

2010 JANUARY

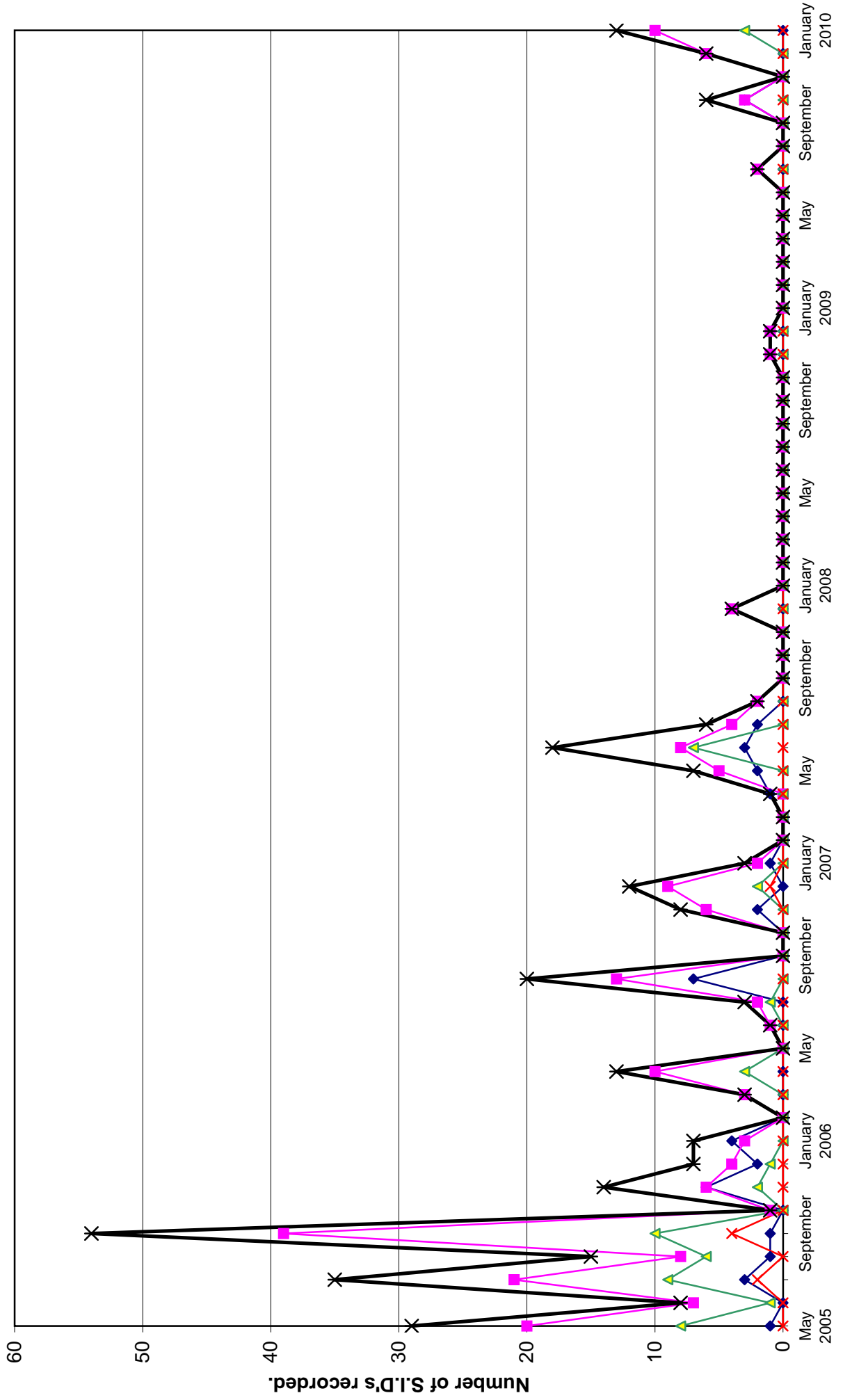
DAY	Xray class	Observers	John Cook (23.4kHz)		Roberto Battaiola (18.3kHz)		Nigel Curtis (23.4kHz)		Bob Middlefell (22.1kHz)		Mark Edwards (18.3kHz)	
			Tuned radio frequency receiver, 0.58m frame aerial.	START PEAK END (UT)	Modified AAVSO receiver.	START PEAK END (UT)	Gyrator receiver, shielded loop aerial.	START PEAK END (UT)	Tuned radio frequency receiver, 0.5m frame aerial.	START PEAK END (UT)	Spectrum Lab / PC 2m loop aerial.	START PEAK END (UT)
2	C2.6	3		14:11	14:14	14:18	1-					
9	C1.1 *	1										
12	C1.1	2	08:40	08:44	08:45	1-				08:40	08:46	08:53
19	C5.2	2										
19	C1.1	2										
19	M2.3	5	13:07	13:44	14:20	2+				13:07	13:42	14:51
19	C2.3	2										
20	M1.6	1										
20	C3.7	5	09:22	09:28	09:37	1-				09:17	09:30	09:50
20	M1.8	5	10:48	11:02	11:20	1+				10:53	11:02	11:30
20	C3.9	4	12:29	12:31	12:35	1-				12:30	12:34	12:39
20	C2.2	2										
21	C1.2	2								10:48	10:50	11:00

