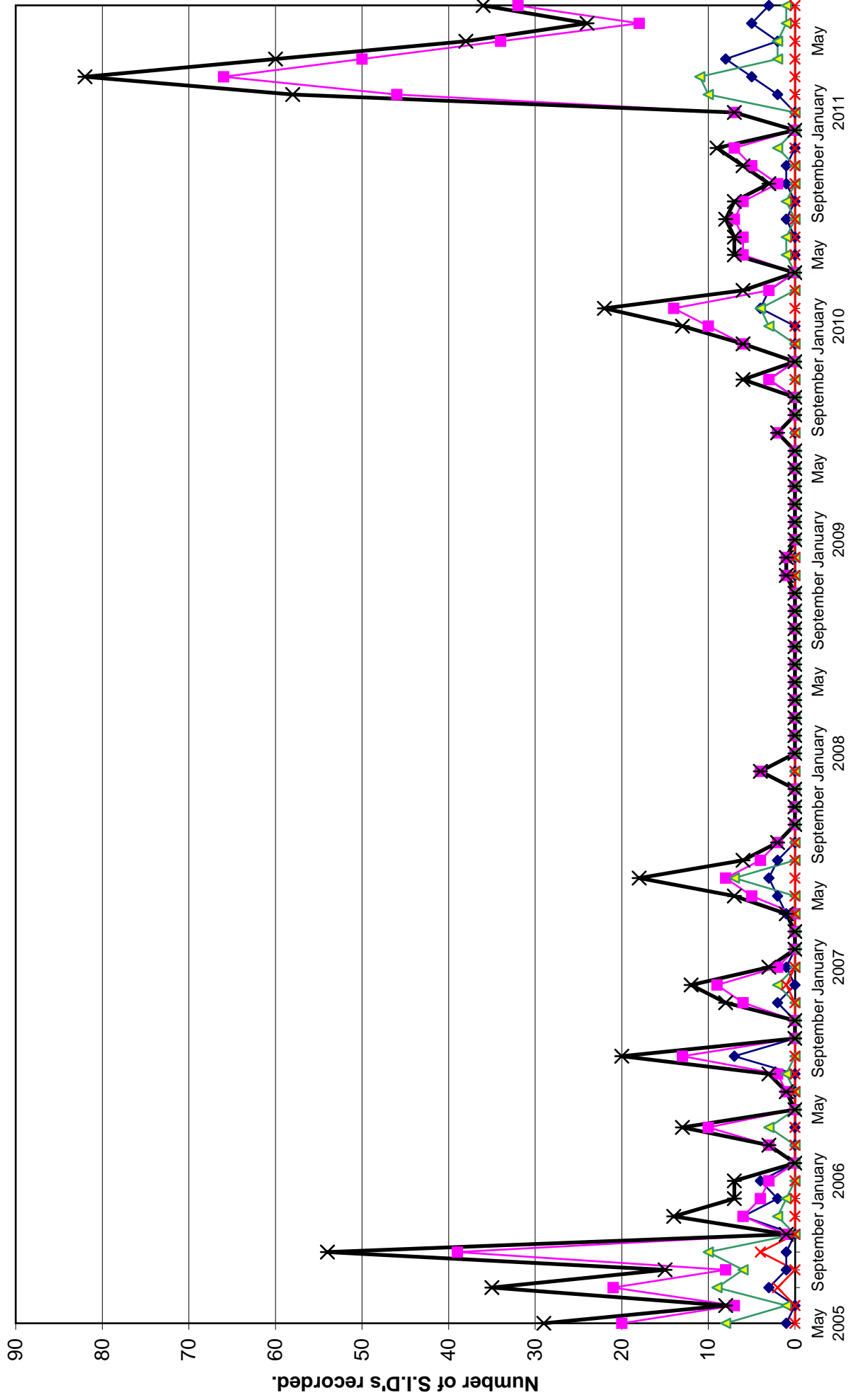




		Paul Hyde (22.1kHz)				Gordon Fiander (23.4kHz)			John Elliott (21.7kHz)				Martyn Kinder (18.3kHz/22.1kHz)				Mark Horn (23.4kHz)		
		Tuned radio frequency receiver, 0.96m frame aerial.				PC sound card.			Tuned radio frequency receiver, 0.5m frame aerial.				Tuned radio frequency receiver, 0.58m frame 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)		
3	C2.1																		
8	C3.0	09:41	09:49	10:18	2				09:43	09:50	10:07	1							
8	C2.8	11:44	11:57	12:38	2+				11:52	11:58	12:18	1+							
8	C3.1	13:29	13:33	14:02	2				13:20	13:33	13:58	2							
8	C2.3	14:59	15:05	15:34	2														
11	C2.6	10:58	11:05	11:19	1														
12	C1.9	14:47	14:52	15:12	1							14:44	14:48	14:52	1-				
18	C1.0	10:19	10:29	10:41	1														
27	C3.0	06:36	07:01	07:43	2+							09:58	10:04	10:14	1-				
27	C3.0	09:59	10:07	10:47	2+							11:21	11:26	11:40	1				
27	C3.6	11:20	11:32	11:56	2														
27	*											12:48	12:54	?	-				
27	C2.0	12:49	12:56	?	-							?	13:13	13:29	-				
27	C2.0	13:11	13:17	13:53	2							15:51	16:07	16:44	2+				
27	M1.1	15:51	16:07	17:45	3														
28	C1.9	07:03	07:07	07:21	1-							?	07:05	07:11	-				
28	C2.7	07:53	07:58	08:26	2							07:31	07:57	08:08	2				
28	C1.5	10:57	11:02	11:08	1-							10:58	11:02	11:07	1-				
28	C5.3	12:06	12:14	13:12	2+							12:04	12:12	12:36	1+				
28	B8.7	13:53	13:58	14:02	1-														
28	C4.1	14:54	15:27	16:26	3							14:45	15:26	15:55	2+				
28	C2.4											16:43	16:51	17:10	1+				
28	C1.6																		
28	C3.5																		
29	*																		
29	C1.1											08:05	08:09	08:14	1-				
29	C1.4	08:06	08:11	08:17	1-														
29	C1.1																		
29	C3.9	12:13	12:22	13:03	2+							12:13	12:20	12:41	1+				
29	C1.3											13:46	13:51	13:59	1-				
29	C6.3	16:36	16:42	17:53	2+							16:36	16:42	16:54	1-				
29	C3.2	17:59	18:03	18:50	2+							17:58	18:06	18:12	1-				
