Preliminary 1996 SOHO LASCO Coronal Mass Ejection List (last revised 06-Jan-1997)

N.B. This is a working version of a catalogue of probable coronal mass ejections detected in white light observations of the LASCO coronagraphs. This list is maintained at the SOHO Experimenters' Operations Facility, and it is based on an examination of only quick-look data, which represents a subset of the final LASCO dataset. Questions about this list should be directed to :: Russ Howard at NRL (russ.howard@nrl.navy.mil) or Chris St.Cyr of NRL/CPI (orville.c.stcyr@nasa.gov).

Date(s)	UT	Location	Comment
14-Jan-1996	~03:00~10:00	West	Streamer expands at base and blows out
15-Jan-1996	<07:08 >19:00	West	Flat-top ~400km/s; Leading rarefaction?; much structure; large disconnection at end
03-Feb-1996	07:01>11:27	NE	Elongated bubble in streamer in C2. DE in C3?
03-Feb-1996	07:01>11:27	S	Faint loop or mound in C2 (part of previous?)
08-Feb-1996	~02:00~08:00	SW	Elongated loop in C3 diffs (~<200 km/s)
10-Feb-1996	~22:00	SE	EIT prom eruption. Maybe in C2 and C3?
12-Feb-1996	~06:00?	SE	EIT prom eruption. C2 and C3 (08:39)
13-Feb-1996	early UT	E	C3 loop/cloud in diffs
16-Feb-1996	late	?	EIT eruptive MK3 at 20:30? JBG report.
17-Feb-1996	~07:50~08:50	SW	C3 small bubble in diffs
17-Feb-1996	~13:06~22:19	W	C3 Loop(?) tracked out through following day
18-Feb-1996	early UT	SE	C3 New feature (part of loop?) adjacent to pylon
02-Mar-1996	05:28-12:53	SE	C2 mound/loop? C3 streamer
08/09-Mar-199	96 09:18-01:18	E	C3 faint cloud
12-Mar-1996	09:35-?	SE	C2/C3 faint
13-Mar-1996	02:42-?	SE	C2/C3 faint (part of previous?)
15/16-Mar-199	96 ~16:00~16:00	SE	"EIT EPL, C2, C3"
15/16-Mar-199	96 16:30-01:00?	W?	C3 event?
22-Mar-1996	03:42-19:44?	NW	C2 and C3 material ejected along streamer
03-Apr-1996	all day	SW	likely C2 and C3 filled front
07-Apr-1996	~07:00	W	Faint loop in C2 and C3
08-Apr-1996	~04:00	SE	Faint in C2 and C3
11-Apr-1996	11:17	SE	C2/C3 Front?/Loop? becomes jet?
13-Apr-1996	~12:00	SW	C2/C3 Jet?
23-Apr-1996	~03:00	W	possible event in C2. Nothing clear in C3
24-Apr-1996	3:30	W	C3 blob
26-Apr-1996	late	W	C2/C3 loop? with multi-disconnections
01-May-1996	early	W	Cloud in C3 during Comet Hyakutake
01-May-1996	03:00-07:00	Е	Giant structured loop in C3 during Comet Hyakutake
05-May-1996	middle	SE	C2 and C3 streamer blowout
06-May-1996	early	SE	Another SE event in C2?
11-May-1996	>08:30	W	C2/C3
14-May-1996	early	SE	Jet in C3 only?
16-May-1996	~16:00	SW	C1 event! Likely C2
18/19-May-1996		W	C2/C3 slow blowout (continues on 20May)
22-May-1996	03:40	SE	Narrow loop w/core in C2/C3

