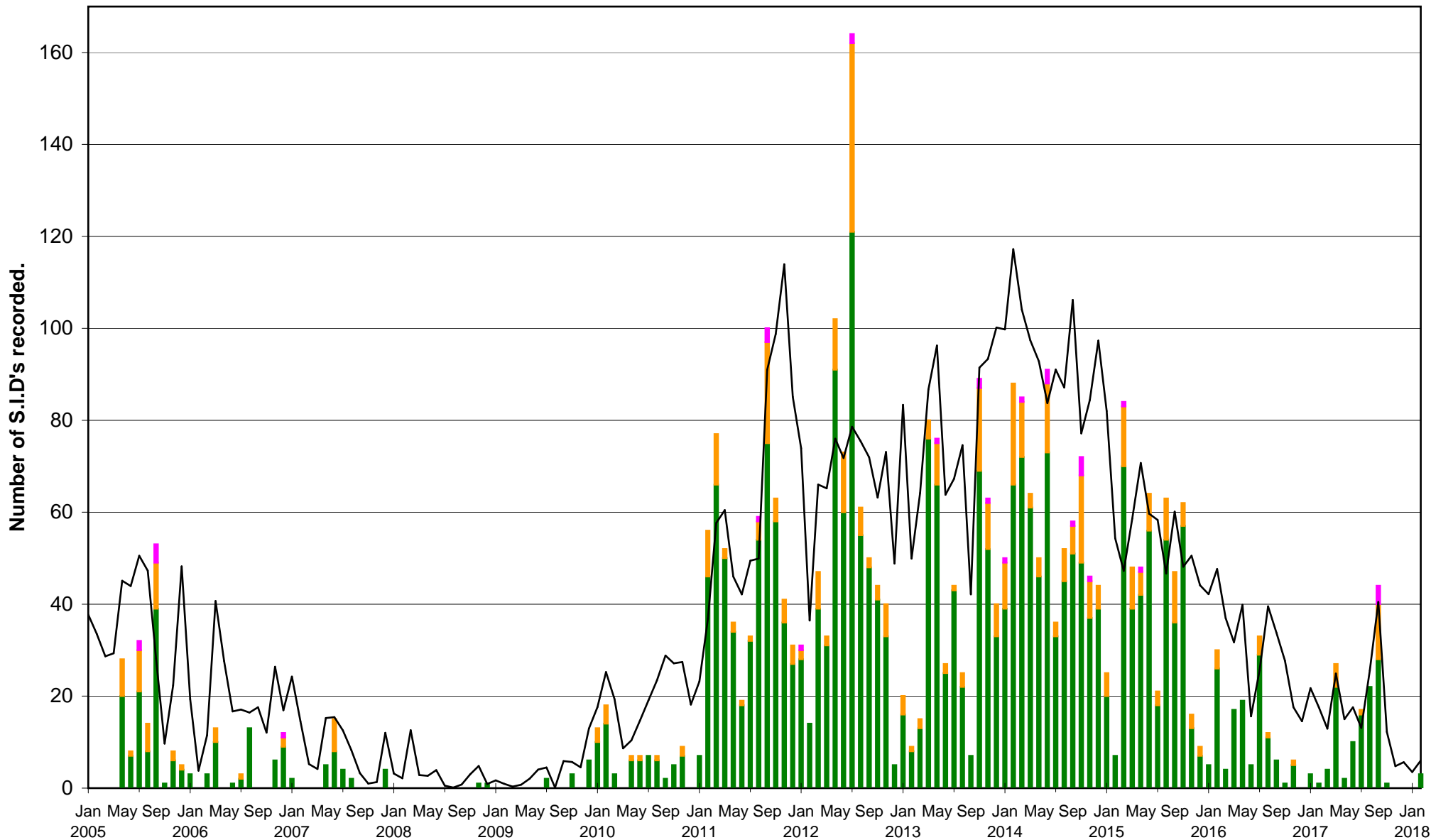
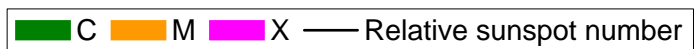


