06.26	13:00:00	0.4	17	1.12	39	6.9	4	553	8	3	15	-23	1.91	HSS(+ICME)
1995.07.22	6:00:00	0.4	3	0.71	42	8.5	4	424	29	3	15	-18	1.8	ICME(+HSS)
1995.07.24	2:53:00	1.4	17	1.23	48	18.7	10	486	22	5.3	56	-52	4.54	HSS(+ICME)
1995.07.28	8:00:00	0.5	14	1.45	1	6.9	21	388	5	2.7	12	-15	1.34	ICME
1995.07.30	16:00:00	0.6	10	1.15	0	8.9	3	390	36	3	15	-13	1.74	ICME
1995.08.17	2:57:00	0.9	31	0.86	24	9.3	20	443	2	3.3	18	-31	2.06	ICME
1995.08.19	9:00:00	0.5	5	0.9	48	6.8	11	421	16	3	15	-18	1.43	ICME
1995.08.22	13:08:00	1.4	15	1.48	1	11.5	16	381	14	5.3	56	-61	2.19	ICME
1995.09.04	7:00:00	0.5	18	0.96	14	11.8	29	335	29	4	27	-34	1.98	ICME(+HSS)
1995.09.05	13:00:00	2.1	32	0.76	10	18.8	4	618	52	5.7	67	-54	5.81	HSS(+ICME)
1995.09.10	19:00:00	0.6	13	0.64	20	11.4	3	583	25	5.7	67	-47	3.32	HSS1
1995.09.12	17:00:00	0.8	29	0.87	36	7.5	10	634	28	4.7	39	-39	2.38	HSS2
1995.09.15	9:00:00	0.6	22	1.25	29	11.9	14	526	26	5	48	-52	3.13	ICME
1995.09.27	14:00:00	0.9	17	0.81	36	14.4	4	419	5	7	132	-108	3.02	ICME1
1995.09.29	11:12:00	0.5	12	0.93	44	7.5	0	380	1	2	7	-30	1.42	ICME2

Date	Time	AF , %	t_{\min} , h	$A_{xy\max}$, %	$t_{A_{xy\max}}$, h	B_{\max} , nT	$t_{B_{\max}}$, h	V_{\max} , km/s	$t_{V_{\max}}$, h	Kp_{\max}	Ap_{\max}	Dst_{\min} , nT	$VmBm$	Type of interplanetary disturbance
1995.10.02	1:00:00	0.9	30	0.72	10	11.5	25	483	35	4.7	39	-58	2.78	ICME(+HSS)
1995.10.03	22:00:00	1.3	21	0.71	37	18.4	10	707	23	6.7	111	-92	6.5	HSS(+ICME)
1995.10.10	9:00:00	0.5	13	0.72	7	8.2	6	540	47	4.7	39	-44	2.21	ICME
1995.10.22	20:00:00	0.8	8	1.76	0	7.9	4	447	38	5	48	-57	1.77	ICME
1995.10.30	10:08:00	0.6	19	0.88	32	11.6	4	438	20	4.7	39	-58	2.54	ICME(+HSS)
1995.10.31	22:00:00	0.7	19	1.06	7	9.8	11	634	21	4.7	39	-55	3.11	HSS(+ICME)
1995.11.16	21:19:00	0.3	-1	0.71	40	9	14	378	3	3.3	18	-5	1.7	ICME
1995.11.22	3:00:00	0.4	21	0.73	46	7	9	366	22	2.7	12	-10	1.28	ICME
1995.12.01	12:00:00	1.1	19	0.81	16	11.4	63	409	56	4.7	39	-62	2.33	ICME
1995.12.15	15:15:00	0.6	11	0.9	26	12.6	25	425	12	5.3	56	-44	2.68	ICME(+HSS)
1995.12.17	4:00:00	0.5	-2	0.64	1	8.1	0	437	9	3.3	18	-24	1.77	HSS(+ICME)
1996.01.28	8:00:00	1	35	0.68	4	9.7	16	568	29	4.3	32	-38	2.75	ICME1
1996.01.30	3:00:00	0.4	6	0.61	20	8.6	4	574	4	3.3	18	-23	2.47	ICME2
1996.02.02	0:00:00	0.4	8	0.8	43	8.4	1	526	13	3.3	18	-23	2.21	ICME
1996.02.14	23:00:00	0.9	37	0.89	27	9.9	32	527	3	3.3	18	-32	2.61	ICME1
1996.02.16	15:00:00	0.4	18	0.87	25	14.1	1	441	48	3.3	18	-25	3.11	ICME2
1996.03.01	13:00:00	0.4	13	0.58	22	5.3	8	391	6	2	7	-21	1.04	ICME(+HSS)
1996.03.02	21:00:00	0.5	46	1.14	47	8.4	11	485	47	3	15	-30	2.04	HSS(+ICME)
1996.03.07	21:00:00	0.6	10	0.97	2	9.9	74	434	75	3.7	22	-30	2.15	ICME
1996.03.27	3:00:00	0.7	25	0.55	6	7.5	25	481	42	3.7	22	-25	1.8	ICME
1996.04.04	9:00:00	0.3	-1	0.71	44	9.4	6	412	14	4	27	-28	1.94	ICME
1996.04.14	8:00:00	0.7	21	0.99	43	11.8	14	609	34	7	132	-56	3.59	ICME
1996.04.17	1:00:00	0.5	6	0.8	20	9.7	2	731	66	5.3	56	-52	3.55	HSS
1996.04.24	20:00:00	0.6	18	0.91	28	5.7	45	394	4	2.3	9	-23	1.12	ICME(+HSS)
1996.04.26	18:00:00	0.6	44	0.85	15	7.4	27	427	34	3.3	18	-14	1.58	HSS(+ICME)
1996.05.17	0:00:00	0.4	14	1.01	24	8.4	4	444	2	3.3	18	-26	1.86	ICME
1996.05.19	6:00:00	0.6	39	0.86	5	9.3	20	483	39	3.7	22	-21	2.25	HSS
1996.05.27	8:00:00	0.7	14	0.83	31	11.1	33	416	5	3.7	22	-33	2.31	ICME(+HSS)
1996.05.29	0:00:00	0.5	7	0.88	20	15.8	3	465	25	3	15	-9	3.67	HSS(+ICME)
1996.07.01	13:20:00	0.6	12	1.04	12	13.8	14	369	6	3.3	18	-20	2.55	ICME(+HSS)
1996.07.02	17:00:00	0.8	8	1.24	3	11.6	3	553	35	3.3	18	-31	3.21	HSS(+ICME)
1996.07.07	8:00:00	1.2	27	0.71	26	7	14	465	30	3.3	18	-16	1.63	ICME
1996.07.12	0:00:00	1	47	0.87	34	10.2	25	428	34	3	15	-24	2.18	ICME

Date	Time	$AF, \%$	t_{\min}, h	$A_{xy\max}, \%$	$t_{A_{xy\max}}, \text{h}$	B_{\max}, nT	$t_{B_{\max}}, \text{h}$	$V_{\max}, \text{km/s}$	$t_{V_{\max}}, \text{h}$	Kp_{\max}	Ap_{\max}	Dst_{\min}, nT	$VmBm$	Type of interplanetary disturbance
1996.08.01	19:00:00	0.5	1	1.02	31	6.9	2	567	4	3.3	18	-27	1.96	HSS
1996.08.07	6:00:00	1.1	32	0.88	4	8.1	25	364	5	2.7	12	-23	1.47	ICME1
1996.08.08	18:00:00	1.5	45	1.03	7	8.5	8	406	20	2.7	12	-9	1.73	ICME2
1996.09.07	7:00:00	0.9	43	1.39	2	6.9	55	427	25	2.7	12	-20	1.47	ICME
1996.09.09	19:13:00	0.7	20	0.73	41	12.2	2	564	14	5	48	-42	3.44	ICME(+HSS)
1996.09.11	15:00:00	0.5	1	0.87	10	9.7	7	687	33	5	48	-54	3.33	HSS(+ICME)
1996.10.19	17:00:00	0.6	7	0.65	2	6.5	54	620	10	5.3	56	-52	2.02	HSS
1996.10.27	9:00:00	2	45	1.58	17	13.2	17	619	39	3.7	22	-26	4.09	HSS
1996.11.28	18:00:00	0.8	45	0.97	15	8.6	40	439	-1	2.3	9	-18	1.89	ICME
1996.12.02	10:01:00	0.8	15	0.64	32	17.4	9	429	35	4	27	-19	3.73	ICME(+HSS)
1996.12.04	4:00:00	0.5	22	0.67	36	10.6	5	523	9	3.7	22	-15	2.77	HSS(+ICME)
1996.12.09	22:00:00	0.7	30	1.01	4	13.7	1	671	37	5	48	-32	4.6	HSS
1996.12.20	21:00:00	0.6	8	0.75	-1	8.5	30	438	27	3.7	22	-37	1.86	ICME
1996.12.23	16:00:00	1.1	19	1.36	25	12.6	34	424	11	2	7	-14	2.67	ICME1
1996.12.25	9:00:00	0.9	44	1.12	2	9.8	-1	359	34	2	7	-33	1.76	ICME2
1997.01.17	6:00:00	0.5	6	1.29	6	6.8	56	355	48	3	15	-14	1.21	ICME
1997.01.23	17:00:00	0.5	39	0.75	42	8.2	12	356	14	2.3	9	-17	1.46	ICME
1997.01.25	21:00:00	1.2	35	0.97	46	15.7	15	576	23	4.7	39	-45	4.52	ICME(+HSS)
1997.01.27	21:00:00	0.7	13	1.14	2	9.7	6	708	19	4.7	39	-44	3.43	HSS(+ICME)
1997.02.17	8:00:00	0.5	12	0.84	9	11.2	10	429	22	4.3	32	-54	2.4	ICME
1997.02.21	2:00:00	0.5	8	0.61	18	9.7	6	431	10	3.3	18	-35	2.09	HSS
1997.02.25	23:00:00	0.7	28	0.85	22	11.5	16	469	37	4	27	-29	2.7	ICME(+HSS)
1997.02.27	16:00:00	1.6	25	0.8	5	14.1	7	611	11	7	132	-86	4.31	HSS(+ICME)
1997.03.02	13:00:00	0.4	9	0.73	16	7.3	3	464	4	3.3	18	-32	1.69	ICME
1997.03.11	22:00:00	0.7	4	1.1	43	12.5	8	502	17	3.3	18	-28	3.14	HSS
1997.03.25	16:00:00	0.7	5	0.62	28	8.7	1	582	29	3.7	22	-31	2.53	ICME
1997.04.16	13:20:00	1.2	15	0.78	-1	14.3	7	543	21	5.3	56	-77	3.88	ICME
1997.04.19	5:00:00	0.3	0	0.76	35	6.9	3	516	6	3.3	18	-36	1.78	ICME1
1997.04.21	6:00:00	0.8	16	0.73	19	13.9	25	421	16	5.3	56	-107	2.93	ICME2
1997.04.30	18:00:00	0.3	16	1.07	16	11.9	3	379	5	3.3	18	-28	2.26	ICME(+HSS)
1997.05.01	12:43:00	0.6	11	0.82	30	13.2	7	606	15	6.3	94	-64	4	HSS(+ICME)
1997.05.25	14:34:00	0.4	13	0.61	-1	8.8	8	321	2	1.3	5	-13	1.41	ICME1
1997.05.26	9:57:00	1.4	15	0.71	40	11	4	358	9	6	80	-73	1.97	ICME2

Date	Time	AF , %	t_{\min} , h	$A_{xy\max}$, %	$t_{A_{xy\max}}$, h	B_{\max} , nT	$t_{B_{\max}}$, h	V_{\max} , km/s	$t_{V_{\max}}$, h	Kp_{\max}	Ap_{\max}	Dst_{\min} , nT	$VmBm$	Type of interplanetary disturbance
1997.06.08	16:36:00	0.9	12	1.36	27	14.1	20	400	22	5.7	67	-84	2.82	ICME
1997.06.19	0:32:00	0.9	19	1.28	38	8.7	7	392	2	3	15	-36	1.71	ICME
1997.06.22	3:13:00	0.8	20	0.98	12	11.5	8	425	43	3	15	-7	2.44	ICME(+HSS)
1997.06.23	23:00:00	0.6	38	1.12	38	7.1	0	438	5	2.7	12	-13	1.55	HSS(+ICME)
1997.07.01	3:00:00	0.4	22	0.63	42	7.5	40	371	4	2	7	-13	1.39	ICME(+HSS)
1997.07.03	4:00:00	0.6	16	0.73	30	8.6	8	393	31	2.7	12	-10	1.69	HSS(+ICME)
1997.07.09	13:00:00	0.5	12	0.86	46	13.1	7	444	15	3.7	22	-28	2.91	ICME(+HSS)
1997.07.11	13:00:00	0.4	6	1.03	41	5.8	14	389	8	1.7	6	-11	1.13	HSS(+ICME)
1997.07.15	3:11:00	1.2	16	0.89	21	12.8	16	375	9	3.7	22	-45	2.4	ICME
1997.08.03	10:42:00	0.7	7	1.16	10	16.6	13	485	6	5	48	-49	4.03	ICME(+HSS)
1997.08.05	4:00:00	0.4	13	0.94	11	8.5	4	377	-1	1.3	5	-15	1.6	HSS(+ICME)
1997.08.17	2:00:00	0.3	-2	0.81	33	8.2	14	410	7	3.7	22	-28	1.68	ICME1
1997.08.18	13:00:00	0.6	10	0.72	20	8.4	19	383	2	3	15	-18	1.61	ICME2
1997.08.20	19:00:00	0.4	9	0.53	1	6.8	9	402	28	3.3	18	-17	1.37	ICME1
1997.08.22	0:00:00	0.5	5	0.57	15	8	1	434	10	2.7	12	-21	1.74	ICME2
1997.08.27	16:00:00	1	16	1.24	15	13.1	16	452	31	4.3	32	-48	2.96	HSS
1997.09.10	21:00:00	0.6	24	0.91	35	8.4	-1	492	5	4.7	39	-49	2.07	HSS
1997.09.17	10:00:00	1.3	19	1.04	2	12.9	44	366	19	5	48	-56	2.36	ICME
1997.10.01	0:59:00	2.3	24	2.18	11	13.8	3	490	13	7	132	-98	3.38	ICME
1997.10.06	8:00:00	1.1	37	1.13	11	9.6	40	419	68	3.7	22	-26	2.01	ICME
1997.10.09	14:00:00	1.2	21	0.96	5	9.3	17	454	15	4.3	32	-56	2.11	ICME1
1997.10.10	16:12:00	2.1	10	1.08	0	13.8	4	448	2	6.3	94	-130	3.09	ICME2
1997.10.17	21:00:00	0.6	27	0.46	8	7.2	56	327	64	2.3	9	-23	1.18	ICME
1997.11.01	1:00:00	1	42	0.87	48	7.5	0	445	10	2	7	-17	1.67	HSS
1997.11.03	18:00:00	2.3	47	0.91	-1	9.5	29	368	46	3.3	18	-44	1.75	ICME
1997.11.06	22:48:00	2.9	20	2.06	15	17.8	23	468	5	7	132	-110	4.17	ICME
1997.11.09	10:04:00	0.6	4	0.91	1	10.4	16	392	14	4	27	-54	2.04	ICME1
1997.11.10	14:00:00	1	11	1.15	5	8.9	3	360	1	3.7	22	-39	1.6	ICME2
1997.11.13	18:00:00	1.2	27	0.82	46	10.8	24	389	52	4.3	32	-49	2.1	ICME
1997.11.30	8:09:00	0.9	44	0.83	35	9.7	2	446	6	2.7	12	-15	2.16	ICME
1997.12.02	22:00:00	0.5	0	0.8	1	7.8	3	381	15	2.3	9	-16	1.49	ICME(+HSS)
1997.12.04	17:00:00	0.9	35	0.97	22	7.7	3	402	55	3	15	-27	1.55	HSS(+ICME)
1997.12.10	5:26:00	2.6	29	2.02	16	16.1	16	384	20	4	27	-60	3.09	ICME

Date	Time	$AF, \%$	t_{\min}, h	$A_{xy\max}, \%$	$t_{A_{xy\max}}, \text{h}$	B_{\max}, nT	$t_{B_{\max}}, \text{h}$	$V_{\max}, \text{km/s}$	$t_{V_{\max}}, \text{h}$	Kp_{\max}	Ap_{\max}	Dst_{\min}, nT	$VmBm$	Type of interplanetary disturbance
1997.12.23	1:00:00	0.4	7	0.81	1	8.4	71	382	19	2.3	9	-13	1.6	ICME
1998.01.06	14:16:00	2	32	1.49	30	18.3	24	415	14	6.3	94	-83	3.8	ICME1
1998.01.08	8:31:00	1.1	-2	1.09	27	13.6	-1	502	25	3.3	18	-45	3.41	ICME2
1998.01.16	8:00:00	0.9	22	1.46	44	13.1	11	366	17	3.3	18	-42	2.4	ICME
1998.01.24	5:29:00	0.6	8	1.21	7	9.9	7	467	51	4	27	-35	2.31	ICME
1998.01.28	17:00:00	1.6	39	1.52	17	9.1	53	411	3	4.3	32	-72	1.87	ICME
1998.01.31	16:42:00	1	26	1.04	18	14.3	2	473	16	4.3	32	-46	3.38	ICME
1998.02.03	23:00:00	0.8	8	0.93	40	14.3	23	397	4	3.3	18	-50	2.84	ICME
1998.02.06	11:00:00	0.6	24	1.01	32	7.8	56	376	56	1	4	-14	1.47	ICME
1998.02.24	2:00:00	1.1	41	1.29	11	7.3	79	405	5	1.7	6	-31	1.48	ICME
1998.02.28	7:00:00	0.7	10	0.98	5	13.9	14	473	65	5	48	-44	3.29	ICME
1998.03.03	8:00:00	0.6	10	1.07	5	5	0	413	2	2	7	-36	1.03	ICME1
1998.03.04	11:56:00	1	15	1.12	24	12.7	27	389	4	4	27	-56	2.47	ICME2
1998.03.10	7:00:00	1.2	15	1.07	41	22.2	8	553	22	7.3	154	-126	6.14	HSS
1998.03.19	21:00:00	0.5	9	1.37	18	10.5	20	343	23	3	15	-32	1.8	ICME(+HSS)
1998.03.20	21:00:00	2.2	47	1.31	31	16	17	605	27	6.3	94	-109	4.84	HSS(+ICME)
1998.03.24	9:00:00	0.6	14	0.51	6	7.3	22	399	24	3	15	-53	1.46	ICME1
1998.03.25	10:00:00	1	14	0.99	11	12.1	19	476	27	4.7	39	-72	2.88	ICME2
1998.03.30	22:00:00	0.9	-3	0.64	12	8.8	47	430	3	3.7	22	-51	1.89	ICME
1998.04.02	21:00:00	1.4	25	1.47	36	9.2	4	400	9	3.3	18	-46	1.84	ICME1
1998.04.04	11:00:00	2.7	41	2.02	6	12.1	6	393	23	2	7	-27	2.38	ICME2
1998.04.07	17:49:00	2.8	32	1.53	18	15.3	11	381	72	3	15	-31	2.91	ICME
1998.04.20	10:00:00	1.2	29	1.55	29	9.5	6	404	7	3.7	22	-40	1.92	ICME
1998.04.23	18:25:00	0.7	28	1.19	14	15.3	4	461	17	5.7	67	-87	3.53	ICME(+HSS)
1998.04.25	7:00:00	1.2	36	0.98	18	9.2	31	499	43	5	48	-78	2.3	HSS(+ICME)
1998.04.30	9:28:00	0.9	30	1.3	18	11.3	6	472	35	4	27	-33	2.67	ICME1
1998.05.01	21:56:00	6	22	2.98	4	20.4	5	652	9	6.7	111	-100	6.65	ICME2
1998.05.07	17:49:00	0.3	-2	1.39	-1	11.1	1	518	9	4	27	-64	2.87	ICME1
1998.05.08	9:52:00	1	10	1.56	33	11.9	3	659	8	4.3	32	-67	3.92	ICME2
1998.06.02	8:00:00	0.8	-3	1.31	10	12	6	431	15	2.7	12	-19	2.59	ICME(+HSS)
1998.06.03	7:00:00	1.3	43	1.33	32	12.4	5	504	11	4	27	-39	3.12	HSS(+ICME)
1998.06.05	9:41:00	1.9	33	1.33	6	12.9	35	460	35	4	27	-45	2.97	ICME(+HSS)
1998.06.06	22:00:00	1.1	4	1.25	48	11.2	8	646	13	4.3	32	-59	3.62	HSS(+ICME)