DAY	Xray class	Observers	Colin Clements (23.4kHz)		Karen Holland (19.5kHz)		Mike King (20.9kHz)		John Wardle (23.4kHz)		Peter King (18.1kHz)	
			AAVSO receiver, 0.76m screened loop aerial.	START PEAK END (UT)	Tuned radio frequency receiver, 0.58m frame aerial.	START PEAK END (UT)	AAVSO receiver. Tuned loop aerial.	START PEAK END (UT)	Gyrator MKII receiver, 1m loop aerial.	START PEAK END (UT)	Own designed receiver, 1.4m loop aerial.	START PEAK END (UT)
2	C2.6											
9	C1.1 *											
12	C1.1											
19	C5.2											
19	C1.1											
19	M2.3											
19	C2.3											
20	M1.6											
20	C3.7											
20	M1.8											
20	C3.9											
20	C2.2											
21	C1.2											

DAY	Xray class	Observers	Paul Hyde (22.1kHz)			
			Tuned radio frequency receiver, 0.96m frame aerial.	START PEAK END (UT)		
2	C2.6		14:13	14:17	14:31	1-
9	C1.1 *					
12	C1.1					
19	C1.1					
19	M2.3		13:07	13:42	14:35	3
19	C2.3					
20	M1.6					
20	C3.7					
20	M1.8		10:53	11:02	11:35	2
20	C3.9		12:30	12:33	12:45	1-
20	C2.2					
21	C1.2					

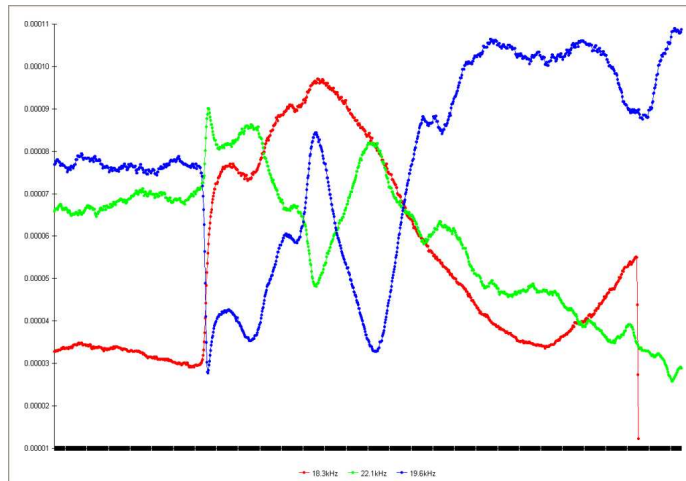
\* GOES data for January 4th to 10th is missing from their lists. On the 19th there were 2 M-class flares, and another 4 on the 20th. The most energetic event was M3.4 at 17:55 on the 20th. There were no flares on the 29th.

VLF flare activity 2005/10.



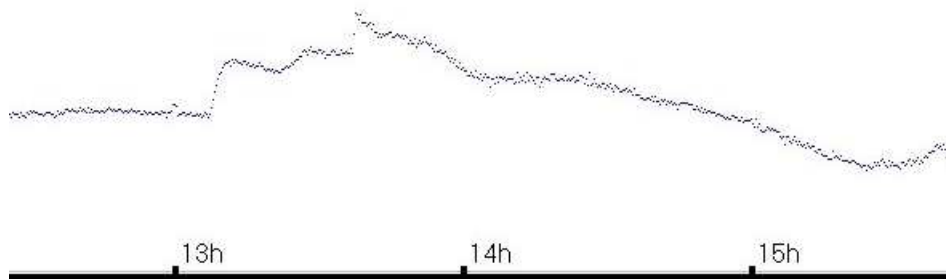
2010 January.