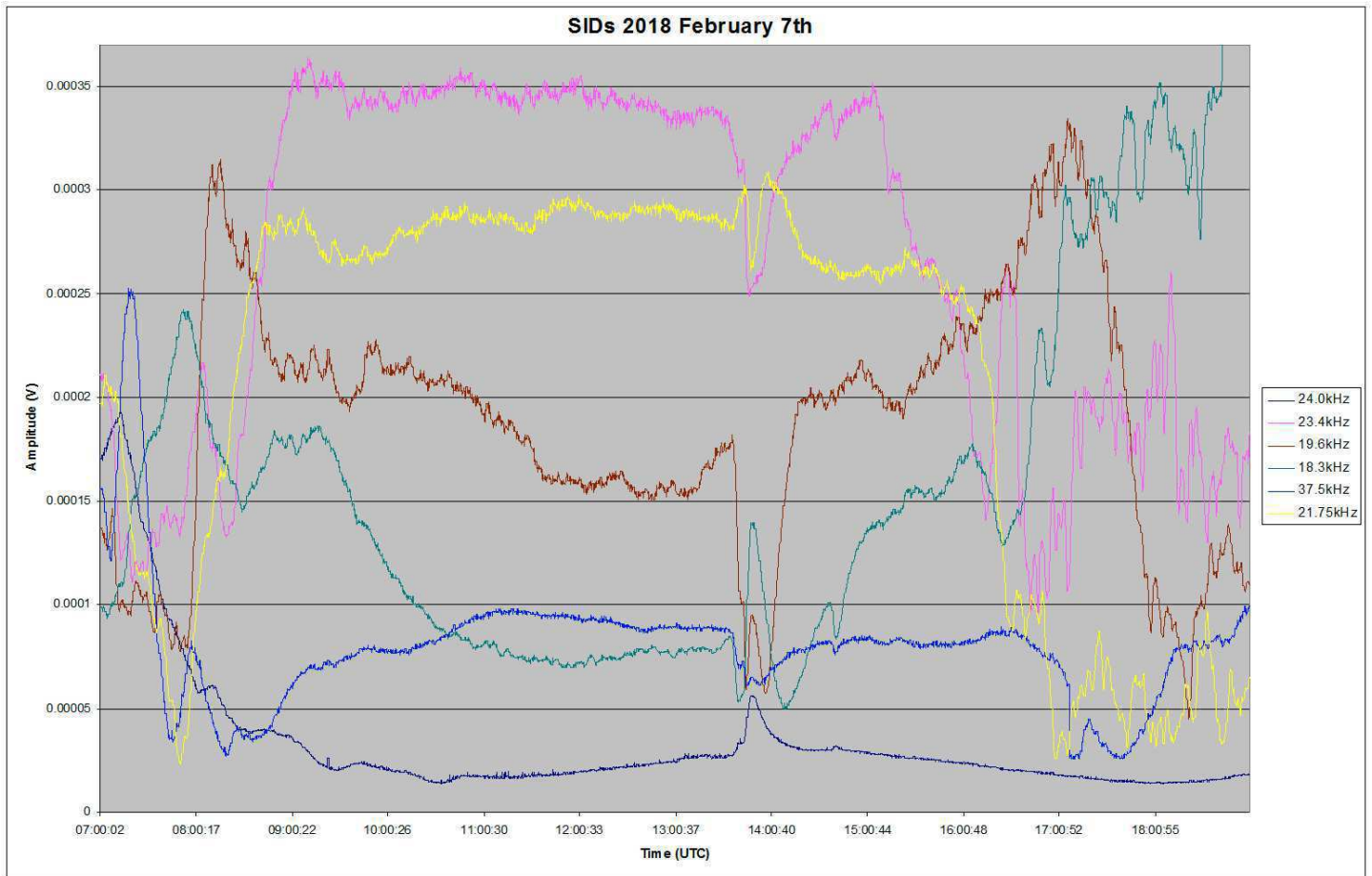
DAY	Xray class	Observers	John Cook (23.4kHz/22.1kHz)	Roberto Battaiola (20.9kHz)	Paul Hyde (22.1kHz/24kHz)	Mark Edwards (24.0kHz)	Colin Clements (23.4kHz/22.1kHz)
			Tuned radio frequency receiver, 0.58m frame aerial.	Modified AAVSO receiver.	Spectrum Lab / PC 1.5m frame aerial.	Spectrum Lab / PC 2m loop aerial.	AAVSO receiver, 0.76m screened loop aerial.
			START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)
7	?	3	13:36 13:39 ? -			13:36 13:39 ? -	
7	C8.1	6	13:44 13:48 13:56 1-	13:34 13:50 14:07 2	13:36 13:48 14:14 2	13:43 13:48 14:24 2	
7	C1.7	3	14:36 14:40 14:46 1-		14:37 14:41 14:48 1-	14:38 14:41 14:46 1-	
9	B3.2	1				14:55 14:57 14:58 1-	
9	B7.2	1				15:46 15:51 15:55 1-	
10	C4.6	6	13:07 13:15 13:26 1	13:02 13:22 13:45 2	13:07 13:18 13:42 2	13:08 13:18 13:50 2	

