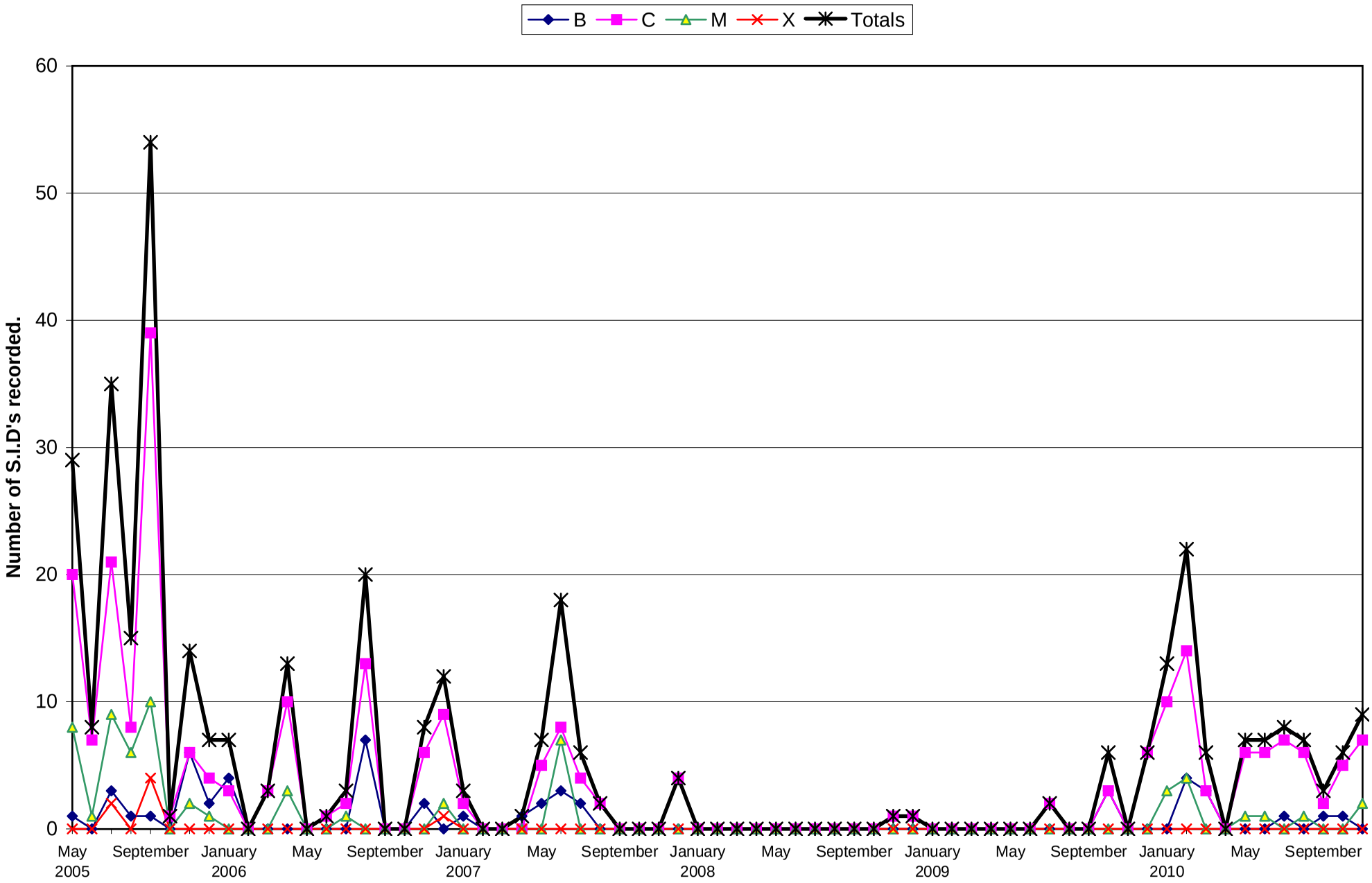
BAA Radio Group VLF summary. 2010 NOVEMBER.

