

**Version 1.6: Draft Event list from the inspection of the PSP plasma and magnetic field data until 27 July 2023. Compiled by VB and IC, 16/02/2024. More references to relevant studies will be added. Abbreviation explanations are given below the Table.**

Year	Month	Day	PSP $r_d$ (au)	SW event	Compl. Obs.	Comments
<b>2018</b>	10	30, 31	SE1, 0.26	TS, SSW, ICME	WSA	RE
	11	2		ME		
		3	6P1	SWB	WE	
		8		SWB, P		
		10		HSS		
		11, 12	E1S, 0.23	SWB, ICME	ESA	Ref. Nieves-Chinchilla_2020_ApJS_246_63
		14-20		HSS		
		15		ME		
		19, 22		MQ		
		21	0.45	ICME		
		23		CS		
		24,25,26	0.52	ICME		
		26-28		HSS		
	12	3,4	0.64	ICME	EE	
		7		CS		
		15		SSW		
		19		BI		
<b>2019</b>	02	20		BI	WSA	
		27		BI		
	03	4		BI		
		5		BI		
		10		BI		
		12		P		
		13		BI		
		15	0.55	ICME		E. Kilpua et al.
		16-17		HSS?		
		17		MH, CS		
		18		CS		
		19	0.49	ICME?		
		20		MH		
		25	0.37	ICME?		
		27		CS		
		28	30SE2	CS	EE	RSA
	04	1		SSW		
		3	4P2	ST		
		6		BD		
		8		P	WSA	RE disk passage
		9		DE		
		10	SE2S, 0.24	ICME		

		11	0.26	ICME		
		16		CS		
		17		HSS		
		18		ME		
	05	13	0.77	ICME		
		19	0.82	ICME		
		23		CS, SSW	EE	
		27		CS?		
	06	1		RC		
		16		ME		
		21		CS		
<b>2019</b>	06	22		SSW		
	07	11		BI		
		16	0.85	ICME		
		17	0.84	ICME		
		25	0.78	ICME	WSA	
	08	9		BI		
		11		HSS		
		17	0.46	CS, ICME		
		19		CS		
		24		BI		
		25		CS, SWB	WE	
		26	27SE3,1P3	ST		
	09	7	E3S	SWB		
		8		SWB		
		10	0.31	ICME		
		11, 12	0.33	ICME		
		14		CS	EE	RSA
		19		CS		
		20-23		HSS		
		27		CS		
		29		CS		
	10	7		ME		
		12		HSS		
		12		CS		
		13, 14	0.80	ICME		
		16		CS		
		17		BI, SH?		
		22	0.87	ICME		
		23,24	0.88	ICME		
		26	0.89	ICME		
		27,28		CS		
		30		CS		
	11	4		BI	EE	PSP meets SA
		11		P		
		12		CS		
		13	0.94	ICME		

		15		CS		
		16	0.94	ICME		
		18		BI		
		20		CS		
		23	0.93	ICME		
		26	0.93	SWB, ICME		
		27	0.92	ICME,CS		
	12	1	0.91	ICME		
		3		CS		
		5		CS		
		6		CS		
		9	0.87	ICME		
		11		MQ		
<b>2019</b>	12	13		CS		
		16	0.83	ICME		
		18	0.81	ICME		
		19	0.80	ICME,SIR		
		26		BS		
		28	0.71	ICME	EE	
<b>2020</b>	01	16	0.43	ICMEs		
		19	0.36	CS,ICME		
		20	0.34	ICME		
		21	23SE4	BI	EE	RSA
		25		BS		
		26		SWB		
		27	29P4, 0.16	BI,ICME?	WSA	RE disk passage
		30		CS		
		31		CS		
	02	1	4E4S	CS	WE	
		7		TS		
		8		CS		
		9	0.37	ICME,CS		
		11		BI		
		12		TS		
		15		SWB		
		16	0.51	ICME		
		17,18		TS		
		20,21	0.58	ICMEs		
		23		CS		
		24		CS?		
		25		CS?,ICME		
		26		CS		
		27		CS		
		29	0.65	CS,ICME		
	03	9,10,11		SWB		
		13		ICME		