DAY	Xray class	Observers	Steve Parkinson (Various)	Andrew Thomas (23.4kHz)	Phil Rourke (23.4kHz)	Jim Barber	John Elliott (18.3kHz)
			Tuned radio frequency receiver, frame aeralis.	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.
			START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)
7	?		13:36 ? ? -				
7	C8.1		13:43 13:48 14:05 1	13:44 13:51 13:59 1-			
7	C1.7						
9	B3.2						
9	B7.2						
10	C4.6		13:09 13:16 13:33 1	13:11 13:17 13:26 1-			

VLF flare activity 2005/18.

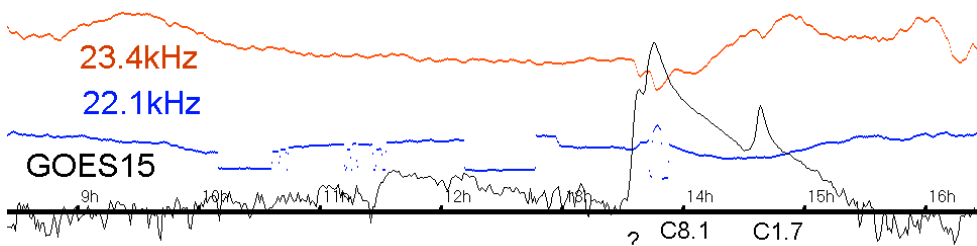


The X-ray background flux remained below B1 levels (ie, $<10^{-7}$ W/m²) for most of the month but the appearance of AR12699 produced numerous small B-class flares during February 5th to the 12th. There were also several C-class flares, some of which were well timed for us to record as SIDs. We thus managed to record six SIDs in February, the most activity since the major flares of September last year. The 23.4kHz transmitter fell silent at midnight on the 18th, and apart from a few short bursts has remained off-air since then.

