SOLAR CORONAL MASS EJECTIONS (CMEs)
FROM SOHO/LASCO

http://cdaw.gsfc.nasa.gov/

Center for Solar Physics and Space Weather (CSPSW) – The Catholic University of America/NRL/NASA

APRIL 2004

First C2 Appearance		Central Position	Width						Measurement	
			Angular	Linear Fit	----2nd order speed-----			Accel	Position	Remarks
Date	Time UT	Angle degree	Width degree	Speed km/s	Initial km/s	Final km/s	20R km/s	m/s^2	Angle degree	
2004/04/01	22:00:05	59	79	460	325	613	528	7.1	54	
2004/04/02	03:00:05	128	25	405	486	321	0	-33.1	126	Only C2
2004/04/02	11:00:05	56	34	84	----	----	----	------	60	Only C2
2004/04/02	23:40:06	246	38	304	347	263	0	-7.1	247	
2004/04/03	04:00:06	250	41	341	353	328	308	-1.3	254	
2004/04/03	11:00:05	122	50	458	543	374	282	-9.1	118	
2004/04/03	23:20:05	127	34	374	452	297	0	-32.5	121	Only C2
2004/04/04	00:20:06	135	22	426	329	525	950	32.7	137	Only C2
2004/04/04	01:20:05	128	47	445	530	362	97	-11.6	121	
2004/04/04	12:20:05	131	29	360	244	477	1006	39.3	132	Only C2
2004/04/04	16:00:05	131	53	520	420	630	713	13.8	141	
2004/04/05	01:31:44	273	13	776	979	554	0	-206.2	276	Only 3 points/C2
2004/04/05	02:54:05	112	41	431	418	443	492	2.9	118	
2004/04/05	05:06:06	124	51	507	529	485	269	-8.8	116	Only C2
2004/04/05	06:06:05	111	191	608	717	496	528	-9.7	125	Partial Halo
2004/04/05	21:08:03	111	27	376	353	399	404	1.6	108	
2004/04/06	00:30:05	247	17	427	----	----	----	------	249	
2004/04/06	02:54:05	106	14	339	----	----	----	------	109	
2004/04/06	13:31:43	Halo	360	1368	1123	1625	1511	45.6	167	
2004/04/06	20:06:06	177	76	367	391	343	267	-3.5	186	
2004/04/07	15:30:34	247	36	327	296	362	376	2.3	257	
2004/04/07	21:54:05	275	39	149	125	173	416	6.6	282	Only C2
2004/04/08	02:06:05	279	113	319	322	316	313	-0.2	276	
2004/04/08	02:54:06	77	11	387	437	334	291	-4.5	77	
2004/04/08	04:06:05	73	26	454	452	456	458	0.3	77	
2004/04/08	06:30:05	272	51	214	175	252	431	6.5	264	
2004/04/08	10:30:19	Halo	360	1068	1320	812	945	-36.5	197	
2004/04/08	11:30:05	269	57	335	305	364	480	5.7	258	
2004/04/08	13:31:42	198	92	959	964	953	956	-0.7	202	
2004/04/08	18:54:05	269	62	258	300	215	0	-5.2	253	
2004/04/08	20:06:05	101	60	198	222	174	0	-3.7	113	
2004/04/09	04:30:07	55	52	297	375	212	0	-7.4	62	
2004/04/09	09:54:05	103	42	168	175	159	0	-1.7	114	Only C2
2004/04/09	12:30:05	251	27	281	----	----	----	------	249	
2004/04/09	12:54:05	122	17	473	406	537	790	20.3	119	
2004/04/09	20:30:05	227	273	977	1000	955	959	-3.3	215	Partial Halo
2004/04/10	00:54:05	227	32	606	598	612	616	0.9	225	
2004/04/10	02:08:05	272	51	233	----	----	----	------	282	Only 3 points/C2
2004/04/10	03:54:07	347	35	250	281	217	147	-2.6	351	
2004/04/10	08:06:05	241	30	595	513	677	769	13.6	244	
2004/04/10	17:54:05	217	19	476	544	408	0	-13.5	214	
2004/04/10	18:54:05	222	53	311	289	335	397	3.1	220	
2004/04/10	23:06:53	60	59	607	835	362	459	-21.4	65	
2004/04/11	01:31:42	10	37	484	----	----	----	------	14	Only C2
2004/04/11	04:30:06	203	314	1645	1953	1340	1474	-77.6	237	Partial Halo
2004/04/11	11:54:05	Halo	360	1132	1276	972	1086	-19.4	295	
2004/04/11	20:30:05	119	12	465	370	554	739	17.3	117	