	Xray class	Observers	John Cook (23.4kHz) Tuned radio frequency receiver, 0.58m frame aerial.				Roberto Battaiola (20.4kHz) Modified AAVSO receiver.				Nigel Curtis Gyrator receiver, shielded loop aerial.				Bob Middlefell Tuned radio frequency receiver, 0.5m frame aerial.				Mark Edwards (22.1kHz) Spectrum Lab / PC 2m loop aerial.			
DAY			START	PEAK	END (UT)		START	PEAK	END (UT)		START	PEAK	END (UT)		START	PEAK	END (UT)		START	PEAK	END (UT)	
3	C4.9	10	12:13	12:20	12:40	1+	12:07	12:32	13:21	2+									12:14	12:21	12:42	1+
3	C3.4	2																				
5	M1.0	9	13:10	13:30	13:53	2																
6	C1.6	1																				
6	M5.4	4	15:31	15:37	15:56	1																
11	C2.2	8	13:03	13:06	13:20	1-																
12	C1.5	1																				
12	C1.5	2																	13:44	13:50	14:08	1
13	C1.3	5	11:38	11:40	11:54	1-													11:35	11:40	11:49	1-

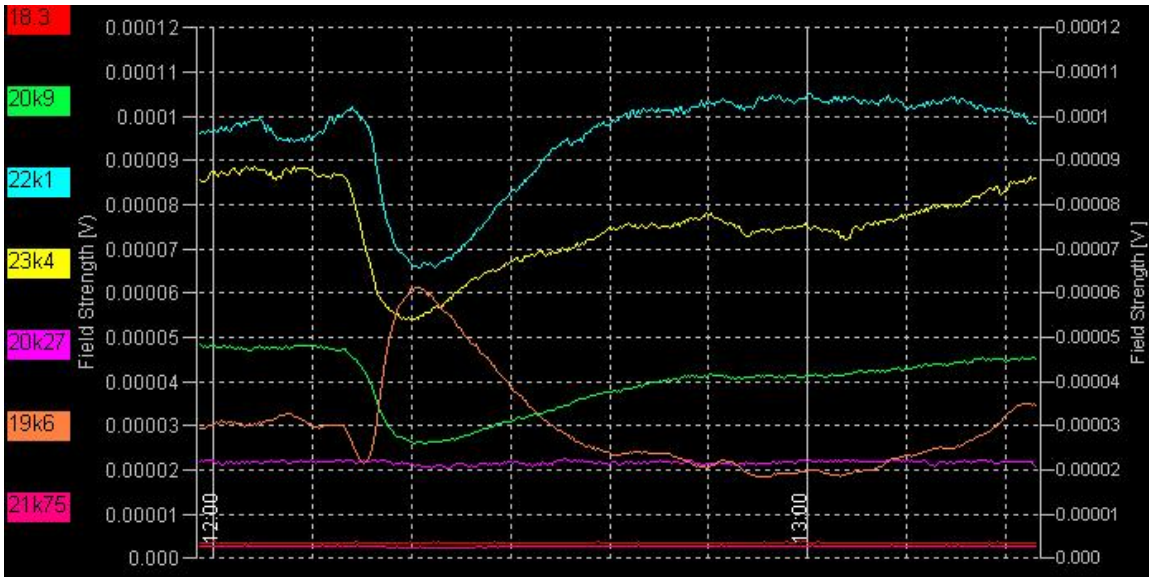
			Colin Clements (23.4kHz) AAVSO receiver, 0.76m screened loop aerial.				Peter Meadows (23.4kHz) Tuned radio frequency receiver, 0.58m frame aerial.				Mike King (20.9kHz) AAVSO receiver. Tuned loop aerial.				John Wardle (19.6kHz) Gyrator MKII receiver, 1m loop aerial.				Peter King (18.3kHz) Own designed receiver, 1.4m loop aerial.			
DAY			START	PEAK	END (UT)		START	PEAK	END (UT)		START	PEAK	END (UT)		START	PEAK	END (UT)		START	PEAK	END (UT)	
3	C4.9		12:08	12:24	12:48	2	12:16	12:23	12:49	2					12:11	12:27	12:33	1	12:05	12:20	12:35	1+
3	C3.4																		12:45	13:10	13:55	2+
5	M1.0		13:08	13:27	14:16	2+	13:21	13:36	13:54	2					13:13	13:41	14:25	2+	12:45	13:30	14:05	2+
6	C1.6																		08:20	08:30	09:05	2
6	M5.4														15:36	15:37	15:42	1-	15:30	15:35	15:45	1-
11	C2.2		12:59	13:10	13:20	1	13:01	13:06	13:23	1									13:00	13:05	13:15	1-
12	C1.5																		08:00	08:10	08:20	1
12	C1.5																		13:40	13:50	14:05	1
13	C1.3																		11:30	11:40	11:50	1

