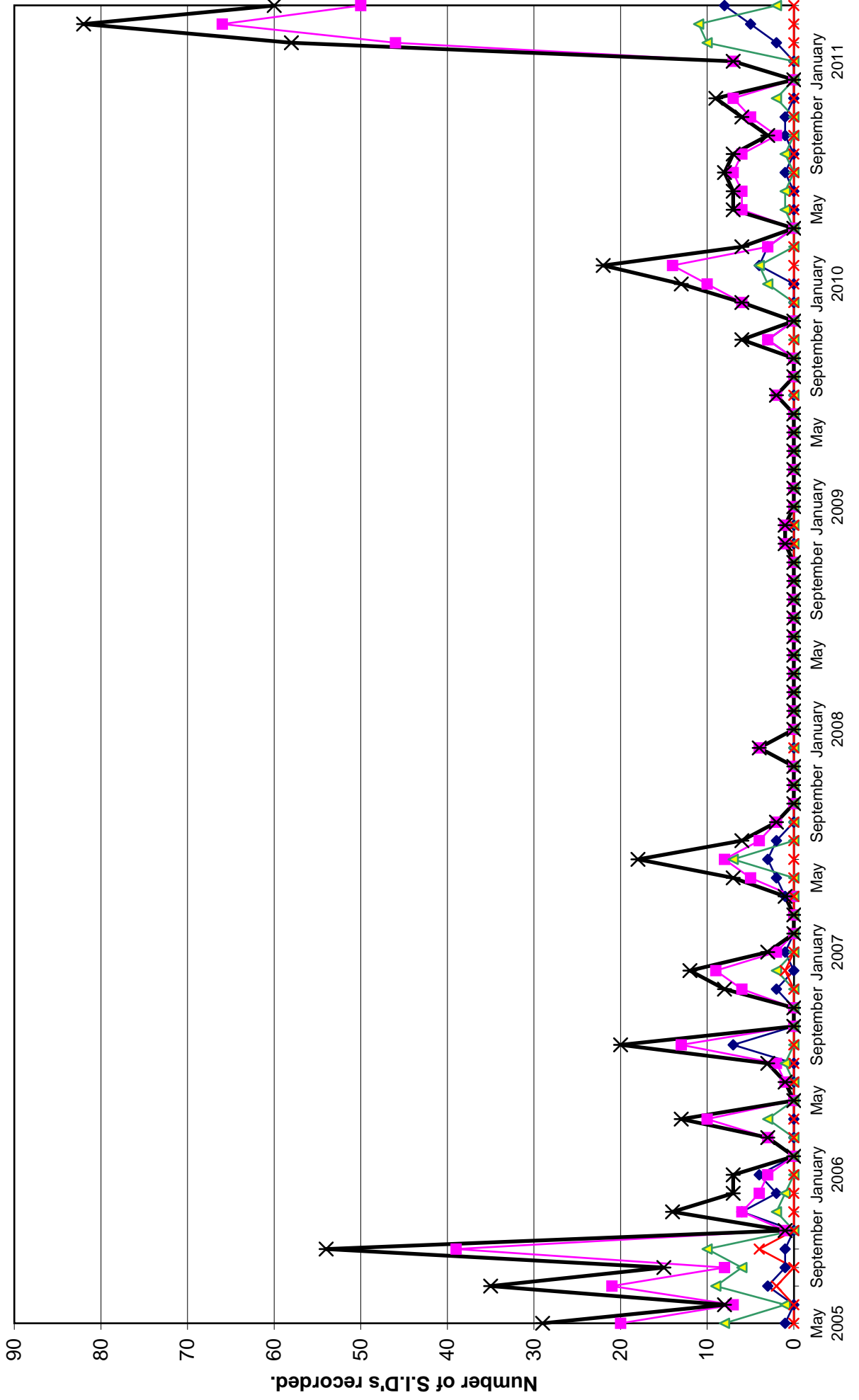


BAA Radio Astronomy Group.

