

BAA Radio Astronomy Group.

2013 JANUARY

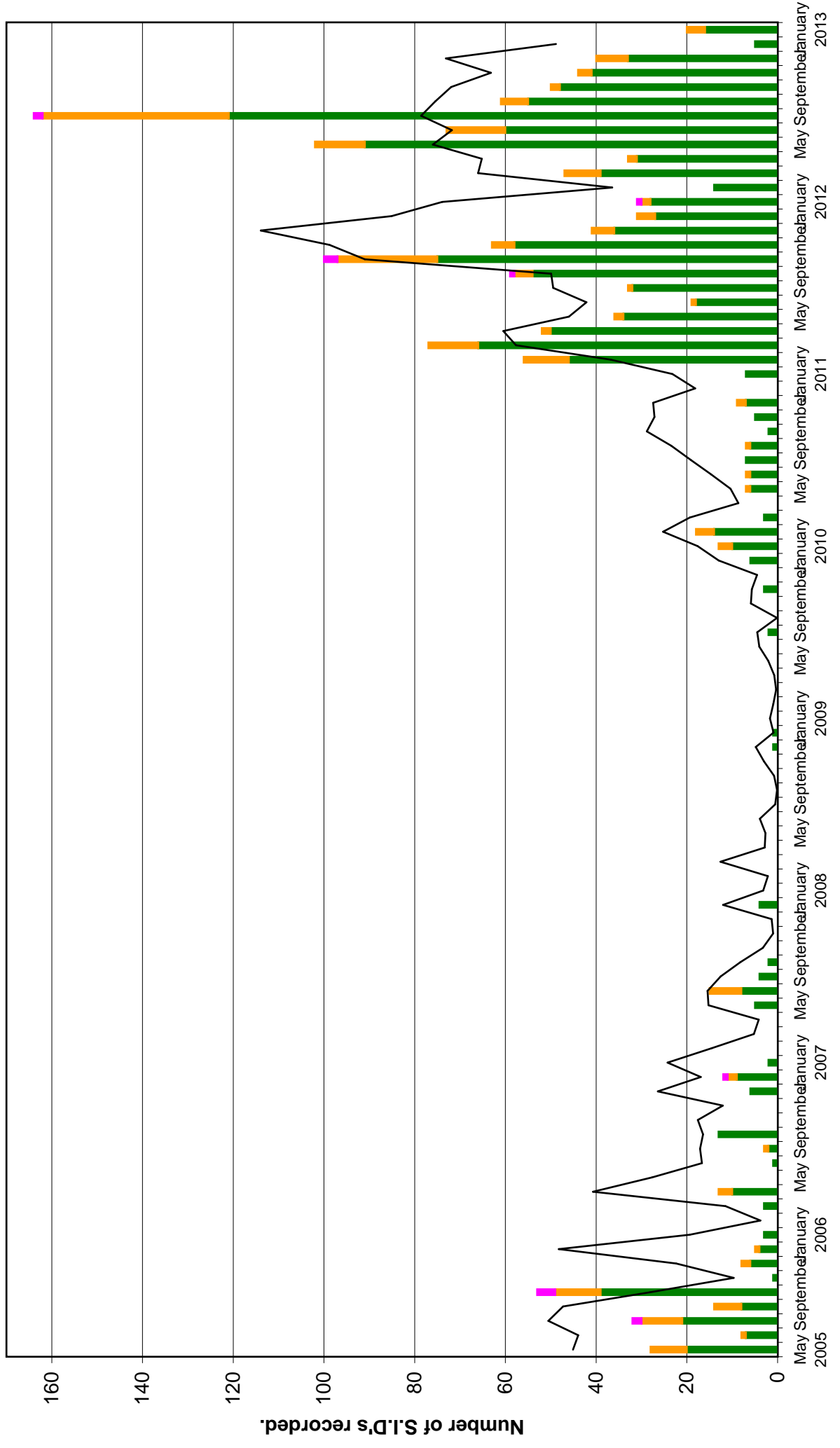
DAY	Kray class	Observers	John Cook (23.4kHz/22.1kHz)		Roberto Battaglia (18.3kHz)		Paul Hyde (22.1kHz)		Bob Middlefell (22.1kHz)		Mark Edwards (18.3/24.0/20.27kHz)				
			START	PEAK	END (UT)	START	PEAK	END (UT)	START	PEAK	END (UT)	START	PEAK	END (UT)	
			Tuned radio frequency receiver, 0.58m frame aerial.		Modified AAVSO receiver.		Tuned radio frequency receiver, 0.96m frame aerial.		Tuned radio frequency receiver, 0.5m frame aerial.		Spectrum Lab / PC 2m loop aerial.				
5	M1.7	6	09:29	09:34	09:56	1+	09:29	09:33	09:59	1+	09:29	09:32	09:51	1	
5	C1.3	2	16:20	16:23	16:27	1-	16:20	16:23	16:27	1-	12:52	12:56	13:01	1-	
6	C1.2	1	11:20	11:28	11:46	1+	11:20	11:28	11:46	1+					
6	C1.7	1	12:42	12:54	13:08	1+	12:42	12:54	13:08	1+					
7	C1.3	1													
9	C2.5	1					11:14	11:27	11:45	1+					
9	C2.4	2													
10	C2.3	1													
10	C8.0	1													
11	M1.2	5	09:05	09:12	09:18	1-	08:55	09:12	09:29	2	09:04	09:12	09:30	1+	
11	M1.0	5	14:55	15:05	15:26	1+	14:53	15:09	15:20	1+	14:55	15:06	15:34	2	
13	M1.7	6	08:36	08:38	08:47	1-	08:36	08:38	08:40	1-	08:35	08:39	08:53	1-	
13	C1.6	1					11:37	11:41	11:46	1-					
13	C1.7	1	11:55	11:56	11:59	1-									
