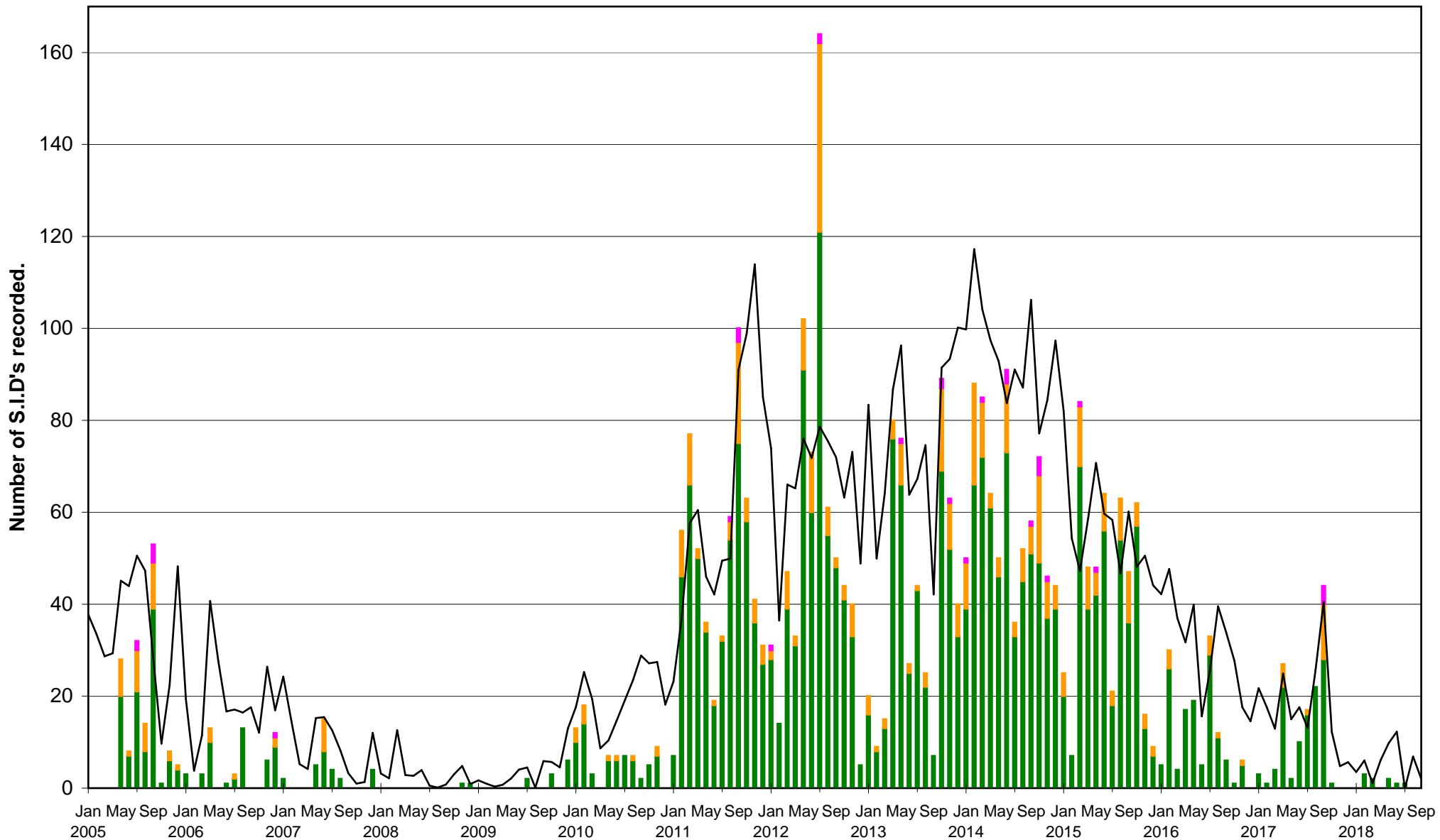
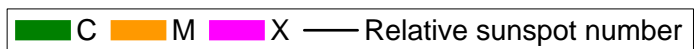
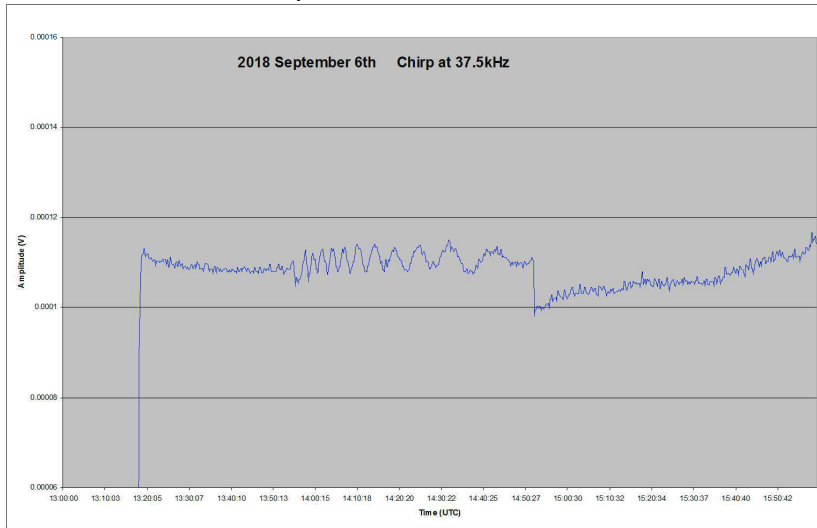