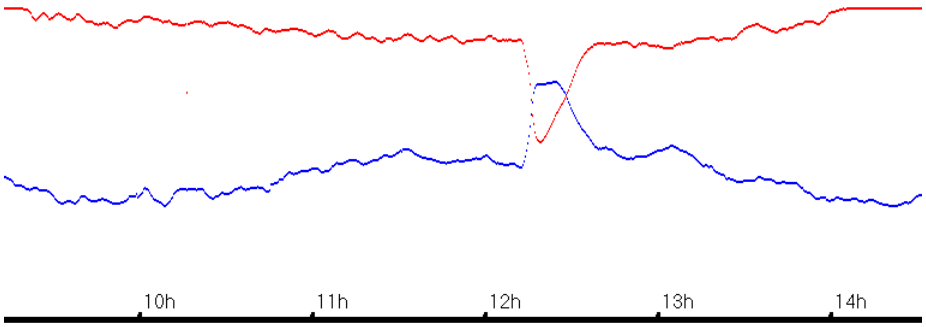
			Paul Hyde (22.1kHz) Tuned radio frequency receiver, 0.96m frame aerial.				Gordon Fiander (23.4 / *19.6* kHz) PC sound card.				John Elliott (22.1kHz) Tuned radio frequency receiver, 0.5m frame aerial.				Martyn Kinder (18.2kHz) Tuned radio frequency receiver, 0.58m frame aerial.				Mark Horn (23.4kHz) 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)	
3	C4.9		12:13	12:21	?	-	12:12	12:20	12:35	1					12:14	12:21	12:42	1+				
3	C3.4		12:47	13:03	13:22	2																
5	M1.0		13:10	13:34	14:25	2+	*13:20*	*13:30*	*13:55*	2					13:16	13:29	14:04	2+	13:12	13:30	14:02	2+
6	C1.6																					
6	M5.4										15:30	15:31	16:15	2								
11	C2.2		13:02	13:09	13:21	1					13:01	13:03	13:24	1	13:02	13:08	13:20	1-	13:02	13:09	13:18	1-
12	C1.5																					
12	C1.5																					
13	C1.3		11:31	11:41	11:54	1													11:31	11:40	11:51	1

November has provided a jump in activity, with 2 M-class flares recorded as SIDs, and a third (M1.6, 23:56, 4th.) out of hours for us. Data from GOES includes many B-class flares as well as C-class events on the 1st, 3rd..7th, 11th..13th and 15th. The 22nd, 26th, and 27th were the only blank days in the month.