Date	Time	$AF, \%$	t_{\min}, h	$A_{xy\max}, \%$	$t_{A_{xy\max}}, \text{h}$	B_{\max}, nT	$t_{B_{\max}}, \text{h}$	$V_{\max}, \text{km/s}$	$t_{V_{\max}}, \text{h}$	Kp_{\max}	Ap_{\max}	Dst_{\min}, nT	$VmBm$	Type of interplanetary disturbance
1998.06.10	13:29:00	0.4	-3	1.11	10	7.9	0	500	13	4.7	39	-33	1.98	ICME1
1998.06.11	23:00:00	1.1	14	2.13	38	5.9	3	379	7	2.7	12	-31	1.12	ICME2
1998.06.17	23:00:00	0.5	8	0.8	5	6.2	3	363	6	1	4	-9	1.13	ICME(+HSS)
1998.06.18	21:00:00	1.2	26	1.77	27	14.6	26	517	16	4.7	39	-33	3.77	HSS(+ICME)
1998.08.26	6:51:00	6.9	9	4.85	2	17.4	18	858	16	8	207	-188	7.46	ICME
1998.09.03	16:00:00	0.5	4	1.39	12	6.7	55	419	9	3	15	-35	1.4	ICME
1998.09.23	2:00:00	1.4	42	1.81	42	13	42	515	29	6	80	-70	3.35	ICME1
1998.09.24	23:45:00	8.7	7	3.46	5	28.6	2	820	9	8.3	236	-233	11.73	ICME2
1998.09.30	14:00:00	0.8	8	1.73	36	11.4	17	581	31	5.3	56	-69	3.31	ICME1
1998.10.02	7:26:00	1.3	17	1.53	1	12.6	2	668	7	5.3	56	-70	4.21	ICME2
1998.10.06	16:30:00	0.7	23	0.68	4	13.5	25	456	22	5.7	67	-45	3.08	ICME(+HSS)
1998.10.07	19:00:00	0.9	3	1.11	17	14.1	-1	585	5	5.3	56	-81	4.12	HSS(+ICME)
1998.10.18	19:52:00	1.7	11	1.24	0	26.5	11	430	9	6.7	111	-139	5.7	ICME(+HSS)
1998.10.20	8:00:00	1.3	1	1.22	42	11.2	-1	668	49	5	48	-78	3.74	HSS(+ICME)
1998.11.04	22:00:00	1.4	47	1.1	0	9.1	32	441	22	4.3	32	-82	2.01	ICME
1998.11.07	8:15:00	1.2	17	1.66	19	16.4	19	535	5	7.7	179	-92	4.39	ICME1
1998.11.08	4:51:00	5.7	8	5.06	4	36.2	3	634	4	7.7	179	-148	11.48	ICME2
1998.11.10	21:00:00	0.6	-2	0.87	28	10.2	52	389	-1	6	80	-38	1.98	ICME
1998.11.13	1:43:00	3.1	12	1.88	2	21.6	34	434	40	6	80	-133	4.69	ICME
1998.11.25	22:00:00	2.5	47	1.47	1	10.9	2	504	16	3.7	22	-22	2.75	ICME
1998.11.30	5:07:00	0.6	23	1.48	42	15.6	6	491	24	4.3	32	-23	3.83	ICME1
1998.12.02	3:33:00	0.4	-1	0.71	0	7.8	12	503	42	3.3	18	-19	1.96	ICME2
1998.12.04	17:00:00	0.9	14	0.92	10	7.5	2	515	2	3.7	22	-30	1.93	ICME(+HSS)
1998.12.06	16:00:00	0.7	30	0.62	7	8.1	30	466	12	2.7	12	-23	1.89	HSS(+ICME)
1998.12.10	8:00:00	1.4	21	1.17	25	13.8	24	377	1	5.3	56	-80	2.6	ICME1
1998.12.11	20:00:00	2.3	30	1.35	17	14.3	2	409	4	3.3	18	-38	2.92	ICME2
1998.12.21	22:00:00	2.2	41	1.62	14	12.9	3	388	4	2.7	12	-29	2.5	ICME
1998.12.25	2:00:00	2	47	1.77	41	20.9	18	559	13	4	27	-61	5.84	ICME
1998.12.28	18:26:00	0.8	6	1.75	4	14.7	2	434	37	5	48	-53	3.19	ICME
1999.03.10	1:30:00	1	6	1.34	22	11.7	3	463	5	6.3	94	-78	2.71	ICME
1999.03.18	14:00:00	1.1	37	1.22	37	7.9	52	463	3	3	15	-27	1.83	ICME
1999.03.21	6:00:00	0.5	18	0.9	4	12.2	34	358	20	2.7	12	-3	2.18	ICME1
1999.03.23	2:00:00	1	38	1.31	8	12.2	5	443	20	2.3	9	2	2.7	ICME2

Date	Time	AF , %	t_{\min} , h	$A_{xy\max}$, %	$t_{A_{xy\max}}$, h	B_{\max} , nT	$t_{B_{\max}}$, h	V_{\max} , km/s	$t_{V_{\max}}$, h	Kp_{\max}	Ap_{\max}	Dst_{\min} , nT	$VmBm$	Type of interplanetary disturbance
1999.03.25	8:00:00	0.6	3	1.14	3	12.6	13	460	31	3.3	18	-29	2.9	ICME
1999.04.08	7:00:00	0.7	32	1.64	37	8.1	9	381	9	4	27	-14	1.54	ICME(+HSS)
1999.04.10	5:00:00	1.3	34	1.87	3	10.9	3	564	17	3.7	22	-22	3.07	HSS(+ICME)
1999.04.19	10:00:00	0.5	8	0.93	9	9	-1	518	27	4.3	32	-48	2.33	ICME1
1999.04.20	16:00:00	1.8	43	1.67	43	12.2	2	622	5	4.3	32	-43	3.79	ICME2
1999.04.26	10:00:00	1	27	1.25	26	10	23	599	33	4.3	32	-37	3	ICME
1999.05.05	15:43:00	2.6	35	1.52	19	10.5	5	492	14	3	15	-16	2.58	ICME
1999.05.12	3:00:00	1	9	2	10	17.3	29	510	5	5	48	-57	4.41	ICME
1999.05.16	0:00:00	1.8	30	2.87	21	5.7	46	408	3	1.3	5	-9	1.16	ICME1
1999.05.18	0:56:00	1.2	7	1.53	27	23.2	5	664	21	5	48	-26	7.7	ICME2
1999.05.22	20:00:00	2	35	2.37	4	8.4	16	489	19	3.3	18	-2	2.05	ICME1
1999.05.24	11:00:00	1.1	7	0.81	4	13.4	13	580	25	4	27	-27	3.89	ICME2
1999.06.22	4:00:00	1.1	22	0.9	24	7.1	15	315	15	2	7	-4	1.12	ICME
1999.06.26	3:25:00	0.8	10	0.93	0	15.1	9	354	8	4.7	39	-20	2.67	ICME1
1999.06.26	20:16:00	3.4	30	2.73	3	23.4	3	673	32	6	80	-24	7.87	ICME2
1999.07.02	0:59:00	1.5	16	1.58	8	10.6	11	691	21	5	48	-34	3.66	ICME
1999.07.12	2:18:00	1.2	-3	2.64	47	11.3	2	318	3	3.3	18	-38	1.8	ICME
1999.07.14	12:00:00	2.1	-3	1.87	9	9.2	16	407	27	3	15	-16	1.87	ICME
1999.07.20	15:00:00	0.5	12	1.1	23	11.5	14	339	2	2.7	12	-6	1.95	ICME1
1999.07.21	16:00:00	2.3	27	1.56	15	17.7	17	525	39	4.7	39	-55	4.65	ICME2
1999.07.26	23:23:00	2	24	1.69	11	7.7	6	466	12	2.3	9	-11	1.79	ICME1
1999.07.28	16:00:00	0.7	13	0.91	3	7.1	1	415	1	3.3	18	-40	1.47	ICME2
1999.08.06	8:00:00	1.9	30	1.43	46	12.3	5	460	26	4	27	-29	2.83	ICME
1999.08.08	18:41:00	1.3	17	1.61	46	13.2	49	416	7	3.7	22	-62	2.75	ICME
1999.08.26	12:00:00	0.7	0	1.43	48	8.6	7	664	13	4	27	-47	2.86	HSS
1999.09.09	12:57:00	0.7	-1	0.93	19	10.3	21	546	43	4	27	-21	2.81	ICME
1999.09.15	20:19:00	1.2	6	1.42	0	8.5	2	596	2	6	80	-67	2.53	ICME2
1999.09.15	7:53:00	1.8	9	2.7	3	15.7	3	621	4	5.7	67	-53	4.87	ICME1
1999.09.20	13:00:00	0.6	17	0.78	44	12.8	40	401	19	3.7	22	-32	2.57	ICME1
1999.09.22	12:22:00	1.7	12	1.57	48	28.4	7	602	10	8	207	-164	8.55	ICME2
1999.09.25	3:00:00	0.8	23	1.5	10	8.5	34	447	3	2	7	-20	1.9	ICME(+HSS)
1999.09.26	14:00:00	2.5	46	1.26	22	16.5	3	638	20	5.7	67	-66	5.26	HSS(+ICME)
1999.10.16	19:00:00	1.1	11	1.04	14	6.7	39	626	1	4.7	39	-58	2.1	ICME

Date	Time	$AF, \%$	t_{\min}, h	$A_{xy\max}, \%$	$t_{A_{xy\max}}, \text{h}$	B_{\max}, nT	$t_{B_{\max}}, \text{h}$	$V_{\max}, \text{km/s}$	$t_{V_{\max}}, \text{h}$	Kp_{\max}	Ap_{\max}	Dst_{\min}, nT	$VmBm$	Type of interplanetary disturbance
1999.11.11	3:00:00	1.8	47	1.17	28	8.1	4	678	21	4.7	39	-53	2.75	HSS
1999.11.13	13:00:00	1.2	19	1.53	12	14.7	9	483	4	6.3	94	-100	3.55	ICME
1999.11.20	1:00:00	1.5	3	1.25	39	14.9	50	493	52	4	27	-26	3.67	ICME
1999.11.24	11:00:00	0.8	-3	1.37	37	13	24	477	1	5	48	-52	3.1	ICME
2000.01.02	12:00:00	0.4	6	0.92	10	5.9	5	694	1	3.3	18	-23	2.05	HSS1
2000.01.04	9:00:00	1	10	0.88	16	7.4	3	635	1	4	27	-34	2.35	HSS2
2000.01.22	0:23:00	2.1	36	1.66	6	18.1	34	432	40	6.3	94	-97	3.91	ICME
2000.01.30	15:00:00	0.7	4	1.54	6	6.7	6	655	7	3.7	22	-29	2.19	ICME
2000.02.05	15:44:00	2.2	41	1.14	0	18.3	11	649	28	5.3	56	-44	5.94	HSS
2000.02.11	2:58:00	2.1	15	1.41	10	10.7	3	506	3	4.3	32	-27	2.71	ICME1
2000.02.11	23:52:00	4.2	11	1.32	1	20.6	13	589	10	6.7	111	-133	6.07	ICME2
2000.02.14	7:31:00	1.1	-3	1.28	22	10	10	681	4	5.3	56	-67	3.4	ICME1
2000.02.16	4:00:00	0.8	25	1.31	40	8.5	75	455	0	2.7	12	-30	1.93	ICME2
2000.02.20	21:39:00	1.9	23	2.45	-1	16.9	23	455	7	4.7	39	-26	3.84	ICME
2000.04.06	16:32:00	4.4	5	2.79	12	31.4	7	626	18	8.7	300	-288	9.83	ICME
2000.04.14	17:00:00	0.5	30	0.62	23	10.9	32	329	4	3.3	18	-32	1.79	ICME(+HSS)
2000.04.16	2:00:00	1.7	28	1.64	22	17.3	15	488	19	4.3	32	-79	4.22	HSS(+ICME)
2000.04.18	20:00:00	1.2	10	0.92	3	12.2	5	475	10	4	27	-14	2.9	ICME(+HSS)
2000.04.19	18:00:00	0.9	7	0.77	0	11.2	1	547	31	3.7	22	-25	3.06	HSS(+ICME)
2000.05.09	14:00:00	1.2	-3	2.01	39	7.6	3	351	3	2.7	12	-23	1.33	ICME
2000.06.08	9:10:00	8.5	9	3	3	24.9	5	775	10	7	132	-90	9.65	ICME
2000.06.11	8:01:00	0.5	0	1.49	18	15.1	9	579	17	5	48	-36	4.37	ICME1
2000.06.12	22:08:00	0.7	1	1.13	16	8.9	2	534	4	4	27	-37	2.38	ICME2
2000.07.10	6:38:00	3.1	21	2.62	6	19.1	3	487	7	4.7	39	-19	4.65	ICME1
2000.07.11	13:00:00	1.8	3	1.25	43	19.8	1	541	13	5.3	56	-26	5.36	ICME2
2000.07.22	6:00:00	1	14	2.05	17	8.8	12	440	-1	3.7	22	-63	1.94	ICME1
2000.07.23	10:41:00	1.2	7	1.84	44	12.7	8	432	1	6	80	-68	2.74	ICME2
2000.07.25	23:00:00	1.2	6	1.86	5	11.8	7	382	7	3.7	22	-44	2.25	ICME1
2000.07.26	18:57:00	0.5	8	1.14	3	9.5	3	400	4	4.7	39	-42	1.9	ICME2
2000.07.31	17:00:00	0.7	-3	1.39	14	12.4	8	482	33	5.3	56	-41	2.99	ICME
2000.08.03	8:00:00	1	34	0.61	18	7.2	15	465	21	3.7	22	-31	1.67	ICME(+HSS)
2000.08.04	23:00:00	3.5	28	1.25	7	12.2	10	581	13	5	48	-56	3.54	HSS(+ICME)
2000.08.08	4:00:00	0.5	1	1.49	47	7	42	444	-1	2.7	12	-21	1.55	ICME1

Date	Time	$AF, \%$	t_{\min}, h	$A_{xy\max}, \%$	$t_{Axy\max}, \text{h}$	B_{\max}, nT	$t_{B\max}, \text{h}$	$V_{\max}, \text{km/s}$	$t_{V\max}, \text{h}$	Kp_{\max}	Ap_{\max}	Dst_{\min}, nT	$VmBm$	Type of interplanetary disturbance
2000.08.10	5:01:00	3.5	30	2.45	4	14.3	5	470	4	5.7	67	-106	3.36	ICME2
2000.08.14	21:00:00	1.5	5	1.76	17	13	3	577	3	4.3	32	-31	3.75	ICME
2000.09.01	20:00:00	1.6	43	1.11	3	10.6	28	522	6	4.3	32	-57	2.77	ICME
2000.09.04	13:33:00	0.8	10	1.46	37	10.8	46	482	6	5.7	67	-36	2.6	ICME
2000.09.28	11:00:00	0.9	16	1.04	3	10.5	43	484	-1	4	27	-42	2.54	ICME1
2000.09.30	7:00:00	1.1	15	1.16	7	14.1	5	458	26	6.3	94	-76	3.23	ICME2
2000.10.12	22:28:00	3.9	28	1.53	13	20.5	3	470	9	6.7	111	-107	4.82	ICME(+HSS)
2000.10.14	18:00:00	1.3	-2	1.49	28	13.6	-1	585	34	5.3	56	-91	3.98	HSS(+ICME)
2000.10.22	7:00:00	0.7	20	0.91	9	13.1	4	565	28	4.7	39	-53	3.7	HSS
2000.11.04	21:00:00	1	1	1.31	4	14.2	7	594	11	4	27	-46	4.22	ICME2
2000.11.04	2:21:00	1.4	6	1.1	17	22.6	2	485	18	5	48	-50	5.48	ICME1
2000.12.03	4:09:00	0.7	5	1.78	17	12.3	6	484	10	3.3	18	-34	2.98	ICME
2000.12.05	21:00:00	0.6	1	0.83	32	9.9	27	395	33	3.7	22	-18	1.96	ICME(+HSS)
2000.12.06	18:00:00	0.7	-2	0.87	45	13.8	37	656	79	4	27	-21	4.53	HSS(+ICME)
2000.12.21	12:00:00	0.8	16	1.3	7	6.7	9	333	7	1.7	6	-1	1.12	ICME1
2000.12.22	19:25:00	1.1	10	0.92	26	14.4	5	328	8	5.7	67	-62	2.36	ICME2
2001.01.13	2:00:00	2	18	2.11	1	12.5	2	423	3	2.7	12	-17	2.64	ICME
2001.01.17	16:31:00	0.8	25	1.04	9	8.6	4	418	2	2.3	9	-3	1.8	ICME
2001.01.20	6:00:00	0.6	-3	0.87	14	13.1	35	324	35	4	27	-38	2.12	ICME(+HSS)
2001.01.21	18:00:00	1.1	21	1.13	36	15.9	9	486	23	4	27	-40	3.86	HSS(+ICME)
2001.01.28	2:00:00	0.2	-3	1.45	17	8.7	16	319	-1	3	15	-20	1.39	ICME(+HSS)
2001.01.28	21:00:00	1.2	20	1.55	21	15	3	467	23	5	48	-29	3.5	HSS(+ICME)
2001.01.31	8:05:00	1.9	7	1.38	3	13.6	2	459	2	4	27	-45	3.12	ICME
2001.02.19	7:00:00	1.4	47	0.79	4	11.8	32	369	79	2.7	12	-17	2.18	ICME
2001.02.26	7:00:00	0.6	41	0.89	37	11.5	14	397	23	4	27	-37	2.28	ICME(+HSS)
2001.02.28	4:00:00	0.5	43	1.14	36	10.1	5	535	12	3.3	18	-17	2.7	HSS(+ICME)
2001.03.03	11:21:00	2.8	39	2.03	10	13	38	512	4	5	48	-73	3.33	ICME(+HSS)
2001.03.05	7:00:00	0.9	-1	1.34	8	14.1	9	579	18	4.3	32	-53	4.08	HSS(+ICME)
2001.03.19	11:14:00	3.2	12	1.63	11	21.5	28	490	7	7.3	154	-149	5.27	ICME
2001.03.22	13:42:00	1	11	1.7	9	19.9	3	443	43	5	48	-75	4.41	ICME
2001.03.27	1:10:00	3.1	14	2.67	15	16.9	5	429	16	4	27	-11	3.63	ICME1
2001.03.27	17:47:00	2.9	5	2.91	0	25.1	3	645	17	6.3	94	-87	8.09	ICME2
2001.04.04	14:55:00	6.2	8	2.82	31	16.8	4	768	6	5.3	56	-50	6.45	ICME

Date	Time	AF , %	t_{\min} , h	$A_{xy\max}$, %	$t_{A_{xy\max}}$, h	B_{\max} , nT	$t_{B_{\max}}$, h	V_{\max} , km/s	$t_{V_{\max}}$, h	Kp_{\max}	Ap_{\max}	Dst_{\min} , nT	$VmBm$	Type of interplanetary disturbance
2001.04.07	17:00:00	1.8	14	1.3	14	14.8	2	533	2	5.7	67	-36	3.94	ICME1
2001.04.08	11:01:00	7.2	7	2.73	6	18.5	5	782	6	7	132	-63	7.23	ICME2
2001.04.18	0:46:00	2.5	18	2.66	31	23.8	4	519	6	7.3	154	-114	6.18	ICME1
2001.04.19	14:00:00	1.4	9	2.37	5	7.5	-1	440	-1	2.7	12	-34	1.65	ICME2
2001.04.28	5:00:00	8.2	20	2.59	7	19.9	10	724	2	6	80	-47	7.2	ICME
2001.05.03	10:00:00	1.3	12	1.94	4	9.6	15	394	40	3	15	-3	1.89	ICME
2001.05.06	1:00:00	0.4	0	0.93	10	7.8	11	366	21	2	7	3	1.43	ICME1
2001.05.06	23:00:00	0.6	26	1.17	25	9.9	2	406	12	4	27	-36	2.01	ICME2
2001.05.11	23:00:00	1.7	19	1.48	19	17.5	13	674	18	5.3	56	-48	5.9	ICME1
2001.05.13	14:00:00	0.8	47	1.58	13	11.1	3	616	14	5.3	56	-48	3.42	ICME2
2001.05.21	10:00:00	1	15	0.76	12	7	14	342	1	2	7	2	1.2	ICME(+HSS)
2001.05.22	18:00:00	2.6	42	1.37	37	16.5	12	586	67	3.3	18	-1	4.83	HSS(+ICME)
2001.05.27	14:59:00	3.7	18	3.18	7	13.9	3	587	3	4.3	32	-42	4.08	ICME
2001.06.14	21:00:00	0.4	-3	0.86	6	8.2	9	366	8	3.7	22	-7	1.5	ICME
2001.07.08	4:00:00	0.9	14	1.45	24	9.3	16	465	11	5	48	-32	2.16	ICME
2001.07.10	15:00:00	1.1	12	1.46	42	9.7	38	387	-1	3.3	18	-38	1.88	ICME
2001.07.24	2:00:00	1.3	26	1.84	3	10.2	18	582	35	4.3	32	-27	2.97	HSS
2001.08.12	11:35:00	0.9	16	1.05	9	14.3	10	429	12	5.3	56	-32	3.07	ICME(+HSS)
2001.08.13	7:00:00	1.1	20	2.31	9	12.9	10	487	39	3.3	18	-25	3.14	HSS(+ICME)
2001.08.17	11:03:00	6.3	15	4.41	5	32.1	6	599	15	7	132	-105	9.61	ICME
2001.08.24	4:00:00	0.3	0	1.23	1	4.5	31	448	2	2.3	9	-3	1.01	ICME1
2001.08.25	12:00:00	2.2	29	1.09	42	11.7	10	450	22	3.3	18	-25	2.63	ICME2
2001.08.27	19:52:00	6.2	23	4.29	19	19.5	3	576	10	4.7	39	-23	5.62	ICME
2001.08.30	14:11:00	0.8	5	0.92	2	8.2	2	497	2	4	27	-40	2.04	ICME1
2001.09.01	2:00:00	0.4	-1	1.03	10	7.4	43	461	2	2.3	9	-19	1.71	ICME2
2001.09.02	22:00:00	0.6	3	1.22	40	10.4	21	552	30	4.3	32	-32	2.87	HSS
2001.09.18	3:00:00	1	28	1.58	34	11.6	17	456	3	4.3	32	-25	2.64	ICME
2001.09.23	6:00:00	2	22	1.29	6	15.2	5	568	8	6	80	-73	4.32	ICME
2001.09.25	20:25:00	8.9	10	1.84	15	24.7	3	680	2	7.3	154	-102	8.4	ICME(+HSS)
2001.09.27	13:00:00	0.9	-1	1.55	43	6.6	3	580	17	4	27	-51	1.91	HSS(+ICME)
2001.10.11	17:01:00	6.9	9	3.81	4	26.5	5	572	12	6	80	-71	7.58	ICME
2001.10.19	19:00:00	0.7	11	1.39	44	10	2	400	17	6	80	-57	2	ICME1
2001.10.21	16:48:00	7.3	11	1.38	0	28.4	7	677	10	7.7	179	-187	9.61	ICME2

