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Please send all reports and observations to jacook.uk@outlook.com

BAA Radio Astronomy Section.

Director Paul Hearn.

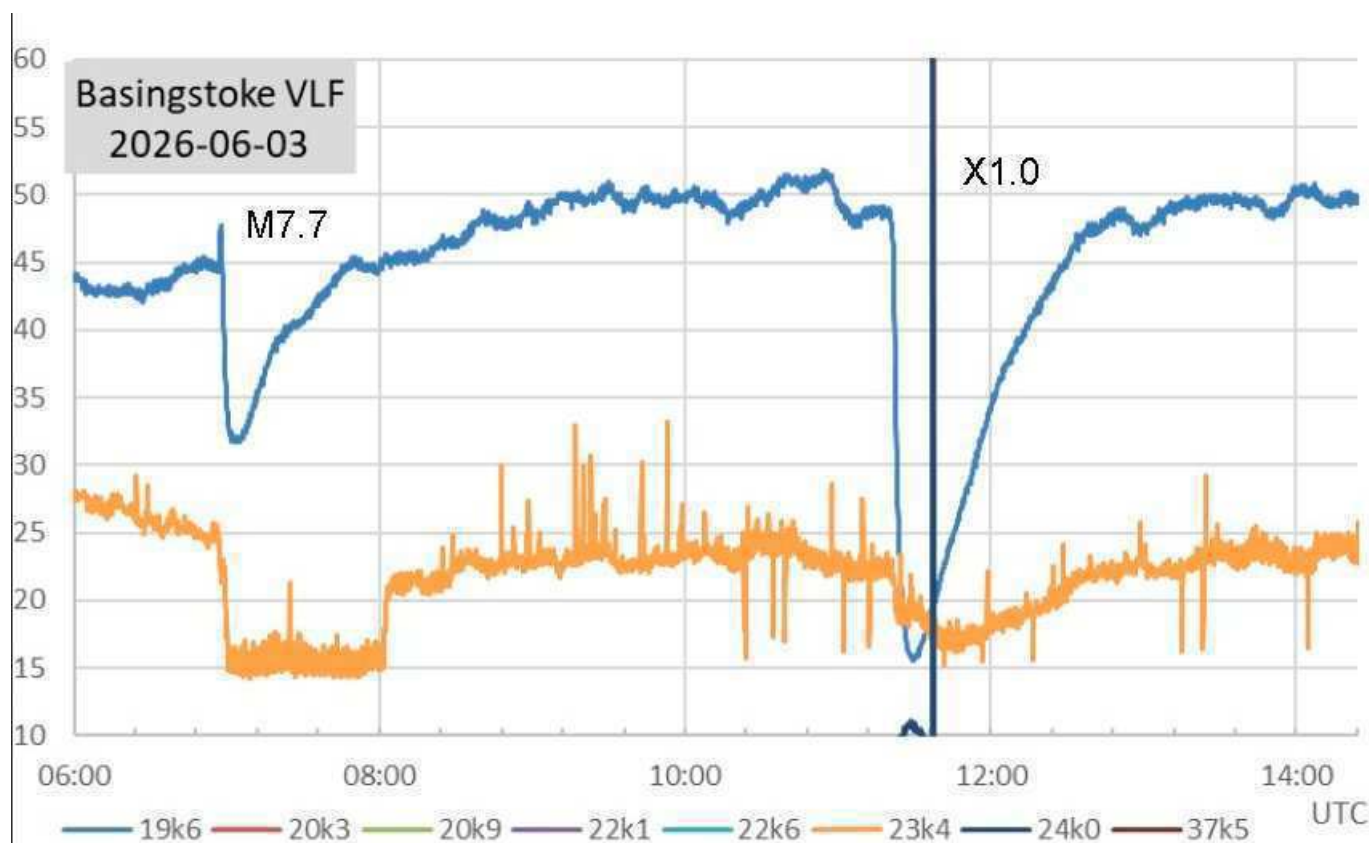
RADIO SKY NEWS

2026 JUNE.

Please note the new email address above, for reports and observations. My previous account stopped working earlier this year, and so I have had to start again with a new system.