24-May-199	6 06:51	SE	Narrow cloud (V-shape in C2?)
24-May-199	6 16:39	W	Very faint loop (w/core?) in C2/C3.
01-Jun-96	~05:00~15:00	E	Cloud in C3 (not C2?)
05/06-Jun-9	6 late 05 June	SW	Jet in C2 and C3.
06-Jun-96	>06:22	SW	Faint small cloud in C2 & C3.
07-Jun-96	early	W	C2/C3 event. EIT eruptive. UVCS?
07-Jun-96	~04:41~08:00	SE	C2/C3 faint V shape?
08-Jun-96	>06:07	NW	Narrow streamer in C2 breaks loose.
13-Jun-96	~02:30~09:30	SW	Faint bubble in C2?
16-Jun-96	~05:30	SE	C2/C3 piece of streamer detaches?
16-Jun-96	>14:50	E	C2/C3 (West too??)
17-Jun-96	02:00	E(&W?)	C2/C3. And C1!
18-Jun-96	early	SW	Faint sharp arc in C2. C3 mound?
18-Jun-96	>17:00	E	Very faint front in C2 diffs. And C1.
19-Jun-96	~12:00	E	YA C2/C3 event from this AR. And C1.
21-Jun-96	~10:45	W	Faint front in C3.
22-Jun-96	~00:30	E	C2/C3 event.
30-Jun-96	~19:00	NE	C2/C3 streamer detaches and reforms?
01-Jul-96	~12:30	W	C1/C2/C3 event.
02-Jul-96	~20:00	SW	C2/C3 small cloud (U shape)
03-Jul-96	~15:30	SW	YA C2/C3 small cloud.
04-Jul-96	~15:00	ENE	Faint front in C3.
05-Jul-96	early	W	C2/C3 piece of streamer detaches?
05-Jul-96	~19:00	WSW	C2/C3 material?
06-Jul-96	~08:00	SW	Small bubble in C2 streamer.
08-Jul-96	~08:00	W	Structured cloud in C2/C3.
09-Jul-96	12:30	W	Big structured cloud in C2/C3 (X-flare)
10-Jul-96	~06:00	E	Faint cloud in C3 (not C2?).
10-Jul-96	07:30	SW	C2/C3 bubble (NW component too?)
12-Jul-96	16:01	NW	C2/C3 material (elongated loop?).
14-Jul-96	15:17	NW	C2/C3 event. (Another elongated loop?)
15-Jul-96	11:42	W	C2/C3 mound?
16-Jul-96	03:04	W	C1/C2/C3. Also SW streamer after.
17-Jul-96	~05:00	NW	C2/C3 material.
17-Jul-96	all day	SW	Small streamer of previous days.
17-Jul-96	12:01	NE	C1. C2/C3 missed front.
20-Jul-96	~09:28	NE+	180 deg loop (may be 270deg).
21-Jul-96	18:52	NW	C1 event.
22-Jul-96	late	W	C2/C3 blob in streamer.
23-Jul-96	05:22(?)	NE	Faint elongated loop? in C2.
24-Jul-96	early	NE	Another faint loop in C2/C3.
24-Jul-96	~11:00?	SW	Very faint front in C2/C3.
27-Jul-96	~19:30	NE	Cloud in C3.
28-Jul-96	late	W	Structured pinched loop in C2/C3.

29-Jul-96	23:01	W	Bubble in C2/C3.	
01-Aug-96	~14:00	W	YA bubble in C2/C3. (And South?)	
** 02-Aug-96	6 to 11-Aug-96 **	Data Not Inspected at EOF for CMEs		
12-Aug-96	03:55	W	Rising loops?	
12-Aug-96	03:55	E	Faint front in East, followed by bright.	
13-Aug-96	<04:30	W	Material at ~4R in C2.	
13-Aug-96	<04:30	NE	Part of streamer detaches?	
13-Aug-96	07:15	SW	New material (part of previous?)	
13-Aug-96	<16:09	SW	Big structured loop.	
14-Aug-96	07:26	SE	Arc appears. (One image w/time jump.)	
14-Aug-96	19:30	SW+	Big structured loop.	
15-Aug-96	<03:30	SE	Faint front?	
15-Aug-96	21:00	SE	Narrow loops appear.	
16-Aug-96	14:14	S	Loop. (Faint signal in N too?)	
17-Aug-96	~12:00	SE	Multiple clouds(?).	
19-Aug-96	11:18	SE	C1; C2/C3 loop. U-shape visible.	
20-Aug-96	02:00	SE	Material in C2. Loop in C3?.	
20-Aug-96	12:09	NW	Faint in C2/C3.	
21-Aug-96	23:01	NW	Big C2 prom. EIT 304.	
22-Aug-96	09:09	SE	Structured loop. C1/C2/C3. Type II/IV and C4 flare.	
22-Aug-96	18:42	NE	YA C2 prom. (Part of previous?)	
03-Sep-96	??	SW	Difficult to define start time. Concave-outward V-shape.	
04-Sep-96	23:05	SW	Another bubble.	
06-Sep-96	<00:00?	SW	Puffs(?).	
06-Sep-96	11:37	SE	Thin streamer detaches in C2.	
07-Sep-96	06:50	NE	Narrow jet in C2 polar plume.	
07-Sep-96	16:30	NW	Bubble in C2/C3.	
08-Sep-96	~12:00	SE	Concave-out in unsharp C2.	
09-Sep-96	~01:00	SW	Faint, diffuse U in C2?	
09-Sep-96	~08:00	NW	Faint C2/C3 loop.	
18-Sep-96	<02:35	NW	Irregular loop.	
20-Sep-96	04:35	SW	Narrow faint loop.	
20-Sep-96	18:50	NE	Narrow loop in C2/C3. Also C1.	
21-Sep-96	13:55	SW	Bubble in streamer. V-shape trails. (earlier in C2?)	
24-Sep-96	~12:00	NE	C2/C3 superposed on streamers.	
26-Sep-96	<03:35	NE	Faint U-shape in C2/C3.	
26-Sep-96	03:35	SW	Slow loops(?) in C2/C3. V-shape trails. EIT movie of southern polar crown filament.	
26-Sep-96	10:57	W	Material moves along loop in C1. EIT brightening at West limb.	
28-Sep-96	14:37	N	Single plume brightens in two frames.	
29-Sep-96	05:38	NW	Puffs(?).	
29-Sep-96	19:41	NW	Jet in C2/C3.	
05-Oct-96	09:45	W	C1 event. Huge structure loop in C2/C3.	