Date	Time	$AF, \%$	t_{\min}, h	$A_{xy\max}, \%$	$t_{A_{xy\max}}, \text{h}$	B_{\max}, nT	$t_{B_{\max}}, \text{h}$	$V_{\max}, \text{km/s}$	$t_{V_{\max}}, \text{h}$	Kp_{\max}	Ap_{\max}	Dst_{\min}, nT	$VmBm$	Type of interplanetary disturbance
2001.10.31	13:48:00	1.7	-3	2.36	33	13.9	10	388	10	5	48	-106	2.7	ICME
2001.11.19	18:15:00	2.3	32	1.91	3	12.6	2	568	3	4.3	32	-47	3.58	ICME1
2001.11.21	19:00:00	1.3	22	0.7	3	8.6	11	469	31	3	15	-42	2.02	ICME2
2001.11.24	5:56:00	9.8	18	3.19	26	50.1	5	1024	10	8.3	236	-221	25.65	ICME
2001.11.27	5:00:00	1.1	-3	1.88	0	6.2	31	482	4	1.3	5	-48	1.49	ICME
2001.12.11	6:00:00	0.5	-3	1.57	23	11.5	27	375	28	3.3	18	-38	2.16	ICME1
2001.12.13	2:00:00	0.6	9	1.23	39	11.1	34	333	-1	2	7	-39	1.85	ICME2
2001.12.21	13:00:00	1.6	19	1.37	30	12	4	444	7	4	27	-67	2.66	ICME
2002.01.07	13:00:00	0.8	-1	0.92	19	12.9	24	438	26	3.7	22	-25	2.83	ICME
2002.01.31	21:27:00	1	4	1.27	6	14.7	3	375	3	4.3	32	-54	2.76	ICME(+HSS)
2002.02.02	7:00:00	0.5	2	1.13	10	13.5	0	422	9	4.7	39	-86	2.85	HSS(+ICME)
2002.02.15	5:00:00	0.6	11	0.87	41	8.9	29	400	1	2.7	12	-20	1.78	ICME1
2002.02.17	2:55:00	1.4	36	1.61	17	11.9	5	435	12	4	27	-21	2.59	ICME2
2002.02.25	18:00:00	0.8	12	0.8	12	7.5	19	368	0	2.7	12	-31	1.38	ICME
2002.02.28	4:51:00	1	8	1.09	10	16.3	20	413	13	6	80	-71	3.37	ICME
2002.03.02	11:00:00	0.3	19	0.87	31	11.3	3	426	10	3	15	-39	2.41	ICME(+HSS)
2002.03.04	0:00:00	1	27	1.12	22	19.2	17	703	36	4.3	32	-46	6.75	HSS(+ICME)
2002.03.10	4:00:00	0.5	24	0.61	6	7.8	23	435	2	4	27	-29	1.7	ICME(+HSS)
2002.03.11	15:00:00	1.4	18	0.86	3	12.1	9	484	21	3	15	-11	2.93	HSS(+ICME)
2002.03.18	13:22:00	4.9	34	1.31	46	22.5	18	470	3	5.3	56	-37	5.29	ICME1
2002.03.20	13:28:00	4.1	3	2.55	2	20.1	2	576	3	4.3	32	-18	5.79	ICME2
2002.03.29	22:37:00	1.1	46	1.24	2	20.7	3	766	56	4.3	32	-38	7.93	HSS
2002.04.05	6:00:00	0.9	9	1.1	2	8.5	11	419	0	1.7	6	-7	1.78	ICME1
2002.04.07	2:00:00	0.7	5	1.79	46	8.7	5	444	17	3	15	-12	1.93	ICME2
2002.04.14	12:34:00	1.2	15	1.28	11	10.9	13	418	3	4.3	32	-23	2.28	ICME
2002.05.05	11:00:00	0.5	18	1.61	21	6.8	25	347	4	1.3	5	10	1.18	ICME(+HSS)
2002.05.06	13:00:00	1.3	44	2	1	10	35	404	27	3	15	-31	2.02	HSS(+ICME)
2002.05.13	15:00:00	1.9	35	0.95	43	10.3	27	472	-1	5	48	-65	2.43	ICME
2002.05.18	20:08:00	3.3	10	2.17	4	19.5	9	487	3	5.3	56	-58	4.75	ICME1
2002.05.20	3:40:00	1.5	16	1.49	29	13.8	2	499	3	3.3	18	-36	3.44	ICME2
2002.05.27	2:00:00	1.3	18	0.95	29	13.6	6	769	24	4.7	39	-64	5.23	HSS
2002.05.30	2:04:00	0.8	-3	1.32	18	8.4	2	515	4	2	7	-13	2.16	ICME
2002.06.08	11:40:00	0.4	-1	1.09	3	13	3	440	24	4	27	-21	2.86	ICME(+HSS)

Date	Time	$AF, \%$	t_{\min}, h	$A_{xy\max}, \%$	$t_{A_{xy\max}}, \text{h}$	B_{\max}, nT	$t_{B_{\max}}, \text{h}$	$V_{\max}, \text{km/s}$	$t_{V_{\max}}, \text{h}$	Kp_{\max}	Ap_{\max}	Dst_{\min}, nT	$VmBm$	Type of interplanetary disturbance
2002.06.09	19:00:00	2.3	39	1.02	27	10	10	498	12	3.7	22	-38	2.49	HSS(+ICME)
2002.06.22	8:00:00	0.6	8	0.87	25	9.2	34	450	8	3	15	-23	2.07	ICME(+HSS)
2002.06.23	19:00:00	0.4	12	1	36	9.3	0	521	13	2	7	-18	2.42	HSS(+ICME)
2002.06.29	22:00:00	0.4	17	1.59	7	8.7	23	395	7	3.3	18	-7	1.72	ICME(+HSS)
2002.06.30	23:00:00	1	41	0.87	47	11.1	9	474	14	3.7	22	-24	2.63	HSS(+ICME)
2002.07.08	21:00:00	0.8	1	1.98	32	9.3	8	509	39	4	27	-20	2.37	HSS
2002.07.22	6:00:00	0.8	24	1.61	43	9.5	1	533	12	4.7	39	-38	2.53	ICME
2002.07.25	13:00:00	2.3	43	1.82	9	13.4	2	520	4	4	27	-31	3.48	ICME
2002.08.06	6:00:00	0.9	17	1.8	19	6.1	39	427	0	2	7	-12	1.3	ICME
2002.08.18	18:46:00	5.1	30	2.5	10	14.3	13	573	2	5.7	67	-71	4.1	ICME
2002.08.21	23:00:00	1.4	28	2.22	-1	12.7	17	463	11	3	15	-51	2.94	ICME
2002.09.07	16:36:00	5.1	12	1.64	-1	22.9	2	550	3	7.3	154	-181	6.3	ICME1
2002.09.08	13:00:00	0.7	-2	1.22	38	12.3	4	522	9	4	27	-84	3.21	ICME2
2002.09.15	20:00:00	2.4	47	2.69	13	13.5	19	479	40	3	15	-45	3.23	ICME
2002.09.21	11:00:00	1.2	11	1.49	11	12.2	3	428	1	2.7	12	-35	2.61	ICME1
2002.09.23	3:00:00	2.1	17	1.93	24	9.9	22	426	5	1.3	5	-18	2.11	ICME2
2002.10.29	20:00:00	1.2	34	0.72	35	11.9	8	513	11	5	48	-52	3.05	ICME
2002.11.09	17:51:00	4	39	1.3	39	16.9	37	472	42	5	48	-32	3.99	ICME(+HSS)
2002.11.11	12:31:00	2.8	27	2.97	28	16.1	2	658	4	4	27	-43	5.3	HSS(+ICME)
2002.11.16	23:00:00	7.8	42	2.66	14	14.2	59	494	7	3.7	22	-52	3.51	ICME
2002.11.26	21:50:00	2.8	24	2.65	7	26.4	3	593	6	5	48	-64	7.83	ICME
2002.12.06	2:00:00	1.1	18	1.65	5	12.3	27	462	26	3.7	22	-22	2.84	ICME(+HSS)
2002.12.07	6:00:00	2.3	29	1.23	18	14.9	4	643	37	4	27	-38	4.79	HSS(+ICME)
2002.12.17	18:00:00	1.7	8	1.95	4	16.6	31	436	-1	2.7	12	-16	3.62	ICME(+HSS)
2002.12.19	2:00:00	2.2	27	1.58	22	21.6	5	544	26	4.7	39	-72	5.88	HSS(+ICME)
2002.12.26	8:00:00	1.1	-2	1.15	0	16	15	771	46	6	80	-68	6.17	HSS
2003.01.17	8:00:00	0.7	16	0.95	22	14.6	35	403	25	3.7	22	-19	2.94	ICME(+HSS)
2003.01.18	20:00:00	1.3	47	1.05	36	17	3	735	65	4.7	39	-37	6.25	HSS(+ICME)
2003.01.24	13:00:00	0.8	9	0.71	1	8.9	1	776	17	5.7	67	-46	3.45	HSS
2003.02.01	14:00:00	4.2	20	2.39	13	13	2	793	3	5.7	67	-72	5.15	ICME
2003.02.17	21:50:00	2	12	1.3	2	15.6	4	697	9	5.3	56	-20	5.44	ICME
2003.02.26	5:00:00	0.3	1	1.23	10	9.4	2	490	6	3.7	22	-21	2.3	ICME(+HSS)
2003.02.26	20:00:00	0.8	11	1.1	14	16.5	4	594	19	5	48	-66	4.9	HSS(+ICME)

Date	Time	AF , %	t_{\min} , h	$A_{xy\max}$, %	$t_{A_{xy\max}}$, h	B_{\max} , nT	$t_{B_{\max}}$, h	V_{\max} , km/s	$t_{V_{\max}}$, h	Kp_{\max}	Ap_{\max}	Dst_{\min} , nT	$VmBm$	Type of interplanetary disturbance
2003.03.02	23:00:00	1.6	31	1.48	16	15.4	25	584	36	5.3	56	-67	4.5	HSS1
2003.03.05	14:00:00	0.9	36	0.77	34	8.6	0	541	18	4.7	39	-50	2.33	HSS2
2003.03.20	4:40:00	3.3	11	2.82	8	13.2	2	822	5	5	48	-64	5.43	ICME
2003.04.03	22:00:00	0.9	36	0.87	38	8.7	4	504	14	5	48	-62	2.19	HSS1
2003.04.05	16:00:00	0.5	6	0.93	18	8.7	3	553	9	5.3	56	-48	2.41	HSS2
2003.04.24	7:00:00	1.1	19	0.94	18	10.2	10	593	19	5.3	56	-53	3.02	HSS1
2003.04.27	8:00:00	0.7	19	1.04	32	8.1	35	546	15	4.3	32	-49	2.21	HSS2
2003.05.04	13:00:00	0.5	11	0.93	-1	12.4	15	423	12	2.3	9	-8	2.62	ICME(+HSS)
2003.05.05	5:04:00	1.7	28	1.17	24	15.6	8	773	81	5.3	56	-32	6.03	HSS(+ICME)
2003.05.09	4:55:00	2.5	5	2.25	8	12.3	6	899	6	6.7	111	-84	5.53	ICME
2003.05.21	2:00:00	0.5	8	1.11	9	10.7	5	457	13	3.3	18	-11	2.44	ICME(+HSS)
2003.05.21	16:00:00	1.4	12	1.04	8	13.3	4	568	5	6	80	-73	3.78	HSS(+ICME)
2003.05.24	8:00:00	1.6	32	0.84	45	10.4	10	590	18	4.3	32	-40	3.07	ICME
2003.06.20	9:00:00	1.2	21	1.03	6	9	3	566	6	4.7	39	-50	2.55	ICME(+HSS)
2003.06.22	8:00:00	1.3	12	1.1	5	8.8	36	577	15	4	27	-36	2.54	HSS(+ICME)
2003.07.06	13:00:00	1.5	10	1.62	4	8.9	1	691	15	3.7	22	-26	3.07	ICME
2003.07.19	8:00:00	1	37	1.2	22	9.6	11	696	22	5.7	67	-43	3.34	ICME1
2003.07.21	7:00:00	0.6	7	1.08	3	7.6	15	532	-1	2.3	9	-25	2.02	ICME2
2003.07.23	14:00:00	0.8	8	0.83	46	10.6	47	515	4	3.7	22	-26	2.73	ICME
2003.08.04	6:00:00	0.8	45	1.29	2	13.6	43	592	2	5.7	67	-60	4.03	ICME
2003.08.07	14:00:00	0.5	9	0.77	11	12.5	5	643	7	6.7	111	-61	4.02	ICME(+HSS)
2003.08.08	4:00:00	0.7	41	0.96	41	13.6	1	779	4	5.3	56	-41	5.3	HSS(+ICME)
2003.08.10	11:00:00	0.4	8	1	11	6.7	21	637	3	2.3	9	-24	2.13	ICME(+HSS)
2003.08.11	10:00:00	0.7	28	0.97	34	9.3	14	685	26	4.7	39	-27	3.19	HSS(+ICME)
2003.08.17	14:21:00	3.4	15	3.24	1	22.3	3	530	5	7.3	154	-148	5.91	ICME
2003.08.29	14:00:00	1.1	12	0.88	0	12.4	2	611	9	5	48	-30	3.79	HSS
2003.09.03	23:00:00	0.8	28	1.1	35	10.6	8	673	17	4.3	32	-35	3.57	HSS
2003.09.08	11:00:00	0.9	16	1.23	6	12.3	12	509	19	3	15	-2	3.13	ICME(+HSS)
2003.09.09	10:00:00	1.4	12	1.58	6	15.2	9	674	24	5	48	-42	5.12	HSS(+ICME)
2003.09.21	22:00:00	0.7	3	1.15	2	7.2	46	609	12	4	27	-37	2.19	HSS1
2003.09.23	21:00:00	0.9	28	0.79	3	9.8	4	720	34	5.7	67	-59	3.53	HSS2
2003.09.30	0:00:00	1.2	19	1.05	3	9	16	323	7	3	15	-17	1.45	ICME(+HSS)
2003.10.01	20:00:00	1.1	30	2.07	10	18.3	10	495	42	4.7	39	-38	4.53	HSS(+ICME)

Date	Time	AF , %	t_{\min} , h	$A_{xy\max}$, %	$t_{A_{xy\max}}$, h	B_{\max} , nT	$t_{B_{\max}}$, h	V_{\max} , km/s	$t_{V_{\max}}$, h	Kp_{\max}	Ap_{\max}	Dst_{\min} , nT	$VmBm$	Type of interplanetary disturbance
2003.10.05	7:00:00	1.4	19	1.16	23	12.5	17	456	17	3.3	18	-1	2.85	ICME(+HSS)
2003.10.06	11:00:00	1.1	15	0.9	1	12.6	9	621	12	4.3	32	-20	3.91	HSS(+ICME)
2003.10.08	9:00:00	0.8	31	0.92	6	7.6	1	621	6	4	27	-12	2.36	HSS
2003.10.14	16:00:00	1.4	13	1.17	36	19.7	4	724	15	7.3	154	-85	7.13	HSS
2003.10.24	15:24:00	5.6	8	2.97	9	34	10	609	23	6.7	111	-49	10.35	ICME
2003.11.04	6:25:00	4.3	4	2.66	33	19.7	3	754	8	7	132	-69	7.43	ICME
2003.11.06	19:37:00	2.3	11	2.14	2	11.2	2	572	4	5.7	67	-21	3.2	ICME(+HSS)
2003.11.08	10:00:00	1.7	3	2.08	9	14.9	8	582	33	5.7	67	-33	4.34	HSS(+ICME)
2003.11.10	9:00:00	1.4	46	1.42	10	15.7	11	770	36	6	80	-62	6.04	HSS
2003.11.20	8:03:00	6.8	17	2.65	17	55.8	8	703	4	8.7	300	-422	19.61	ICME
2003.12.08	6:00:00	0.9	8	1.37	29	14.4	7	821	67	5.3	56	-54	5.91	HSS
2003.12.20	3:00:00	0.9	14	1.63	10	20.6	10	551	29	4.7	39	-22	5.68	ICME(+HSS)
2003.12.21	15:00:00	1.1	25	1	21	8.9	-1	628	31	4	27	-25	2.79	HSS(+ICME)
2003.12.27	10:00:00	1.2	41	1.11	6	12.2	1	549	33	4.3	32	-33	3.35	HSS
2004.01.06	19:51:00	5.7	47	2.09	6	16.6	5	739	12	6	80	-69	6.13	ICME
2004.01.09	6:00:00	0.7	18	1.3	20	13.7	26	618	14	5.3	56	-50	4.23	ICME1
2004.01.10	9:00:00	2.1	7	1.16	13	15	1	678	25	5.3	56	-60	5.08	ICME2
2004.01.13	9:00:00	0.9	-3	1.35	13	8.6	24	597	9	4.3	32	-30	2.57	ICME(+HSS)
2004.01.14	22:00:00	1.2	-2	1.39	23	12.4	17	642	53	4.7	39	-57	3.98	HSS(+ICME)
2004.01.22	1:37:00	9.4	11	4.32	6	25.4	9	666	2	7	132	-149	8.46	ICME1
2004.01.23	14:25:00	2.2	42	0.79	30	12.7	4	556	4	6	80	-89	3.53	ICME2
2004.02.05	20:00:00	0.9	6	0.81	31	8.2	4	619	14	4.7	39	-34	2.54	HSS
2004.02.14	21:00:00	0.5	4	0.99	5	8	79	735	9	4.7	39	-53	2.94	HSS
2004.02.26	21:00:00	1.3	31	1.31	7	16.5	24	717	68	4	27	-28	5.92	HSS
2004.03.07	23:00:00	0.4	2	0.53	2	11	36	410	36	3	15	-6	2.26	ICME(+HSS)
2004.03.09	12:00:00	2.4	27	1.06	8	16.4	8	770	39	6.3	94	-77	6.31	HSS(+ICME)
2004.03.19	13:00:00	0.4	15	0.74	17	8.6	8	439	67	4	27	-28	1.89	HSS
2004.04.09	2:33:00	0.9	18	1.17	17	9.4	2	533	4	4.7	39	-35	2.51	ICME1
2004.04.10	20:10:00	1.3	14	1.7	2	11.6	2	496	2	3.7	22	-29	2.88	ICME2
2004.04.30	17:00:00	0.9	16	1	48	9.4	28	457	5	4.7	39	-36	2.15	ICME
2004.05.14	17:00:00	1	9	1.2	28	9.3	7	356	1	3.3	18	-23	1.66	ICME
2004.05.21	20:00:00	0.6	27	1.17	20	7.6	1	511	12	3.3	18	-11	1.94	HSS
2004.05.28	3:00:00	0.7	21	1.22	18	8.4	16	413	17	3	15	-33	1.73	ICME(+HSS)

Date	Time	AF , %	t_{\min} , h	$A_{xy\max}$, %	$t_{A_{xy\max}}$, h	B_{\max} , nT	$t_{B_{\max}}$, h	V_{\max} , km/s	$t_{V_{\max}}$, h	Kp_{\max}	Ap_{\max}	Dst_{\min} , nT	$VmBm$	Type of interplanetary disturbance
2004.05.29	3:00:00	0.7	36	1.18	25	10.3	41	544	62	4.3	32	-30	2.8	HSS(+ICME)
2004.05.31	22:00:00	0.4	-1	1.03	7	7	0	577	24	3.7	22	-16	2.02	HSS1
2004.06.05	10:00:00	0.4	14	1.22	16	6.8	6	507	20	3.7	22	-19	1.72	HSS2
2004.06.13	12:00:00	0.8	6	1.13	11	12.8	25	404	25	3.3	18	-28	2.59	ICME(+HSS)
2004.06.14	15:00:00	0.7	28	1.15	16	13	17	585	41	4.3	32	-30	3.8	HSS(+ICME)
2004.06.17	0:00:00	0.3	4	0.87	1	6.3	2	539	9	2.3	9	-10	1.7	HSS
2004.06.28	10:00:00	1.2	43	1.4	20	16.7	18	593	24	4	27	-16	4.95	HSS
2004.07.19	15:00:00	0.9	21	0.85	31	8.5	4	563	28	3	15	-20	2.39	ICME
2004.07.22	10:36:00	5.2	22	2.08	16	18.7	11	700	12	7	132	-101	6.54	ICME1
2004.07.24	6:13:00	4.6	9	2.84	5	24.1	34	619	29	8	207	-148	7.46	ICME2
2004.07.30	21:14:00	0.6	-3	1.35	26	7.6	2	496	2	3.7	22	-46	1.88	ICME1
2004.08.01	2:00:00	2	19	2.42	36	8.1	2	516	3	3.7	22	-42	2.09	ICME2
2004.08.05	16:00:00	0.4	-2	0.85	25	8.1	4	358	11	2.7	12	-26	1.45	ICME(+HSS)
2004.08.06	20:00:00	0.7	-1	1.33	14	13	17	479	33	4	27	-39	3.11	HSS(+ICME)
2004.08.09	3:00:00	0.4	-2	1.06	9	9.9	18	387	-1	4	27	-41	1.92	ICME(+HSS)
2004.08.09	22:00:00	0.8	16	1.17	11	12.7	15	608	27	4.3	32	-55	3.86	HSS(+ICME)
2004.08.13	23:00:00	1.2	30	1.47	30	6.4	1	445	12	2.7	12	-19	1.42	ICME
2004.08.16	17:00:00	1.6	33	1.57	2	11.6	28	360	54	3.7	22	-26	2.09	ICME
2004.08.26	10:00:00	0.6	6	1.12	32	8.9	21	451	11	2.7	12	-19	2.01	HSS
2004.09.05	9:00:00	0.9	-3	1.05	14	12	11	452	45	3.7	22	-38	2.71	HSS
2004.09.13	20:03:00	5.3	30	2.6	0	25.5	2	613	15	5.3	56	-50	7.82	ICME
2004.09.16	18:00:00	1.1	17	1.21	15	7.9	25	550	6	5	48	-43	2.17	ICME1
2004.09.18	11:00:00	0.9	4	1.23	5	7.8	4	452	0	3	15	-33	1.76	ICME2
2004.09.27	8:00:00	0.5	-2	0.73	42	8.8	28	413	47	2.7	12	-22	1.82	HSS
2004.10.08	7:00:00	0.4	11	1.38	46	9.6	9	370	18	3.3	18	-21	1.78	HSS
2004.10.12	22:00:00	0.9	9	0.86	27	11.6	16	542	43	5	48	-63	3.14	HSS
2004.10.19	14:00:00	0.8	29	0.9	19	11.2	22	448	29	3.7	22	-48	2.51	HSS1
2004.10.23	11:00:00	1.4	44	0.68	44	10.6	42	503	36	3.7	22	-18	2.67	HSS2
2004.10.26	7:00:00	0.5	1	0.5	5	4.5	23	450	-1	0.7	3	-9	1.01	ICME1
2004.10.27	12:12:00	0.3	0	0.98	16	6.7	4	413	2	1.7	6	-1	1.38	ICME2
2004.11.02	16:00:00	0.9	15	0.99	4	8.5	8	378	6	1.7	6	-13	1.61	ICME(+HSS)
2004.11.03	10:00:00	0.9	15	1.39	40	9.3	15	455	20	4.3	32	-23	2.12	HSS(+ICME)
2004.11.23	12:00:00	0.3	9	1.06	30	9.3	33	439	1	3	15	-36	2.04	ICME(+HSS)