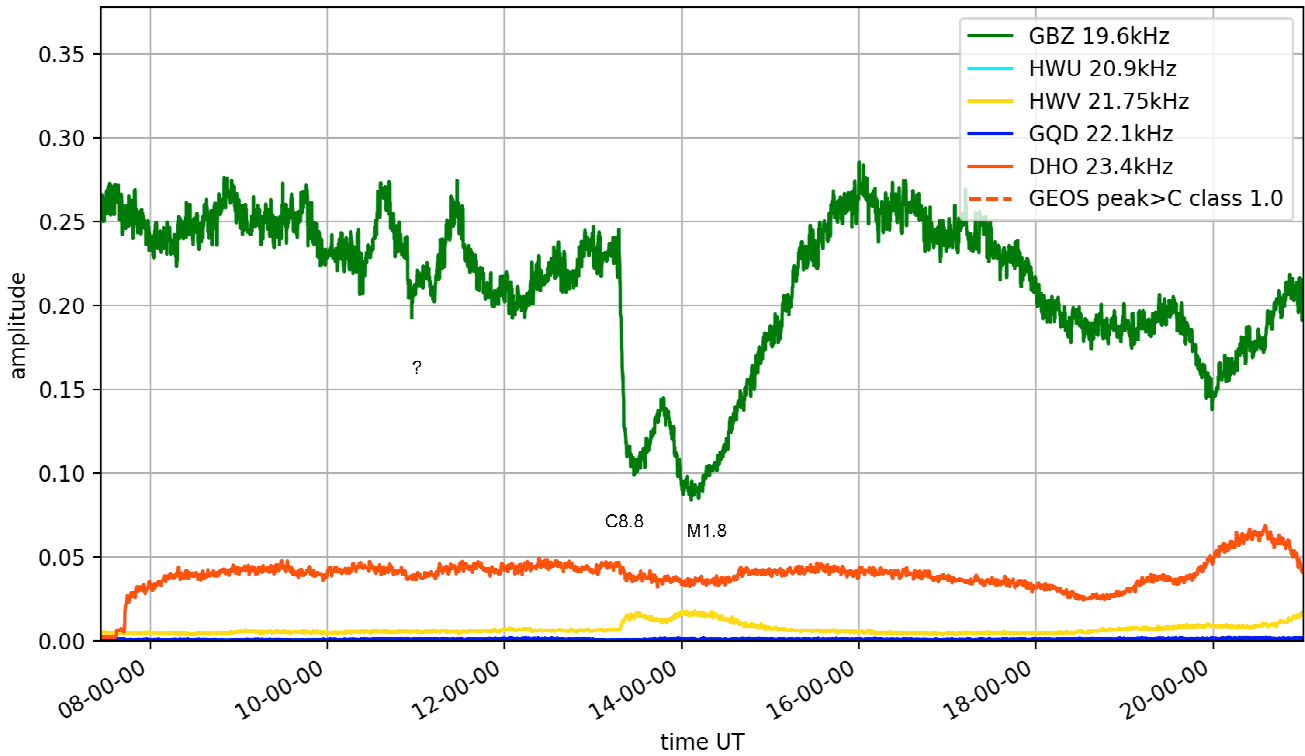
VLF SID OBSERVATIONS.

Solar activity in June was slightly higher than in May, with 34 SIDs recorded. We recorded a single X-class flare, well timed around 11:30UT on the 3rd.