13	C2.7	1									15:51	15:53	16:03	1-	
14	C3.4	2									15:43	15:46	15:54	1-	
15	C1.2	4	12:04	12:07	12:13	1-					12:03	12:07	12:30	1+	
18	C2.4	4					09:38	09:44	09:49	1-	09:39	09:44	09:50	1-	
18	C1.0	5					13:10	13:16	13:23	1-	13:12	13:15	13:20	1-	
20	C1.1	1									14:28	14:32	14:37	1-	
			Colin Clements (22.1kHz)		Peter King (18.3kHz)		Tarif Rashid Santo (19.8kHz)		John Wardle (19.6/23.4kHz)		Steve Parkinson (23.4kHz)				
			AAVSO receiver, 0.76m screened loop aerial.		Own designed receiver, 1.4m loop aerial.		Spectrum Lab, Half-wave dipole.		PC soundcard, 0.7m frame aerial.		Tuned radio frequency receiver, 0.58m frame aerial.				
DAY			START	PEAK	END (UT)		START	PEAK	END (UT)	START	PEAK	END (UT)	START	PEAK	END (UT)
5	M1.7										09:28	09:33	10:37	2+	
5	C1.3														
6	C1.2														
6	C1.7														
7	C1.3										07:36	07:51	08:06	1+	
9	C2.5														
9	C2.4														
10	C2.3														
10	C8.0														
11	M1.2										09:05	09:12	09:30	1	
11	M1.0														
13	M1.7										08:33	08:39	08:49	1-	
13	C1.6														
13	C1.7														
13	C2.7														
14	C3.4														
15	C1.2														
18	C2.4														
18	C1.0		13:10	13:13	13:20	1-									
20	C1.1										15:42	15:46	15:54	1-	