06-Oct-96	>15:00	NW	Structured loop(s).
09-Oct-96	early	SW	Loop?
11-Oct-96	>12:51	SE	Slow build-up lets loose.
18-Oct-96	~22:00	E	Lift off in C1 FeXIV.
19-Oct-96	08:15	NE	Bright knot in FeXIV. Bubble in C3.
19-Oct-96	16:32	SE	C1/C2/C3 loop.
20-Oct-96	08:11	NE	C1/C2/C3.
20-Oct-96	>22:00	S	Another event? Part of previous?
24-Oct-96	02:35	NE	Faint partial loop?
26-Oct-96	~17:00	N	Jet in NE; very faint loop? in NW.
27-Oct-96	late	NW	Thick loop.
28-Oct-96	all day	NW	Second narrow loop after previous.
29-Oct-96	03:30	NW	YA bubble in streamer?
30-Oct-96	06:25	SW	Jet in C2/C3.
30-Oct-96	08:40	E	Material along streamer (puff?).
30-Oct-96	23:41	N	Polar jet. EIT 195.
31-Oct-96	07:10	SW	Thick jet above AR?
04-Nov-96	00:52	NE	FeXIV transient?
04-Nov-96	01:40	W	Spit of material FeXIV,C2,C3.
04-Nov-96	20:38	SE	C2/C3 loop(?).
05-Nov-96	02:35	W	FeXIV, Halpha,C2,C3. U-shape.
07-Nov-96	10:50	SE	Bubble in streamer.
07-Nov-96	23:55	E	FeXIV; C2/C3 loop w/helix.
08-Nov-96	14:42	NW/NE	304 EPL. Huge streamer blowout.
DATA GAP	18:00 09-Nov-96 th	ough 18:00 1	1-Nov-96 (Momentum Management)
19-Nov-96	23:20	SW	Slowly expanding loops.
DATA GAP	18:30 20-Nov-96 th	ough 18:00 2	24-Nov-96
24-Nov-96	18:55	NW	Loop in C3 after data gap.
24-Nov-96	23:55	SW	No clean front C2/C3.
26-Nov-96			No dicarritorit ozroc.
	21:35	W	Irregular loop w/structure (C1?).
27-Nov-96	21:35 all day	w w	
27-Nov-96 28-Nov-96			Irregular loop w/structure (C1?).
	all day	W	Irregular loop w/structure (C1?). Almost continuous activity.
28-Nov-96	all day 16:25	W W	Irregular loop w/structure (C1?). Almost continuous activity. Fast, irregular structured loop.
28-Nov-96 30-Nov-96	all day 16:25 21:50	w w w	Irregular loop w/structure (C1?). Almost continuous activity. Fast, irregular structured loop. Loop with trailing core.
28-Nov-96 30-Nov-96 02-Dec-96	all day 16:25 21:50 16:40	w w w	Irregular loop w/structure (C1?). Almost continuous activity. Fast, irregular structured loop. Loop with trailing core. Loop becomes halo(?).
28-Nov-96 30-Nov-96 02-Dec-96 05-Dec-96	all day 16:25 21:50 16:40 22:55	W W W W	Irregular loop w/structure (C1?). Almost continuous activity. Fast, irregular structured loop. Loop with trailing core. Loop becomes halo(?). Slow rising loops, then fast. V-shape.
28-Nov-96 30-Nov-96 02-Dec-96 05-Dec-96 06-Dec-96	all day 16:25 21:50 16:40 22:55 14:50	W W W W SE	Irregular loop w/structure (C1?). Almost continuous activity. Fast, irregular structured loop. Loop with trailing core. Loop becomes halo(?). Slow rising loops, then fast. V-shape. Fast ejection.
28-Nov-96 30-Nov-96 02-Dec-96 05-Dec-96 06-Dec-96 07-Dec-96	all day 16:25 21:50 16:40 22:55 14:50	W W W SE W E	Irregular loop w/structure (C1?). Almost continuous activity. Fast, irregular structured loop. Loop with trailing core. Loop becomes halo(?). Slow rising loops, then fast. V-shape. Fast ejection. Very faint front?