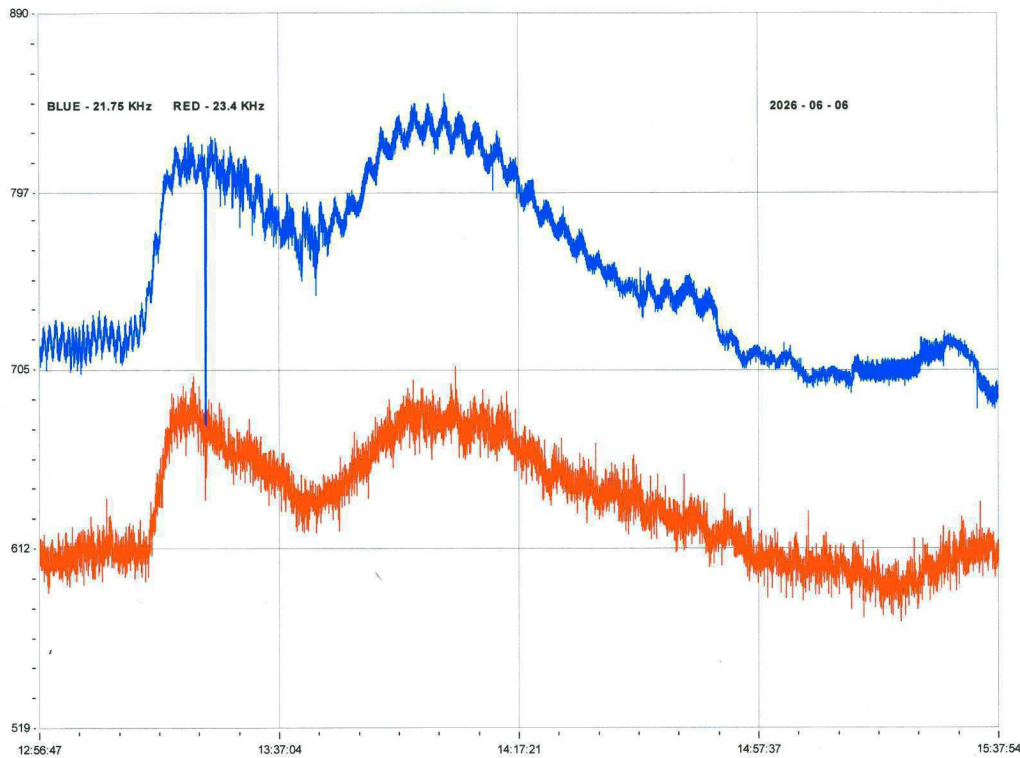


Paul Hyde's recording shows a clean SID at 19.6kHz, together with the earlier M7.7. 24kHz appears to show a spike during the X flare, presumably unrelated. 23.4kHz shows its usual morning break during the M7.7 flare, with only a very small response to the X-flare. The only other X-flare shown in the satellite data was at 20:50UT on the 30th.

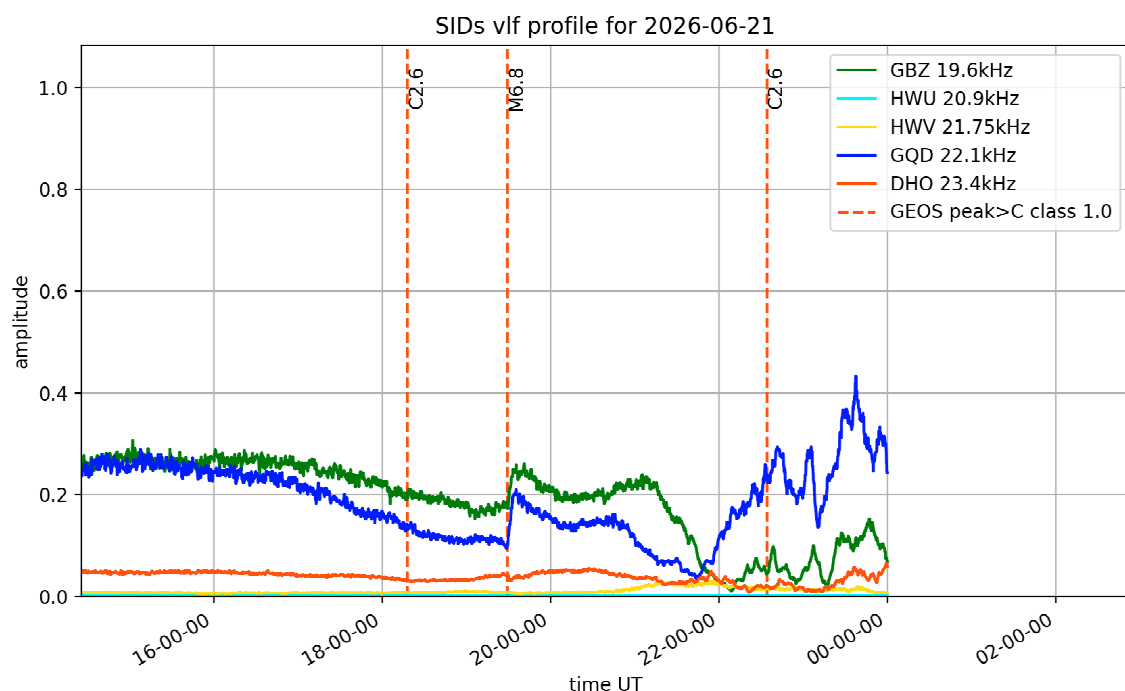
SIDs vlf profile for 2026-06-06



Mark Prescott's recording from the 6th shows a pair of overlapping flares. The SWPC data lists them as from separate active areas. The SIDs at 19.6kHz are very clear, with a small response at 21.75kHz. The pair of spikes earlier in the morning do not appear to be solar related.