Date	Time	AF , %	t_{\min} , h	$A_{xy\max}$, %	$t_{A_{xy\max}}$, h	B_{\max} , nT	$t_{B_{\max}}$, h	V_{\max} , km/s	$t_{V_{\max}}$, h	Kp_{\max}	Ap_{\max}	Dst_{\min} , nT	$VmBm$	Type of interplanetary disturbance
2004.11.24	22:00:00	0.6	9	0.73	28	9.6	2	542	23	4.3	32	-63	2.6	HSS(+ICME)
2004.11.28	19:00:00	1.3	38	1.03	2	15.5	7	700	45	4	27	-43	5.42	HSS
2004.12.05	7:46:00	4.9	23	1.68	1	34.6	3	453	37	4.3	32	-58	7.84	ICME(+HSS)
2004.12.07	0:00:00	1.1	2	1.31	0	10.7	-1	535	15	3.7	22	-51	2.86	HSS(+ICME)
2004.12.24	22:00:00	1	25	0.81	36	13.3	18	530	34	4	27	-25	3.52	HSS
2004.12.27	6:00:00	2.5	18	1.43	11	10	4	554	2	2.7	12	-38	2.77	ICME1
2004.12.28	16:00:00	2.2	13	1.84	5	9.6	23	446	16	4.7	39	-55	2.14	ICME2
2005.01.01	12:00:00	1.6	21	0.89	5	17.2	10	776	22	5.7	67	-57	6.67	ICME(+HSS)
2005.01.02	19:00:00	4.3	26	1.86	10	13.5	3	763	44	5.3	56	-55	5.15	HSS(+ICME)
2005.01.07	9:22:00	1.3	14	1.32	22	22.4	19	585	3	7.7	179	-96	6.55	ICME1
2005.01.09	10:41:00	1	-3	0.84	24	15.6	62	469	10	3.7	22	-38	3.66	ICME2
2005.01.14	21:00:00	0.4	-1	1.07	25	8.6	5	664	9	5	48	-41	2.86	HSS
2005.01.27	18:00:00	0.5	21	1.04	3	10.8	7	394	18	2.7	12	-16	2.13	ICME(+HSS)
2005.01.29	1:00:00	1.1	1	1.12	20	16.5	12	614	39	4.3	32	-28	5.07	HSS(+ICME)
2005.02.06	22:00:00	1.3	21	0.74	11	16.6	13	746	80	5.7	67	-62	6.19	HSS
2005.02.27	19:00:00	0.5	3	1.02	16	8.4	3	672	44	3.7	22	-23	2.82	HSS
2005.03.05	22:00:00	1.5	23	1.12	45	16.2	7	767	60	5.7	67	-65	6.21	HSS1
2005.03.09	16:00:00	0.7	-2	1.38	43	6.8	0	729	3	5	48	-44	2.48	HSS2
2005.03.18	10:00:00	1.2	25	1.33	20	9.9	10	464	17	4.7	39	-45	2.3	ICME
2005.03.21	6:00:00	0.6	13	1.38	15	8.5	6	606	5	3.3	18	-35	2.58	ICME1
2005.03.22	7:00:00	0.5	1	1.47	37	7.3	38	441	3	2	7	-12	1.61	ICME2
2005.04.09	13:00:00	0.5	21	1.08	21	6.6	47	350	43	1.7	6	-15	1.15	ICME(+HSS)
2005.04.11	13:00:00	1.2	38	0.72	11	16.6	8	637	43	5	48	-70	5.29	HSS(+ICME)
2005.04.19	10:00:00	1	21	0.99	43	13.1	18	574	30	4.7	39	-40	3.76	HSS
2005.04.21	15:00:00	0.9	24	1.09	3	9.3	5	505	0	3	15	-22	2.35	ICME(+HSS)
2005.04.22	22:00:00	0.9	29	1.01	48	8.9	2	581	21	3	15	-24	2.59	HSS(+ICME)
2005.05.15	2:38:00	12.2	4	2.53	8	54.8	7	987	8	8.3	236	-263	27.04	ICME1
2005.05.17	0:00:00	1.2	-2	1.55	0	8.4	37	619	1	4.3	32	-97	2.6	ICME2
2005.05.20	4:01:00	1	8	0.88	4	15	17	483	11	5	48	-103	3.62	ICME
2005.06.02	13:00:00	0.4	5	0.97	18	7.4	10	469	19	2.7	12	-30	1.74	HSS1
2005.06.04	13:00:00	0.5	-1	1.39	10	14.9	10	665	28	5.7	67	-46	4.95	HSS2
2005.06.11	18:00:00	0.3	8	1.23	10	9.8	5	324	13	3.7	22	-9	1.59	ICME1
2005.06.12	7:45:00	3.1	15	1.25	1	25	6	518	10	7.3	154	-106	6.48	ICME2

Date	Time	AF , %	t_{\min} , h	$A_{xy\max}$, %	$t_{Axy\max}$, h	B_{\max} , nT	$t_{B\max}$, h	V_{\max} , km/s	$t_{V\max}$, h	Kp_{\max}	Ap_{\max}	Dst_{\min} , nT	$VmBm$	Type of interplanetary disturbance
2005.06.14	18:35:00	1.5	22	0.83	-1	11.1	8	554	4	4.7	39	-54	3.07	ICME1
2005.06.16	8:47:00	2.1	19	1.59	46	18.6	2	692	13	5	48	-48	6.44	ICME2
2005.06.30	20:00:00	1	18	0.94	26	15.2	21	641	28	4.3	32	-18	4.87	HSS
2005.07.07	12:00:00	0.6	15	0.55	0	7.2	14	344	1	2.7	12	-7	1.24	ICME1
2005.07.09	3:00:00	0.6	18	1.07	23	14.4	5	345	3	5	48	-60	2.48	ICME2
2005.08.15	9:00:00	0.7	22	1.26	36	11.7	27	714	57	3.7	22	-15	4.18	HSS
2005.09.02	14:19:00	2.5	8	0.97	3	16.5	3	665	11	6.7	111	-68	5.49	ICME(+HSS)
2005.09.04	2:00:00	0.5	6	1.05	32	7.6	4	755	13	4.7	39	-76	2.87	HSS(+ICME)
2005.09.15	8:35:00	4.3	8	2.7	3	17.8	9	881	9	7	132	-86	7.84	ICME
2005.09.30	8:00:00	0.9	16	0.61	9	10.7	7	537	23	3.7	22	-33	2.87	HSS
2005.10.07	3:00:00	2.1	28	1.74	27	20.2	26	724	33	4.7	39	-49	7.31	HSS
2005.10.15	8:00:00	0.5	13	0.67	42	8.3	40	426	44	4.3	32	-39	1.77	HSS
2005.10.20	6:00:00	0.3	-2	1.17	29	5.2	0	384	2	1	4	-19	1	ICME(+HSS)
2005.10.21	20:00:00	0.5	9	0.96	5	13.8	7	394	17	4	27	-14	2.72	HSS(+ICME)
2005.10.24	19:00:00	0.7	31	0.94	31	10.7	10	556	45	4.3	32	-39	2.97	HSS
2005.11.02	13:00:00	0.6	11	0.87	22	13.8	7	665	29	4.7	39	-39	4.59	HSS1
2005.11.04	9:00:00	0.9	36	1.14	34	8.6	0	732	4	4.3	32	-32	3.15	HSS2
2005.11.18	0:00:00	0.6	-1	1.02	28	9.1	28	351	30	2.3	9	-4	1.6	ICME(+HSS)
2005.11.19	12:00:00	0.9	16	0.91	4	12.4	2	442	19	4	27	-37	2.74	HSS(+ICME)
2005.11.21	19:00:00	0.3	2	0.77	2	7.5	14	375	1	2.7	12	-20	1.41	ICME(+HSS)
2005.11.23	7:00:00	0.6	44	0.98	31	11.2	27	490	46	3.7	22	-28	2.74	HSS(+ICME)
2005.11.29	16:00:00	1.3	43	1.12	38	15	6	737	42	4.7	39	-18	5.53	HSS
2005.12.08	15:00:00	0.2	9	0.78	-1	5	23	296	2	1.7	6	-6	0.74	ICME(+HSS)
2005.12.09	15:00:00	1.4	32	1.24	24	15	12	397	38	4.3	32	-28	2.98	HSS(+ICME)
2005.12.16	6:00:00	0.5	21	1.75	12	7	15	370	1	3.3	18	-9	1.3	ICME
2005.12.18	10:00:00	0.4	11	0.73	1	9.2	3	363	2	1.7	6	3	1.67	ICME(+HSS)
2005.12.19	11:00:00	0.9	21	0.82	15	14	8	583	22	4	27	-27	4.08	HSS(+ICME)
2005.12.24	10:00:00	0.5	-3	0.77	34	11.4	20	385	58	2.7	12	-25	2.19	ICME
2005.12.27	4:00:00	1.2	26	1.27	15	18.9	15	729	48	5.3	56	-41	6.89	HSS
2005.12.31	0:00:00	2.1	21	2.03	4	10.8	33	591	3	3.3	18	-31	3.19	ICME1
2006.01.01	14:05:00	0.7	-1	0.9	24	16.8	2	503	4	2.7	12	-16	4.23	ICME2
2006.01.06	7:00:00	0.6	15	0.94	13	8.5	11	401	32	3	15	-23	1.7	HSS
2006.01.25	4:00:00	1.3	11	0.8	11	11.1	20	447	22	4	27	-34	2.48	ICME(+HSS)

Date	Time	AF , %	t_{\min} , h	$A_{xy\max}$, %	$t_{A_{xy\max}}$, h	B_{\max} , nT	$t_{B_{\max}}$, h	V_{\max} , km/s	$t_{V_{\max}}$, h	Kp_{\max}	Ap_{\max}	Dst_{\min} , nT	$VmBm$	Type of interplanetary disturbance
2006.01.26	3:00:00	0.8	18	1.01	24	11.3	16	683	28	5.3	56	-43	3.86	HSS(+ICME)
2006.01.30	19:00:00	0.4	-1	0.76	30	4.9	23	334	1	1.3	5	-1	0.82	ICME(+HSS)
2006.02.01	3:00:00	0.6	1	0.68	14	7.7	44	364	74	2.3	9	-17	1.4	HSS(+ICME)
2006.02.05	17:00:00	0.7	10	0.93	7	11.7	16	367	3	3.7	22	-25	2.15	ICME
2006.02.10	10:00:00	0.5	40	0.8	29	10.6	25	493	48	3	15	-7	2.61	HSS
2006.02.15	7:00:00	0.4	43	0.53	13	10	3	561	24	3.7	22	-17	2.8	HSS
2006.02.18	20:00:00	0.4	6	0.59	24	7.7	30	398	31	2.3	9	-15	1.53	ICME(+HSS)
2006.02.20	4:00:00	1.3	21	0.6	41	11.1	3	690	38	4.7	39	-42	3.83	HSS(+ICME)
2006.02.28	10:00:00	0.7	11	0.89	-1	7.3	28	444	32	3	15	-15	1.62	HSS
2006.03.09	2:00:00	1.1	46	1.12	12	10.9	29	569	55	4.7	39	-17	3.1	HSS
2006.03.18	2:00:00	0.7	22	1.18	-1	12.3	22	719	62	6.3	94	-41	4.42	HSS
2006.03.24	9:00:00	0.8	30	1.09	7	7.1	9	407	2	2.7	12	-15	1.44	HSS
2006.04.03	19:00:00	1.1	30	1.04	4	12.7	41	347	44	5.3	56	-85	2.2	ICME(+HSS)
2006.04.05	16:00:00	0.7	12	1.2	3	14.4	0	460	14	4.7	39	-87	3.31	HSS(+ICME)
2006.04.08	7:00:00	1.1	44	1.31	23	17.7	35	693	54	6	80	-80	6.13	HSS
2006.04.13	3:00:00	2.7	29	1.27	13	19.6	24	550	14	7	132	-111	5.39	ICME(+HSS)
2006.04.14	12:00:00	0.7	3	1.17	7	12.9	-1	684	27	7	132	-92	4.41	HSS(+ICME)
2006.04.26	21:00:00	0.3	8	0.86	22	5.3	8	339	1	1.3	5	-11	0.9	ICME1
2006.04.28	1:16:00	1.1	8	1	5	9.8	8	435	23	3.7	22	-21	2.13	ICME2
2006.05.10	19:00:00	0.9	22	1.12	47	9.7	15	667	27	4.3	32	-22	3.23	HSS
2006.05.17	7:00:00	1.3	43	1.14	35	14.6	29	594	60	4.3	32	-38	4.34	HSS1
2006.05.22	2:00:00	0.7	22	0.51	1	6.1	60	502	20	3.7	22	-8	1.53	HSS2
2006.05.25	18:00:00	0.3	11	0.64	35	4.7	4	364	9	1.7	6	-4	0.86	ICME
2006.05.30	10:00:00	0.6	10	0.78	17	9.3	4	351	9	3.7	22	2	1.63	ICME(+HSS)
2006.05.31	7:00:00	0.8	15	1.15	16	10.3	26	603	67	3	15	-13	3.11	HSS(+ICME)
2006.06.06	5:00:00	0.9	42	0.83	47	14	4	669	54	5.3	56	-45	4.68	HSS
2006.06.14	6:00:00	0.8	41	0.95	22	11.1	25	615	43	4.3	32	-30	3.41	HSS
2006.06.27	11:00:00	1.3	43	1.04	38	14	40	601	45	4	27	-24	4.21	HSS
2006.07.04	0:00:00	1	25	1.42	0	18.4	25	633	30	5	48	-34	5.82	HSS
2006.07.09	21:36:00	3.8	34	1.95	26	9.7	3	438	2	3.3	18	-23	2.12	ICME(+HSS)
2006.07.11	11:00:00	1.4	1	1.66	9	14.8	5	528	29	4	27	-17	3.91	HSS(+ICME)
2006.07.14	10:00:00	0.8	0	1.32	28	10.5	5	473	14	4.3	32	-35	2.48	ICME
2006.07.22	1:00:00	0.4	-2	0.72	5	5.3	8	331	11	1.7	6	-1	0.88	ICME(+HSS)

Date	Time	$AF, \%$	t_{\min}, h	$A_{xy\max}, \%$	$t_{A_{xy\max}}, \text{h}$	B_{\max}, nT	$t_{B_{\max}}, \text{h}$	$V_{\max}, \text{km/s}$	$t_{V_{\max}}, \text{h}$	Kp_{\max}	Ap_{\max}	Dst_{\min}, nT	$VmBm$	Type of interplanetary disturbance
2006.07.23	19:00:00	0.6	47	1.02	45	6.7	20	364	61	2.7	12	-10	1.22	HSS(+ICME)
2006.07.27	13:53:00	1	13	0.82	42	14	12	663	17	6	80	-47	4.64	HSS
2006.07.29	18:00:00	0.3	0	1.13	8	5.2	21	520	1	1.7	6	-17	1.35	ICME(+HSS)
2006.07.30	23:00:00	0.7	24	0.98	25	14.3	13	631	39	4	27	-24	4.51	HSS(+ICME)
2006.08.07	0:35:00	0.9	28	0.78	42	18.1	9	630	26	5.7	67	-44	5.7	HSS
2006.08.10	21:00:00	0.4	30	0.86	12	5.7	28	487	9	3	15	-13	1.39	ICME
2006.08.27	12:00:00	1.1	16	1.15	43	18.7	9	664	17	4.7	39	-42	6.21	HSS
2006.08.30	2:00:00	1.4	25	1.07	36	9.8	30	555	-1	3	15	-34	2.72	ICME
2006.09.16	13:00:00	1.2	42	1.07	10	10.4	27	639	55	4.3	32	-35	3.32	HSS
2006.09.23	9:00:00	1.4	21	1.24	48	18.3	16	671	42	5	48	-56	6.14	HSS
2006.09.30	23:00:00	1.1	0	0.87	24	12.3	-1	571	14	5	48	-48	3.51	HSS(+ICME)
2006.09.30	3:00:00	1	9	1.25	14	18	12	439	7	4	27	-18	3.95	ICME(+HSS)
2006.10.07	12:00:00	0.7	42	1.28	38	11.6	6	535	10	4	27	-20	3.1	HSS
2006.10.12	23:00:00	1.1	26	0.65	35	11.8	11	596	56	5.3	56	-49	3.52	HSS
2006.10.20	2:00:00	1.2	26	1.09	42	17.1	20	646	38	4.3	32	-24	5.52	HSS1
2006.10.24	23:00:00	0.4	7	0.75	1	5.7	0	487	6	2.3	9	-13	1.39	HSS2
2006.10.28	0:00:00	0.8	45	0.94	6	12	17	585	48	4.7	39	-46	3.51	HSS
2006.11.01	17:00:00	0.7	15	1.14	13	5.9	9	421	2	3	15	-22	1.24	ICME(+HSS)
2006.11.03	12:00:00	0.8	43	1.04	35	9.5	16	436	24	3.3	18	-20	2.07	HSS(+ICME)
2006.11.21	12:00:00	0.8	35	0.71	1	10.6	27	372	1	3	15	-5	1.97	ICME(+HSS)
2006.11.23	2:00:00	0.6	32	1.11	42	14.9	7	638	76	4.3	32	-31	4.75	HSS(+ICME)
2006.11.28	13:00:00	1.7	24	1.31	35	15.6	30	497	7	5.3	56	-74	3.88	ICME
2006.12.08	4:35:00	1.8	10	1.77	37	9.1	3	702	2	5	48	-20	3.19	ICME1
2006.12.09	22:00:00	1	29	1.29	3	8.9	44	756	52	4.3	32	-19	3.36	ICME2
2006.12.14	14:14:00	9.6	12	4.35	4	17.7	11	955	2	8.3	236	-146	8.45	ICME
2007.01.01	7:00:00	1.4	24	0.74	7	13.7	17	699	55	4.7	39	-21	4.79	HSS
2007.01.14	12:48:00	1	12	1.02	-1	14.5	19	379	6	3	15	-11	2.75	ICME(+HSS)
2007.01.15	10:00:00	0.4	21	0.85	35	13.6	3	698	52	5	48	-27	4.75	HSS(+ICME)
2007.02.12	9:00:00	1.2	40	0.97	46	12.9	5	735	46	5.7	67	-26	4.74	HSS
2007.02.25	18:00:00	0.9	18	1.39	12	13.2	38	661	77	3.7	22	-12	4.36	HSS
2007.03.11	8:00:00	1	42	0.88	36	10.3	40	706	51	5	48	-33	3.64	HSS
2007.03.31	20:00:00	1.1	18	1.24	25	10.7	6	649	49	5	48	-63	3.47	HSS
2007.04.08	22:00:00	1.1	7	1.14	1	17	3	487	17	3.7	22	-10	4.14	HSS1