29	B7.0																		
30	C1.3																		
31	C1.1																		
31	B5.3																		
31	C1.4																		
31	*																		
31	C1.5																		

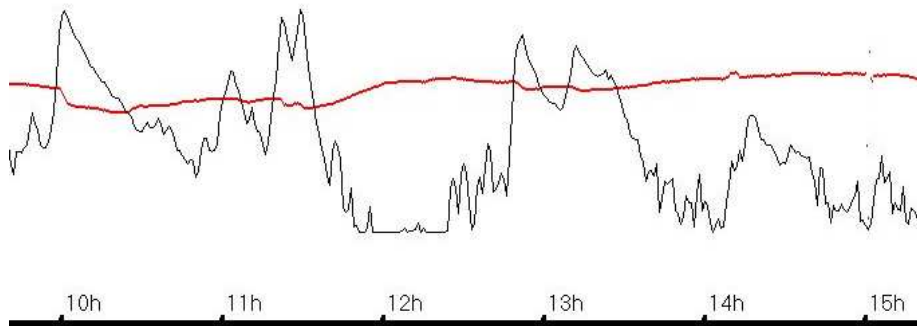
		Steve Parkinson (23.4kHz)				Simon Dawes (various)			Gonzalo Vargas (Various)								
		Tuned radio frequency receiver, 0.58m frame aerial.				PC soundcard and TRF receiver with 1m loop aerial.			Spectrum Lab.								
DAY		START	PEAK	END (UT)		START	PEAK	END (UT)	START	PEAK	END (UT)	START	PEAK	END (UT)	START	PEAK	END (UT)
3	C2.1																
8	C3.0	09:45	09:53	10:30	2	09:37	09:41	10:44	2+								
8	C2.8	11:48	11:57	13:00	2+	11:41	11:52	12:47	2+								
8	C3.1	13:30	13:39	14:06	2	13:17	13:28	14:20	2+								
8	C2.3					14:53	14:58	15:38	2								
11	C2.6																
12	C1.9																
18	C1.0																
27	C3.0					09:58	10:05	10:40	2								
27	C3.0	11:23	11:24	12:00	2	11:19	11:32	12:05	2+								
27	C3.6																
27	*																
27	C2.0																
27	C2.0	16:00	16:10	?	-	15:54	16:06	17:13	2+								
27	M1.1																
28	C1.9																
28	C2.7																
28	C1.5																
28	C5.3	12:09	12:14	12:48	2	12:01	12:11	12:45	2								
28	B8.7																
28	C4.1																
28	C2.4																
28	C1.6																
28	C3.5																
29	*					04:51	04:54	05:08	1-								
29	C1.1					05:36	05:44	05:52	1-								
29	C1.4																
29	C1.1																
29	C3.9	12:18	12:20	?	-	12:06	12:22	13:22	2+								
29	C1.3					13:43	13:53	14:14	1+								
29	C6.3					16:33	16:40	17:17	2	16:45	16:46	17:01	1-				
29	C3.2																
29	B7.0									21:52	21:53	22:05	1-				
30	C1.3																
31	C1.1																
31	B5.3									18:12	18:13	18:20	1-				
31	C1.4																
31	*									21:13	21:14	21:39	1+				
31	C1.5									22:39	22:41	22:43	1-				