		16		CS		
		19		CS		
		23,24	0.81	ICME,CS		
		26,27	0.86	ICME		
		31		CS		
04		1		CS		
		5		P		
		16	0.85	ICME		
		21	0.83	ICMEs		
		26		SWB		
05		10		SWB,TS		
		11	0.66	ICMEs, CS		
		13		SWB		
		17		SWB		
<b>2020</b>	05	19		CS		
		21	0.51	SWB,CS,ICMEs		
		22	0.49	SWB,ICME		
		24	0.45	ICME,P		
		25		P		
		31		BI		
06		1	SE5	SWB,P		
		2		SWB		
		3	0.21	ICME?		
		4		SWB	ESA	
		5		FS		
		7	P5	SWB		
		8		CS	EE	RSA
		9	0.15	SH,ICME		
		13	E5S, 0.25	ICME		
		15	0.30	ICMEs	WSA	RE
		16		CS		
		18		CS		
		19		CS		
		20	0.41	ICME,CS		
		23	0.47	ICME		
		24		CS		
		25	0.51	ICME		E. Kilpua
		26		CS		
07		1		SWB		
		6-7		HSS		
		9,10		CS		
		22	0.79	ICME		
		26		CS		
		29,30		CS		
08		2		CS		
		3		SWB		

		4		CS		
		12	0.80	ICME		
		13	0.80	ICME,CS,S T		
		18	0.77	ICMEs		
		20		SWB		
		25	0.72	ICME?,CS		
		26		CS,SWB		
		27		ST		
		28,29	0.69	ICME,CS		
		29		HSS		
		31		BS		
	09	1		ST,CS		
		1-2		HSS		
		2		BI		
		3,4		SWB,TS		
		5		SWB,BI,CS		
		6		CS,BD		
<b>2020</b>	09	7,8		SSW		
		9		BD,SSW		
		10		CS		
		12	0.48	ICME,SH		
		13		CS		
		14		SWB		
		15		CS,SWB	WSA	
		16	0.40	ICME,SH?		
		17		BI		
		18	0.35	ICME,BI,CS ?		
		19		CS,SWB		
		20	21SE6	CS		RSA
		22		CS		
		23		SSW,TS		
		24		BI		
		25,26	27P6, 0.15	CS,ICMEs?	WE	
		28		SSW,TS	ESA	
		30		CS?		
	10	1	0.78	SWB		
		2	E6S	BD		
		6		CS		
		7	0.36	CS,ICMEs, P		
		14-21		HSS		RE
		27	0.69	ICME		
		28	0.70	ICME	EE	
		31		HSS		
		31		CS		

	11	2,3		BI		
		5		BI		
		6		TS		
		15		BI		
		18	0.81	ICMEs?		
		20		SWB		
		21		SWB,CS		
		23	0.82	ICME		
		25	0.82	ICME		
		27	0.81	ICME		
		28	0.81	ICME		
		29,30	0.81	ICME		
	12	1	0.80	ICME		
		2		BI		
		7		CS		
		8	0.77	BI,ICME?		
		9	0.77	BI,ICME?		
		12	0.75	BI,ICME?		
		12-14		HSS		
		13		SWB		
		14		CS,SWB		
<b>2021</b>	01	2		SWB,CS		
		4		SWB		
		6,7		SWB	EE	
		10,11	12SE7	SWB		
		12		HSS		
		13	0.22	TS,ICME?		
		14		CS		RSA
		15		FS,SSW		disk passage
		17	P7	CS	ESA	RE
		18		BD		
		19		CS?		
		20		CS?	WE	
		21		SWB		
		23,24	23E7S, 0.24	ICME,CS		
		26	0.33	ICME		
		27		CS?		
		28,29	0.38	ICMEs?,S WB?,TS	ESA	
		30-2		HSS		
	02	4,5		SWB		
		6-7		HSS		
		7,8		RC,ST		
		9		CS		
		10		SWB, HSS		
		11	0.62	ICME		
		12	0.64	ICME		

