

SMM C/P 1984 Coronal Mass Ejections page 1 of 9

Date	DOY	Time [UT]	Ctrl PA [deg]	Width [deg]	Kinematics						Comments
					Trajectory Times [UT]	Speed [km/s]	Speed PA	#Data Pts	Qual	Feature	
					—	—	—	—	0	No clear front	First continuous observations resume Jun 07, 1984.
					—	—	—	—	0	No clear front	DATA GAP: Jun 07 18:07 to Jun 08 14:15.
Jun 08	160	20:36-21:50	~275	~010	—	—	—	—	0	No clear front	Faint wisps of material at south edge of streamer. Could be wider. Deflections.
Jun 09	161	12:09~12:41	118?	055?	—	—	—	—	0	No clear front	Cloud superposed on southern edge of streamer. Northern edge tough to measure.
					—	—	—	—	0	No clear front	DATA GAP: Jun 10 02:52 to Jun 11 05:00.
Jun 12	164	15:46-17:42	~259	023	—	—	—	—	1	Fan	Fan (or jet) superposed on faint rays. Deflections.
Jun 12	164	21:03-23:37	~129	~052	—	—	—	—	1	Cloud	Cloud superposed on and north of streamer.
Jun 14	166	12:05-19:40	116?	024?	Jun 14 13:45-15:20	211 ₁ ★ 444 ₂	114†	4	7	Cavity	Could be two events:
		12:05-16:34									1. Diffuse loop/cavity superposed on faint streamer. Could be wider. Deflections. Region is disrupted.
		16:44-19:40	~099	~040	Jun 14 16:44-17:15	187 ₁ ★ 197 ₂	095	3	4	Cloud	2. Cloud (or loop/cavity) superposed on and south of disrupted streamer in part one. Deflections continue. Region is blown out.
Jun 17/18	169/170	~02:59-18:21?	077 133?	054 040?	—	—	—	—	0	No clear front	Could be two events. Same start/stop times for both. Data gap interrupts event.
					—	—	—	—	0	No clear front	1. Slow-moving, faint mound superposed on streamer.
					—	—	—	—	0	No clear front	2. Slow-moving, low-contrast cavity superposed on streamer. Streamer is disrupted. Could be wider. No south data available.
Jun 17	169	10:44~13:58	315	050	—	—	—	—	1	Cloud	Faint cloud (or loop/cavity) superposed on streamer.
					—	—	—	—	0	No clear front	DATA GAP: Jun 17 14:33 to Jun 18 15:02.
Jun 19	171	06:46<21:31	248	024	—	—	—	—	0	No obvious front	Streamer slowly elongates. Blows out during data gap. Deflections.
					—	—	—	—	0	No obvious front	DATA GAP: Jun 19 12:08 to 21:31.
Jun 26	178	02:29-08:47	120	009	—	—	—	—	0	No obvious front	Narrow fan (or jet) appears south of small streamer and blows out.

† Position of feature was measured along a non-radial line.