# VLF flare activity 2005/11.

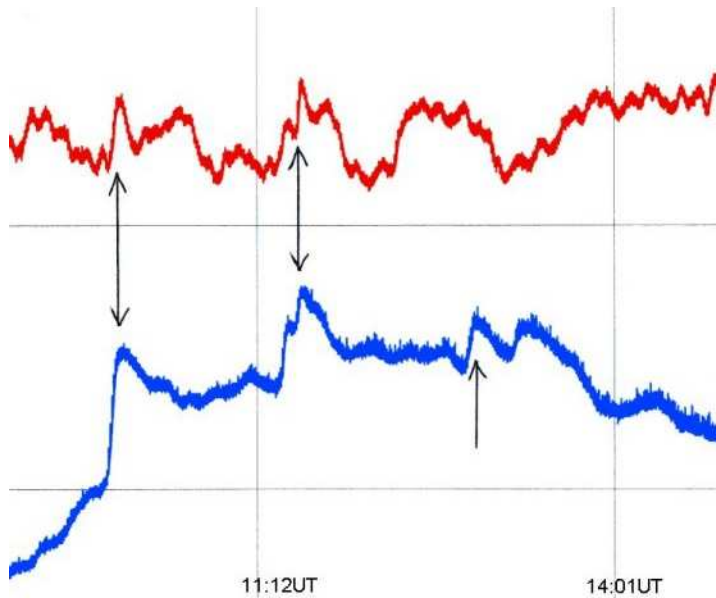


## 2011 JULY

There was a small rise in activity over last month, mainly due to active regions 1260 and 1261 appearing in the last week of July. Both regions developed very quickly as they came into view over the east limb of the Sun. The C3.6 flare on the 27<sup>th</sup> showed two distinct peaks to some observers, and so I have listed it with both timings in the summary.