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		Simon Dawes (various)	Gordon Fiander (19.6/22.1kHz)	John Elliott (21.7kHz)	Martyn Kinder (19.6kHz/22.1kHz)	Mark Horn (23.4kHz)
		PC soundcard and TRF receiver with 1m loop aerial.	PC sound card.	Spectrum Lab, 0.5m frame aerial.	Tuned radio frequency receiver, 0.58m frame aerial.	Tuned radio frequency receiver, 0.58m frame aerial.
DAY		START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)
5	M1.7				09:28 09:33 09:36 1-	
5	C1.3					
6	C1.2					
6	C1.7					
7	C1.3					
9	C2.5				09:33 09:37 10:15 2	
9	C2.4					
10	C2.3				09:25 09:36 09:45 1	
10	C8.0			17:50 17:52 17:58 1-		
11	M1.2				08:46 09:11 09:25 2	
11	M1.0				14:54 15:05 15:28 2	
13	M1.7				08:36 08:39 08:46 1-	
13	C1.6					
13	C1.7					
13	C2.7					
14	C3.4					
15	C1.2				12:03 12:07 12:16 1-	
18	C2.4				09:41 09:43 09:46 1-	
18	C1.0				13:12 13:14 13:19 1-	
20	C1.1					

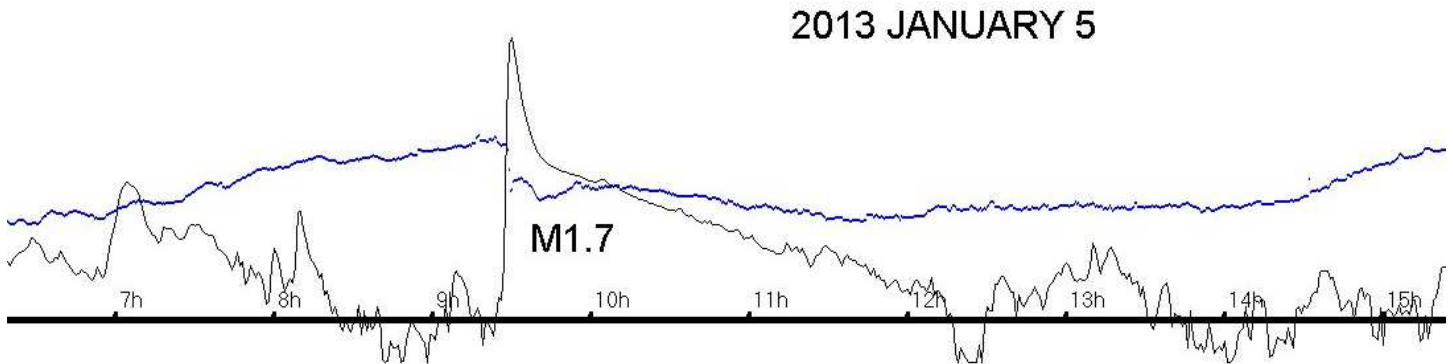
VLF flare activity 2005/12.



