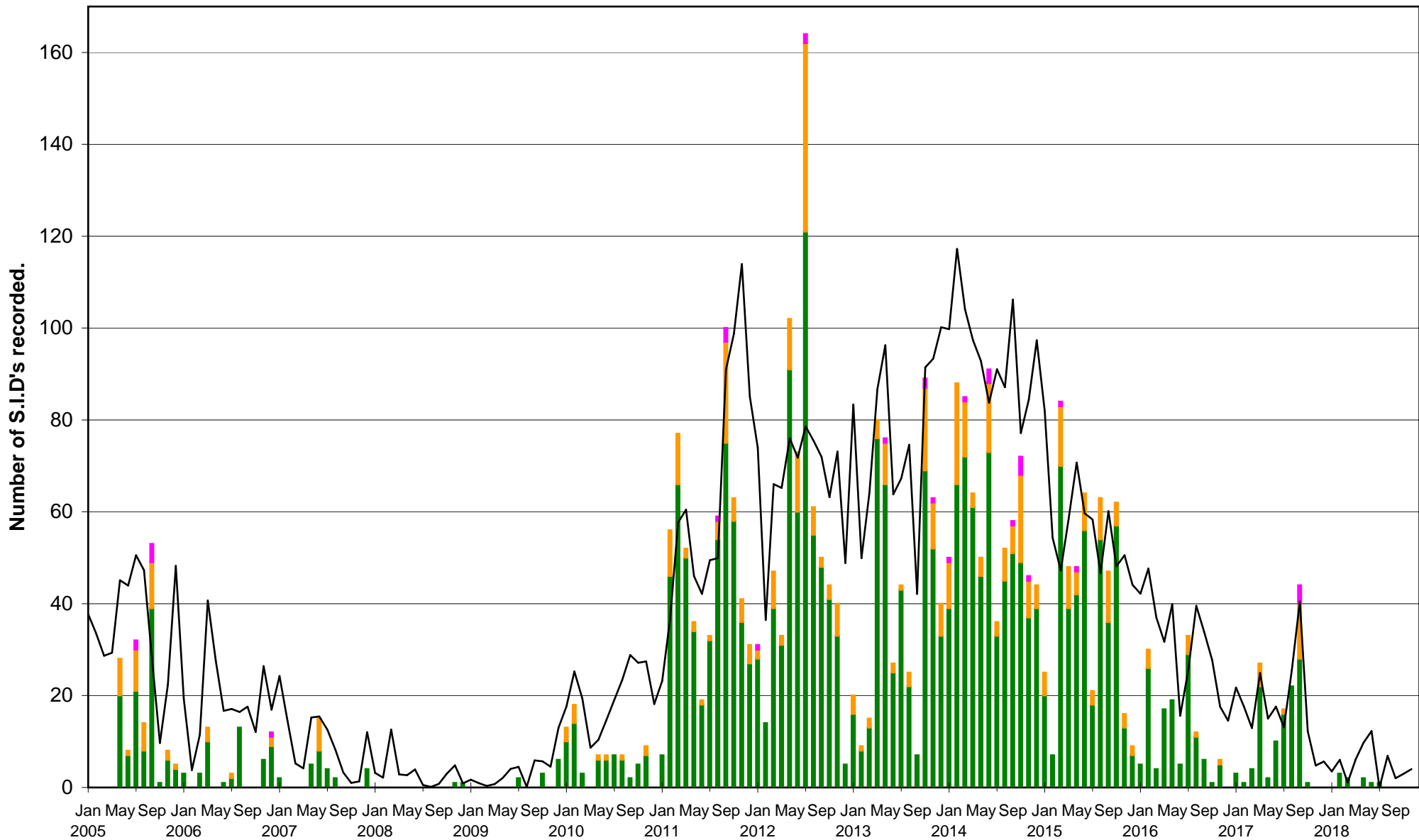
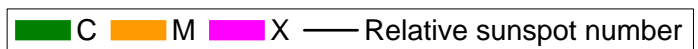


	Xray class	Observers	John Cook (23.4kHz/22.1kHz)	Roberto Battaiola (18.3kHz)	Paul Hyde (22.1kHz/24kHz)	Mark Edwards (24.0kHz)	Colin Clements (23.4kHz/18.3kHz)
			Tuned radio frequency receiver, 0.58m frame aerial.	Modified AAVSO receiver.	Spectrum Lab / PC 1.5m frame aerial.	Spectrum Lab / PC 2m loop aerial.	Tuned Radio Frequency receivers, 0.76m screened loop aerial.
DAY		0	START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)

	Xray class		Steve Parkinson (Various)	Andrew Thomas (23.4kHz)	Phil Rourke (23.4kHz)	Jim Barber	John Elliott (18.3kHz)
			Tuned radio frequency receiver, frame aerials.	Tuned radio frequency receiver, 0.6m frame aerial.	Spectrum Lab, 0.6m frame aerial.	Spectrum Lab, 0.6m frame aerial.	Tuned radio frequency receiver, 0.5m frame aerial.
DAY			START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)