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Jun 27	179	09:57-13:06	~058	~046	—	—	—	—	0	No obvious front	Very faint cloud superposed on and south of streamer.	
Jun 27	179	18:27-20:58	074	012	Jun 27 18:27-19:36	328 ₁ ★	071†	2	5	Jet	Jet south of streamer. By 19:36 jet has widened and is concave-outward, 'U'-shaped with internal structure.	
Jun 29	181	09:34~17:05	233	047	Jun 29 09:49-13:56	109 ₁ 185 ₂ ★	230	7	7	Cavity	Loop/cavity and structured core superposed on streamer. Core is concave-outward, 'V'-shaped. Deflections. Streamer is blown out.	
											DATA GAP: Jun 29 20:35 to Jul 02 15:48.	
Jul 05/06	187/188	22:30-12:43	050	030	Jul 05/06 23:11-03:16	028 ₁ ★ 035 ₂	050	6	4	Cavity	Faint loop(?)/cavity and fuzzy core in streamer. Streamer is blown out. Deflections.	
											DATA GAPS: Jul 06 13:24 to Jul 07 13:50. Jul 12 00:01 to 15:01.	
Jul 14	196	07:55~23:46	309	053	Jul 14 08:01-10:14	215 ₁ 307 ₂ ★	300	6	9	Cavity	Could be two events: 1. Loop/cavity and partially structured core superposed on streamer. Deflections. Streamer is blown out.	
		07:55-14:47			—	—	—	—	0	Front at 15:54 only	2. Cloud superposed on fan. Ray brightens from 19:03 until 20:37 then fades.	
											DATA GAP: Jul 17 13:44 to 19:20.	
Jul 20	202	10:33-18:25	242	079	Jul 20 10:33-13:42	129 ₁ 055 ₂ ★	255	3	5	Loop	Large loop/cavity with structured, loop-shaped(?) core superposed on and south of streamer. Deflections. Region is disrupted.	
Jul 21	203	13:15-16:14	~100	—	—	—	—	—	0		Loop(?)/cavity south of streamer. Northern edge is tough to measure.	
											DATA GAP: Jul 23 12:22 to 21:43.	

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					Trajectory Times [UT]	Speed [km/s]	Speed PA	#Data Pts	Qual	Feature	
Jul 26	208	06:28-19:48	055	020	Jul 26 09:37-12:46	123 ₁ ★ 121 ₂	055	3	4	Cavity	Cavity and core in streamer. Thin loop(?) becomes visible around cavity. 'Light-bulb' shaped by 12:46. Streamer bulges and blows out. Deflections.
Jul 28	210	00:59-10:26	~071	~052	—	—	—	—	0	No obvious front	Faint, structured material superposed on fan (or streamer).
Jul 28	210	16:44-18:28	~108	~054	Jul 28 16:44-17:00	181 ₁ ★	094†	2	4	Loop	Loop(?)/cavity. South side of loop is superposed on streamer.
											DATA GAP: Jul 29 05:38 to 16:18.
Jul 29/31	211/213	<16:21-06:16	108	052	—	—	—	—	0	No clear front	Slow expansion and ejection of mound and core superposed on streamer and fan. Began during data gap. Deflections. Region is partially blown out.
Aug 09/10	222/223	18:21-16:40	086	055	—	—	—	—	0	No clear front	Slow expansion of streamer. Irregularly-shaped material ejected into streamer from Aug 10 03:59 until ~16:40. Streamer is disrupted. Deflections.
Aug 11	224	05:01-06:40	042?	027?	Aug 11 05:01-05:30	204 ₁ ★ 140 ₂	062	9	5	Mound	Faint mound just north of streamer.
Aug 13/15	226/228	~18:27~08:06	126	040	—	—	—	—	0	No obvious front	Could be two events:
	226/227	~18:27~15:14			—	—	—	—	0	No obvious front	1. Slow expansion of fan. Region is partially blown out. Deflections. Small loop(?) / cavity may be present at southern edge of event from Aug 13 23:04 until Aug 14 03:59. Loop(?) / cavity is deflected southward.
	227/228	16:31~08:06			Aug 14/15 19:34-00:23	039 ₁ ★ 047 ₂	165	4	3	Loop	2. Wide, faint loop / cavity spans pylon shadow. Superposed on existing structures. Deflections. Structures at eastern extent of loop are partially blown out.
Aug 16	229	~07:50~23:27	052	027	—	—	—	—	0	No clear front	Slow expansion of faint fan north of streamer.