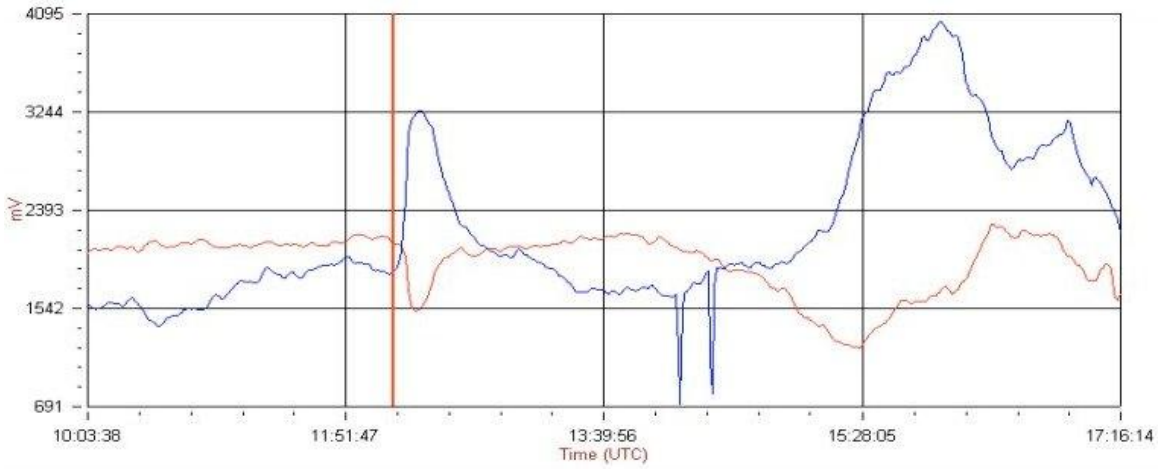

VLF flare activity 2005/10.
B
C
M
X
Totals
Number of S.I.D's recorded.
60
50
40
30
20
10
0
May 2005
September
January 2006
May
September
January 2007
May
September
January 2008
May
September
January 2009
May
September
January 2010
May
September

The C4.9 flare on the 3rd. was the most widely recorded event this month. Mark Edwards has provided a selection of timings as follows:
19.6kHz 12:13 12:21 12:41
20.9kHz 12:13 12:20 12:50
22.1kHz 12:14 12:21 12:42
23.4kHz 12:13 12:20 12:50

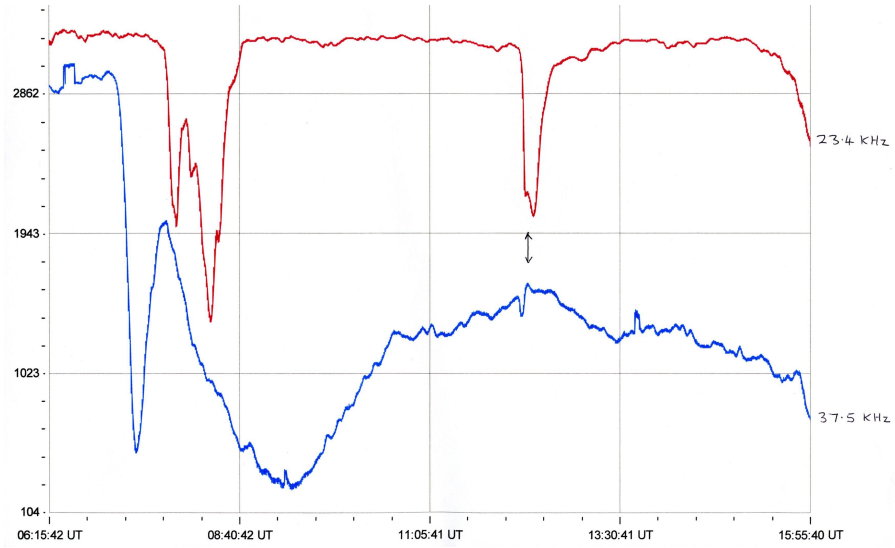




John Cook (Red = 23.4kHz, Blue = 22.1kHz).