VLF flare activity 2005/18.

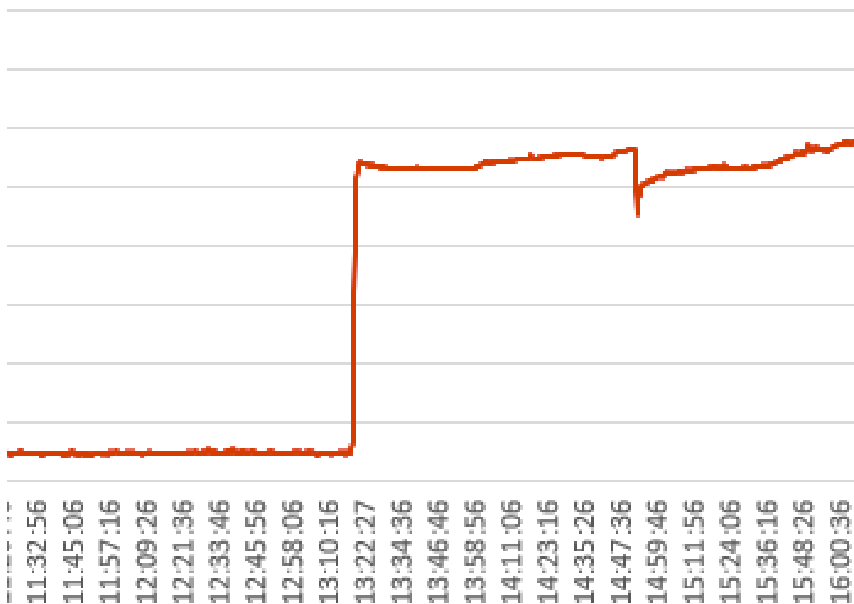


For the second month we have again recorded no SIDs. The GOES X-ray flux recordings show that the background flux was below A1 level for most of September, with brief excursions to A4 over the 10th, 11th, 12th, and 30th. Although there were a few small sunspots recorded by the Solar Section, none were active and there were no flares.

Mark Edwards did record several of the ‘chirps’ that have been a characteristic of the 37.5kHz signal from Grindavic, notably on the 6th and 20th.