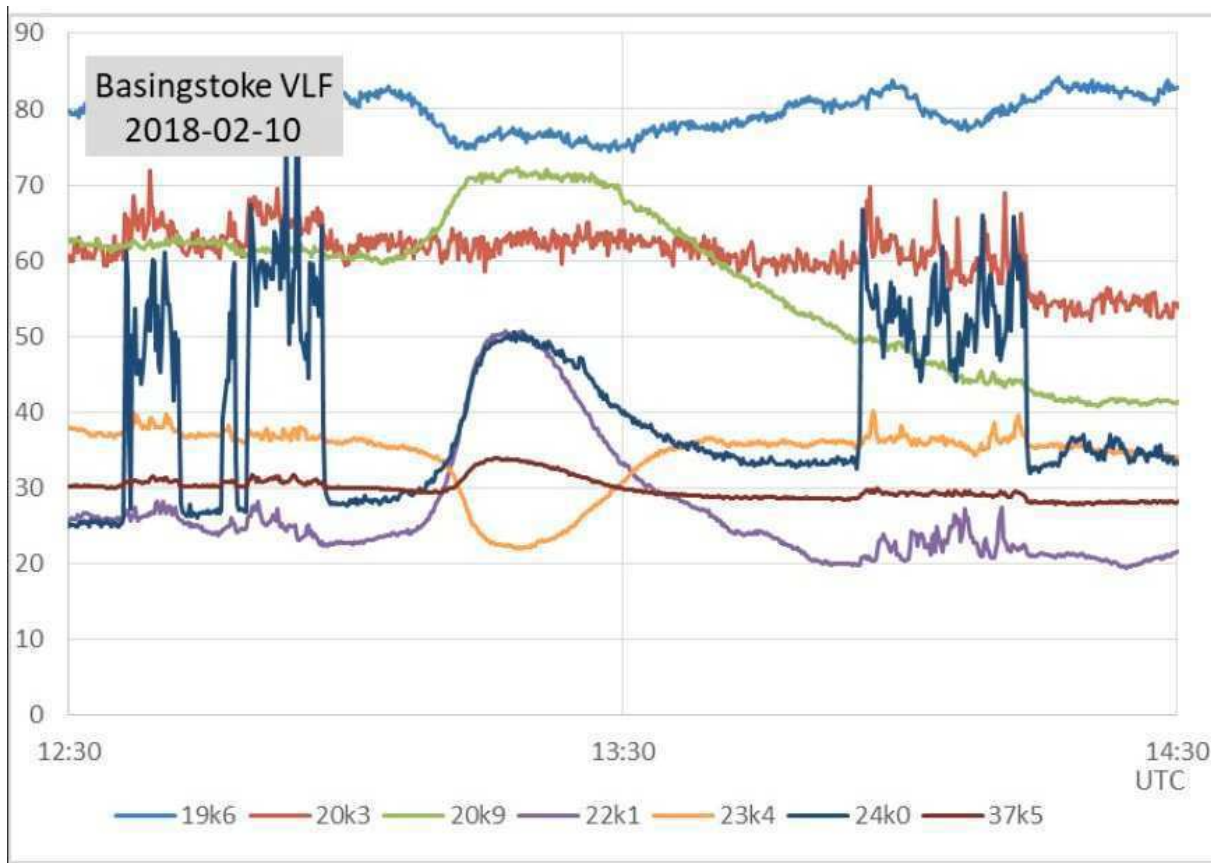


This recording by Mark Edwards shows activity on the 7th, with both the C8.1 and C1.7 flares producing clear SIDs. A smaller peak, unclassified in the GOES data, is also visible just before the main peak of the C8.1 flare. It is evident at most of the frequencies shown, and is identified as '?' in the tables.

2018 February 7



I have added the GOES data to my own recording (above), showing the extra peak in X-ray flux.