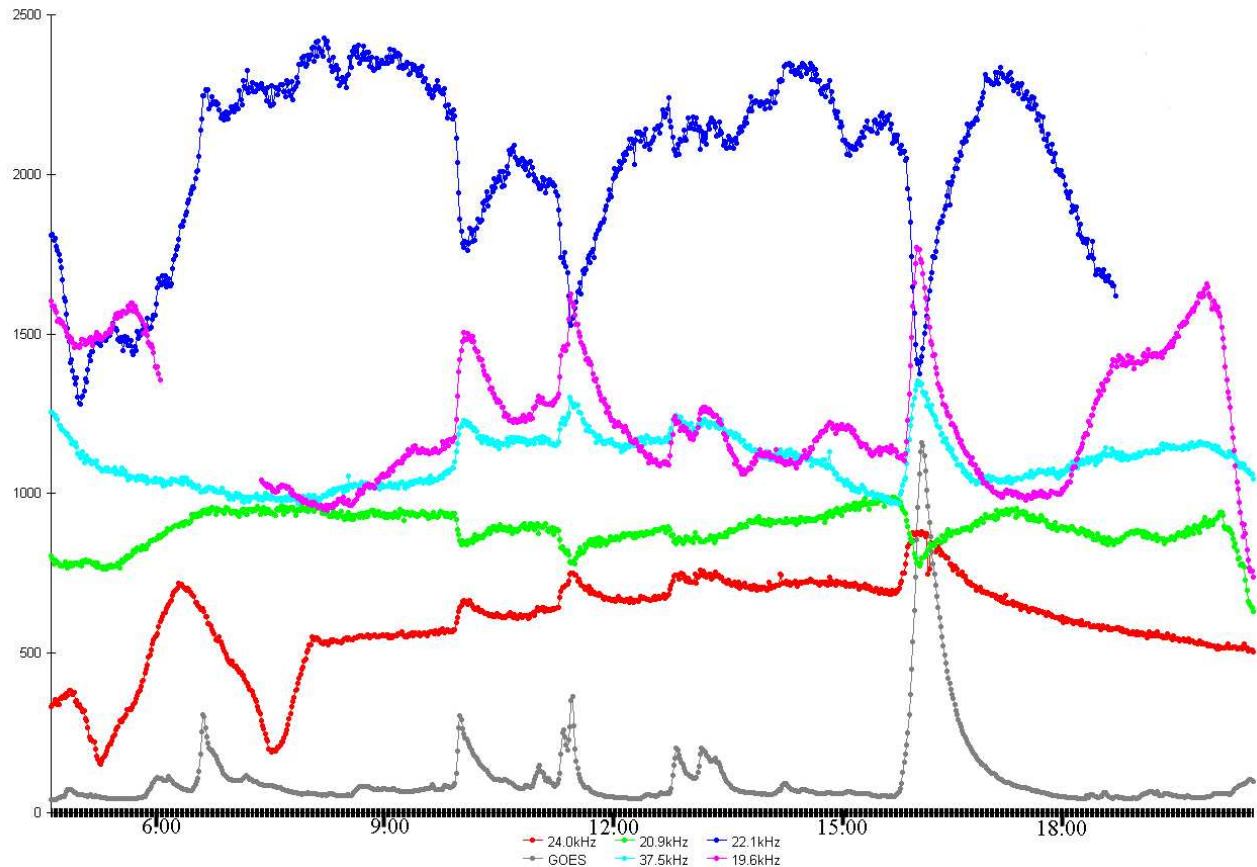


This is my own recording of 23.4kHz with the GOES X-ray flux added as the black trace. The two X-ray peaks are clearly shown at 11:23 and 11:30UT. The next SID shows a similar double peak, but is listed as two C2.0 flares.



This recording by Colin Clements shows similar behaviour at 37.5kHz (Blue) and 23.4kHz (Red).

The 27<sup>th</sup> also produced an M1.1 flare, peaking at about 16:10UT. The only one recorded in July, compare with 10 in February and 11 in March. It produced a fairly weak SID with some observers (including myself), but Mike Edwards has it well recorded in his chart:



This shows all of the events of the day, including the GOES X-ray flux in grey. 37.5kHz is Red, 24kHz Blue, 20.9kHz Green, and 19.6kHz Magenta.

Roberto Battaiola notes that HWU at 18.8kHz went off-air at the end of July. It does seem to go off for periods of time, and then come back on again. Mark Edwards also notes that the 20.27kHz from Tavolara has gone off. He has found a signal at 45.9kHz, also apparently Italian, that has shown several SIDs this month.

My thanks to those that responded to the report of pulsing mentioned last month. Paul Hyde directed me to the Keil Longwave monitor site at [www.df31p.de](http://www.df31p.de) which clearly shows a pulsing signal at 18.0kHz. This signal was causing interference to the wanted signal just 300Hz higher. The source of this signal is not known, however.

The SID reported on the 31<sup>st</sup> peaking at 21:14UT is listed in the GOES data without a flare classification. This is also the case with that shown at 04:54 on the 29<sup>th</sup>.

## Magnetic Data

ROTATION	KEY:	DISTURBED.	ACTIVE	B, C, M, X = FLARE MAGNITUDE.	Synodic rotation start (carrington's)
2407					2092 1 2 3 4 5 6 7 8 9 10 11 12 13 C
2408					2093 1 2 3 4 5 6 7 8 9 C C C C C C C C C 2010 February
2409					2094 1 2 3 4 5 6 7 8 C 2010 March
2410					2095 27 28 29 30 31 1 2 3 4 C C 2010 April
2411					2096 23 24 25 26 27 28 29 30 1 C May
2412					2097 20 21 22 23 24 25 26 27 28 C
2413					2098 15 16 17 18 19 20 21 22 23 24 C M C C C C C C C C
2414					2099 14 15 16 17 18 19 20 21 C C C C C C C C
2415					2100 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 C C C C C C M C C C C C C
2416					2101 6 7 8 9 10 11 12 13 14 C C C C C C C C C C
2417					2102 4 5 6 7 8 9 10 11 C C C C C C C C C C
2418					2103 31 1 2 3 4 5 6 7 C C C C C M C C M C
2419					2104 27 28 29 30 1 2 3 4 C C C C C C C C C C
2420					2105 25 26 27 28 29 30 31
2421					2106 20 21 22 23 24 25 26 27 C C C C C C C C C C
2422					2107 16 17 18 19 20 21 22 23 C C C C C C C C C C
2423					2108 16 17 18 19 20 21 22 C C C C C C C C C C
2424					2109 12 13 14 15 16 17 18 C C C C C C C C C C
2425					2110 9 10 11 12 13 14 15 C C C C C C C C C C
2426					2111 4 5 6 7 8 9 10 11 C C C C C C C C C C
2427					2112 1 2 3 4 5 6 7 8 C C C C C C C C C C
2428					2113 30 31 1 2 3 4 C C C C C C C C C C

Data for the Bartels chart supplied by Gonzalo Vargas, Colin Clements and John Cook. There were no major disturbances recorded, most of the periods identified above being from coronal hole high speed streams, or minor storms.