Date	Time	AF , %	t_{\min} , h	$A_{xy\max}$, %	$t_{Axy\max}$, h	B_{\max} , nT	$t_{B\max}$, h	V_{\max} , km/s	$t_{V\max}$, h	Kp_{\max}	Ap_{\max}	Dst_{\min} , nT	$VmBm$	Type of interplanetary disturbance
2007.04.10	10:00:00	0.7	46	0.61	14	8.2	4	556	46	2.7	12	-13	2.28	HSS2
2007.04.17	3:00:00	0.3	13	0.64	9	10.5	9	408	48	3.3	18	-36	2.14	HSS
2007.04.22	3:00:00	1	45	1.51	24	12.9	26	533	33	5	48	-27	3.44	HSS
2007.04.26	14:00:00	0.7	33	1	39	9.5	29	681	80	5	48	-33	3.23	HSS
2007.05.21	17:00:00	1.5	15	1.36	1	12.7	15	504	-1	4.3	32	-20	3.2	ICME(+HSS)
2007.05.23	2:00:00	0.5	-1	0.97	36	11.3	9	687	51	5.7	67	-63	3.88	HSS(+ICME)
2007.06.13	20:00:00	1.3	46	1.17	2	11.4	7	618	31	4.3	32	-17	3.52	HSS1
2007.06.17	16:00:00	0.4	8	0.58	30	5.3	1	521	12	2.3	9	-6	1.38	HSS2
2007.06.21	9:00:00	0.7	42	0.81	0	9.8	3	578	44	4	27	-21	2.83	HSS
2007.06.29	18:00:00	0.6	10	0.88	43	11.3	5	539	11	4	27	-12	3.05	HSS1
2007.07.03	10:00:00	0.5	26	0.9	1	10.4	7	620	24	4.3	32	-15	3.22	HSS2
2007.07.10	15:00:00	1.3	38	1.06	18	17.8	13	598	30	5	48	-39	5.32	HSS
2007.07.13	19:00:00	0.5	12	1.12	0	12.5	21	477	18	4.3	32	-45	2.98	ICME(+HSS)
2007.07.14	17:00:00	0.8	10	0.64	14	12.5	-1	606	11	5.3	56	-41	3.79	HSS(+ICME)
2007.07.20	6:16:00	1.3	37	1.23	45	11	2	532	26	4	27	-30	2.93	HSS
2007.07.26	13:00:00	0.7	32	0.7	45	11.9	10	484	18	3.7	22	-17	2.88	HSS1
2007.07.29	0:00:00	1.3	27	1	10	15.6	5	613	45	3.7	22	-18	4.78	HSS2
2007.08.01	1:00:00	0.6	2	1	15	8.4	0	650	7	3.7	22	-17	2.73	HSS
2007.08.06	6:00:00	1.2	44	0.9	16	15.3	18	690	27	5.7	67	-34	5.28	HSS1
2007.08.10	9:00:00	0.9	40	1.03	24	11.4	5	573	13	4.3	32	-32	3.27	HSS2
2007.08.18	11:00:00	0.7	37	1.02	27	7.2	26	411	38	2.7	12	-5	1.48	HSS
2007.08.25	10:00:00	0.7	15	0.77	23	10.5	7	382	15	3	15	-8	2.01	ICME(+HSS)
2007.08.26	11:00:00	1.5	33	1.37	22	19.4	8	676	32	4	27	-22	6.56	HSS(+ICME)
2007.08.31	15:00:00	0.6	37	0.69	36	9	36	670	81	4.7	39	-22	3.02	HSS
2007.09.06	6:00:00	0.6	6	0.97	22	8.1	17	556	21	4.3	32	-29	2.25	HSS
2007.09.14	15:00:00	1.2	31	1.14	17	15.3	8	444	15	2.3	9	0	3.4	HSS
2007.09.20	10:12:00	1.4	44	1.02	36	10.5	5	674	71	4	27	-13	3.54	HSS
2007.09.27	11:51:00	0.8	22	0.8	20	10	8	588	16	5	48	-20	2.94	ICME(+HSS)
2007.09.28	16:00:00	0.7	10	0.76	41	9.4	3	672	32	5	48	-39	3.16	HSS(+ICME)
2007.10.02	21:00:00	0.6	27	0.76	31	7.9	5	586	30	4	27	-35	2.31	HSS
2007.10.11	22:00:00	1	25	0.77	1	8.8	18	352	34	2.3	9	-12	1.55	HSS1
2007.10.14	16:00:00	0.6	37	1.19	8	8.2	17	347	52	1.7	6	-10	1.42	HSS2
2007.10.25	11:35:00	0.9	8	0.78	48	15.7	5	698	14	4.7	39	-52	5.48	HSS1

Date	Time	$AF, \%$	t_{\min}, h	$A_{xy\max}, \%$	$t_{Axy\max}, \text{h}$	B_{\max}, nT	$t_{B\max}, \text{h}$	$V_{\max}, \text{km/s}$	$t_{V\max}, \text{h}$	Kp_{\max}	Ap_{\max}	Dst_{\min}, nT	$VmBm$	Type of interplanetary disturbance
2007.10.29	16:00:00	0.5	9	0.78	30	7.7	5	587	9	4.7	39	-31	2.26	HSS2
2007.11.12	10:00:00	1.4	47	0.96	48	12.5	16	666	48	3	15	-12	4.16	HSS
2007.11.19	18:11:00	1.8	9	1.83	6	19.7	16	481	12	4.3	32	-1	4.74	ICME1
2007.11.20	11:00:00	0.8	11	1.08	16	19.7	-1	668	28	5.3	56	-63	6.58	ICME2
2007.11.24	13:00:00	0.7	15	0.97	35	6.3	3	644	11	4	27	-23	2.03	HSS
2007.12.04	23:00:00	0.6	27	0.92	-1	8.5	8	372	17	2	7	-6	1.58	HSS
2007.12.17	2:53:00	1.2	20	1.2	2	15.9	6	697	47	4	27	-38	5.54	HSS
2007.12.27	17:00:00	0.7	8	0.75	14	8.2	2	476	15	3	15	-14	1.95	HSS
2008.01.25	1:00:00	0.5	5	0.8	10	9.1	2	551	7	3.7	22	-21	2.51	HSS
2008.01.31	11:23:00	0.6	18	0.6	6	11.4	7	461	12	3.3	18	-30	2.63	HSS1
2008.02.01	8:00:00	1.3	46	0.55	1	8.8	7	634	52	4.7	39	-49	2.79	HSS2
2008.02.18	8:00:00	0.5	11	0.47	2	6.6	6	622	24	3.7	22	-33	2.05	HSS
2008.03.26	9:36:00	1.2	19	0.76	20	9.5	3	624	21	5	48	-48	2.96	HSS1
2008.03.27	15:00:00	0.8	25	0.92	7	7.7	1	688	19	5	48	-56	2.65	HSS2
2008.04.04	11:00:00	1	42	0.73	31	11.9	3	729	48	5	48	-33	4.34	HSS
2008.04.22	14:00:00	1.3	36	0.87	13	14.5	18	659	31	5.3	56	-46	4.78	HSS1
2008.04.24	5:00:00	0.7	14	0.81	20	9.1	4	624	12	3.7	22	-39	2.84	HSS2
2008.04.27	22:00:00	0.6	16	0.73	7	6.5	2	499	4	3.7	22	-29	1.62	HSS
2008.05.03	11:00:00	0.5	18	0.93	8	8.1	1	647	64	3.3	18	-21	2.62	HSS
2008.05.28	2:25:00	1.1	25	0.93	-1	10.6	4	538	25	3.3	18	-16	2.85	HSS1
2008.05.29	19:00:00	1.2	35	0.78	1	7.8	3	645	39	3.7	22	-21	2.52	HSS2
2008.06.14	12:23:00	1.8	38	0.73	19	14.8	9	758	64	5.7	67	-41	5.61	HSS
2008.07.20	18:00:00	0.4	28	0.68	34	6	17	384	34	1.7	6	-7	1.15	HSS1
2008.07.22	7:00:00	0.9	39	0.67	5	10.3	6	653	39	4	27	-27	3.36	HSS2
2008.07.24	17:00:00	0.4	6	0.74	5	5.5	66	507	2	2	7	-20	1.39	ICME
2008.08.05	4:00:00	0.5	42	0.85	42	6.9	41	369	64	1.3	5	-4	1.27	ICME
2008.08.08	12:00:00	1.7	46	1.1	46	19.3	18	658	31	5.3	56	-33	6.35	HSS
2008.08.13	22:00:00	0.5	11	1.11	9	6.6	73	490	4	3	15	-17	1.62	HSS1
2008.08.18	3:00:00	0.8	24	0.57	29	10.8	9	635	13	4.7	39	-26	3.43	HSS2
2008.09.03	2:00:00	0.7	11	1.37	9	14.5	6	438	12	2.3	9	-3	3.18	ICME(+HSS)
2008.09.03	15:43:00	1.1	4	1.32	8	12.8	4	600	30	6	80	-51	3.84	HSS(+ICME)
2008.09.06	2:00:00	0.5	5	0.85	3	6.8	5	632	29	3.3	18	-17	2.15	HSS
2008.09.14	20:00:00	0.8	21	0.72	26	11.7	12	586	24	4	27	-30	3.43	HSS

Date	Time	$AF, \%$	t_{\min}, h	$A_{xy\max}, \%$	$t_{A_{xy\max}}, \text{h}$	B_{\max}, nT	$t_{B_{\max}}, \text{h}$	$V_{\max}, \text{km/s}$	$t_{V_{\max}}, \text{h}$	Kp_{\max}	Ap_{\max}	Dst_{\min}, nT	$VmBm$	Type of interplanetary disturbance
2008.09.30	12:34:00	1	47	0.83	33	8.4	15	715	59	4	27	-27	3	HSS
2008.10.11	7:00:00	0.9	18	0.7	15	13.9	2	549	24	6.3	94	-54	3.82	HSS
2008.10.19	9:00:00	0.6	47	0.82	0	7.9	15	414	45	3	15	-18	1.64	HSS
2008.10.25	12:00:00	0.5	30	0.56	17	7	19	397	30	2.7	12	-7	1.39	ICME
2008.10.28	6:00:00	1.1	41	0.81	26	13.5	14	711	35	4.3	32	-22	4.8	HSS
2008.11.07	3:53:00	1	27	0.88	30	11.1	19	574	43	4.3	32	-29	3.19	HSS
2008.11.15	16:25:00	0.7	16	1.03	22	13.1	6	525	22	3.7	22	-29	3.44	HSS
2008.11.24	23:51:00	1.2	45	1.08	7	21.9	7	658	48	3.7	22	-12	7.21	HSS
2008.12.10	18:00:00	0.5	31	0.48	8	7.1	16	462	59	1.7	6	-7	1.64	HSS
2008.12.16	11:59:00	1.4	24	1.13	24	9.6	19	370	3	2.7	12	-15	1.78	ICME
2008.12.22	6:00:00	0.6	47	0.76	1	11.6	13	556	31	3.7	22	-11	3.22	HSS
2008.12.30	19:00:00	1.1	25	0.78	16	12.5	8	525	21	3.3	18	-17	3.28	HSS
2009.01.09	5:00:00	0.5	18	0.72	25	6.8	19	395	12	3	15	-17	1.34	HSS
2009.01.12	17:00:00	0.6	23	1.08	16	8.3	34	330	34	2.3	9	-17	1.37	ICME(+HSS)
2009.01.14	13:00:00	0.8	6	0.66	38	7.8	17	412	37	2.3	9	-19	1.61	HSS(+ICME)
2009.01.30	21:00:00	0.9	8	0.99	3	9	5	496	28	2.7	12	-14	2.23	HSS
2009.02.14	1:00:00	1	25	0.66	2	16.1	6	589	34	4.3	32	-38	4.74	HSS
2009.02.26	23:00:00	0.6	25	0.97	11	8.7	11	689	22	4	27	-23	3	HSS
2009.03.20	18:00:00	1	23	1	25	9.9	13	438	17	3	15	-27	2.17	HSS
2009.04.08	1:00:00	0.3	0	0.33	11	3.3	16	361	0	2.3	9	-4	0.6	ICME(+HSS)
2009.04.08	18:00:00	0.8	33	0.6	34	8.4	9	559	74	3.3	18	-27	2.35	HSS(+ICME)
2009.04.16	12:00:00	0.8	37	1.29	31	11.2	16	537	51	3.3	18	-25	3.01	HSS
2009.04.24	0:53:00	0.7	22	0.66	-1	7.8	17	432	21	2.3	9	-9	1.68	HSS1
2009.04.26	5:00:00	0.6	18	0.73	3	6.8	3	401	6	2.3	9	-12	1.36	HSS2
2009.05.06	0:00:00	0.7	30	1.03	-1	7.2	20	518	54	4	27	-12	1.86	HSS
2009.05.16	1:00:00	0.5	21	0.88	0	7.1	4	392	16	1.3	5	-11	1.39	HSS1
2009.05.20	14:00:00	0.6	30	0.66	4	7.6	5	396	56	2.7	12	-9	1.5	HSS2
2009.05.28	5:19:00	0.9	32	0.81	15	10.1	4	440	14	2.3	9	-17	2.22	HSS
2009.06.03	8:00:00	1.2	35	1.09	27	7.2	18	340	30	2.3	9	-19	1.22	ICME
2009.06.20	4:51:00	0.5	45	0.99	17	7.4	17	353	24	2.7	12	-3	1.31	ICME
2009.06.27	14:00:00	0.6	15	1.06	13	9	26	425	3	3	15	-5	1.91	ICME(+HSS)
2009.06.28	18:00:00	0.7	31	0.56	25	10.1	2	561	23	4	27	-28	2.83	HSS(+ICME)
2009.07.06	15:00:00	0.9	36	1.35	35	6	44	393	5	1.7	6	-12	1.18	ICME

Date	Time	AF , %	t_{\min} , h	$A_{xy\max}$, %	$t_{A_{xy\max}}$, h	B_{\max} , nT	$t_{B_{\max}}$, h	V_{\max} , km/s	$t_{V_{\max}}$, h	Kp_{\max}	Ap_{\max}	Dst_{\min} , nT	$VmBm$	Type of interplanetary disturbance
2009.07.13	9:00:00	0.7	26	0.96	21	10.2	10	540	19	3.7	22	-25	2.75	HSS
2009.07.20	5:00:00	0.6	29	0.96	28	8.2	33	339	23	2.3	9	-22	1.39	ICME(+HSS)
2009.07.22	1:00:00	1.3	7	0.98	12	16.7	6	575	53	5.7	67	-83	4.8	HSS(+ICME)
2009.08.19	6:00:00	0.7	42	0.85	22	11.6	12	559	42	3.7	22	-26	3.24	HSS
2009.09.03	15:52:00	0.7	18	0.77	10	8.1	12	492	29	2.7	12	-8	1.99	HSS
2009.09.10	2:00:00	0.6	31	0.91	2	6.3	34	308	11	1.7	6	-7	0.97	ICME1
2009.09.11	19:00:00	0.4	9	0.71	10	5.7	0	309	15	1.3	5	-14	0.88	ICME2
2009.09.13	12:00:00	0.9	27	0.77	35	8.3	9	438	39	3	15	-14	1.82	HSS1
2009.09.15	14:00:00	0.3	8	0.82	22	6.4	3	469	8	3.3	18	-15	1.5	HSS2
2009.09.26	11:00:00	0.9	22	1.14	14	8.5	16	344	21	3.3	18	-16	1.46	ICME(+HSS)
2009.09.28	6:49:00	0.5	12	0.68	26	6.7	2	339	19	3.3	18	-13	1.14	HSS(+ICME)
2009.10.04	4:12:00	0.8	17	0.95	13	9.8	8	416	26	2.3	9	-2	2.04	HSS
2009.10.15	6:00:00	0.4	20	0.76	7	9	6	433	14	2.3	9	-9	1.95	HSS
2009.10.17	13:00:00	0.2	0	0.4	6	3.7	13	332	7	0.7	3	-2	0.61	ICME1
2009.10.18	18:00:00	0.4	15	0.61	13	5.1	21	320	13	1	4	-1	0.82	ICME2
2009.10.29	5:00:00	0.6	6	0.83	13	11.1	13	384	12	3.3	18	-34	2.13	ICME1
2009.10.30	10:00:00	0.4	3	0.96	37	5.4	39	374	2	2.7	12	-29	1.01	ICME2
2009.11.01	3:00:00	0.5	21	1.02	22	7.9	29	365	11	2	7	-14	1.44	ICME(+HSS)
2009.11.02	13:00:00	0.6	12	0.66	0	6.3	0	352	7	0.7	3	-10	1.11	HSS(+ICME)
2009.11.13	20:00:00	0.7	23	0.68	43	8	18	372	33	2.7	12	-18	1.49	ICME
2009.12.05	6:51:00	0.9	45	0.96	40	10	19	420	25	2.3	9	-11	2.1	HSS
2009.12.12	5:00:00	0.4	18	0.74	7	7.9	26	296	14	3	15	-2	1.17	ICME1
2009.12.14	5:00:00	0.7	32	0.84	33	7.4	56	347	72	3	15	-12	1.28	ICME2
2009.12.21	21:00:00	0.7	43	0.97	32	6	35	385	2	2	7	-4	1.16	ICME
2009.12.24	4:00:00	0.3	-3	0.87	31	5.6	1	442	4	1	4	-8	1.24	ICME(+HSS)
2009.12.25	17:00:00	0.6	32	0.95	12	9.6	4	413	24	2.3	9	-8	1.98	HSS(+ICME)
2010.01.01	18:00:00	0.8	18	0.81	18	7.7	25	304	9	2	7	-15	1.17	ICME
2010.02.06	5:00:00	0.7	10	1.36	6	8.7	10	374	8	2.7	12	-19	1.63	ICME1
2010.02.07	15:00:00	1.1	15	1.12	35	10.7	17	406	5	2.7	12	-22	2.17	ICME2
2010.02.14	13:00:00	0.7	6	1.26	2	9.9	15	319	11	3	15	-28	1.58	ICME1
2010.02.15	18:00:00	1.1	30	0.98	48	13.3	2	368	52	4.3	32	-59	2.45	ICME2
2010.02.25	17:07:00	0.4	0	1.18	-1	7.3	0	401	13	2.7	12	-13	1.46	ICME1
2010.02.27	14:00:00	0.6	20	1.03	29	6.3	19	345	41	1.3	5	-5	1.09	ICME2

Date	Time	AF , %	t_{\min} , h	$A_{xy\max}$, %	$t_{A_{xy\max}}$, h	B_{\max} , nT	$t_{B_{\max}}$, h	V_{\max} , km/s	$t_{V_{\max}}$, h	Kp_{\max}	Ap_{\max}	Dst_{\min} , nT	$VmBm$	Type of interplanetary disturbance
2010.03.14	0:00:00	0.7	9	0.8	32	6	2	457	10	2.7	12	-17	1.37	ICME
2010.04.05	8:26:00	3.1	18	1.64	8	18.8	5	814	7	7.7	179	-76	7.65	ICME(+HSS)
2010.04.06	14:00:00	1.1	-2	1.02	1	8.5	1	635	26	5.3	56	-81	2.7	HSS(+ICME)
2010.04.09	18:00:00	0.4	8	1.02	8	5.3	40	468	7	1.7	6	-31	1.24	ICME1
2010.04.11	13:04:00	1.6	15	0.87	22	12.1	20	457	3	5.7	67	-67	2.76	ICME2
2010.04.14	5:00:00	1.3	29	1.01	44	12.3	17	515	34	5	48	-36	3.17	HSS
2010.05.02	5:00:00	1.3	34	0.78	24	17.4	9	720	34	6	80	-71	6.26	HSS
2010.05.10	18:00:00	0.3	20	0.51	9	7.2	10	398	18	2.3	9	-13	1.43	ICME1
2010.05.12	2:00:00	0.7	16	0.76	1	8.3	5	495	21	2.3	9	-15	2.05	ICME2
2010.05.18	7:00:00	0.5	20	0.79	10	10.5	25	365	5	1.7	6	-34	1.92	ICME(+HSS)
2010.05.19	9:00:00	1.1	36	0.72	47	12.9	5	510	26	3.3	18	-19	3.29	HSS(+ICME)
2010.05.28	2:57:00	2.7	33	1.96	20	14.4	29	385	8	5.3	56	-80	2.77	ICME(+HSS)
2010.05.29	23:00:00	0.8	18	1.25	0	13.5	1	616	42	5	48	-58	4.16	HSS(+ICME)
2010.06.15	9:00:00	0.8	21	0.9	43	10.7	6	571	38	3.7	22	-36	3.05	HSS
2010.06.20	21:00:00	1.2	26	1.39	8	7.5	14	404	6	2.3	9	-11	1.52	ICME
2010.06.29	20:00:00	0.6	7	0.98	36	10.2	3	698	11	4.3	32	-27	3.56	HSS
2010.07.08	15:00:00	0.5	10	1.17	22	6	9	347	23	2	7	-17	1.04	ICME(+HSS)
2010.07.10	10:00:00	0.3	1	0.92	13	5.1	28	342	61	2	7	-14	0.87	HSS(+ICME)
2010.07.23	5:00:00	0.9	19	0.74	2	9.7	12	414	8	2.7	12	-16	2.01	ICME(+HSS)
2010.07.25	1:00:00	0.3	6	0.44	39	7.7	3	456	31	2.3	9	-13	1.76	HSS(+ICME)
2010.07.26	22:00:00	0.7	31	0.78	33	8.8	5	691	44	4	27	-31	3.04	HSS
2010.08.20	4:00:00	0.7	38	1.24	18	5.5	71	321	5	1.3	5	-8	0.88	ICME
2010.09.01	1:00:00	0.7	0	1.16	10	10.1	12	423	20	2.3	9	-14	2.14	ICME(+HSS)
2010.09.02	1:00:00	0.3	-2	1.17	11	10.1	0	447	28	2.3	9	-15	2.26	HSS(+ICME)
2010.09.05	15:00:00	0.7	32	0.97	16	8.8	10	393	15	3	15	-16	1.73	ICME(+HSS)
2010.09.07	2:00:00	0.8	41	0.82	15	7.4	3	501	16	3.7	22	-38	1.85	HSS(+ICME)
2010.09.13	1:00:00	0.6	4	1.37	9	6.5	29	322	5	1.7	6	-13	1.05	ICME1
2010.09.14	7:00:00	1.2	33	1.43	22	9.9	16	408	20	3.7	22	-25	2.02	ICME2
2010.09.20	19:00:00	0.3	23	0.75	7	8.6	2	445	17	2.7	12	-16	1.91	HSS
2010.09.23	2:00:00	0.9	29	1.13	30	12.2	11	631	53	4	27	-32	3.85	HSS
2010.10.30	10:13:00	1.9	36	1.74	19	11.7	44	387	2	2.3	9	-11	2.26	ICME
2010.11.05	14:00:00	0.3	4	0.83	13	5.6	2	364	6	1.3	5	-12	1.02	ICME
2010.11.27	14:00:00	1.1	21	0.77	22	14.5	13	478	23	4.7	39	-23	3.47	ICME