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					Trajectory Times [UT]	Speed [km/s]	Speed PA	#Data Pts	Qual	Feature	
Aug 20/21	233/234	02:06-15:16	289	011	—	—	—	—	0	No obvious front	Succession of narrow jets are ejected. Ray appears at Aug 20 ~02:06. Material is ejected along ray until ~03:42, from Aug 20 ~12:33 until 15:57 and from Aug 21 04:51 until 10:35 when ray disappears.
											DATA GAPS: Aug 22 00:44 to 16:19. Aug 23 00:20 to 15:56. Aug 29 04:42 to Sep 05 21:47.
Sep 06	250	10:26~23:39	129	020	—	—	—	—	0	No measurable front	Ray (or narrow fan) appears and expands south of existing structures. Material is ejected along ray.
Sep 10	254	01:38-18:57	~067	~040	Sep 10 01:38-12:02	037 ₁ 088 ₂ *	065	7	3	Loop	Two part event: 1. Fuzzy (multiple?) loop(?) / cavity with internal structure superposed on and north of fan (or streamer). Southern edge defines dark 'V' in corona. Swelling began on previous day. Part two follows immediately.
		01:38-12:36									
		11:59-18:57									
Sep 11	255	05:58-14:47	080	052	—	—	—	—	0	No clear front	Fan of material ejected just south of streamer.
Sep 11/12	255/256	11:44~04:54	309	050	Sep 11 10:38-21:40	031 ₁ 068 ₂ *	313	23	3	Mound	Mound (or loop) with cavity and structured core rise in streamer. Streamer is deflected northward and is disrupted. Base of ejection is concave-outward, 'V'-shaped from 21:49 until end of event.

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					Trajectory Times [UT]	Speed [km/s]	Speed PA	#Data Pts	Qual	Feature	
					—	—	—	—	—		DATA GAP: Sep 13 18:50 to 23:25.
Sep 16/17	260/261	~08:49~14:43	~267	~063	—	—	—	—	0	No obvious front	Slow expansion of faint material around faint streamer (or fan).
Sep 17	261	21:59-23:57	~042	~056	Sep 17 22:02-23:54	223 ₁ 346 ₂ ★	045	7	6	Cavity	Thin loop/cavity superposed on and north of streamer. Could be wider.
											DATA GAP: Sep 21 17:49 to 20:26.
Sep 21/22	265/266	22:27-01:36	~072	~056	Sep 21/22 22:27-01:36	145 ₁ ★ 127 ₂	070	11	4	Cavity	Faint (multiple?) loop/cavity superposed on streamer.
Oct 01	275	~08:34-21:41	~134	~086	Oct 01 11:34-17:52	173 ₂ ★	125	12	7	Cavity	Cavity expands slowly in streamer. Loop(?) becomes visible around cavity and core is visible beneath cavity by 14:55. Cavity accelerates shortly thereafter. Deflections. Streamer is blown out.
Oct 02/03	276/277	14:20~23:23	107	039	Oct 02 16:07-19:43	065 ₁ ★	101†	3	5	Loop	Loop/cavity and structured core superposed on fan. Core is concave-outward, 'V'-shaped. Vertex of 'V' becomes location of ray (or leg) that is deflected southward. Material may be ejected through fan prior to event from Oct 02 09:36 until ~11:47.
					Oct 02/03 21:18-00:27	039 ₁ ★ 046 ₂	105	5	6	Core	
Oct 03	277	13:08<21:55	247	013	—	—	—	—	0	No obvious front	Material ejected in narrow fan (or streamer). Fan is blown out following data gap from 17:12 to 21:55.
											DATA GAP: Oct 03 17:12 to 21:49.
Oct 12/13	286/287	16:41~19:27	325	030	—	—	—	—	1	Mound	Small mound(?) superposed on streamer. Streamer splits in two at 02:07 on Oct 13. Streamer splits into a third ray at 10:00.
Oct 15/16	289/290	22:22~12:31	017	046	Oct 15/16 22:22-06:14	023 ₁ ★ 026 ₂	010	8	7	Mound	Faint mound superposed on and north of streamer. Fades into background brightness levels.