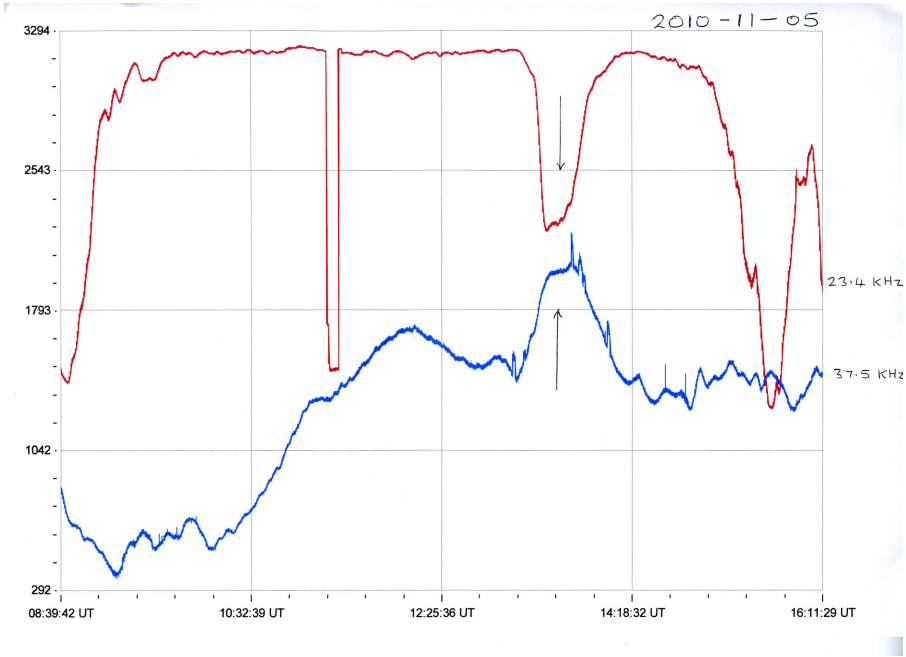
Martyn Kinder (Red = 22.1kHz, Blue = 18.2kHz).



Colin Clements.

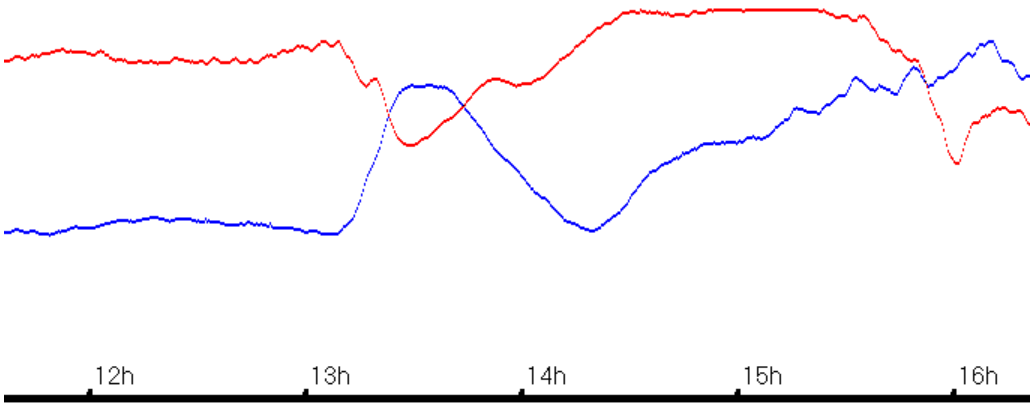
Peter Meadows 23.4kHz.

November 5th. produced a nice 'firework' with an M1.0 flare.



Colin Clements.

Peter Meadows (23.4kHz).



John Cook (Red = 23.4kHz, blue = 22.1kHz).

The response that Colin Clements has recorded at 37.5kHz from Keflavik in Iceland is surprisingly strong. The sun angle for much of this path will be very low in November as the sun is well south of the equator.

Since the 2010 February peak of 22 SIDs, activity over the year has held at more modest levels. The last X-class flare recorded by the group was in 2006 December, so I look forward to reporting the next one. Visual solar activity has also held at fairly steady levels; R was 25 in 2010 February, and is now 27.

As usual, many thanks for all of your observations. I will again be writing a report for the journal next year, comparing radio with visual observations. Meanwhile may I wish everyone a very Happy Christmas and busy New Year. I hope that our winter weather does not upset plans too much; at least radio observing does not require us to stand outside with a frozen telescope.