		15-16		HSS		
		17		CS		
		20		BS,SWB		
		24		SWB,BI		
<b>2021</b>	<b>03</b>	2,3		SWB		
		8	0.78	ICME		
		15,16		SWB?,BI		
		20		SWB		
		21		CS		
		28		CS		
		29	0.70	ICME		
		30	0.69	ICMEs?		
		31		SWB		
	<b>04</b>	1		SWBs, CS		
		2		SWBs		
		7,8,9,10,11,12		CS		
		15,16		SWBs?, CS?		
		18		SSW, TS		
		19		CS, SWBs		
		22		SWB		
		23		CS		
		24-28	SE8	BI, ICME?, SSW	WSA	
		29	P8	CS		
		30	0.08	ICME?		RSA
	<b>05</b>	1	E8S4	SSW		RE disk passage
		9	0.37	ICME?, CS?		
		12,13		CS	WE	
		14	0.48	ICME?		
		15		SWBs		
		16		CS		
		27		SWB		
		28,29	0.68	ICME		
		30	0.70	ICME	WSA	
	<b>06</b>	1,2,3,4		CS		
		7,8	0.75	ICMEs		
		9	0.76	ICME, CS		
		10,11	0.76	BI, CS, ICME?		
		12	0.77	ICME?		
		14		CS?		
		15-17		CS		
		18		SIR, CS		
		19		HSS		

		20-22		CS		
		23		SWB		
		24		ST		
		25		CS?		
		29		TS		
		30/01	0.76	ICME		
	07	03	0.75	ICME?	WSA, WE	
	07	05/06	0.73	ICME?		
		11	0.69	ICME		
		14	0.66	CS		
		25/26	0.50	CS		
		28	0.44	SFR		
		30	0.40	ICME		
	08	01	0.35	SFR		
		02	0.32	BS, ICME		
		03/04	0.29, SE9	ICMEs		
		07,08,09	0.16, P9	SSW		
		10	0.08	CS		
		11	0.10	ICME?	EE, ESA	
		14	0.21, E9S15	ICME?		
		17	0.31	CS		
		19	0.36	SWB		
		20/21/22	0.38	CS		RSA
		25	0.49	SFR		
		27	0.53	ICME?		
		28/29/30/31	0.54	ICMEs		
<b>2021</b>	09	01	0.60	SFR		
		02	0.62	SFR		
		03	0.63	SFR		
		04	0.64	ICME?		
		06	0.66	CS		
		09/10	0.69	CS		
		12/13	0.72	ICME		
		14/15/16/17	0.73	ICMEs		
		18	0.75	ICME		
		19	0.76	ICME?		
		20	0.76	SFR		
		21/22	0.77	CS?, ICME		
		23	0.77	CS		
		24/25	0.78	ICME?, CS		RSA
		26/27	0.78	ICME		
		28/29/30	0.78	ICME, CS		
	10	3/4		SSW		
		5		CS		
		6		CS		
		7	0.77	ICME		
		8		SWB		



		10		SSW, ICME?	EE	
		11	0.76	ICME		
		12		ICME		
		14		CS?		
		16	0.73	ICME?		
		17		ICME?		
		19		ICME?		
		20		ICME, CS?		RE
		21	0.70	ICME	WE,SA	
		24		CS		
		28		CS		
		29		ICME		
	11	01		ICME?		
		02	0.56	ICME		
		03		ICME		
		04/05		ICME?		
		07		ICME		
		09/10	0.42	ICME		
		11		CS		
		14/15/16	0.26, SE10	SWB		
		17/18/19	0.22	SWB		RE disk passage
		22	0.07, P10, E10S26	CS		
<b>2022</b>	01	11		ICME	ESA	
		12		ICME		
		13/14	0.76	ICME		
		18		SH		
		20		ICME?		
		21	P10	ICME?		
		25	E10S26	CS		
		27		CS		
		28		CS		
		29/30		ICME?		
		31		SWB		
	02	02/03		SWB		
		05	0.58	ICME?		
		08/09/10		SWB		
		11		SWB		
		13		SSW		
		14		CS		
		15		ICME?		
		16/17	0.38	SH, ICME, CS		
		18/19/20	SE11	SWB		
		21/22/23	0.23	SSW	EE	
		25	P11	CS		RE disk passage