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					Trajectory Times [UT]	Speed [km/s]	Speed PA	#Data Pts	Qual	Feature	
Oct 17	291	~05:31~23:12	063	052	—	—	—	—	0	No clear front	Slow-moving cloud superposed on streamer. Streamer remains unaffected.
Oct 18	292	~03:55-12:45	068	047	Oct 18 06:27-08:39	094 ₁ 194 ₂ ★	070	4	5	Loop	Loop/cavity and structured, loop-shaped(?) (prominence?) core superposed on streamer. ‘Light-bulb’-shaped. Streamer is disrupted. Deflections.
					Oct 18 05:02-08:39	096 ₁ 170 ₂ ★	070	5	5	Cavity	
					Oct 18 06:27-09:35	063 ₁ 085 ₂ ★	070†	5	6	Core (prominence?)	
											DATA GAP: Oct 19 13:02 to Oct 20 15:03.
Oct 21	295	11:33-23:11	~110	~030	—	—	—	—	0	No clear front	Cloud superposed on streamer. Base of cloud is concave-outward, ‘U’-shaped. Streamer is disrupted. Deflections.
					—	—	—	—	1	Base of cloud	
Oct 21/22	295/296	21:37~08:38	064	058	Oct 21/22 22:47-00:46	205 ₁ ★ 268 ₂	072	5	4	Loop	Loop/cavity and core superposed on streamer. Deflections. Streamer is disrupted.
					Oct 21/22 21:37-00:46	298 ₂ ★	072	7	9	Cavity	
					Oct 21/22 22:47-00:46	112 ₁ ★ 077 ₂	072	7	9	Core	
Oct 23/24	297/298	~00:28~12:02	~292	~035	—	—	—	—	0	No clear front	Slow disruption of fuzzy streamer.
Oct 24/25	298/299	18:57~00:37	283	023	—	—	—	—	0	No clear front	Small mound(?) fans out and is ejected south of streamer.
											DATA GAPS: Oct 27 09:50 to Oct 30 00:05. Oct 30 13:24 to Oct 31 18:34. Nov 02 03:56 to 17:49.

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					Trajectory Times [UT]	Speed [km/s]	Speed PA	#Data Pts	Qual	Feature	
Nov 02/03	307/308	<17:58<17:34	~083	~036	—	—	—	—	1	Cavity	Low-contrast cavity rises in streamer. Streamer swells during data gap from Nov 02 03:47 until 17:58. Cavity accelerates on Nov 03 at ~01:41. Material appears to be concave-outward, 'U'-shaped from Nov 03 02:16 until ~03:24. Data gap follows until Nov 03 17:34. Deflections. Streamer is disrupted.
											DATA GAP: Nov 03 03:30 to 17:21.
Nov 09/10	314/315	~19:48~13:06	240	027	Nov 09/10 22:56-03:55	056 ₁ * 059 ₂	247	4	7	Mound	Mound (or loop/cavity) superposed on streamer. Streamer began to swell early Nov 09. Bottom of ejection is concave-outward, 'V'-shaped from ~06:49 until 08:23. Streamer is partially blown out. Deflections.
Nov 10	315	19:17-22:26	~054	~035	Nov 10 19:17-21:20	419 ₂ *	060	5	4	Material	Faint material superposed on streamer. Streamer began slow expansion ~06:43.
Nov 11/12	316/317	~00:00~16:55	~060	~060	—	—	—	—	0	No clear front	Slow, faint, structured material superposed on streamer. Streamer is blown out. Deflections.
Nov 12	317	13:43-17:01	~283	~070	Nov 12 13:43-13:52	398 ₁ *	298	2	3	Mound	Faint mound superposed on and north of fan. Deflections.
Nov 13/14	318/319	22:49~20:50	101	048	Nov 14 00:23-08:15	031 ₁ * 039 ₂	103†	5	6	Cavity	Cavity rises in streamer and is followed by a structured core. Fuzzy loop becomes visible around cavity. Base of core is concave-outward, 'V'-shaped from 06:41 until 12:58. Streamer is blown out. Deflections.
					Nov 14 08:15-12:58	057 ₁ * 082 ₂	105	3	6	Base of core	DATA GAP: Nov 15 15:52 to 18:49.
Nov 16/17	321/322	15:20-08:44	288	031	Nov 16 15:44-18:34	091 ₁ * 130 ₂	290	3	5	Mound	Fuzzy mound with embedded loop(?)/cavity and core superposed on northern half of faint fan. Deflections.
					—	—	—	—	1	Loop	