28-Nov-96 30-Nov-96 02-Dec-96 05-Dec-96 06-Dec-96 07-Dec-96	all day 16:25 21:50 16:40 22:55 14:50 03:30 18:32	W W W SE W E SE	Irregular loop w/structure (C1?). Almost continuous activity. Fast, irregular structured loop. Loop with trailing core. Loop becomes halo(?). Slow rising loops, then fast. V-shape. Fast ejection. Very faint front? Something faint? Deflection? Builds slowly, blows out on 10-Dec.
28-Nov-96 30-Nov-96 02-Dec-96 05-Dec-96 06-Dec-96 07-Dec-96 07-Dec-96	all day 16:25 21:50 16:40 22:55 14:50 03:30 18:32 all day	W W W SE W E SE W+	Irregular loop w/structure (C1?). Almost continuous activity. Fast, irregular structured loop. Loop with trailing core. Loop becomes halo(?). Slow rising loops, then fast. V-shape. Fast ejection. Very faint front? Something faint? Deflection? Builds slowly, blows out on 10-Dec. U-shape trails. East limb too?
28-Nov-96 30-Nov-96 02-Dec-96 05-Dec-96 06-Dec-96 07-Dec-96 07-Dec-96	all day 16:25 21:50 16:40 22:55 14:50 03:30 18:32 all day	W W W SE W E SE W+	Irregular loop w/structure (C1?). Almost continuous activity. Fast, irregular structured loop. Loop with trailing core. Loop becomes halo(?). Slow rising loops, then fast. V-shape. Fast ejection. Very faint front? Something faint? Deflection? Builds slowly, blows out on 10-Dec. U-shape trails. East limb too? Rising loops finally erupt.
28-Nov-96 30-Nov-96 02-Dec-96 05-Dec-96 06-Dec-96 07-Dec-96 07-Dec-96 14-Dec-96	all day 16:25 21:50 16:40 22:55 14:50 03:30 18:32 all day all day 03:30	W W W SE W E SE W+ NE	Irregular loop w/structure (C1?). Almost continuous activity. Fast, irregular structured loop. Loop with trailing core. Loop becomes halo(?). Slow rising loops, then fast. V-shape. Fast ejection. Very faint front? Something faint? Deflection? Builds slowly, blows out on 10-Dec. U-shape trails. East limb too? Rising loops finally erupt. Jet or fan.

16-Dec-96	19:30	E	Front (with trailing U) moves through streamers.
17-Dec-96	>18:47	SW	Bubble in streamer. (One earlier in day.)
18-Dec-96	two days	W	Multiple events over several days.
19-Dec-96	17:40	W+	Large loop. (halo?)
20-Dec-96	19:30	W	Two amorphous ejections.
21-Dec-96	22:34	W	Concentric loops?

Beginning 22-Dec-1996 at 01:00 UT, LASCO and EIT entered a high cadence mode with a 50 minute cyclical sequence designed to examine CMEs.

22-Dec-96	13:43	NW	Narrow ejection.
23-Dec-96	<05:55	NW	Loops.
23-Dec-96	11:25	SW	Narrow ejection.
23-Dec-96	22:06	SW	A Rosetta stone?
24-Dec-96	<15:59	SW	More ejections.
27-Dec-96	09:04	W	Intricate structure with multiple outward-V's.

High rate telemetry ends 28-Dec-1996 ~16:00.

?? RAH(?) report of streamer blowout. 27-Dec-96 ??

See new file for 1997 events.

No further updates to this list are planned until a comprehensive review of the 1996 observations is performed. 06-Jan-1997 CSt