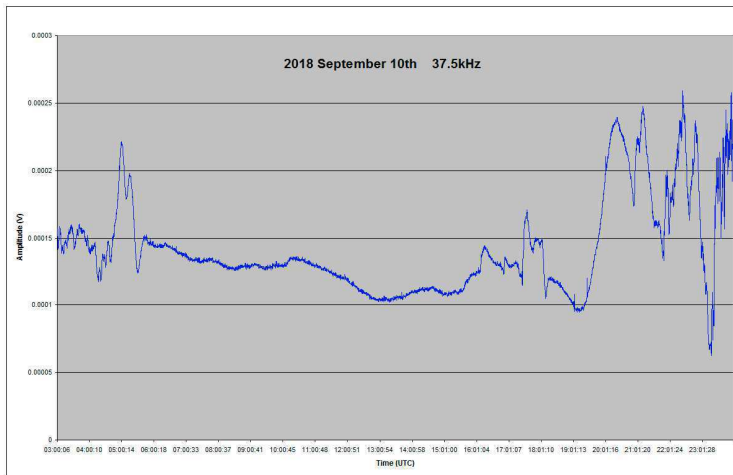
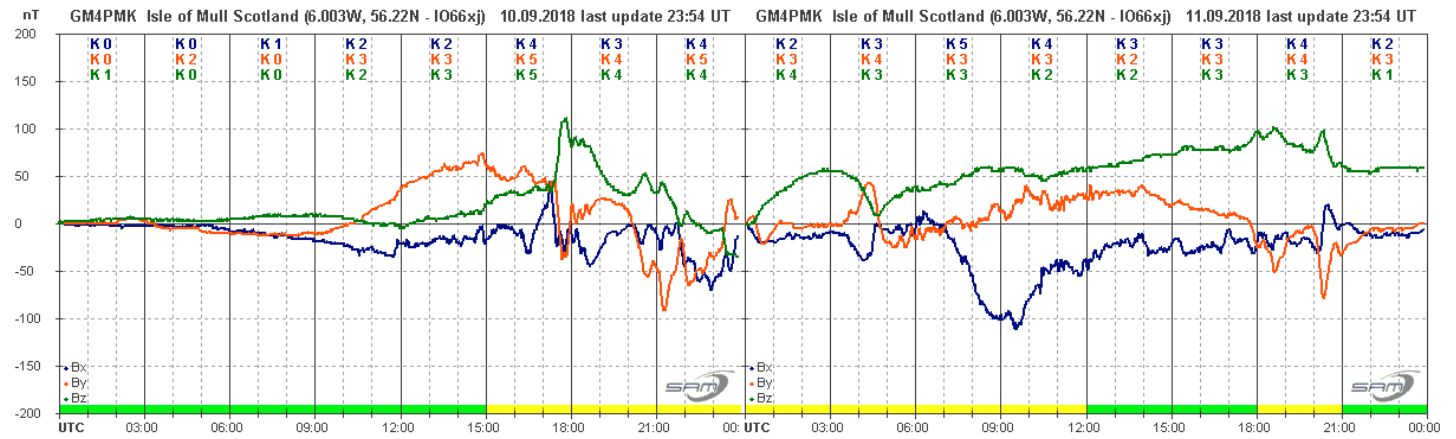
180906 York Grindavic 37.5kHz



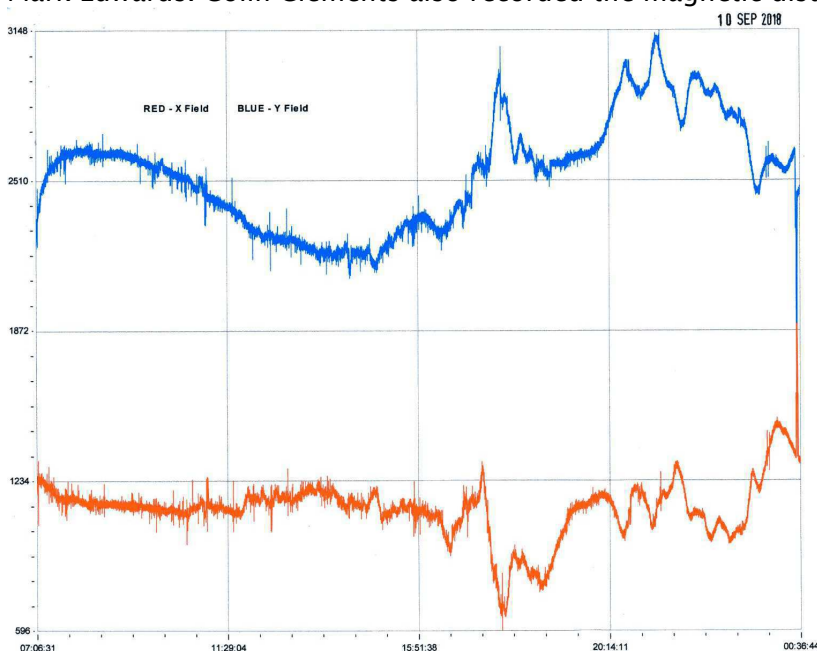
The top recording is by Mark Edwards (Coventry), and the lower recording is by Colin Briden (York), showing the 37.5kHz signal on the 6th. While the oscillating ‘chirp’ is very clear in Mark’s recording, there is no evidence in Colin’s. The rise in signal strength at about 13:20 is present in both, as is the transient glitch at about 14:50. The source of the chirp remains unknown, but does look more like a source of interference.