2011 APRIL

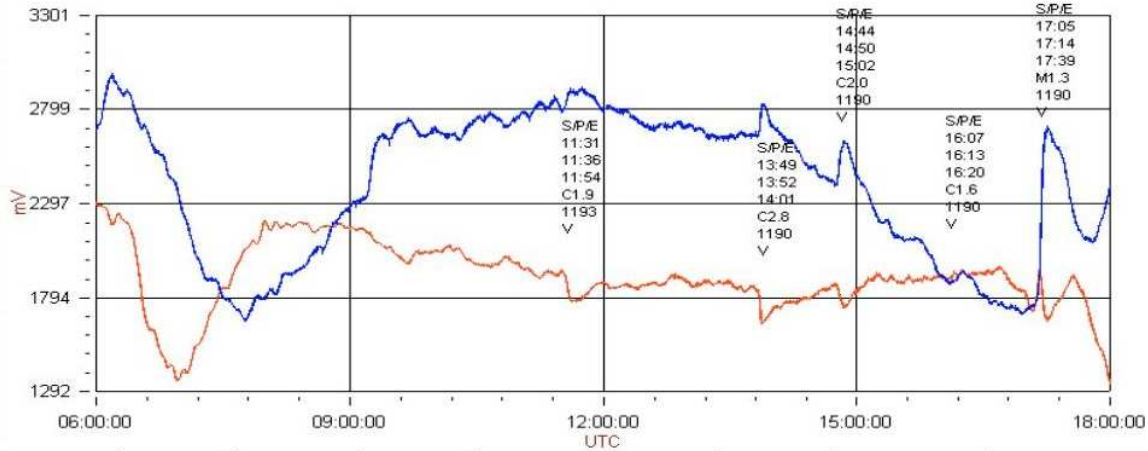
DAY		Colin Clements (23.4kHz/37.5kHz)				Peter Meadows (23.4kHz)				Mike King (20.9kHz)				John Wardle (23.4kHz)				Peter King (16.8kHz)			
		AAVSO receiver, 0.76m screened loop aerial.				Tuned radio frequency receiver, 0.58m frame aerial.				AAVSO receiver. Tuned loop aerial.				Gyrator MKII receiver, 1m loop aerial.				Own designed receiver, 1.4m loop aerial.			
		START	PEAK	END (UT)		START	PEAK	END (UT)		START	PEAK	END (UT)		START	PEAK	END (UT)		START	PEAK	END (UT)	
6	C1.2																	16:15	16:24	16:35	1
6	C1.9																				
7	C1.5													16:25	16:39	16:54	1+	16:25	16:40	16:55	1+
9	C1.3																	14:49	15:45	15:59	2+
11	B9.2																				
11	C1.2																	15:54	16:01	16:20	1+
12	C1.8													12:23	12:35	13:01	2	12:20	12:32	12:39	1
13	C2.2																				
13	C1.2													07:58	08:03	08:10	1-				
13	C1.0																	08:30	08:33	08:35	1-
13	C1.4																	10:38	10:40	10:45	1-
13	C2.5					13:39	13:45	13:57	1-					13:41	13:47	14:06	1	13:13	13:44	13:50	2
13	C1.1																	16:02	16:08	16:10	1-
14	C4.9																				
14	C2.3													09:41	09:44	10:06	1	09:38	09:45	09:50	1-
14	C1.6																	12:25	12:30	12:33	1-
14	C2.4					15:24	15:28	15:42	1-					15:25	15:27	15:46	1	15:20	15:28	15:35	1-
14	C1.1																	17:06	17:10	17:14	1-
15	C1.6													09:29	09:36	09:41	1-	09:10	09:35	09:50	2
15	C1.9					11:30	11:38	11:43	1-					11:32	11:36	12:03	1+	11:30	11:35	11:49	1
15	C2.8					13:52	13:59	14:02	1-	14:04	14:06	14:20	1-	13:50	13:53	14:16	1+	13:48	13:51	13:55	1-
15	C2.0					14:43	14:49	14:54	1-					14:45	14:49	15:08	1	14:43	14:50	14:58	1-
15	C1.6													16:11	16:14	16:23	1-	16:08	16:15	16:20	1-
15	M1.3					17:04	17:13	17:50	2+					17:02	17:12	17:44	2	17:03	17:13	17:29	1+
16	C1.8													09:01	09:07	09:12	1-	09:00	09:08	09:13	1-
16	B9.4																				