	Xray class		Colin Briden (22.1kHz)				
			Spectrum Lab / PC, 1.2m frame aerial.				
DAY			START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)

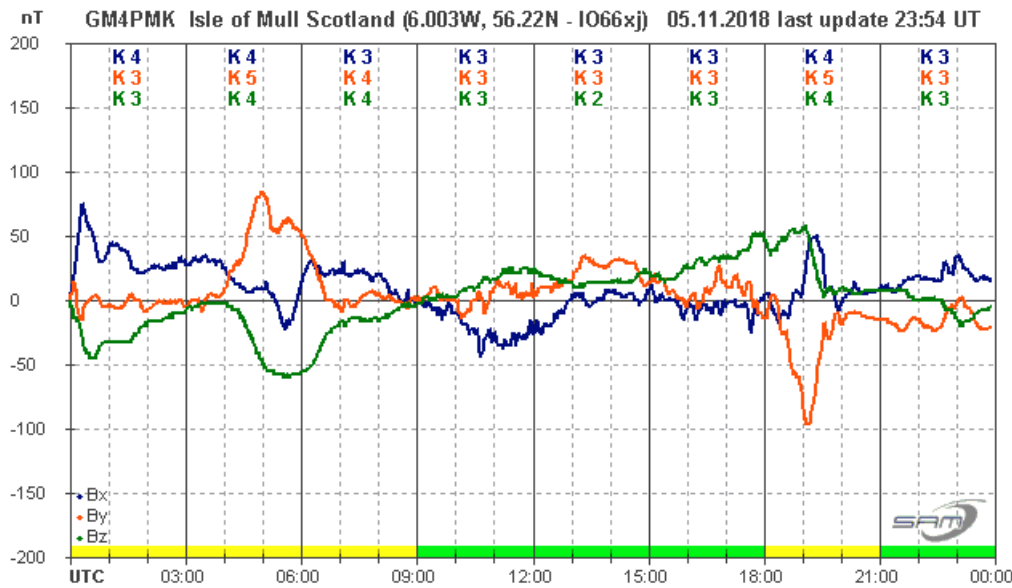
### VLF flare activity 2005/18.



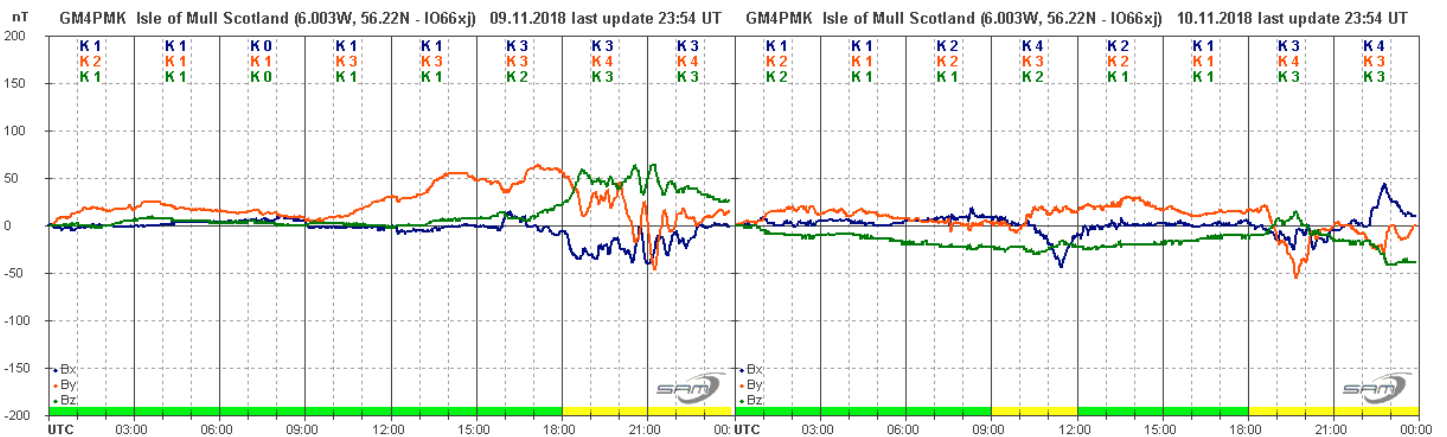
The sun has remained quiet again for most of November, with the X-ray background recorded by GOES15 no higher than A3. There were a few very minor A-class flares, but nothing strong enough to be recorded as a SID. My own 23.4kHz recording is very noisy on most days through the month, typical of the shorter autumn days with the sun at a low altitude.