MAGNETIC OBSERVATIONS.

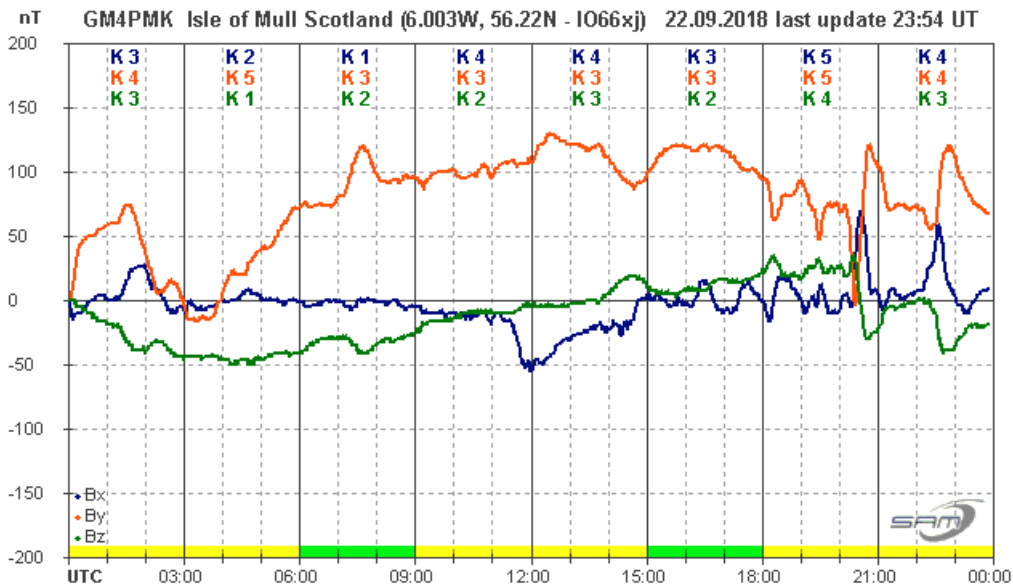
There were no earth directed CMEs during September, all of the magnetic activity being from turbulent coronal winds. The most active period was in the afternoon of the 10th, as shown in the recording from Roger Blackwell:



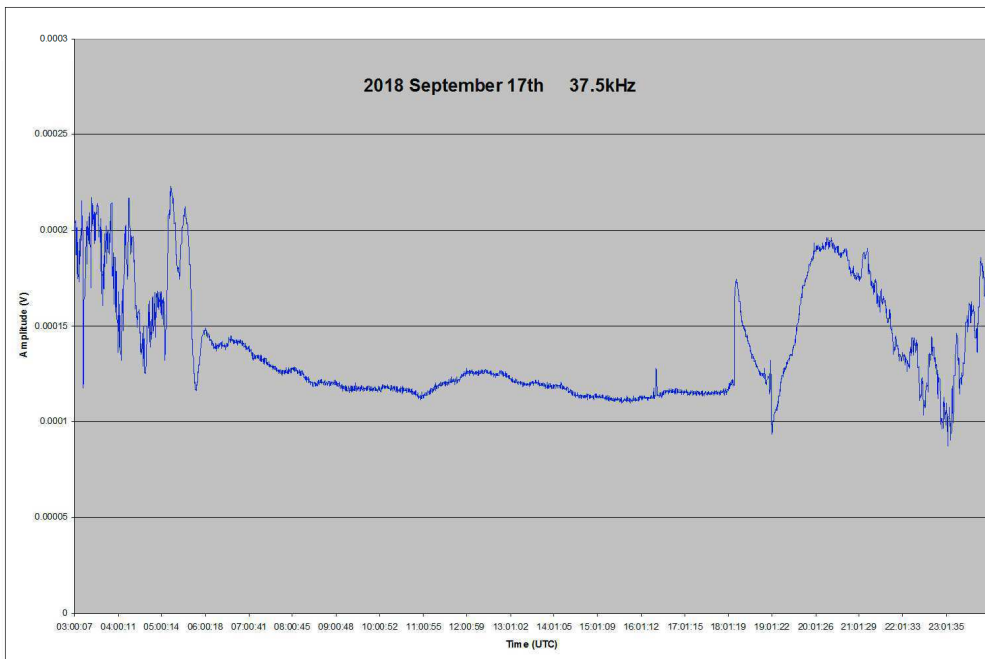
The 37.5kHz signal responded with a strong disturbance from about 16:00 to 18:00UT, recorded by Mark Edwards. Colin Clements also recorded the magnetic disturbance on the 10th, shown below:



