

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

Date	DOY	Time [UT]	Ctrl PA [deg]	Width [deg]	Kinematics					Feature	Comments
					Trajectory Times [UT]	Speed [km/s]	Speed PA	#Data Pts	Qual		
											First continuous observations resume Jun 07, 1984.
											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.
											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: 1. Diffuse loop/cavity superposed on faint streamer. Could be wider. Deflections. Region is disrupted. 2. Cloud (or loop/cavity) superposed on and south of disrupted streamer in part one. Deflections continue. Region is blown out.
		12:05-16:34									
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. 1. Slow-moving, faint mound superposed on streamer. 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.
											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.
											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 07:55-14:47 15:54~23:46	309 279	053 021	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. 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		
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	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.
	226/227	~18:27~15:14									
	227/228	16:31~08:06	~182	~155	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		
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. 2. Huge faint loop/cavity (or mound with cavity) superposed on existing structures. Possible halo. Western edge may contain multiple loops and is followed by a loop-shaped core. Deflections. Eastern region is mostly blown out.
		01:38-12:36									
		11:59-18:57									
					Sep 10 13:42-17:29	111 ₁ 184 ₂ *	315	7	5	Core	
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		
											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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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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