### MAGNETIC OBSERVATIONS.

Coronal holes were again responsible for all of the magnetic activity, with several equatorial holes drifting through during the month. The most active period was on the 4<sup>th</sup> and 5<sup>th</sup>, as shown in Roger Blackwell's recording:



Another minor disturbance was seen on the 9<sup>th</sup> and 10<sup>th</sup>:



The rest of the month's magnetic activity was of a very minor nature as the coronal holes fragmented and the solar wind speed reduced. There were no magnetic disturbances seen in the 37.5kHz signal.

Magnetic observations received from Colin Clements, Roger Blackwell, Gonzalo Vargas and John Cook.

BARTELS DIAGRAM

ROTATION	KEY:	DISTURBED.	ACTIVE	SFE	B, C, M, X = FLARE MAGNITUDE.	Synodic rotation start (carrington's).
2485	F	25 26 27 28 29 30	1 2 3	4 5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20 21	2015 October 2169
2486	F	22 23 24 25 26 27	28 29 30 31	1 2 3 4 5 6 7 8 9 10 11 12	13 14 15 16 17	2015 November 2170
2487	F	18 19 20 21 22 23 24 25 26 27	28 29 30	1 2 3 4 5 6 7 8 9 10 11 12 13 14	15 16 17 18 19 20 21 22	2015 December 2171
2488	F	15 16 17 18 19 20 21 22 23 24	25 26 27 28 29 30	31 1 2 3 4 5 6 7 8 9 10		2016 January 2172
2489	F	11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31			2016 February 2173
2490	F	7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	1 2 3 4			2016 March 2174
2491	F	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31				2175
2492	F	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27				2016 April 2176
2493	F	28 29 30	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24			2016 May 2177
2494	F	25 26 27 28 29 30 31	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20			2016 June 2178
2495	F	21 22 23 24 25 26 27 28 29 30	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19			2016 July 2179
2496	F	18 19 20 21 22 23 24 25 26 27 28 29 30	31 1 2 3 4 5 6 7 8 9 10 11 12 13			2016 August 2180
2497	F	14 15 16 17 18 19 20 21 22 23 24 25 26	27 28 29 30 31	1 2 3 4 5 6 7 8 9		2016 September 2181
2498	F	10 11 12 13 14 15 16 17 18 19 20 21 22	23 24 25 26 27 28 29 30	1 2 3 4 5 6		2016 October 2182
2499	F	7 8 9 10 11 12 13 14 15 16 17 18 19	20 21 22 23 24 25 26 27 28 29 30 31	1 2		2016 November 2183
2500	F	3 4 5 6 7 8 9 10 11 12 13 14 15 16	17 18 19 20 21 22 23 24 25 26 27 28 29			2184
2501	F	30 31	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26			2016 December 2185
2502	F	27 28 29 30 31	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22			2017 January 2186
2503	F	23 24 25 26 27 28 29 30 31	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18			2017 February 2187
2504	F	19 20 21 22 23 24 25 26 27 28 29 30 31	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17			2017 March 2188
2505	F	18 19 20 21 22 23 24 25 26 27 28 29 30 31	1 2 3 4 5 6 7 8 9 10 11 12 13			2017 April 2189
2506	F	14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	31 1 2 3 4 5 6 7 8 9 10			2017 May 2190
2507	F	11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	27 28 29 30 31	1 2 3 4 5 6		2017 June 2191
2508	F	7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	23 24 25 26 27 28 29 30	1 2 3		2017 July 2192
2509	F	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	20 21 22 23 24 25 26 27 28 29 30			2193
2510	F	31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26				2017 August 2194
2511	F	27 28 29 30 31	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22			2017 September 2195
2512	F	23 24 25 26 27 28 29 30	1 2 3 4 5 6 7 8 9			2017 October 2196
2513	F	20 21 22 23 24 25 26 27 28 29 30 31	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15			2017 November 2197
2514	F	16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	1 2 3			2017 December 2198
2515	F	13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	31 1 2 3 4 5 6 7 8			2018 January 2199
2516	F	9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	27 28 29 30 31	1 2 3 4		2018 February 2200
2517	F	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	31 1 2 3			2018 March 2201
2518	F	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30				2202
2519	F	31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26				2018 April 2203
2520	F	27 28 29 30	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23			2018 May 2204
2521	F	24 25 26 27 28 29 30 31	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19			2018 June 2205
2522	F	20 21 22 23 24 25 26 27 28 29 30	1 2 3 4 5 6 7 8 9			2018 July 2206
2523	F	17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	1 2 3 4 5 6 7 8 9 10 11 12			2018 August 2207
2524	F	13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	1 2 3 4 5 6 7 8			2018 September 2208
2525	F	9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	30 1 2 3 4 5			2018 October 2209
2526	F	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	27 28 29 30 31	1		2210
2527	F	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22				2018 November 2211
2528	F	29 30	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19			2018 December 2212