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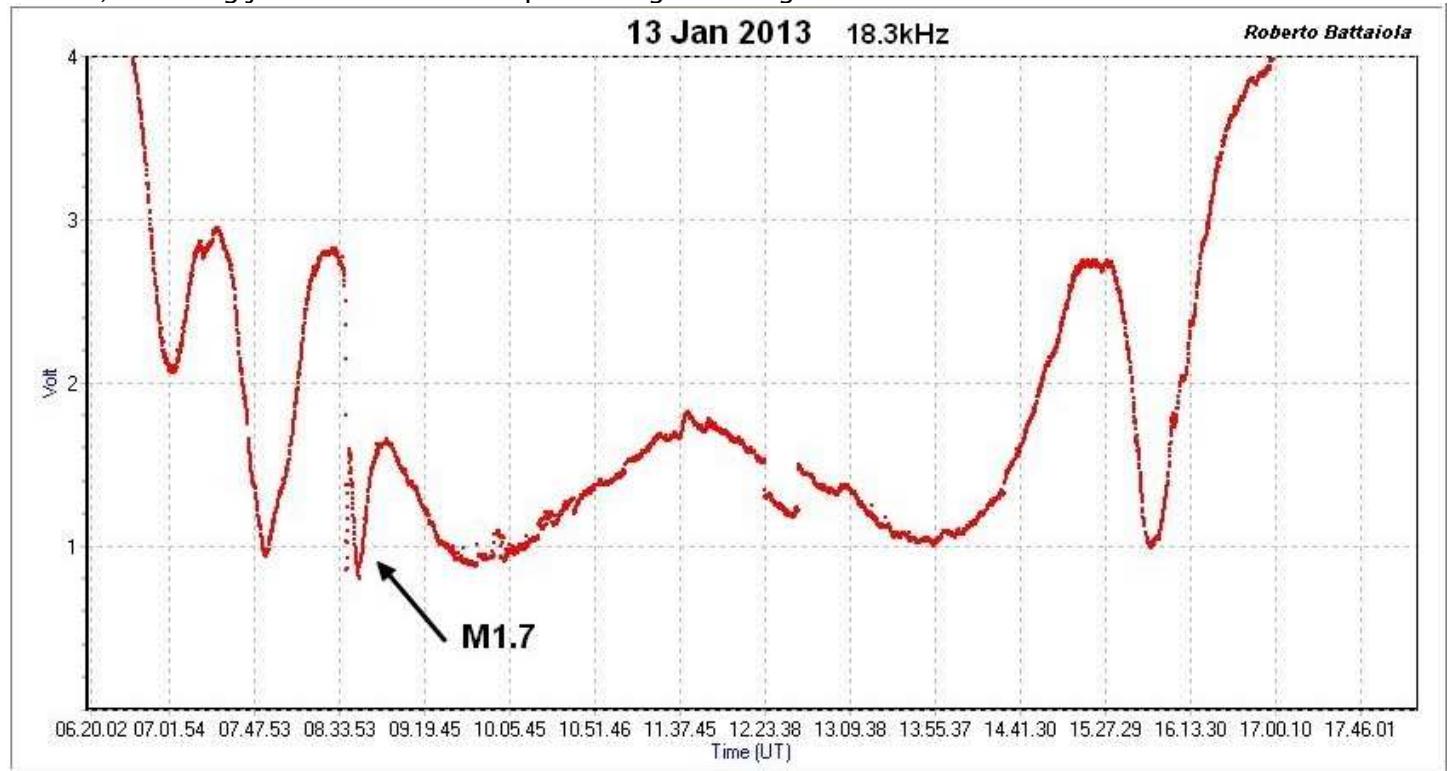
A small increase in activity has been recorded through January, with 16 C and 4 M-class flares recorded as SIDs. The two M1.7 flares were the most energetic in the GOES record for the entire month. The last 10 days of January were particularly quiet, with just 24 B, and 2 C-class flares recorded by GOES. These totals are surprisingly low given that there was plenty of visual sunspot activity over the first two weeks, with some larger and more complex groups to be seen.

The first SID to be recorded in the new year was from the M1.7 flare on the 5th. The Ramsloh 23.4kHz signal was off at the time, but I did record it at 22.1kHz:

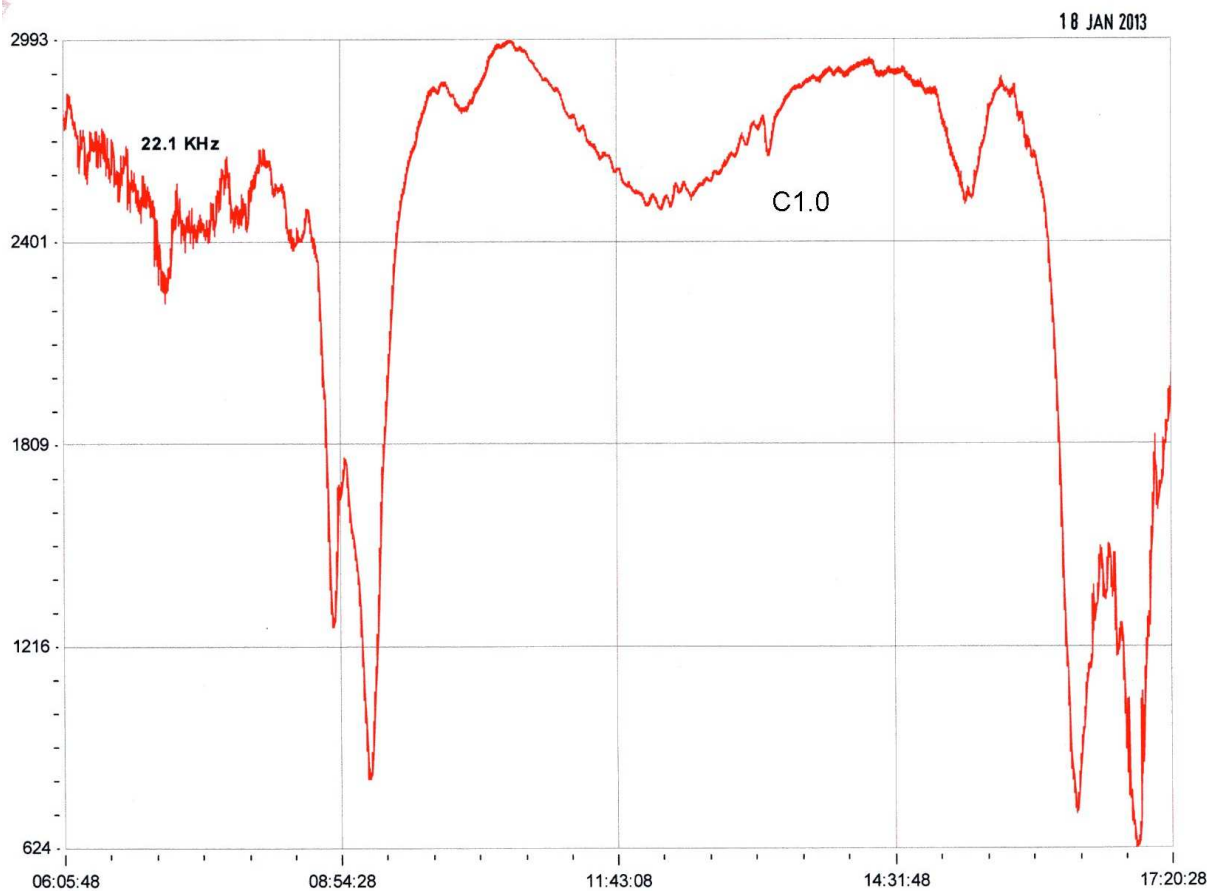


I have added the GOES X-ray flux in black.

The second M1.7 flare was on the 13th, peaking around 08:39UT. Roberto Battaiola sent this chart of the SID, occurring just after the sunrise peak in signal strength:



Some of the weaker flares were also well recorded, notably the C1.0 flare around 13:15UT on the 18th. This recording by Colin Clements clearly shows the SID, despite some noise on the signal:



Martyn Kinder reported a double peaked SID from the C1.2 flare on the 15th. The GOES data shows a fast rise in X-ray flux to a single peak at 12:05UT with a fairly slow fall until 12:10. The X-ray flux then falls away more quickly. My own recording shows a very indistinct SID, just measurable.

MAGNETIC OBSERVATIONS.

The disturbed period from the 11th to 14th was due to a Coronal Hole High Speed Stream. The disturbance was at a very low level, although the evening of the 13th was rather more turbulent. A CME associated with the M1.7 flare on the 13th arrived on the 17th with a mild disturbance lasting through the morning of the 18th. A filament eruption associated with AR1650 was detected in SOHO images about 19:00 on the 16th. The BGS reported a SI from this event at 17:32 on the 19th, although none of us managed to record it. The subsequent disturbance was better recorded, although again very mild. A further CHHSS was in progress from the 25th, when STEREO images reported CMEs and a filament eruption off the NE quadrant of the solar disc. We have not recorded any SI from the filament eruption, but some turbulence was recorded on the 27th and 28th.

Magnetic reports received from Gonzalo Vargas, Paul Hyde, Colin Clements and John Cook.

Reports and observations to John Cook, jacook@clara.co.uk