		28		SSW		
03	01			SSW	WE	
	02	E11S		SWB		
	05			SWB, CS		
	07			SWB		
	08			CS		
	09	0.42		ICME		
	10			ICME		
	11			SH, ICME?		
	12/13			SWB/CS		
	15			ICME?		
	16			ICME?		
	17/18			SWB/CS		
	19			ICME		
	21			ICME?/CS ?		
	22			CS		
	23/24	0.64		SH, ICME		
	25			SWB		
	27/28			CS, SWB		
05	01			SWB		WE,SA
	02/03	0.69		CS, ICME?		
	04			ICME?		
	05			SWB		
	07/08/09			SWB		
	12			CS		
	13	0.57		SH, ICME		
	14/15			SH, ICME		
	16			SWB		
	17/18			ST		
	19			SWB		
	20			SH, ICME		
	22/23			SWB		
	24	0.36		ICME?		
	26/27/28	27SE12		SWB		
06	02	0.06, P1		CS, ICME?	EE,SA	RE,RSA disk passage
	06	E12S7		ICME		
	09			CS		
	10	0.34		ICME?		
	11/12			ICME?	WSA	
	22			CS		
	30			ICME		
07	01	0.68		ICME	WSA	
	02			ICME		
	05			ST		
	06			CS		
	07			ICME		

		09	0.73	ICME?		
		10		CS		
		11		SH, ICME		
		12		ICME?		
		14		SWB		
		17/18	0.76	ICME		
		19		ICME		
		20		CS		
		21		SWB		
		24		ICME?		
		25		SWB		
		28		CS		
		30/31	0.74	ICME?		
08		7-12		HSS		
		16	0.59	ICME		
		18		ICME		
		20		ICME		
		23		SSW, SWB		
		24		ICME		
		25		CS		
		29	0.34	ICME	WSA,WE	
		30		ICME?		
		31		BI		
09		01	SE13	SWB		
		03/04		SSW		
		05	0.10	SH, ICME	WSA,WE	
		06	P	ICME, CS		
		07	0.08	ICME?	ESA,EE	
		09		ICME		
		12	0.27, E13S11	ICME		
		14		CS		
		17		ICME?		
		18	0.43	ICME		
		21		CS		
		22		ICME?		
		24		ICME		
		25	0.56	ICME, CS?		
10		01	0.64	ICME?		
		05		CS?		
		07		CS		
		08		CS		
		11		SWB		
		12		ICME		
		13/14/15/16	0.73	CS, SSW		
		19/20/21		CS		
		26/27	0.76	CS?	ESA,EE	
		28		SWB		

		30		CS		
	11	13/14/15/16 /17	0.71	CS		
		18/19		SWB		
		24/25/26		SWB		
		28/29/30		CS		
	12	04/05	06SE14 0.32 AU	CS	WESTA	
		08		SW, SWB,P		disk passage
		12	11P14 16SE14 0.07 AU	CS		
		18/19		CS		
		23	BE			
		24		CS		
		25/26	0.46 AU	CS, ICME	EE	
		31		SWB		
2023	01	01/02/03/04		CS		
		07		CS		
		09	0.67 AU	ICME	EESTA	
		11		CS		
		12		ICME		
		17		CS		
		31		CS		
	02	09/10/11		CS		
		13/14	0.71 AU	ICME?		
		16		SWB		
		17/18/19		CS		
		21		SWB		
		22	0.62 AU	ICME?		
		23		ICMEs		
		25		CS		
		26	0.57 AU	CS, ICME		
		27		CS		
		28		SWB		
	03	07		CS		
		10	0.33 AU	ICMEs	EESTA	
		12	SE15 0.27 AU	CS		
		13		ICME		
		14/15/16/17	17PE15 0.08 AU	CS	EESTA	disk passage
		20	23SE15 0.25 AU	CS		
	04	05		CS		
		12/13		CS		