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Nov 17/18	322/323	21:52-03:37	~072	~027	Nov 17/18 21:52-02:06	103 ₁ ★ 117 ₂	075†	9	7	Cavity	Cavity rises in streamer (or fan) and is followed by a bright, structured (prominence?) core. Streamer is disrupted. Deflections. Motion in southeast throughout the day.
					Nov 17/18 22:45-02:06	098 ₁ ★ 129 ₂	071†	7	7	Core (prominence?)	
											DATA GAPS: Nov 20 15:57 to 23:10. Nov 22 18:20 to Nov 23 03:11.
Nov 24	329	15:19-21:56	294	029	Nov 24 15:19-20:51	045 ₁ ★ 059 ₂	292	12	7	Cavity	Faint loop/cavity and core superposed on fan (or streamer). Fan is disrupted. Deflections.
					Nov 24 16:55-20:51	044 ₁ ★ 057 ₂	292	11	7	Core	
Nov 25	330	08:39-11:01	313	014	Nov 25 08:39-09:26	267 ₁ ★ 310 ₂	308†	4	5	Blob	Narrow blob (or jet) superposed on fan (or streamer).
Nov 26	331	01:58~06:41	324	016	—	—	—	—	0	No clear front	Fuzzy blob (or cloud) superposed on faint streamer (or fan).
Nov 27	332	~09:30~17:59	~115	~026	—	—	—	—	0	No clear front	Slow disruption of streamer (or fan). Deflections.
Nov 30/ Dec 02	335/337	~00:29~01:18	247?	077?	—	—	—	—	0	No clear front	Very slow ejection of faint material around streamer and fan. Region is disrupted. Deflections. Tough to give start/stop times.
											DATA GAP: Dec 01 06:58 to 09:25.
Dec 01	336	15:46-18:55	084	060	Dec 01 15:46-17:20	254 ₁ ★ 232 ₂	087	3	4	Cavity	Loop/cavity and possible core superposed on streamers. Deflections.
Dec 09/10	344/345	23:30~04:16	077	028	Dec 09/10 23:30-01:43	220 ₁ ★ 278 ₂	070	6	7	Loop	Loop/cavity and structured core in streamer. 'Light-bulb'-shaped. Streamer is disrupted. Deflections.
					Dec 09/10 23:30-01:07	203 ₁ ★ 224 ₂	070	5	7	Cavity	

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Dec 14	349	13:46-16:55	280	040	—	—	—	—	0	No clear front	Loop/cavity superposed on streamer and fan. Deflections. Event fades into background brightness levels.
											DATA GAP: Dec 15 13:54 to Dec 16 14:43.
Dec 18/20	353/355	16:59~15:58	~103	~065	—	—	—	—	0	No clear fronts	Very slow disruption and blowout of adjacent streamers. Three faint fans and jets of material are ejected just north of streamers from Dec 18 ~16:59 until ~19:57, Dec 19 ~13:47 until ~16:58 and Dec 20 ~13:25 until 15:58. A new streamer begins to appear in region late Dec 20.
											DATA GAP: Dec 21 00:22 to 05:12.
Dec 24	359	05:11-11:28	260	060	Dec 24 05:11-08:32	068 ₁ 121 ₂ ★	257	6	6	Loop	Faint loop/cavity superposed on streamer. Deflections.
					Dec 24 06:34-08:32	149 ₁ 221 ₂ ★	265	5	6	Cavity	
Dec 25/26	360/361	~12:48~07:57	~262	~021	—	—	—	—	1	Streamer	Slow blowout of streamer. Base of blowout is concave-outward, 'V'-shaped from ~02:37 until end of event. Deflections. Event could be wider.

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