16	C5.7	13:58	14:07	14:40	2	13:50	14:10	14:45	2+					13:55	14:06	14:45	2+	13:50	14:15	14:30	2
16	C3.7					16:45	16:54	17:05	1					16:47	16:56	17:11	1	16:35	16:54	17:09	2
17	C1.4	14:11	14:18	14:35	1	14:06	14:15	14:24	1-					14:11	14:15	14:27	1-				
17	B7.4																				
18	B9.7	16:02	16:02	16:44	2																
19	B9.0																				
20	B6.7																				
20	B8.5																				
20	C1.5																	17:38	18:35	19:05	3
21	C1.0																	08:30	08:39	08:50	1
21	C8.5	09:45	09:53	10:16	1+	09:40	09:44	09:52	1-					09:41	09:51	10:50	2+	09:39	09:49	09:59	1
21	C4.9					14:41	14:51	15:09	1+					14:45	14:52	15:30	2	14:36	14:50	15:00	1
22	C1.8																				
22	C2.5													08:06	08:09	08:13	1-				
22	C2.6					09:42	09:46	10:02	1					09:42	09:45	10:17	2	09:40	09:45	10:00	1
22	C7.7	11:21	11:30	11:58	2	11:06	11:19	11:26	1					11:11	11:26	12:06	2+	11:06	11:25	13:36	3+
22	C3.0	12:34	12:39	13:19	2	12:32	12:37	12:47	1-					12:33	12:39	12:56	1	12:30	12:36	12:40	1-
22	C1.3																				
22	C1.3																				
22	?																				
22	C1.4																	14:05	14:08	14:10	1-
22	M1.2	15:54	16:01	16:15	1	15:49	15:58	16:57	2+					15:51	15:54	16:30	2	14:41	14:47	14:50	1-
22	C5.5	17:07	17:13	17:26	1									17:05	17:11	17:27	1	15:48	15:53	16:10	1
22	C4.2	17:46	17:54	18:27	2									17:48	17:54	18:01	1-				
22	C3.6													19:32	19:35	19:39	1-				
23	C2.4													07:32	07:37	07:57	1				
23	C1.0																	14:10	14:23	14:31	1
25	B8.1																				
28	C2.4	11:56	12:03	12:39	2									11:54	12:01	12:31	2	11:50	11:58	12:04	1-
28	C1.1													12:42	12:49	13:12	1+				
30	C1.5	08:11	08:24	08:53	2													08:10	08:20	08:28	1-
30	C1.7	08:53	09:07	09:18	1													08:55	09:05	09:08	1-
30	C3.2	11:47	11:55	13:16	3																
30	C1.0																	12:20	12:29	12:43	1
30	C3.2	13:17	13:39	14:18	2+													13:09	13:25	14:20	2+