		15/16/17/18 /19/20/21/22		CS	WESTA	
		23	0.73 AU	ICME?		
	05	09/10/11/12		CS		
		14/15	0.74 AU	ICMEs?		
		16		CS		
		18/19		CS		
	06	08/09		CS		
		11		CS		
		13/14	16SE16 0.28 AU	CS	EESTA	
		18		CS		
		22	PE16 0.06 AU	CS		disk passage
		24/25		CS		
		27	SE16 0.24 AU	CS		
	07	01		CS		
		03/04		CS		
		06		P?		
		08/09		CS		
		11	0.56 AU	ICME?	RESTA	
		12		CS		
		14/15		CS		
		16	0.62 AU	ICME?		
		17/18		CS		
		19		ICME?		
		20		CS		
		25		ICME		
		26		CS		

### **Abbreviations**

BD = B decrease

BI = B increase

BS = B spike

CS = current sheet crossing

DE = density enhancement

ExS= Encounter x stop

EE= east limb wrt earth

ESA= eas tlimb wrt STEREO A

FS = fine structures

HSS = High Speed Stream

ME = magnetic enhancement

MH = magnetic hole

MQ = magnetic quiet interval

P = periodicities  
yPx= day of month for perihelion x  
RC = radial directional change  
RE= radial alignment with earth  
SFR=Small Flux Rope  
SH = shock  
SIR = stream interaction region  
SSW = slow solar wind  
SWB = switchback  
Sex= start encounter x  
ST = stream transition  
TS = turbulent stream  
WE= west limb wrt earth  
WSA= west limb wrt STEREO A

**From the PSP solar wind Investigation the following features have been listed:**

- ICMEs
- High speed streams
- Switchback events
- Current sheet crossings where the IMF direction reverses
- Turbulent solar wind streams with strong plasma and magnetic field fluctuations
- Short time plasma density enhancements
- Periodicities in plasma and field parameters on time scales of a few hours
- Plasma fine structures in individual solar wind streams
- Very slow solar (~200 km/s) wind
- Signatures of interplanetary shock waves
- Transition between individual streams
- Short time enhancements of the magnetic field on time scales of a few hours
- Spikes of the magnetic field lasting about an hour
- Periods when the radial direction of the IMF reverses
- Stream interaction regions
- Time intervals of a few hours of relative quiet magnetic field conditions
- Magnetic holes when the field intensity vanishes

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The Wide-Field Imager for Parker Solar Probe (WISPR) instrument was designed, built, and is now operated by the US Naval Research Laboratory in collaboration with Johns Hopkins University/Applied Physics Laboratory, California Institute of Technology/Jet Propulsion Laboratory, University of Gottingen, Germany, Centre Spatiale de Liege, Belgium and University of Toulouse/Research Institute in Astrophysics and Planetology.

E1

31 Oct - 5 Nov – 11 Nov 2018  
CR 2210

E2

30 Mar – 4 – 10 Apr 2019  
CR 2215

E3

27 Aug – 01 – 07 Sep 2019  
CR2221

E4

23 Jan – 29 – 04 Feb 2020  
CR2226

E5

01 Jun – 07 – 13 Jun 3020  
2231

E6

21 Sep – 27 – 02 Oct 2020  
CR2235

E7

12 Jan – 17 – 23 Jan 2021  
CR 2239

E8

24 Apr – 29 – 04 May 2021  
CR2243

E9

04 Aug – 09 – 15 Aug 2021  
CR 2247

E10

16 Nov – 21 – 26 Nov 2021  
CR2251

E11

20 Feb – 25 – 02 Mar 2022  
2254

E12

27 May – 01 – 07 Jun 2022  
CR2258



E13

01 Sep – 06 – 11 Sep

E14

06 Dec – 11 – 16 Dec

E15

12 Mar – 17 – 23 Mar

E16

16 Jun – 22 – 27 Jun

E17

22 Sep – 27 – 03 Oct

E18

24 Dec – 29 – 03 Jan