Date	Time	AF , %	t_{\min} , h	$A_{xy\max}$, %	$t_{A_{xy\max}}$, h	B_{\max} , nT	$t_{B_{\max}}$, h	V_{\max} , km/s	$t_{V_{\max}}$, h	Kp_{\max}	Ap_{\max}	Dst_{\min} , nT	$VmBm$	Type of interplanetary disturbance
2011.01.02	1:00:00	0.4	22	0.48	20	7.6	5	362	20	2	7	-4	1.38	ICME(+HSS)
2011.01.03	11:00:00	0.4	12	0.69	29	9.3	12	426	26	2.7	12	-9	1.98	HSS(+ICME)
2011.01.11	21:00:00	0.4	8	0.51	1	6.1	6	506	15	3	15	-16	1.54	ICME(+HSS)
2011.01.13	11:00:00	1.2	16	0.8	21	7.7	9	561	24	3.3	18	-29	2.16	HSS(+ICME)
2011.01.18	15:00:00	0.5	31	0.56	2	5.7	18	530	22	2.7	12	-14	1.51	HSS
2011.01.24	5:00:00	0.6	12	0.82	12	7.8	17	396	6	3	15	-14	1.54	ICME
2011.01.28	17:00:00	0.4	44	0.89	32	7.5	8	318	1	2.7	12	-6	1.19	ICME
2011.01.30	23:00:00	0.3	9	1.02	4	6.9	4	279	7	0.7	3	4	0.96	ICME(+HSS)
2011.01.31	16:00:00	1	37	1.1	0	12.7	5	525	28	3.3	18	-22	3.33	HSS(+ICME)
2011.02.18	1:30:00	4.7	7	1.55	4	31	5	691	12	5	48	-32	10.71	ICME
2011.03.06	3:31:00	0.5	1	1.42	22	6.3	35	538	3	3.7	22	-27	1.69	ICME
2011.03.10	6:45:00	3	25	3	7	11.9	3	405	27	5.3	56	-83	2.41	ICME(+HSS)
2011.03.11	16:00:00	1.2	5	1.73	5	13.8	6	599	70	5.7	67	-64	4.13	HSS(+ICME)
2011.03.16	22:00:00	0.9	14	2.12	29	9.2	16	429	23	3.7	22	-10	1.97	ICME
2011.03.20	11:00:00	0.8	12	2.53	20	7.3	38	387	10	3.3	18	-18	1.41	ICME(+HSS)
2011.03.22	7:00:00	1	10	1.47	16	10.4	13	516	34	3.3	18	-14	2.68	HSS(+ICME)
2011.03.29	16:30:00	2.9	23	1.4	9	14.5	10	391	2	3.3	18	-4	2.83	ICME
2011.04.18	6:52:00	0.7	1	1.38	30	12.8	6	404	32	3.3	18	-15	2.59	ICME(+HSS)
2011.04.19	21:10:00	1.2	9	1.66	1	15.9	7	555	17	5	48	-26	4.41	HSS(+ICME)
2011.05.07	12:00:00	0.4	-3	1.02	10	6.7	2	383	1	2	7	-13	1.28	ICME1
2011.05.09	13:00:00	0.6	18	0.69	3	8.5	19	390	34	3.3	18	-15	1.66	ICME2
2011.06.04	20:44:00	3.4	8	1.78	27	23.6	6	556	8	6.3	94	-45	6.56	ICME
2011.06.13	19:00:00	0.7	26	1.03	2	8.7	5	555	23	3.3	18	-13	2.41	HSS
2011.06.21	14:00:00	0.2	-1	0.87	11	6.1	1	496	4	3	15	-7	1.51	ICME(+HSS)
2011.06.22	3:00:00	4.1	47	1.33	38	10.5	28	661	26	4	27	-30	3.47	HSS(+ICME)
2011.06.28	15:00:00	0.6	20	1.14	1	5.6	40	403	1	1.7	6	-6	1.13	ICME(+HSS)
2011.06.30	16:00:00	0.9	7	0.76	4	10.3	14	422	18	3.7	22	-48	2.17	HSS(+ICME)
2011.07.06	3:00:00	1.1	28	1.21	16	6.3	31	409	4	3	15	-30	1.29	ICME
2011.07.08	16:00:00	0.6	2	0.85	2	12.8	14	356	1	4	27	-14	2.28	ICME1
2011.07.09	9:00:00	0.8	44	1.12	13	10	2	503	22	3.3	18	-28	2.52	ICME2
2011.07.14	18:00:00	0.8	7	0.82	14	6	80	510	-1	2.7	12	-17	1.53	ICME
2011.07.18	8:00:00	1.5	47	0.7	2	10.4	23	731	69	4	27	-19	3.8	HSS
2011.07.28	21:00:00	0.5	32	0.95	37	9.8	36	412	38	2.3	9	-12	2.02	ICME(+HSS)

Date	Time	AF , %	t_{\min} , h	$A_{xy\max}$, %	$t_{A_{xy\max}}$, h	B_{\max} , nT	$t_{B_{\max}}$, h	V_{\max} , km/s	$t_{V_{\max}}$, h	Kp_{\max}	Ap_{\max}	Dst_{\min} , nT	$VmBm$	Type of interplanetary disturbance
2011.07.30	12:00:00	1.2	26	1.6	48	14.1	11	686	37	5	48	-40	4.84	HSS(+ICME)
2011.08.04	21:53:00	0.7	4	1.45	18	9.5	3	431	17	3	15	-15	2.05	ICME1
2011.08.05	17:51:00	4.8	20	2.29	2	29.4	5	611	4	7.7	179	-115	8.98	ICME2
2011.08.11	20:00:00	0.8	20	1.58	38	4.7	18	417	4	1.7	6	-22	0.98	ICME1
2011.08.13	19:00:00	0.6	38	1.57	4	9.4	14	528	33	4	27	-23	2.48	ICME2
2011.08.20	19:00:00	0.7	44	1.01	22	6.9	11	415	30	2.7	12	-15	1.43	ICME
2011.08.23	3:00:00	0.7	29	0.88	17	9.9	8	569	24	3.3	18	-14	2.82	HSS
2011.08.29	1:00:00	0.7	3	0.92	25	8.6	4	534	12	2.7	12	-23	2.3	HSS
2011.09.02	20:00:00	1	33	0.92	15	10.3	8	416	30	3	15	-29	2.14	ICME(+HSS)
2011.09.04	12:00:00	0.5	26	1.08	13	9.6	3	441	49	3	15	-31	2.12	HSS(+ICME)
2011.09.25	11:45:00	1.3	18	1.02	13	10.5	3	367	3	2	7	-5	1.93	ICME1
2011.09.26	12:35:00	5.1	7	1	24	34.2	7	704	10	6.3	94	-118	12.04	ICME2
2011.10.05	7:36:00	2.3	13	1.77	3	13.8	18	470	4	4.3	32	-43	3.24	ICME1
2011.10.06	12:00:00	0.7	7	0.77	12	12	6	390	23	2.3	9	-33	2.34	ICME2
2011.11.18	16:00:00	0.9	4	0.91	48	5.5	62	405	4	1.3	5	-6	1.11	ICME
2011.12.02	16:00:00	0.6	13	1.16	19	7.7	16	420	30	3	15	-34	1.62	ICME1
2011.12.03	23:00:00	0.6	-1	1.4	40	5.6	1	477	3	3	15	-23	1.34	ICME2
2011.12.18	18:00:00	1	28	0.86	10	9.7	11	381	21	2.7	12	-3	1.85	ICME(+HSS)
2011.12.20	14:00:00	1	36	1.04	13	8.4	9	418	42	2.7	12	-18	1.76	HSS(+ICME)
2011.12.25	4:00:00	0.7	1	1.02	41	7.7	71	377	15	1.7	6	-7	1.45	ICME
2011.12.28	4:00:00	1.1	27	1.2	9	13.3	26	395	41	3.7	22	0	2.63	ICME1
2011.12.29	22:00:00	1.5	16	1.35	25	11.4	22	431	1	3	15	-24	2.46	ICME2
2012.01.12	18:00:00	0.6	25	0.87	42	8.7	8	542	13	3.3	18	-4	2.36	HSS
2012.02.09	13:00:00	0.6	12	0.95	37	7.5	7	460	18	2.7	12	-14	1.72	HSS
2012.02.12	9:00:00	0.5	31	1.03	-1	10.7	31	416	30	3	15	-30	2.23	ICME1
2012.02.14	1:00:00	2.4	26	2.5	22	9.4	46	414	18	5.3	56	-67	1.95	ICME2
2012.02.26	21:39:00	2	11	2.14	4	8.9	5	488	2	3.7	22	-9	2.17	ICME1
2012.02.27	12:00:00	2.1	26	1.64	36	14.9	14	493	1	5.3	56	-57	3.67	ICME2
2012.03.11	13:00:00	0.8	2	1.7	12	8.3	5	461	6	3.3	18	-44	1.91	ICME1
2012.03.12	9:14:00	5.8	18	3.27	13	23.6	2	727	11	6.3	94	-64	8.58	ICME2
2012.03.22	15:00:00	0.4	0	1.13	21	9.8	9	415	8	4	27	-33	2.03	ICME(+HSS)
2012.03.24	4:00:00	0.5	6	1.31	31	7.7	8	468	15	4.3	32	-25	1.8	HSS(+ICME)
2012.03.29	20:00:00	0.7	27	1.14	32	8.3	20	401	19	2.7	12	-16	1.66	ICME1

Date	Time	$AF, \%$	t_{\min}, h	$A_{xy\max}, \%$	$t_{A_{xy\max}}, \text{h}$	B_{\max}, nT	$t_{B_{\max}}, \text{h}$	$V_{\max}, \text{km/s}$	$t_{V_{\max}}, \text{h}$	Kp_{\max}	Ap_{\max}	Dst_{\min}, nT	$VmBm$	Type of interplanetary disturbance
2012.03.31	11:00:00	1.1	38	1.12	0	8.4	7	375	12	3.3	18	-33	1.58	ICME2
2012.04.03	18:00:00	0.3	0	0.9	20	5.8	6	364	3	2.3	9	-21	1.06	ICME1
2012.04.04	19:00:00	3.4	33	2.08	23	11.7	43	375	75	4	27	-64	2.19	ICME2
2012.05.03	2:00:00	0.4	-3	1.47	7	7.9	2	315	9	3	15	-23	1.24	ICME1
2012.05.03	23:00:00	1.7	27	1.54	0	8	8	334	8	3	15	-11	1.34	ICME2
2012.05.12	14:00:00	1	12	1.18	26	5.6	1	587	1	3.3	18	-37	1.64	ICME
2012.05.15	1:00:00	0.8	20	0.97	31	7.7	22	454	3	2.3	9	-10	1.75	ICME1
2012.05.16	12:00:00	2.6	46	2.03	14	12.2	37	433	45	3.7	22	-43	2.64	ICME2
2012.06.09	22:00:00	1.1	23	1.42	7	6.9	38	462	17	3.3	18	-26	1.59	ICME1
2012.06.11	13:00:00	0.9	1	2	14	10.4	13	422	12	5.3	56	-67	2.19	ICME2
2012.06.16	9:55:00	1.1	7	1.64	7	10.6	7	413	9	3	15	1	2.19	ICME1
2012.06.16	20:20:00	4	8	1.9	0	40.1	7	519	3	6.3	94	-86	10.41	ICME2
2012.06.29	20:00:00	1.7	43	1.09	35	12.6	15	689	41	4.7	39	-37	4.34	HSS
2012.07.14	18:09:00	7.6	23	2.62	18	27.3	15	667	7	7	132	-139	9.1	ICME
2012.07.20	4:47:00	2.2	18	2.8	1	9.1	8	476	6	3	15	-31	2.17	ICME1
2012.07.21	16:05:00	2.7	9	2.06	33	13	2	517	3	3	15	-28	3.36	ICME2
2012.08.07	21:00:00	0.7	4	0.83	1	9.6	6	424	8	4.7	39	-34	2.04	ICME
2012.08.18	5:00:00	1.2	21	1.17	17	12.4	17	403	16	3.7	22	-18	2.5	ICME(+HSS)
2012.08.19	10:00:00	1.2	12	1.15	6	11.5	3	579	17	4	27	-29	3.33	HSS(+ICME)
2012.08.25	0:00:00	0.5	4	1.05	27	8.9	3	586	8	3	15	-20	2.61	ICME(+HSS)
2012.08.26	10:00:00	0.7	7	0.77	0	9.2	4	698	21	3.7	22	-9	3.21	HSS(+ICME)
2012.08.28	18:00:00	0.4	-3	0.73	12	4.8	3	544	7	1.3	5	-8	1.31	HSS
2012.09.03	12:13:00	2.5	25	1.22	24	19.8	2	449	13	5.7	67	-69	4.45	ICME1
2012.09.04	22:45:00	2.9	11	1.71	10	15.2	10	545	8	5.7	67	-64	4.14	ICME2
2012.09.18	14:00:00	0.9	18	1.18	15	7.5	5	399	6	2.7	12	-15	1.5	ICME(+HSS)
2012.09.19	15:00:00	0.5	21	0.93	4	12	6	578	24	4.7	39	-36	3.47	HSS(+ICME)
2012.09.21	7:00:00	0.6	1	0.97	31	5.1	6	537	8	2.7	12	-10	1.37	HSS
2012.09.30	11:31:00	1	8	1.56	0	7.9	8	319	8	4.3	32	-39	1.26	ICME1
2012.09.30	23:05:00	2.1	17	1.78	9	21	4	410	4	6.7	111	-122	4.3	ICME2
2012.10.17	0:00:00	0.6	0	1.17	36	9	22	598	36	2.7	12	-29	2.69	HSS
2012.11.06	23:00:00	0.6	11	1.02	40	11.3	5	501	24	4	27	-7	2.83	HSS
2012.11.30	9:00:00	0.3	-2	0.81	21	5.6	26	352	4	1	4	-2	0.99	ICME1
2012.12.01	17:00:00	1.3	28	1.35	14	10.7	9	353	12	2.7	12	-10	1.89	ICME2

Date	Time	AF , %	t_{\min} , h	$A_{xy\max}$, %	$t_{A_{xy\max}}$, h	B_{\max} , nT	$t_{B_{\max}}$, h	V_{\max} , km/s	$t_{V_{\max}}$, h	Kp_{\max}	Ap_{\max}	Dst_{\min} , nT	$VmBm$	Type of interplanetary disturbance
2012.12.08	19:00:00	0.6	16	0.8	25	8.6	13	322	17	2.7	12	-6	1.38	ICME(+HSS)
2012.12.10	14:00:00	0.8	44	1.62	34	7.5	2	316	2	1.3	5	2	1.18	HSS(+ICME)
2013.01.02	5:00:00	0.6	39	0.86	44	5.8	52	336	65	1.7	6	-3	0.97	ICME
2013.01.25	17:00:00	1.3	17	1.02	18	16.5	4	502	18	4.3	32	-26	4.14	ICME(+HSS)
2013.01.26	14:00:00	1.1	28	1.18	46	14	2	531	9	4	27	-51	3.72	HSS(+ICME)
2013.01.31	14:00:00	0.6	6	0.76	13	6.6	12	338	21	2	7	-9	1.12	ICME(+HSS)
2013.02.01	15:00:00	0.8	24	1.13	45	11.1	14	485	25	3.3	18	-18	2.69	HSS(+ICME)
2013.02.06	18:00:00	0.4	14	0.65	2	9.3	13	367	23	3	15	-25	1.71	ICME(+HSS)
2013.02.07	22:00:00	0.7	8	0.69	11	10.1	6	457	18	3	15	-22	2.31	HSS(+ICME)
2013.02.16	12:09:00	1.8	14	1.34	11	11.6	2	407	4	4	27	-21	2.36	ICME1
2013.02.17	11:00:00	0.7	13	1.18	23	7.2	3	365	2	3.3	18	-40	1.31	ICME2
2013.02.23	11:00:00	0.6	12	1.41	25	5.6	-1	381	4	2.3	9	-24	1.07	ICME1
2013.02.25	5:00:00	1	32	1.4	45	8	10	353	16	2	7	-16	1.41	ICME2
2013.03.06	6:00:00	0.5	17	1.17	30	5.3	21	343	32	2.3	9	-11	0.91	ICME
2013.03.08	19:00:00	0.5	27	1.03	8	5.7	4	354	25	2.3	9	-1	1.01	HSS
2013.03.15	5:26:00	1.7	41	1.58	17	12.2	4	475	28	3.7	22	-25	2.9	ICME1
2013.03.17	5:59:00	4.3	38	1.72	1	17.8	4	725	8	6.7	111	-132	6.45	ICME2
2013.03.20	11:00:00	0.6	-2	0.97	4	10.4	6	601	8	4.3	32	-54	3.13	ICME1
2013.03.22	4:00:00	0.6	0	1.12	5	6.9	3	458	-1	2.7	12	-32	1.58	ICME2
2013.04.09	22:00:00	1.3	47	0.93	1	7.3	30	487	45	2.3	9	-7	1.78	ICME
2013.04.20	1:00:00	0.7	-1	1.14	41	6.4	35	317	11	2	7	-3	1.01	ICME
2013.04.30	9:49:00	2.3	13	1.84	-1	10.5	8	426	5	3	15	-30	2.24	ICME(+HSS)
2013.05.01	8:00:00	1	10	1.98	2	11.1	0	484	29	5.7	67	-72	2.69	HSS(+ICME)
2013.05.24	18:10:00	1.2	11	1.31	1	11.6	4	555	2	5.7	67	-59	3.22	ICME1
2013.05.25	9:48:00	2.4	18	1.51	31	12.1	13	777	68	5	48	-56	4.7	ICME2
2013.05.31	16:18:00	2.2	21	1.81	8	19.6	17	684	23	7	132	-124	6.7	ICME(+HSS)
2013.06.01	17:00:00	0.8	8	1.13	3	12.9	8	774	21	4	27	-68	4.99	HSS(+ICME)
2013.06.06	2:55:00	2.8	20	2.05	5	13.4	21	513	2	5.7	67	-78	3.44	ICME1
2013.06.07	20:00:00	0.7	5	0.91	15	9.7	2	457	16	3	15	-34	2.22	ICME2
2013.06.27	14:38:00	2.8	18	2.12	13	12.5	30	453	2	5.7	67	-100	2.83	ICME(+HSS)
2013.06.29	5:00:00	0.5	2	1.48	7	13	8	560	37	6.3	94	-102	3.64	HSS(+ICME)
2013.07.02	18:00:00	1	41	1.81	40	5.3	43	428	1	1.7	6	-19	1.13	ICME1
2013.07.04	18:00:00	2	47	1.8	12	12.8	33	386	3	4.7	39	-87	2.47	ICME2

Date	Time	$AF, \%$	t_{\min}, h	$A_{xy\max}, \%$	$t_{Axy\max}, \text{h}$	B_{\max}, nT	$t_{B\max}, \text{h}$	$V_{\max}, \text{km/s}$	$t_{V\max}, \text{h}$	Kp_{\max}	Ap_{\max}	Dst_{\min}, nT	$VmBm$	Type of interplanetary disturbance
2013.07.12	17:14:00	2.7	15	2.09	13	16.3	22	509	7	4.3	32	-65	4.15	ICME
2013.09.12	14:00:00	0.3	4	0.71	4	9.4	9	523	16	3	15	-10	2.46	HSS1
2013.09.13	14:00:00	0.4	9	0.78	15	9.5	3	576	15	3.7	22	-7	2.74	HSS2
2013.09.24	3:00:00	0.8	5	1.17	14	10.5	9	440	22	4.3	32	-23	2.31	HSS
2013.09.29	19:00:00	0.9	47	1.02	22	8.7	46	374	54	2	7	2	1.63	ICME
2013.10.02	1:55:00	3.7	5	1.24	16	22.2	5	629	4	7.7	179	-72	6.98	ICME
2013.10.12	12:00:00	0.7	29	0.68	5	5.8	13	396	11	2.3	9	-15	1.15	ICME(+HSS)
2013.10.14	7:00:00	2.1	47	0.76	33	10.4	18	546	36	4.3	32	-49	2.84	HSS(+ICME)
2013.11.08	18:00:00	1.5	13	0.87	12	14.1	13	466	15	5	48	-80	3.29	ICME(+HSS)
2013.11.09	10:00:00	0.7	38	1.01	36	12.4	0	611	7	4.3	32	-73	3.79	HSS(+ICME)
2013.11.22	22:00:00	0.8	7	2.26	4	9.4	10	357	9	3.3	18	-27	1.68	ICME1
2013.11.23	14:00:00	0.6	1	1.28	46	10	2	372	1	2	7	-20	1.86	ICME2
2014.01.07	15:12:00	1.5	16	1.5	5	8.1	43	440	39	3.3	18	-22	1.78	ICME
2014.01.09	20:08:00	2.3	42	2.36	3	11.2	4	436	4	2.7	12	-8	2.44	ICME(+HSS)
2014.01.11	19:00:00	0.8	-2	1.69	8	11.6	40	907	37	3.3	18	-20	5.26	HSS(+ICME)
2014.02.15	13:16:00	3.6	24	1.96	1	16.2	17	450	2	5	48	-31	3.64	ICME
2014.02.27	16:50:00	4.9	23	2.35	15	16.6	3	483	4	5.3	56	-97	4.01	ICME
2014.03.25	20:03:00	1.5	45	1.14	14	8.6	17	516	2	3.7	22	-24	2.22	ICME
2014.03.29	12:00:00	0.4	-3	0.86	28	4.7	7	455	19	2.7	12	-9	1.07	ICME(+HSS)
2014.03.31	12:00:00	0.6	10	1.1	47	6.8	8	450	45	2.7	12	-15	1.53	HSS(+ICME)
2014.04.10	14:00:00	0.3	7	1.04	9	5.1	10	410	0	1	4	-9	1.05	ICME1
2014.04.11	6:00:00	0.9	24	1.17	8	11.5	34	396	64	4.7	39	-87	2.28	ICME2
2014.04.29	20:26:00	1.5	9	1.08	18	9.9	17	309	19	4	27	-67	1.53	ICME1
2014.04.30	16:00:00	0.9	-2	1.52	18	10.4	5	383	30	3.3	18	-56	1.99	ICME2
2014.05.15	20:00:00	1.2	41	0.85	1	7.8	13	353	16	2	7	-7	1.38	ICME
2014.06.22	19:00:00	0.7	1	0.66	5	4	2	396	2	3	15	-15	0.79	ICME1
2014.06.23	23:08:00	0.4	0	0.98	10	7.8	4	361	4	3	15	-9	1.41	ICME2
2014.07.03	0:42:00	0.4	6	0.82	6	7.2	11	347	5	2	7	-15	1.25	ICME1
2014.07.04	10:00:00	0.4	26	0.99	10	4.7	0	327	7	2	7	-8	0.77	ICME2
2014.07.13	9:00:00	1.1	27	2.37	9	11.1	21	358	6	3.3	18	-6	1.99	ICME1
2014.07.14	14:31:00	1.5	10	1.08	7	14.9	8	489	29	3.3	18	-9	3.64	ICME2
2014.07.26	2:00:00	0.6	19	1.04	22	7.5	15	384	12	2	7	-19	1.44	HSS
2014.07.31	2:00:00	0.3	22	0.84	22	5.7	24	340	5	2	7	-2	0.97	ICME(+HSS)