VLF flare activity 2005/11.

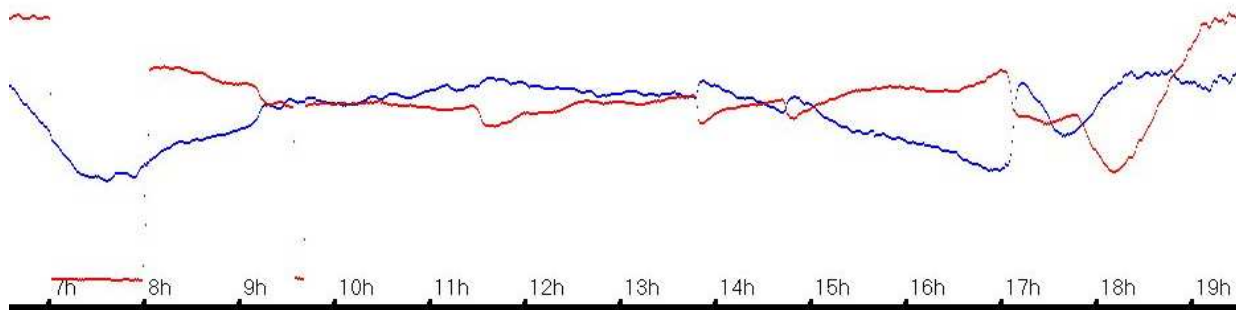


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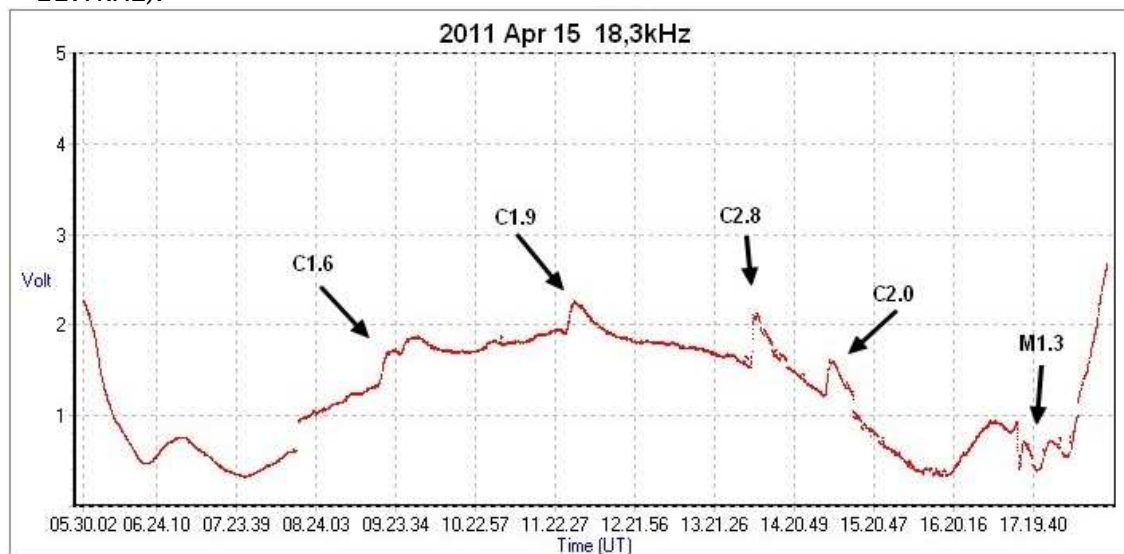
Another month of strong solar activity, with 61 SIDs recorded by members. Following the slow down at the end of March, April started with just a few B and C-class flares, slowly building towards the First M-class flare on the 15th.



Martyn Kinder's chart for the 15th. shows most of the day's activity, with a nice strong SID for the M1.3 in late afternoon.