Disturbances continued all day on the 11th, and then after a quieter period on the 12th were again present from the 13th to the 15th. A turbulent coronal wind was again present from about 23:30UT on the 21st, and all day on the 22nd. It had faded out by 04:00 on the 23rd. Roger Blackwell's recording from the 23rd shows the strong disturbance:



The most active period was from 20UT, and so rather late to show on the 37.5kHz signal. Mark did record a 37.5kHz disturbance on the 17th that appears to be linked to weak magnetic transients at 18:09 and 19:02UT



The end of the disturbance is lost as sunset takes over, but this does appear to be genuine. September is often a good month for magnetic storms and their associated aurora as the Earth's magnetic field is well aligned with the solar magnetic field, allowing charged particles from the solar wind easy access to the polar regions of the atmosphere.

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 C	26 CMCC	27 MCM	28 MCM	29 MCM	30 MCM	2015 October 1 CCM	2 CCMM	3 CCCC	2169	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
2486	F	22	23	24	25	26	27	28	29	30	31	2015 November 1 CCCC	2 CCCC	3 CMM	4	5	6	7	8	9	10	11	12	13	14	15	16	17			
2487	F	18	19	20	21	22	23	24	25	26	27	2015 December 28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14			
2488	F	15	16	17	18	19	20	21	22	23	24	2016 January 25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10			
2489	F	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	2016 February 1	2	3	4	5	6			
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	30	31	2016 March 1	2	3	4	
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			
2492	F	2016 April 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	F	28	29	30	2016 May 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	F	25	26	27	28	29	30	31	2016 June 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			
2495	F	21	22	23	24	25	26	27	28	29	30	2016 July 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17			
2496	F	18	19	20	21	22	23	24	25	26	27	28	29	30	2016 August 1	2	3	4	5	6	7	8	9	10	11	12	13				
2497	F	14	15	16	17	18	19	20	21	22	23	24	25	26	2016 September 1	2	3	4	5	6	7	8	9								
2498	F	10	11	12	13	14	15	16	17	18	19	20	21	22	2016 October 1	2	3	4	5	6											
2499	F	7	8	9	10	11	12	13	14	15	16	17	18	19	2016 November 1	2	3	4	5	6											
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			
2501	F	30	2016 December 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	F	27	28	29	30	31	2017 January 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22			
2503	F	23	24	25	26	27	28	29	30	31	2017 February 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18			
2504	F	19	20	21	22	23	24	25	26	27	28	29	30	31	2017 March 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
2505	F	18	19	20	21	22	23	24	25	26	27	28	29	30	31	2017 April 1	2	3	4	5	6	7	8	9	10	11	12	13			
2506	F	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	2017 May 1	2	3	4	5	6	7	8	9	10		
2507	F	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	2017 June 1	2	3	4	5	6			
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	31	2017 July 1	2	3		
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			
2510	F	31	2017 August 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	F	27	28	29	30	31	2017 September 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22			
2512	F	23	24	25	26	27	28	29	30	31	2017 October 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
2513	F	20	21	22	23	24	25	26	27	28	29	30	31	2017 November 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15			
2514	F	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	2017 December 1	2	3	4	5	6	7	8	9	10	11	12		
2515	F	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	2018 January 1	2	3	4	5	6	7	8			
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	2018 February 1	2	3	4			
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	2018 March 1	2	3
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			
2519	F	31	2018 April 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			
2520	F	27	28	29	30	2018 May 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
2521	F	24	25	26	27	28	29	30	31	2018 June 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19			
2522	F	20	21	22	23	24	25	26	27	28	29	30	2018 July 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
2523	F	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	2018 August 1	2	3	4	5	6	7	8	9	10	11	12			
2524	F	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	2018 September 1	2	3	4	5	6	7	8			
2525	F	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	2018 October 1	2	3	4	5		