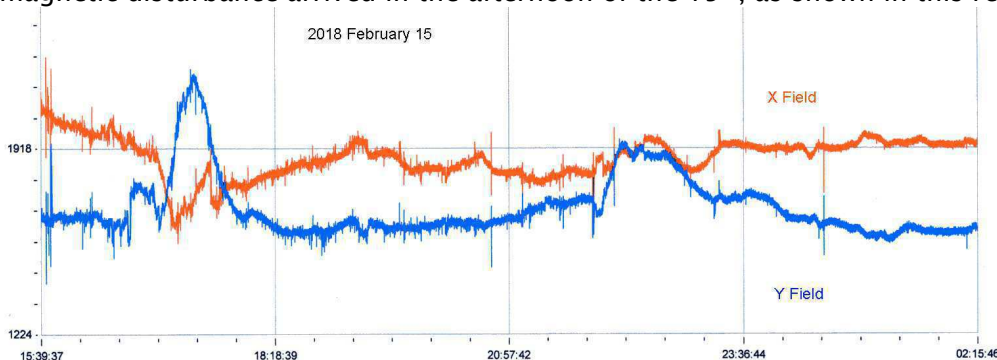


This chart from Paul Hyde shows the C4.6 flare recorded on the 10th. There are clear SIDs at most of the frequencies shown, but 20.3kHz has shown no response at all. 19.6kHz shows some response, but it is well masked by the general noise. The very strong noise bursts before and after the flare also show at most frequencies, including 20.3kHz, but not 19.6kHz.

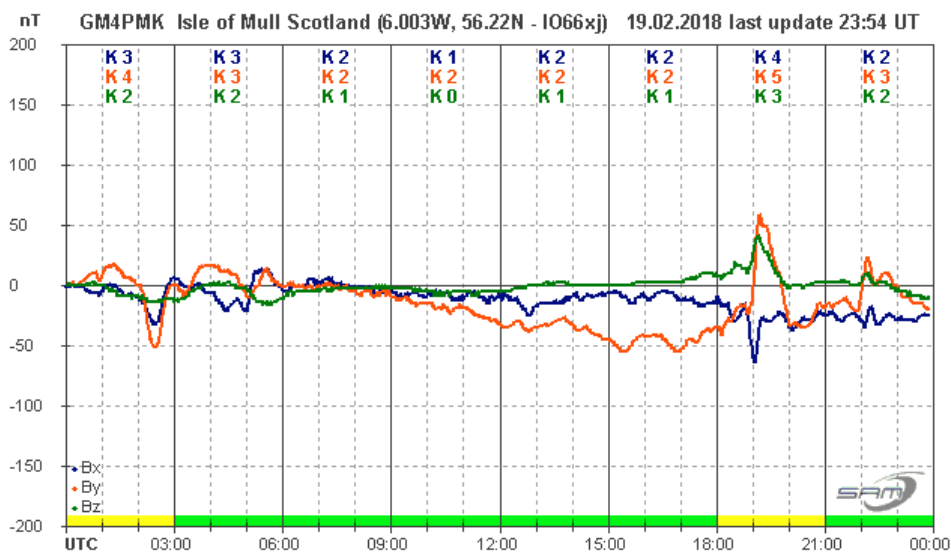
Following on from January, Colin Clements noted some substantial noise and oscillations early in February, fading as the month progressed. My own recordings showed a similar pattern, although the loss of 23.4kHz from the 19th prevents a full comparison. Mark Edwards recorded another pair of noisy 'chirps' at 37.5kHz on the 1st, at 11:05 and 12:54UT. There was little magnetic activity at the time, and no proton events are shown in the satellite data, so its cause still remains a mystery.

MAGNETIC OBSERVATIONS.

A C1.5 long-duration flare at 01:25UT on the 12th produced an Earth directed CME. The resulting magnetic disturbance arrived in the afternoon of the 15th, as shown in this recording by Colin Clements:

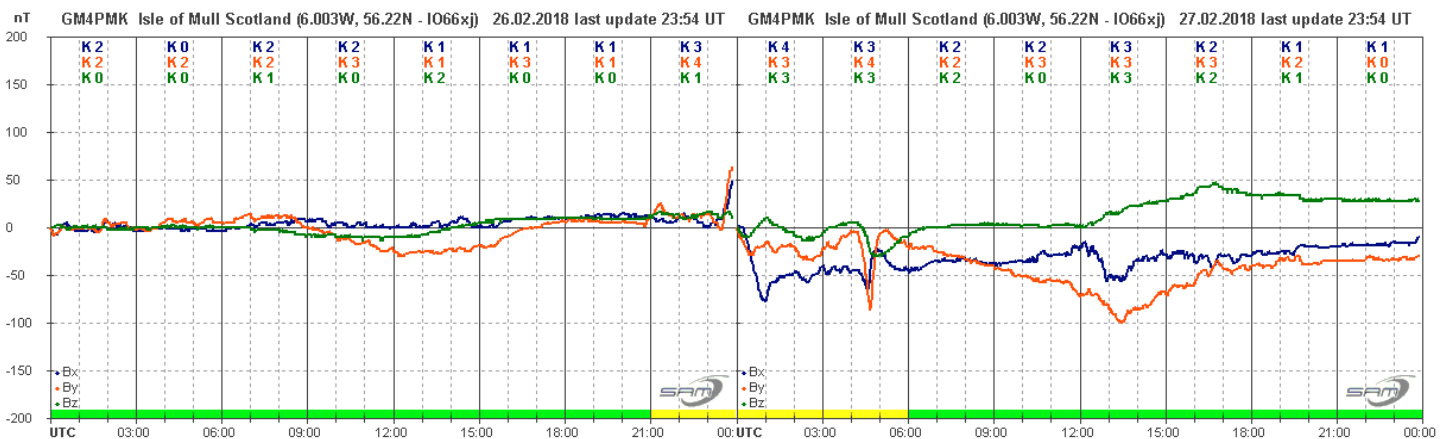


The disturbance was very short-lived, having faded by the end of the day. The Bartels diagram shows activity present for most of the remainder of the month. This was from numerous small coronal holes, and was mostly of a very minor nature.



This is Roger Blackwell's recording from the 19th. A small coronal hole near the solar south pole that was last seen on January 24th made a repeat appearance with a high speed wind stream and some minor magnetic turbulence.

An equatorial coronal hole produced another high speed stream, arriving over the 26th and 27th.



The sensor has been reset at midnight in this recording by Roger Blackwell showing activity over the 26th and 27th. Starting around 23:30UT on the 26th, the disturbance lasts for most of the next day.

Both of these disturbances were also noted by Gonzalo Vargas (Bolivia), together with a smaller 10 minute disturbance on the 23rd. Colin Clements also noted some activity present on the 18th.

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).																								
2474	2014 December																													
	F	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		
2475	2015 January																													
	F	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		
2476	2015 February																													
	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		
2477	2015 March																													
	F	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
2478	2015 April																													
	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		
2479	2015 May																													
	F	16	17	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		
2480	2015 June																													
	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		
2481	2015 July																													
	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	5	
2482	2015 August																													
	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		
2483	2015 September																													
	F	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		
2484	2015 October																													
	F	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		
2485	2015 November																													
	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		
2486	2015 December																													
	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		
2487	2016 January																													
	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	14	
2488	2016 February																													
	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		
2489	2016 March																													
	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		
2490	2016 April																													
	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				
2491	2016 May																													
	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		
2492	2016 June																													
	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		
2493	2016 July																													
	F	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	
2494	2016 August																													
	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		
2495	2016 September																													
	F	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	
2496	2016 October																													
	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		
2497	2016 November																													
	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		
2498	2016 December																													
	F	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	5	6	
2499	2017 January																													
	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		
2500	2017 February																													
	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		
2501	2017 March																													
	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	
2502	2017 April																													
	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		
2503	2017 May																													
	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		
2504	2017 June																													
	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
2505	2017 July																													
	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		
2506	2017 August																													
	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	
2507	2017 September																													
	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		
2508	2017 October																													
	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	3	
2509	2017 November																													
	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		
2510	2017 December																													
	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		
2511	2018 January																													
	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		
2512	2018 February																													
	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	19	
2513	2018 March																													
	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		
2514	2018 April																													
	F	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	
2515	2018 May																													
	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		
2516	2018 June																													
	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		
2517	2018 July																													
	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		