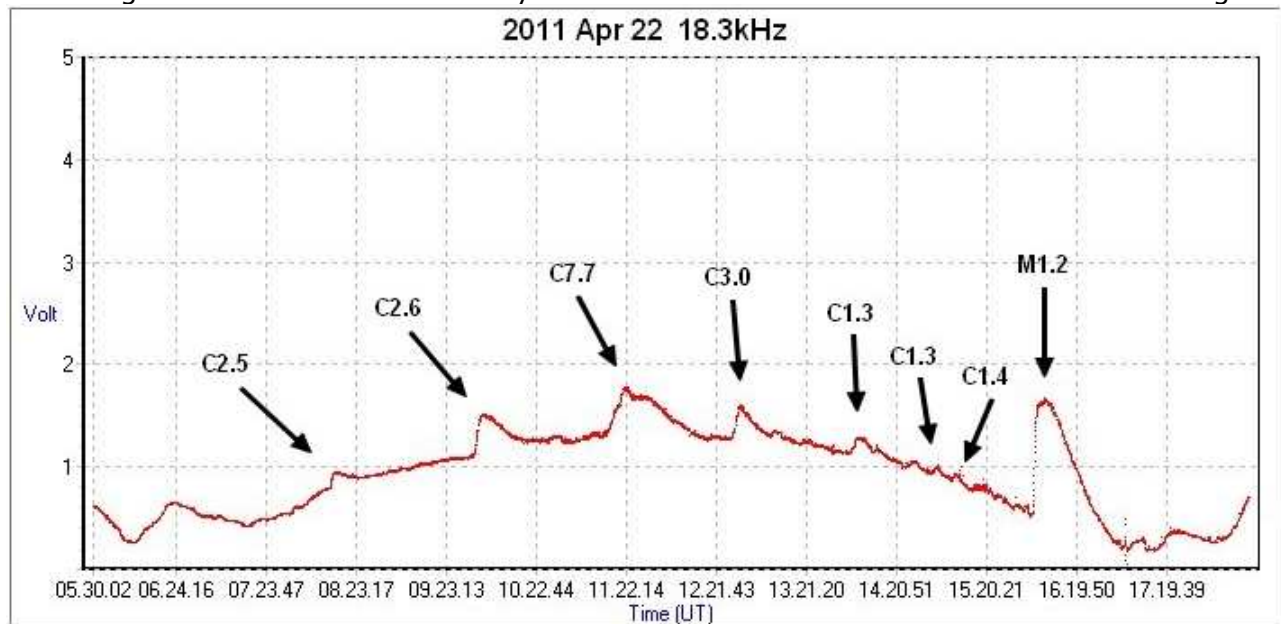


My own chart also shows a strong SID for the M1.3 flare just before sunset (Red = 23.4kHz, Blue = 22.1kHz).

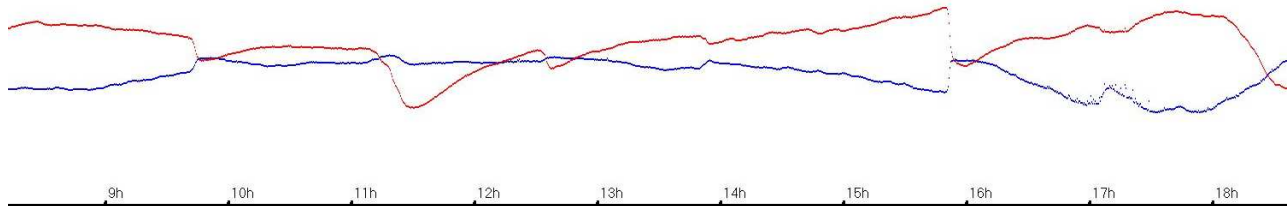


The chart from Roberto Battaiola in Milan shows the effect of an earlier sunset, muting the M1.3 SID compared to those from the UK.

Recordings on the 22nd showed so many SIDs that it was difficult to determine accurate timings.



The chart from Roberto shows a much stronger SID for the M1.2 flare, occurring slightly earlier in the afternoon than the M1.2 on the 15th.



My own recording from the 22nd. Also shows the effects of a local thunder storm from 16:50 to 17:30UT, particularly on the 22.1kHz signal. I was making a visual observation at 15:55, starting with a white-light sunspot count. I then switched to H-alpha, and was surprised to see an intensely bright and moving structure between the spots of active region 1195. I had already counted 21 spots within the group, and so the flaring material was quite complex. I was not able to capture a picture of the event, but watched it for 15 minutes slowly moving. A rare privilege to see a flare in action.

Magnetic Data.

The Bartels chart shows plenty of magnetic activity. Data from Colin Clements as well as my own recordings are included. If you have a magnetometer, then it is worth looking at www.geomag.bgs.ac.uk/operations/eskdale.html for checking results. This is the Eskdalemuir site in Scotland, but there is also a link to the Hartland observatory in Devon. Their bulletins include some useful background information, as well as K-index calibration details.