Date	Time	$AF, \%$	t_{\min}, h	$A_{xy\max}, \%$	$t_{A_{xy\max}}, \text{h}$	B_{\max}, nT	$t_{B_{\max}}, \text{h}$	$V_{\max}, \text{km/s}$	$t_{V_{\max}}, \text{h}$	Kp_{\max}	Ap_{\max}	Dst_{\min}, nT	$VmBm$	Type of interplanetary disturbance
2014.08.01	3:00:00	0.9	46	1.16	6	10.8	10	446	36	3.3	18	-18	2.41	HSS(+ICME)
2014.08.19	6:57:00	1.4	17	1.15	9	20.7	31	419	11	5.3	56	-30	4.34	ICME
2014.11.03	22:00:00	2	47	1.21	48	12.9	16	550	47	4.7	39	-44	3.55	ICME
2015.02.05	4:00:00	0.7	-3	1.02	19	8.5	63	450	31	3.3	18	-15	1.91	ICME
2015.03.11	5:00:00	1.7	32	1	18	9.6	4	429	2	3.3	18	-14	2.06	ICME1
2015.03.13	3:00:00	0.5	0	1.34	4	8.7	12	435	10	3.3	18	-8	1.89	ICME2
2015.03.17	4:45:00	5.6	17	1.9	29	31.5	11	609	8	7.7	179	-223	9.59	ICME1
2015.03.18	13:00:00	1	-2	2.01	1	12.1	-1	683	9	5.3	56	-88	4.13	ICME2
2015.03.21	20:54:00	0.9	17	1.09	1	11.2	4	706	14	6.3	94	-43	3.95	ICME(+HSS)
2015.03.23	4:00:00	1.1	0	1.7	12	8.8	1	643	7	4.3	32	-39	2.83	HSS(+ICME)
2015.03.28	0:00:00	1.2	34	1.56	32	15.4	26	424	20	4	27	-35	3.26	ICME
2015.03.31	8:32:00	2.7	14	2.07	16	15.9	7	434	34	3	15	-4	3.45	ICME(+HSS)
2015.04.02	7:00:00	1.1	13	1.6	24	12.7	23	565	29	4.7	39	-22	3.59	HSS(+ICME)
2015.04.09	2:13:00	1.9	19	1.98	13	13.3	18	385	18	3	15	-7	2.56	ICME1
2015.04.10	0:00:00	1.6	31	1.6	6	19.9	9	448	3	5.3	56	-75	4.46	ICME2
2015.04.22	20:00:00	0.5	3	0.79	5	5.5	4	509	4	3.3	18	-20	1.4	ICME
2015.05.06	1:42:00	2.6	30	1.88	1	17.5	7	479	6	5.3	56	-28	4.19	ICME
2015.05.22	11:00:00	0.7	16	1.49	13	6.3	21	424	2	1.3	5	-4	1.34	ICME(+HSS)
2015.05.23	16:00:00	0.4	-1	1.02	40	5.4	-1	349	36	1.7	6	-7	0.94	HSS(+ICME)
2015.06.12	13:06:00	1.1	32	1.4	35	8.3	9	530	11	4	27	-21	2.2	ICME1
2015.06.14	8:00:00	2.2	17	1.43	4	10.8	7	599	30	4.3	32	-34	3.23	ICME2
2015.07.13	1:38:00	3	20	1.88	13	9.9	6	644	3	5.7	67	-61	3.19	ICME(+HSS)
2015.07.14	22:00:00	0.6	2	1.32	47	10	0	557	4	3	15	-24	2.78	HSS(+ICME)
2015.07.26	16:00:00	1	11	1.02	14	7.2	11	500	16	3	15	-24	1.8	HSS1
2015.07.30	15:37:00	1.3	30	0.87	23	14.7	8	613	67	4.3	32	-29	4.51	HSS2
2015.08.18	21:00:00	0.8	3	1.16	17	8.8	17	517	39	4	27	-50	2.27	HSS
2015.08.21	19:00:00	0.4	8	0.77	23	10.3	18	446	-1	3.3	18	-21	2.3	ICME(+HSS)
2015.08.23	3:00:00	0.6	4	1.13	47	13.2	6	582	16	5.3	56	-43	3.84	HSS(+ICME)
2015.08.25	9:00:00	0.5	6	1.54	2	5.6	10	403	1	2.7	12	-20	1.13	ICME1
2015.08.25	23:00:00	3.5	30	2.04	4	13.4	49	417	1	6.3	94	-92	2.79	ICME2
2015.09.13	7:00:00	0.4	1	0.98	19	7.3	25	483	6	3.7	22	-38	1.76	ICME(+HSS)
2015.09.14	9:00:00	0.8	2	1.2	26	9	2	523	27	4.7	39	-41	2.35	HSS(+ICME)
2015.09.17	12:00:00	1.3	0	0.89	47	9.4	45	462	4	4.7	39	-33	2.17	ICME

Date	Time	AF , %	t_{\min} , h	$A_{xy\max}$, %	$t_{A_{xy\max}}$, h	B_{\max} , nT	$t_{B_{\max}}$, h	V_{\max} , km/s	$t_{V_{\max}}$, h	Kp_{\max}	Ap_{\max}	Dst_{\min} , nT	$VmBm$	Type of interplanetary disturbance
2015.10.06	18:00:00	0.9	15	1.27	7	19.1	16	460	14	6	80	-93	4.39	ICME(+HSS)
2015.10.07	15:00:00	1	5	0.98	21	20.4	1	775	7	7.3	154	-124	7.9	HSS(+ICME)
2015.10.12	10:00:00	0.6	35	0.99	-1	8	7	581	21	5	48	-46	2.32	HSS
2015.11.06	18:18:00	3.1	13	2.23	27	19.4	26	677	10	6	80	-89	6.57	ICME
2015.11.13	9:00:00	1	13	1.4	37	9.9	7	482	17	3.7	22	-32	2.39	ICME1
2015.11.15	10:00:00	1.1	18	1.98	37	9.1	8	417	8	3.3	18	-39	1.9	ICME2
2015.11.18	8:00:00	1	20	0.86	10	12.7	14	489	16	5	48	-36	3.11	ICME1
2015.11.20	1:00:00	1	22	1.76	27	9.3	21	409	25	2.3	9	-15	1.9	ICME2
2015.11.26	14:00:00	1.2	18	0.88	20	12.5	39	362	62	3	15	-14	2.26	ICME
2015.12.09	23:00:00	0.6	44	0.89	30	10.4	9	662	39	5	48	-15	3.44	HSS
2016.01.18	21:57:00	2	27	1.48	15	16.9	33	383	17	4.7	39	-93	3.24	ICME
2016.01.24	9:00:00	1.2	-3	1.04	45	7.6	10	502	10	4	27	-13	1.91	ICME
2016.01.26	21:00:00	1.2	32	1.3	24	8.9	15	382	18	2.3	9	3	1.7	ICME(+HSS)
2016.01.28	9:00:00	0.9	14	1.82	42	8.5	1	363	-1	2.3	9	-21	1.54	HSS(+ICME)
2016.01.30	14:00:00	0.7	9	2.18	21	8.7	22	286	18	2.3	9	-23	1.24	ICME1
2016.01.31	15:00:00	1.2	22	1.86	35	10.4	9	316	8	3.7	22	-48	1.64	ICME2
2016.02.06	17:00:00	0.3	3	0.97	1	6.2	19	450	2	3.7	22	-19	1.4	ICME(+HSS)
2016.02.07	22:00:00	0.7	7	0.86	6	10.3	9	451	12	5	48	-39	2.32	HSS(+ICME)
2016.03.05	10:00:00	1.1	22	0.68	15	17.6	28	388	30	5	48	-4	3.41	ICME(+HSS)
2016.03.06	17:00:00	1.8	10	1.05	6	20.1	1	588	20	6.3	94	-98	5.91	HSS(+ICME)
2016.03.26	15:00:00	0.7	20	1.26	9	11.9	19	425	18	3.3	18	-7	2.53	ICME(+HSS)
2016.03.28	1:00:00	0.9	-2	1.18	31	10.8	-1	557	50	3.7	22	-16	3.01	HSS(+ICME)
2016.04.07	12:00:00	1.2	12	1.13	17	12.1	8	390	1	5.7	67	-60	2.36	ICME
2016.04.10	4:00:00	1.2	30	1.84	43	10.1	38	398	18	3	15	-13	2.01	ICME
2016.04.30	4:24:00	1	30	0.65	12	9.1	30	401	24	3	15	-12	1.82	ICME(+HSS)
2016.05.01	13:00:00	0.9	32	1.05	17	11	3	578	42	5.7	67	-37	3.18	HSS(+ICME)
2016.05.26	16:00:00	0.3	6	0.86	3	8.2	16	432	20	2.3	9	-4	1.77	ICME(+HSS)
2016.05.27	13:00:00	1	9	0.78	32	12.5	5	515	19	4	27	-16	3.22	HSS(+ICME)
2016.06.22	4:00:00	2.1	31	1.57	-1	13.1	18	425	24	4.7	39	-10	2.78	ICME1
2016.06.23	14:00:00	0.9	23	1.03	9	9.3	0	529	35	3.7	22	-30	2.46	ICME2
2016.06.30	12:00:00	0.6	19	0.93	17	8.1	5	406	24	3.3	18	-4	1.64	HSS
2016.07.14	21:00:00	0.4	4	0.83	11	7	0	677	7	3	15	-17	2.37	HSS
2016.07.19	23:51:00	2.8	31	2.03	6	27.3	3	576	9	5	48	-23	7.86	ICME

Date	Time	AF , %	t_{\min} , h	$A_{xy\max}$, %	$t_{A_{xy\max}}$, h	B_{\max} , nT	$t_{B_{\max}}$, h	V_{\max} , km/s	$t_{V_{\max}}$, h	Kp_{\max}	Ap_{\max}	Dst_{\min} , nT	$VmBm$	Type of interplanetary disturbance
2016.07.22	15:00:00	0.7	-3	0.87	35	8.7	-1	458	4	3	15	-19	1.99	ICME1
2016.07.24	15:25:00	1	12	1.59	10	11.3	4	456	23	4.7	39	-34	2.58	ICME2
2016.07.28	19:00:00	0.5	9	0.81	11	16.4	10	626	15	4	27	-30	5.13	HSS
2016.08.02	7:00:00	2.3	22	1.51	10	24.6	20	445	12	5	48	-42	5.47	ICME(+HSS)
2016.08.03	8:00:00	0.6	7	1.29	2	17.7	2	607	29	5	48	-52	5.37	HSS(+ICME)
2016.08.05	4:00:00	1.2	42	0.84	15	7.1	5	676	18	4.3	32	-28	2.4	HSS1
2016.08.08	21:00:00	1	34	0.64	12	7.8	2	662	37	3.7	22	-29	2.58	HSS2
2016.08.15	15:00:00	0.5	14	0.53	17	7.3	23	326	0	1.7	6	-6	1.19	ICME1
2016.08.16	19:00:00	1.3	32	1.72	40	9.4	3	412	30	3.3	18	-24	1.94	ICME2
2016.10.04	10:00:00	0.6	-2	0.63	11	9.7	3	552	2	4	27	-44	2.68	HSS
2016.10.10	12:00:00	1.4	45	1.91	42	7.2	4	411	22	3	15	-19	1.48	ICME
2016.10.12	22:12:00	1.8	21	3.01	2	24.1	25	440	5	6.3	94	-104	5.3	ICME(+HSS)
2016.10.14	17:00:00	1.5	13	1.96	6	14	-1	545	30	3	15	-31	3.82	HSS(+ICME)
2016.11.20	11:00:00	0.4	26	0.43	15	6.8	2	360	11	1.7	6	-5	1.22	ICME(+HSS)
2016.11.21	17:00:00	2.8	33	0.96	8	12.6	22	499	35	4.3	32	-28	3.14	HSS(+ICME)
2016.11.24	5:00:00	0.8	23	0.93	24	10.9	8	670	53	5.3	56	-46	3.65	HSS1
2016.11.28	18:00:00	0.7	6	0.45	21	6.3	5	472	7	2.7	12	-18	1.49	HSS2
2017.01.03	3:00:00	0.5	-3	1.51	1	10.5	7	523	14	3.7	22	-27	2.75	HSS1
2017.01.04	5:00:00	1.6	42	1.47	42	13.9	2	744	48	4	27	-33	5.17	HSS2
2017.01.17	15:00:00	1.2	10	1.27	6	15.9	19	611	43	3.7	22	-33	4.86	HSS
2017.01.24	23:00:00	0.6	28	0.67	17	7.3	4	352	4	3	15	-10	1.28	ICME(+HSS)
2017.01.26	8:15:00	0.8	19	0.84	31	14.1	17	636	23	4.3	32	-28	4.48	HSS(+ICME)
2017.01.30	3:00:00	0.4	-3	0.86	7	8.9	13	539	17	2.7	12	-8	2.4	ICME(+HSS)
2017.01.31	3:00:00	1.3	44	1.08	8	16.8	10	753	18	5	48	-45	6.33	HSS(+ICME)
2017.02.05	4:00:00	0.6	8	0.95	11	7.6	6	640	14	3.7	22	-23	2.43	HSS
2017.02.15	21:00:00	0.5	3	1.53	2	9.8	14	385	20	3.3	18	-10	1.89	ICME(+HSS)
2017.02.16	19:00:00	1.2	29	1.13	19	10.2	8	586	58	4.3	32	-27	2.99	HSS(+ICME)
2017.02.21	12:00:00	0.6	8	0.65	13	7.8	27	441	18	3.7	22	-21	1.72	ICME(+HSS)
2017.02.22	19:00:00	1.1	36	1.04	35	11	32	649	38	4.7	39	-26	3.57	HSS(+ICME)
2017.02.27	10:00:00	0.3	3	0.82	15	8.5	24	411	24	3	15	-20	1.75	ICME(+HSS)
2017.02.28	19:00:00	1.7	18	1.14	18	17.4	18	714	43	5.7	67	-61	6.21	HSS(+ICME)
2017.03.08	4:00:00	0.6	23	0.52	41	6.3	51	555	21	3.7	22	-32	1.75	HSS1
2017.03.11	17:00:00	0.6	27	0.71	28	6.9	9	418	8	3.7	22	-22	1.44	HSS2

Date	Time	$AF, \%$	t_{\min}, h	$A_{xy\max}, \%$	$t_{A_{xy\max}}, \text{h}$	B_{\max}, nT	$t_{B_{\max}}, \text{h}$	$V_{\max}, \text{km/s}$	$t_{V_{\max}}, \text{h}$	Kp_{\max}	Ap_{\max}	Dst_{\min}, nT	$VmBm$	Type of interplanetary disturbance
2017.03.15	0:00:00	0.8	25	1.05	8	9	14	408	27	3	15	-18	1.84	HSS1
2017.03.18	23:00:00	0.4	5	0.7	13	4.8	40	323	13	1	4	-3	0.78	HSS2
2017.03.20	23:00:00	1.3	30	1.08	20	15	10	687	41	5.3	56	-35	5.15	HSS
2017.03.25	17:00:00	0.5	-1	0.83	33	6.8	34	464	1	2.3	9	-10	1.58	ICME(+HSS)
2017.03.27	3:45:00	1	7	1.05	32	15.3	6	708	30	6.3	94	-74	5.42	HSS(+ICME)
2017.04.04	2:00:00	1.5	14	0.92	16	16.2	10	440	17	4.7	39	-44	3.56	ICME(+HSS)
2017.04.05	15:00:00	0.6	11	0.71	0	10.4	4	497	10	3.3	18	-17	2.58	HSS(+ICME)
2017.04.13	17:00:00	0.8	11	0.57	11	7.9	14	446	7	3.3	18	-25	1.76	ICME
2017.05.18	2:00:00	0.7	3	1.53	10	9.4	7	449	-1	3.7	22	-28	2.11	ICME(+HSS)
2017.05.19	3:00:00	1	39	1.06	35	12.4	28	733	32	4.3	32	-39	4.54	HSS(+ICME)
2017.05.27	15:34:00	2.9	15	1.25	48	22.8	9	401	9	7	132	-125	4.57	ICME
2017.06.03	8:00:00	0.6	11	0.72	17	12.1	6	480	13	3.7	22	-26	2.9	HSS
2017.06.16	3:00:00	1.1	26	0.85	17	13.7	8	623	17	5	48	-31	4.27	HSS1
2017.06.17	12:00:00	0.8	13	0.89	23	8.3	5	594	26	4	27	-26	2.47	HSS2
2017.07.20	9:00:00	1.9	45	1.01	5	10.3	9	715	28	4.3	32	-33	3.68	HSS1
2017.07.23	13:00:00	0.7	32	1.11	20	7.9	0	702	34	4	27	-29	2.77	HSS2
2017.08.03	11:00:00	0.8	13	0.87	4	18.6	17	711	29	4.3	32	-30	6.61	HSS
2017.08.11	3:00:00	0.8	35	1.09	40	11.6	30	602	66	3.3	18	-9	3.49	HSS
2017.08.15	19:00:00	0.3	2	0.55	-1	5.6	14	386	-1	1.3	5	-1	1.08	ICME(+HSS)
2017.08.16	10:00:00	2	36	1.22	46	12.5	24	736	77	4.7	39	-24	4.6	HSS(+ICME)
2017.09.06	23:43:00	1.8	3	1.43	10	14.4	3	581	5	3.7	22	-3	4.18	ICME1
2017.09.07	23:00:00	7.7	13	3.29	10	27.3	2	817	10	8.3	236	-124	11.15	ICME2
2017.09.24	22:00:00	0.6	12	1.34	21	9.7	2	397	11	2.7	12	3	1.93	HSS1
2017.09.27	1:00:00	1.4	24	1.38	28	14.2	13	697	34	6.7	111	-55	4.95	HSS2
2017.10.05	1:00:00	0.9	46	1.24	48	8.8	18	448	34	3.3	18	-25	1.97	HSS1
2017.10.07	7:00:00	0.6	25	1.41	9	7.4	16	441	18	2	7	-9	1.63	HSS2
2017.10.09	19:00:00	0.3	-3	0.94	-1	4.2	26	352	-1	0.3	2	2	0.74	ICME(+HSS)
2017.10.10	22:00:00	0.9	45	0.83	18	11.6	25	559	42	5	48	-41	3.24	HSS(+ICME)
2017.10.13	13:00:00	0.8	8	1.1	46	8.9	4	713	17	5.7	67	-52	3.17	HSS
2017.10.19	4:00:00	0.5	38	0.77	24	9.6	13	470	19	3.7	22	-28	2.26	HSS
2017.10.24	8:00:00	1.1	19	0.85	31	13.4	5	614	29	4.7	39	-28	4.11	HSS
2017.11.01	10:00:00	1.9	37	1.17	25	12.6	27	422	76	3.3	18	-24	2.66	HSS
2017.11.07	4:00:00	1.5	46	0.9	-1	16.1	15	655	22	6.3	94	-74	5.27	HSS1