While there has been a steady increase of activity recently, the appearance of a most unusual M-class SID on the 19<sup>th</sup>. was quite unexpected. In fact it was a 3-peaked flare, with successive peaks superimposing to create a single SID. The GOES data for the event lists it as a single flare, whilst our recordings show 3 SIDs. For the summary data I have kept to the GOES designation, and list our measurements here:

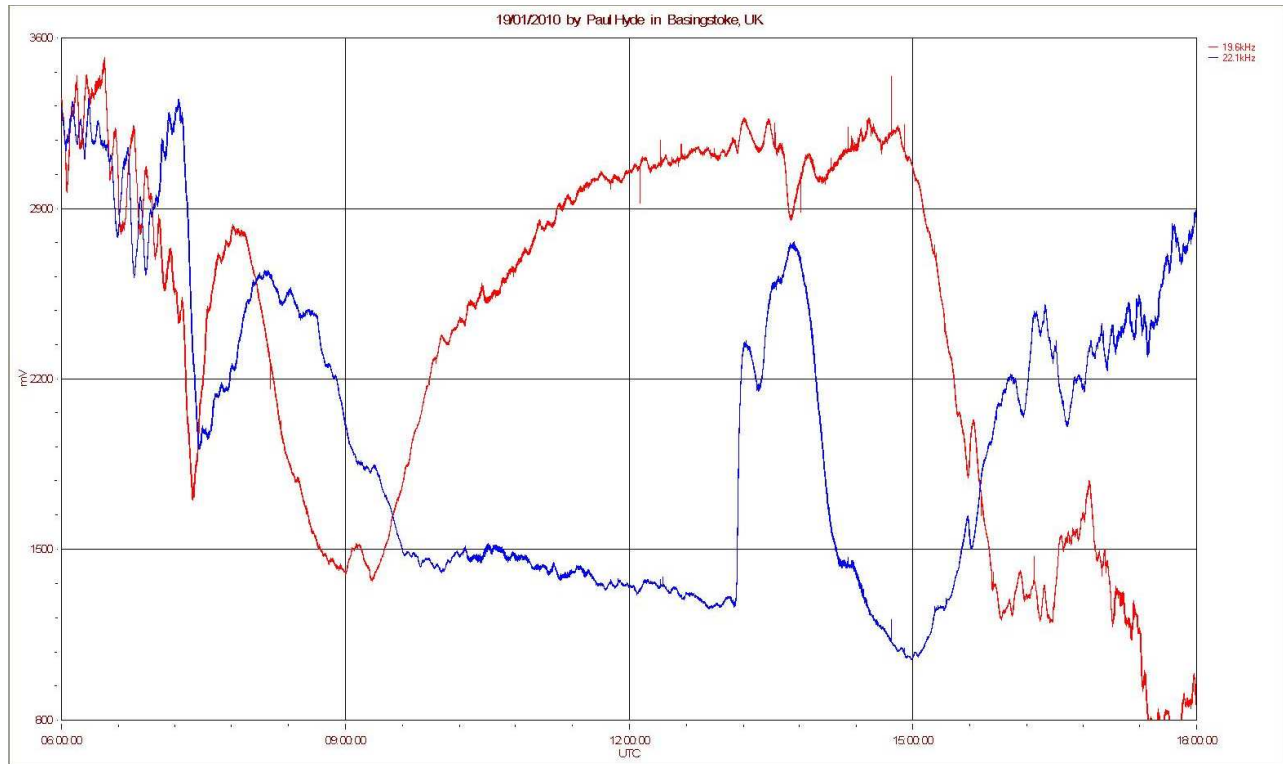


Recording by Mark Edwards.

18.3kHz:	13:07	13:16	13:21	13:34	13:35	13:42	14:51
19.6kHz:	13:06	13:15	13:22	13:33	13:36	13:42	14:14
22.1kHz:	13:07	13:12	13:22	13:33	13:35	13:42	14:15

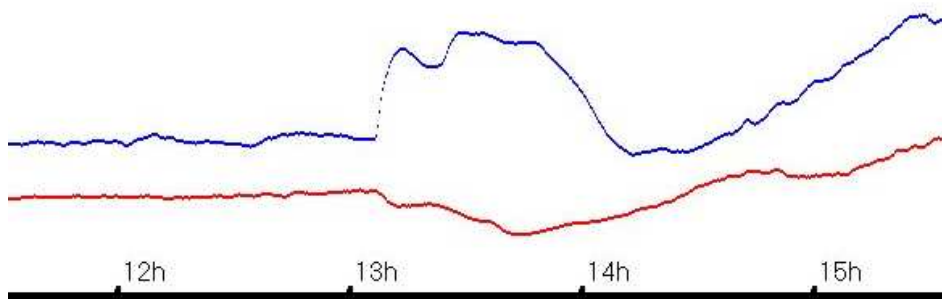


Recording by John Wardle (23.4kHz).