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APRIL 2004

First C2 Appearance		Central Position	Width Angular	Linear Fit	----2nd order speed-----			Accel	Measurement Position	Remarks
Date	Time UT	Angle degree	Width degree	Speed km/s	Initial km/s	Final km/s	20R km/s	m/s^2	Angle degree	
2004/04/11	23:30:05	227	27	670	775	561	0	-49.1	227	
2004/04/12	00:30:05	120	16	488	713	277	0	-118.0	117	Only 3 points/C2
2004/04/12	00:54:05	248	57	261	262	259	257	-0.1	238	
2004/04/12	09:54:31	228	31	537	667	398	0	-31.0	235	
2004/04/12	11:06:05	98	21	453	440	466	505	2.6	101	
2004/04/12	12:54:05	33	50	435	----	----	----	------	39	
2004/04/12	20:30:06	305	44	495	367	615	1033	39.0	305	
2004/04/12	21:30:05	100	32	510	472	549	640	8.0	101	
2004/04/13	05:54:22	58	61	433	432	435	434	0.1	66	
2004/04/13	08:54:05	309	63	406	408	405	405	-0.1	315	
2004/04/13	10:54:05	147	32	458	462	453	449	-0.5	150	
2004/04/13	11:30:05	229	39	826	890	768	668	-14.9	227	
2004/04/13	18:26:05	320	51	293	364	217	0	-8.5	329	
2004/04/13	20:59:06	202	125	325	225	439	411	5.0	222	Partial Halo
2004/04/14	01:27:13	147	36	380	431	330	0	-20.0	145	Only C2
2004/04/14	02:26:05	21	135	254	0	559	455	9.1	52	Partial Halo
2004/04/14	16:26:05	224	27	597	657	536	0	-18.9	223	
2004/04/14	18:50:05	107	19	286	211	365	913	33.4	110	Only C2
2004/04/14	20:26:05	170	14	609	----	----	----	------	170	Only 2 points/C2
2004/04/14	22:26:05	231	43	898	1334	454	637	-60.2	233	
2004/04/14	23:06:06	48	47	524	31	930	822	28.6	42	
2004/04/15	03:26:05	233	45	714	790	636	648	-8.6	232	
2004/04/15	08:06:05	228	39	568	729	384	408	-15.2	225	
2004/04/15	08:06:05	308	54	325	316	334	348	0.9	309	
2004/04/15	17:26:05	280	32	276	----	----	----	------	280	Only C2
2004/04/15	20:26:05	120	80	489	----	----	----	------	110	Only C2
2004/04/16	17:42:06	224	29	376	420	334	0	-24.0	223	Only 3 points/C2
2004/04/16	18:42:05	96	19	279	224	340	762	22.6	95	Only 3 points/C2
2004/04/16	18:42:05	40	27	399	525	262	0	-36.8	42	Only C2
2004/04/18	00:42:05	301	42	185	183	187	208	0.4	309	Only C2
2004/04/18	04:42:05	93	18	340	331	350	444	3.7	89	Only C2
2004/04/18	14:08:07	278	43	310	76	554	1713	132.8	268	Only 3 points/C2
2004/04/18	16:42:05	252	51	138	----	----	----	------	260	Only C2
2004/04/19	02:08:05	266	61	341	350	332	251	-2.5	290	Only C2
2004/04/19	21:08:06	80	55	812	----	----	----	------	61	Only 2 points/C2
2004/04/20	02:08:06	183	61	381	----	----	----	------	182	Only 3 points/C2
2004/04/20	05:42:05	223	120	335	283	391	363	2.1	237	
2004/04/20	10:08:05	94	31	315	291	339	539	8.6	91	Only C2
2004/04/20	10:08:05	296	98	248	176	323	296	2.3	311	
2004/04/29	19:27:14	Halo	360	185	199	168	150	-0.7	205	
2004/04/30	04:50:05	317	84	312	387	232	0	-8.6	314	

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CME heights are measured at the fastest segment of the leading edge

PA= Postion Angle measured from Solar North in degrees (Counter clockwise)

Numbers in 2nd order fit columns correspond to the speed at the last height of measurement and at a distance of 20 solar radii.