Date	Time	AF , %	t_{\min} , h	$A_{xy\max}$, %	$t_{A_{xy\max}}$, h	B_{\max} , nT	$t_{B_{\max}}$, h	V_{\max} , km/s	$t_{V_{\max}}$, h	Kp_{\max}	Ap_{\max}	Dst_{\min} , nT	$VmBm$	Type of interplanetary disturbance
2017.11.10	3:00:00	0.7	3	0.82	4	7.7	2	686	12	4	27	-46	2.64	HSS2
2017.11.14	2:00:00	0.9	21	0.75	1	8.6	9	404	21	3	15	-30	1.74	ICME(+HSS)
2017.11.15	10:00:00	0.9	22	0.93	31	14.2	8	504	18	4.3	32	-26	3.58	HSS(+ICME)
2017.11.18	20:00:00	0.5	-2	0.71	39	4.1	1	393	4	2.3	9	-9	0.81	ICME(+HSS)
2017.11.20	15:00:00	1.3	18	0.87	24	13.1	13	611	26	5	48	-43	4	HSS(+ICME)
2017.11.27	14:42:00	1	47	1.09	47	9.1	-1	480	2	3.3	18	-19	2.18	HSS
2017.12.04	16:13:00	1.5	41	1.05	43	12.2	2	622	37	5	48	-45	3.79	HSS
2017.12.11	3:00:00	0.8	46	0.91	33	10.9	15	517	30	4	27	-29	2.82	HSS1
2017.12.14	1:00:00	0.5	14	0.92	7	6.6	2	437	1	2.7	12	-7	1.44	HSS2
2017.12.16	22:00:00	0.5	14	0.84	33	11.7	13	643	19	4.7	39	-24	3.76	HSS
2017.12.31	16:00:00	0.9	10	0.88	35	11	13	472	25	3.7	22	-20	2.6	HSS
2018.01.12	6:00:00	0.5	19	0.94	0	5.8	13	347	2	1.3	5	-6	1.01	ICME(+HSS)
2018.01.13	8:00:00	0.9	-1	0.95	13	12	14	584	17	4.7	39	-21	3.5	HSS(+ICME)
2018.01.15	1:00:00	0.6	4	1.09	25	6.6	1	509	6	3.7	22	-19	1.68	HSS
2018.01.23	11:00:00	0.5	22	0.52	25	5.6	26	469	1	3	15	-12	1.31	ICME(+HSS)
2018.01.24	14:00:00	0.7	20	0.92	5	10.1	16	423	26	4	27	-23	2.14	HSS(+ICME)
2018.01.31	8:00:00	0.6	35	0.59	4	8.6	5	420	16	2.7	12	-16	1.81	HSS
2018.02.04	13:00:00	0.5	22	1.21	15	8.5	6	439	54	3	15	-14	1.87	HSS
2018.02.08	1:00:00	0.3	1	1.02	37	6.5	28	383	2	2.7	12	-7	1.24	ICME
2018.02.10	5:00:00	0.5	2	0.81	4	9.8	4	382	20	2.3	9	-11	1.87	ICME
2018.02.21	1:00:00	0.8	38	0.69	38	7.1	38	416	40	2.7	12	-15	1.48	ICME(+HSS)
2018.02.22	18:00:00	1.3	32	0.79	14	9.2	13	547	17	4.3	32	-31	2.52	HSS(+ICME)
2018.02.26	22:00:00	0.6	13	0.75	12	9.6	14	551	19	5.3	56	-30	2.64	HSS
2018.03.14	16:00:00	0.4	6	0.75	36	9.8	8	489	31	4.3	32	-35	2.4	HSS
2018.03.24	9:00:00	0.6	12	0.97	28	8.6	10	530	48	4	27	-27	2.28	HSS1
2018.03.26	23:00:00	0.6	-1	1.04	3	6.2	5	541	10	3	15	-19	1.68	HSS2
2018.03.29	16:00:00	0.4	30	0.88	26	7.7	2	428	9	2.7	12	-5	1.65	HSS1
2018.03.31	2:00:00	0.7	19	0.92	4	6.5	0	460	42	2.7	12	-6	1.5	HSS2
2018.04.09	6:00:00	0.7	27	1.01	30	8.5	24	587	35	4.3	32	-30	2.49	HSS
2018.04.27	13:00:00	0.3	11	0.81	10	7.8	3	385	13	2.7	12	-3	1.5	HSS1
2018.04.30	1:00:00	0.6	21	1.26	18	6.3	5	403	24	2	7	-7	1.27	HSS2
2018.05.05	10:25:00	1	14	0.87	12	15.9	6	669	27	5.7	67	-56	5.32	HSS
2018.05.15	18:00:00	0.2	-2	0.52	9	5.2	24	361	1	1.3	5	-13	0.94	ICME1

Date	Time	$AF, \%$	t_{\min}, h	$A_{xy\max}, \%$	$t_{A_{xy\max}}, \text{h}$	B_{\max}, nT	$t_{B_{\max}}, \text{h}$	$V_{\max}, \text{km/s}$	$t_{V_{\max}}, \text{h}$	Kp_{\max}	Ap_{\max}	Dst_{\min}, nT	$VmBm$	Type of interplanetary disturbance
2018.05.16	19:00:00	1.5	27	0.72	2	9.6	17	448	46	3	15	-32	2.15	ICME2
2018.05.22	12:18:00	0.6	22	0.88	40	10.3	20	520	31	3.3	18	-8	2.68	HSS
2018.05.27	21:00:00	0.6	7	0.83	10	7	36	393	8	1.7	6	-4	1.38	HSS
2018.05.31	14:46:00	1	42	0.93	47	12.9	4	707	76	4.7	39	-39	4.56	HSS
2018.06.17	15:00:00	1.1	29	1.29	19	19.8	12	526	24	4	27	-35	5.21	HSS
2018.06.25	6:00:00	0.6	14	0.83	22	9	16	443	0	5	48	-48	1.99	ICME(+HSS)
2018.06.26	7:00:00	0.8	11	1.18	44	11.5	5	626	18	3.7	22	-40	3.6	HSS(+ICME)
2018.07.03	15:00:00	0.4	5	0.96	24	7	11	355	45	2.3	9	1	1.24	HSS
2018.07.10	1:00:00	1.1	37	0.89	39	11.1	14	396	9	2.7	12	0	2.2	ICME(+HSS)
2018.07.11	22:00:00	0.5	24	0.61	7	9.4	1	491	53	2.7	12	-5	2.31	HSS(+ICME)
2018.07.16	6:00:00	0.4	10	0.77	2	9.9	4	350	3	2.7	12	-14	1.73	ICME(+HSS)
2018.07.16	20:00:00	0.8	6	0.62	9	14.3	4	440	23	3	15	-23	3.15	HSS(+ICME)
2018.07.24	6:00:00	0.7	14	1.54	35	13	1	587	10	4	27	-18	3.82	HSS
2018.08.07	13:00:00	0.4	37	0.65	25	7.8	1	439	30	3	15	-11	1.71	HSS
2018.08.14	23:00:00	1.1	26	0.61	28	9.5	37	543	71	4	27	-34	2.58	HSS
2018.08.25	2:00:00	1.5	27	2.87	23	18.2	32	444	13	7.3	154	-174	4.04	ICME(+HSS)
2018.08.26	15:00:00	0.6	15	1.16	22	15.1	2	619	27	6	80	-86	4.67	HSS(+ICME)
2018.08.29	23:00:00	0.3	2	0.61	19	5.3	31	473	0	1.7	6	-33	1.25	ICME(+HSS)
2018.08.31	7:00:00	0.5	6	0.58	4	7.9	11	395	17	2.3	9	-23	1.56	HSS(+ICME)
2018.09.06	23:00:00	0.6	17	0.59	3	10.5	8	488	14	2.3	9	-7	2.56	HSS
2018.09.10	16:00:00	1.2	21	0.96	16	14.2	9	570	15	6	80	-60	4.05	HSS
2018.09.14	15:00:00	0.6	5	0.67	6	5.1	1	688	9	3	15	-22	1.75	ICME
2018.09.17	2:00:00	0.8	46	1.57	22	10.8	2	561	7	3.3	18	-15	3.03	HSS
2018.10.03	20:00:00	0.7	9	0.88	8	7.7	1	508	6	3	15	-9	1.96	HSS1
2018.10.07	8:00:00	1.5	14	0.71	47	16.6	6	614	53	5.3	56	-53	5.1	HSS2
2018.10.13	5:00:00	1	41	1.17	46	11.3	15	616	58	4.3	32	-38	3.48	HSS
2018.10.26	3:00:00	0.5	23	0.85	3	7.4	8	421	28	2.3	9	-13	1.56	HSS
2018.11.04	7:00:00	1.4	35	0.85	34	11.2	14	611	24	5.7	67	-53	3.42	HSS
2018.11.09	13:00:00	1.1	37	0.86	39	12.8	12	637	65	4.3	32	-42	4.08	HSS
2018.11.27	5:00:00	0.3	41	0.91	2	7.5	17	427	25	2.3	9	-4	1.6	HSS
2018.12.01	3:00:00	0.5	40	0.93	0	9.5	16	450	41	3.7	22	-15	2.14	HSS
2018.12.07	5:00:00	0.9	40	1.44	32	9.6	3	595	45	3.3	18	-21	2.86	HSS1
2018.12.09	11:00:00	0.5	8	0.97	0	10.1	1	661	15	3.7	22	-15	3.34	HSS2

Date	Time	AF , %	t_{\min} , h	$A_{xy\max}$, %	$t_{A_{xy\max}}$, h	B_{\max} , nT	$t_{B_{\max}}$, h	V_{\max} , km/s	$t_{V_{\max}}$, h	Kp_{\max}	Ap_{\max}	Dst_{\min} , nT	$VmBm$	Type of interplanetary disturbance
2018.12.16	21:00:00	0.6	23	0.91	23	10.6	11	447	54	2.7	12	-16	2.37	HSS1
2018.12.19	7:00:00	0.5	28	0.93	26	8.5	5	638	27	3	15	-14	2.71	HSS2
2018.12.27	23:00:00	0.4	22	0.66	43	12.1	8	604	23	4.3	32	-22	3.65	HSS
2019.01.04	12:00:00	1.4	40	1.01	19	11.4	17	554	54	5	48	-23	3.16	HSS
2019.01.13	1:00:00	0.4	10	0.84	-1	3.4	7	366	1	1	4	-4	0.62	ICME(+HSS)
2019.01.13	23:00:00	0.5	2	1.06	12	10.2	3	403	10	2.7	12	-2	2.06	HSS(+ICME)
2019.01.15	11:00:00	0.4	15	1.06	24	7.7	1	417	12	1.7	6	-7	1.61	HSS1
2019.01.16	19:00:00	0.4	-2	1.1	26	9.9	20	503	24	2.7	12	-20	2.49	HSS2
2019.01.22	15:00:00	1.1	45	0.82	41	9.3	58	634	50	4	27	-17	2.95	HSS
2019.01.31	5:00:00	0.6	-1	0.73	8	15	10	404	12	3.3	18	-8	3.03	ICME(+HSS)
2019.01.31	18:00:00	0.9	30	1.08	26	15.7	2	627	17	5.3	56	-34	4.92	HSS(+ICME)
2019.02.27	8:00:00	1.1	46	0.82	26	11.6	16	595	61	4.7	39	-41	3.45	HSS
2019.03.11	11:00:00	1.1	45	0.66	7	9.2	21	396	21	2.7	12	-24	1.82	ICME
2019.03.13	19:00:00	0.3	-3	0.78	26	6.4	30	363	1	3	15	-11	1.16	ICME(+HSS)
2019.03.15	2:00:00	0.5	21	0.83	36	7.5	5	443	37	3	15	-24	1.66	HSS(+ICME)
2019.03.19	4:00:00	0.5	12	1.07	39	7.1	13	410	28	2.7	12	-13	1.46	HSS
2019.03.31	3:00:00	0.7	19	1.2	28	7.2	75	421	30	3.7	22	-28	1.52	HSS1
2019.04.03	13:00:00	0.7	24	0.98	15	9.4	23	527	62	3.7	22	-33	2.48	HSS2
2019.04.07	18:00:00	0.8	11	0.93	5	8.6	12	458	20	3.3	18	-27	1.97	HSS
2019.04.23	18:00:00	0.3	9	0.47	-1	10.4	3	425	10	3.3	18	-15	2.21	HSS1
2019.04.24	22:00:00	0.4	42	0.73	8	6.9	8	418	21	1.7	6	-8	1.44	HSS2
2019.05.09	6:00:00	0.5	21	0.62	34	7.1	6	379	15	2.3	9	-8	1.35	HSS
2019.05.14	0:00:00	0.9	7	1.18	24	14.3	7	556	9	6.3	94	-65	3.98	ICME1
2019.05.15	18:00:00	1	40	1.1	4	9.8	3	480	32	3	15	-10	2.35	ICME2
2019.05.19	19:00:00	0.6	17	0.98	6	8.2	12	414	42	3.3	18	-10	1.7	ICME
2019.05.26	22:14:00	1.1	14	0.94	16	11.8	12	372	10	3.3	18	-16	2.19	ICME(+HSS)
2019.05.28	15:00:00	0.5	27	0.73	47	8.2	2	562	30	3.7	22	-28	2.3	HSS(+ICME)
2019.06.12	6:00:00	0.7	25	1.08	19	7.4	21	447	25	2.3	9	-1	1.65	ICME(+HSS)
2019.06.13	15:00:00	0.8	12	0.82	13	7.8	6	477	8	4	27	-12	1.86	HSS(+ICME)
2019.06.25	20:00:00	0.6	37	0.66	37	6	11	402	23	1.7	6	-6	1.21	HSS
2019.07.04	18:00:00	0.4	11	0.7	5	7.1	10	441	22	2.3	9	-6	1.57	HSS
2019.07.19	21:00:00	0.3	15	0.75	35	5.1	34	349	37	1.7	6	-4	0.89	ICME(+HSS)
2019.07.21	18:00:00	0.5	17	0.69	23	9.3	10	424	53	3.7	22	-18	1.97	HSS(+ICME)

Date	Time	$AF, \%$	t_{\min}, h	$A_{xy\max}, \%$	$t_{A_{xy\max}}, \text{h}$	B_{\max}, nT	$t_{B_{\max}}, \text{h}$	$V_{\max}, \text{km/s}$	$t_{V_{\max}}, \text{h}$	Kp_{\max}	Ap_{\max}	Dst_{\min}, nT	$VmBm$	Type of interplanetary disturbance
2019.07.30	11:00:00	1	32	0.9	35	10.7	13	553	44	3.3	18	-6	2.96	HSS
2019.08.11	15:00:00	0.2	-3	0.8	13	6	2	462	1	2.3	9	-16	1.39	ICME(+HSS)
2019.08.12	6:00:00	0.6	26	0.74	13	6.8	21	491	37	2	7	-18	1.67	HSS(+ICME)
2019.08.25	10:00:00	0.4	10	0.67	3	5.5	15	331	24	2	7	-7	0.91	ICME(+HSS)
2019.08.26	18:00:00	0.8	25	0.93	12	9.6	9	514	17	3	15	-16	2.47	HSS(+ICME)
2019.08.30	6:00:00	1.2	35	0.85	29	10.5	10	752	45	5.7	67	-52	3.95	HSS1
2019.09.01	13:00:00	0.8	10	1	36	7.5	3	728	11	5.3	56	-51	2.73	HSS2
2019.09.24	9:00:00	0.4	1	0.94	1	14.7	9	499	15	3.7	22	-24	3.67	HSS
2019.09.26	16:00:00	0.4	3	0.89	13	2.8	-1	386	-1	1.3	5	-3	0.54	ICME(+HSS)
2019.09.27	7:00:00	0.8	20	0.95	24	13	7	695	18	5.3	56	-49	4.52	HSS(+ICME)
2019.10.12	19:00:00	0.6	40	1.3	16	5.2	42	382	0	1.7	6	-9	0.99	ICME(+HSS)
2019.10.14	14:00:00	0.8	29	1.29	16	8	9	427	64	2.3	9	-9	1.71	HSS(+ICME)
2019.10.23	12:00:00	0.4	17	0.86	11	4	19	355	19	1.3	5	1	0.71	ICME(+HSS)
2019.10.24	8:00:00	0.8	29	0.8	25	11.7	8	650	33	5.3	56	-46	3.8	HSS(+ICME)
2019.10.26	5:00:00	0.6	32	0.76	28	8.2	8	650	13	4.7	39	-41	2.66	HSS
2019.11.02	22:00:00	0.4	5	1.32	6	6.4	4	349	-1	1	4	-4	1.12	ICME(+HSS)
2019.11.04	7:00:00	0.6	2	0.69	16	7.3	8	416	30	2	7	-13	1.52	HSS(+ICME)
2019.11.10	6:00:00	0.4	11	0.73	4	4.5	8	319	5	1.3	5	-8	0.72	ICME1
2019.11.10	21:00:00	1	47	1.15	44	12.2	25	374	18	2.7	12	-23	2.28	ICME2
2020.01.28	19:00:00	0.7	35	0.8	20	8	4	456	13	3.3	18	-20	1.82	ICME(+HSS)
2020.01.30	17:00:00	0.6	5	0.71	9	7.3	8	517	24	3.7	22	-23	1.89	HSS(+ICME)
2020.02.06	3:00:00	0.9	16	0.8	38	9.5	6	639	25	4	27	-21	3.04	HSS
2020.02.17	19:00:00	0.9	25	1.25	13	12.2	20	395	20	3.7	22	-52	2.41	ICME(+HSS)
2020.02.19	1:00:00	0.6	8	1.39	3	9.8	0	498	10	4	27	-33	2.44	HSS(+ICME)
2020.03.30	13:00:00	0.8	9	0.89	4	7	19	531	27	4	27	-41	1.86	HSS
2020.04.11	14:00:00	0.5	19	0.47	16	7.5	67	448	20	3.3	18	-21	1.68	HSS
2020.04.20	2:33:00	0.9	10	0.96	18	15.9	13	371	7	4.7	39	-59	2.95	ICME(+HSS)
2020.04.21	8:00:00	0.6	10	1.06	9	11	-1	490	19	3.3	18	-28	2.7	HSS(+ICME)
2020.04.29	8:00:00	0.8	23	0.79	7	4.1	35	360	8	1	4	-6	0.74	ICME1
2020.04.30	20:00:00	1	44	0.66	32	7.2	16	340	48	2	7	-20	1.22	ICME2
2020.05.03	19:00:00	0.4	5	0.7	1	8.5	4	335	30	2.7	12	-12	1.42	ICME(+HSS)
2020.05.05	13:00:00	0.4	29	0.59	2	7.5	12	347	70	3.3	18	-25	1.3	HSS(+ICME)
2020.05.10	16:00:00	0.6	-1	0.65	15	5.5	6	348	15	2.3	9	-15	0.96	HSS

Date	Time	$AF, \%$	t_{\min}, h	$A_{xy\max}, \%$	$t_{Axy\max}, \text{h}$	B_{\max}, nT	$t_{B\max}, \text{h}$	$V_{\max}, \text{km/s}$	$t_{V\max}, \text{h}$	Kp_{\max}	Ap_{\max}	Dst_{\min}, nT	$VmBm$	Type of interplanetary disturbance
2020.06.13	2:00:00	1.2	42	0.69	0	5.5	81	338	10	1.3	5	-5	0.93	ICME
2020.06.26	18:00:00	0.3	0	0.56	5	8.5	4	338	5	2.7	12	-8	1.44	ICME(+HSS)
2020.06.27	11:00:00	0.6	29	0.65	9	9	1	422	9	2.3	9	-14	1.9	HSS(+ICME)
2020.06.30	3:00:00	0.7	10	0.76	-1	5.9	21	373	2	1.7	6	-34	1.1	ICME1
2020.07.01	1:00:00	0.8	28	0.93	0	9	79	433	81	2.3	9	-12	1.95	ICME2
2020.07.04	16:00:00	0.5	20	0.78	16	9.6	10	514	20	3.3	18	-16	2.47	HSS1
2020.07.05	22:00:00	0.4	24	0.74	2	6.3	1	516	6	2.7	12	-13	1.63	HSS2
2020.08.02	5:00:00	0.8	39	0.95	25	10.9	8	701	47	3.3	18	-22	3.82	HSS1
2020.08.05	22:00:00	0.5	3	0.5	26	4.8	38	495	17	2.3	9	-7	1.19	HSS2
2020.08.21	7:00:00	0.7	39	0.73	24	7.4	28	358	44	2.3	9	-37	1.32	ICME(+HSS)
2020.08.23	4:00:00	0.4	5	0.77	3	7.8	11	403	24	2.7	12	-36	1.57	HSS(+ICME)
2020.10.05	9:00:00	1.1	10	1.68	18	10.6	19	366	8	4.3	32	-40	1.94	ICME(+HSS)
2020.10.07	7:00:00	0.6	30	1.22	22	9.5	8	396	18	2.3	9	-13	1.88	HSS(+ICME)
2020.10.12	12:00:00	0.6	39	0.91	31	7.7	15	309	28	1.3	5	-2	1.19	ICME
2020.10.15	18:00:00	0.6	-2	0.93	7	8.7	44	347	81	2	7	-16	1.51	ICME
2020.10.30	22:00:00	0.7	10	0.85	11	6.2	13	414	11	2.3	9	-35	1.28	ICME1
2020.11.01	11:00:00	0.5	5	0.75	33	8.6	18	397	0	3	15	-28	1.71	ICME2
2020.11.05	18:00:00	1.1	39	1.23	26	9.5	11	502	16	2.7	12	-9	2.38	HSS
2020.11.08	14:00:00	0.7	-3	1.47	17	5.2	4	448	6	1.3	5	-8	1.16	ICME1
2020.11.09	19:00:00	0.4	3	0.82	7	5.4	4	351	8	0.3	2	0	0.95	ICME2
2020.11.21	12:00:00	0.7	31	1.1	16	10.6	11	635	31	4.7	39	-38	3.37	HSS
2020.11.28	20:00:00	0.4	21	0.79	1	7.9	10	423	2	3	15	-10	1.67	ICME(+HSS)
2020.11.30	6:00:00	0.6	47	0.84	29	8.5	3	503	6	3.3	18	-13	2.14	HSS(+ICME)
2020.12.05	7:00:00	0.6	5	0.79	14	7.2	4	402	7	2.7	12	-4	1.45	ICME
2020.12.09	3:00:00	0.4	17	0.74	7	9	13	439	22	3.3	18	-8	1.98	HSS
2020.12.10	2:00:00	1	27	1.61	11	12.2	2	568	2	3.3	18	-10	3.46	HSS
2020.12.16	22:00:00	0.6	40	0.88	46	6.5	2	298	58	0.7	3	-1	0.97	ICME
2020.12.29	18:00:00	0.6	16	0.98	17	6.8	3	509	20	2.7	12	-15	1.73	HSS