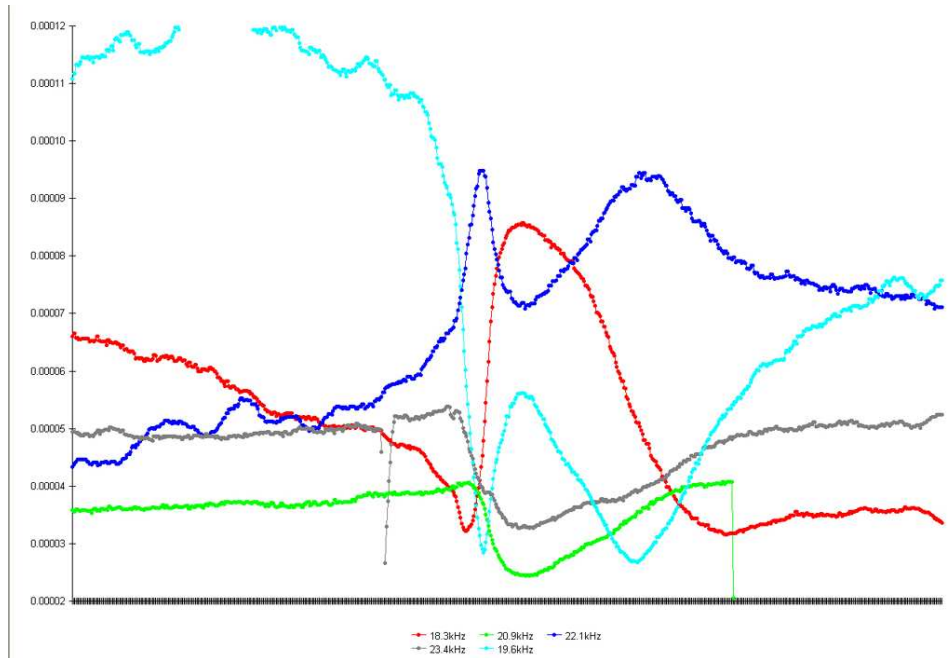
Recording by Paul Hyde.

At 19.6kHz (red) the 3 peaks are separate events, while at 22.1kHz (blue) they combine.



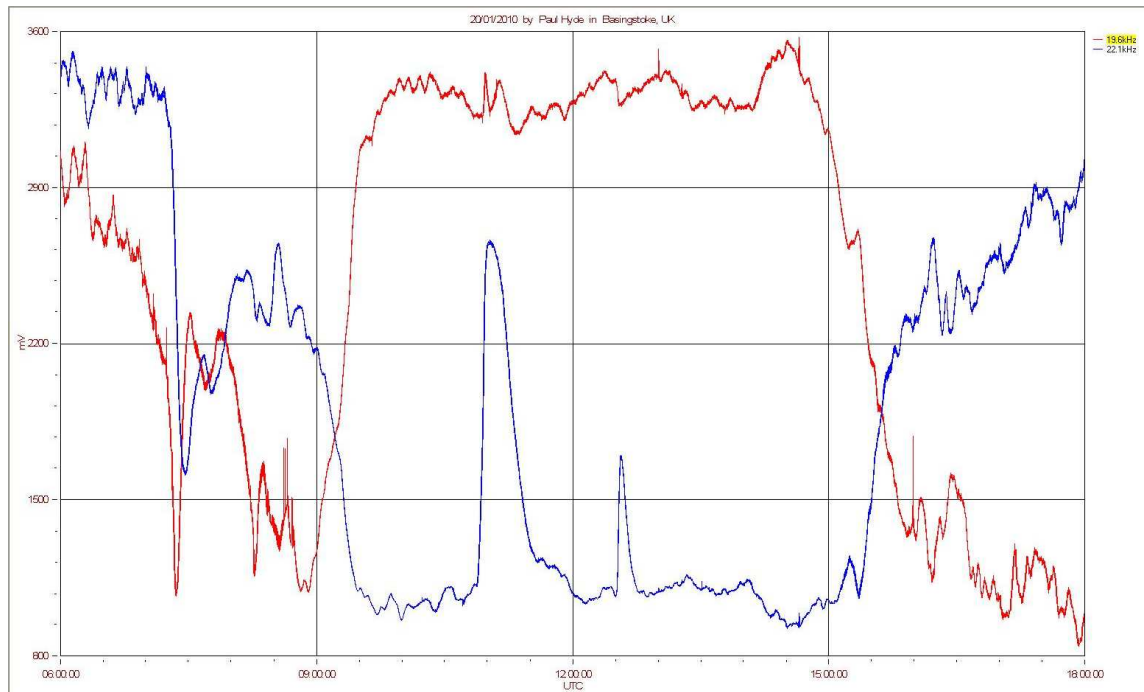
Recording by John Cook (23.4kHz red, 22.6kHz blue).

The second M-class flare was on the 20<sup>th</sup>, appearing as a more normal event.



Recording by Mark Edwards.

18.3kHz 10:53 11:02 11:30 20.9kHz 10:54 11:03 11:25 23.4kHz 10:53 11:02 11:38  
 19.6kHz 10:49 11:02 11:51 22.1kHz 10:52 11:02 11:37



Recording by Paul Hyde.

19.6kHz 10:57 10:58 11:16  
 22.1kHz 10:53 11:02 11:35