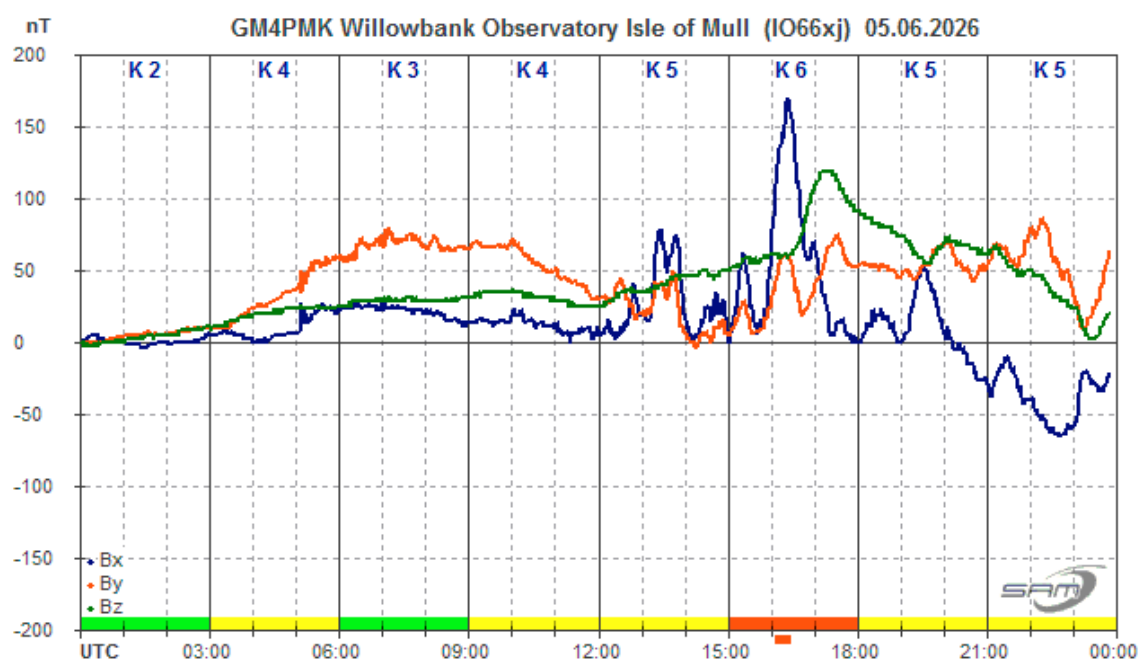


Colin Clements' recording of these flares is rather unusual, 21.75kHz (blue) showing a stable oscillation during the M1.8 flare. Measuring from the chart, there are 2.67 minutes per cycle. The source of this is not clear, Colin is recording in Co Antrim, Mark is in Kent, so there is a considerable path difference from the transmitter.



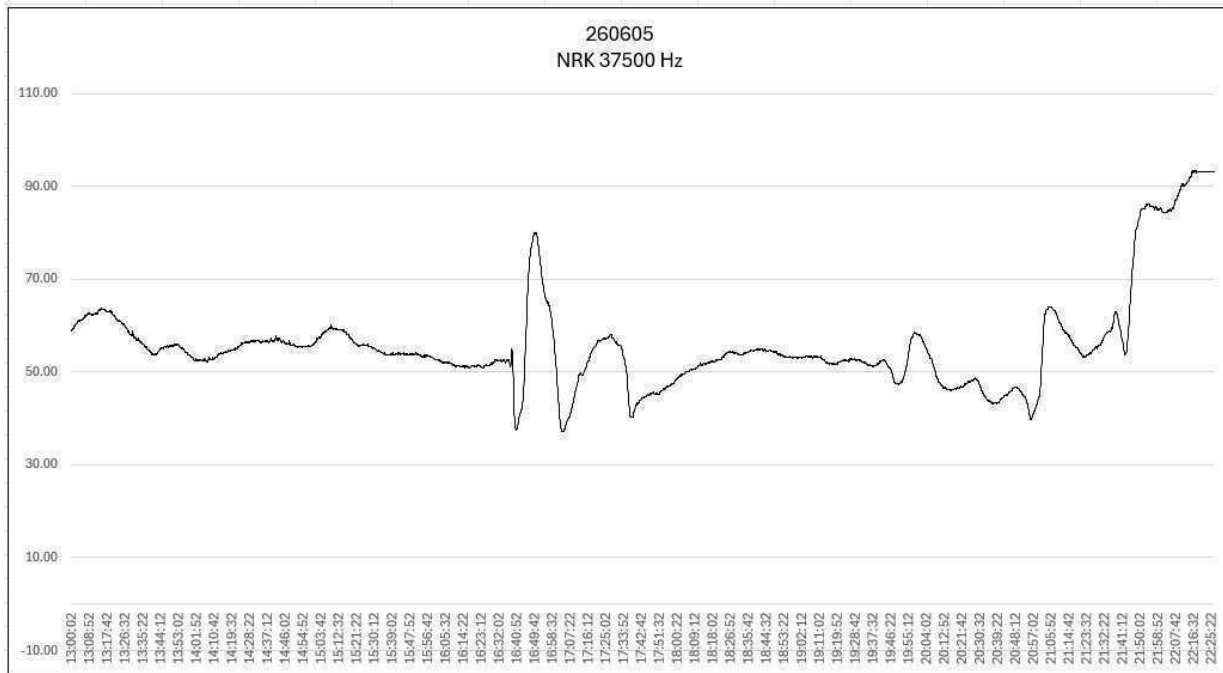
June 21st marked the summer solstice, the longest day allowing Mark Prescott to record the M6.8 flare peaking around 19:30 UT. The peak of the SID is very clear, while the decay phase is starting to merge with the sunset. Both of the UK signals are well recorded, while 23.4kHz shows only a very small SID.

MAGNETIC OBSERVATIONS.

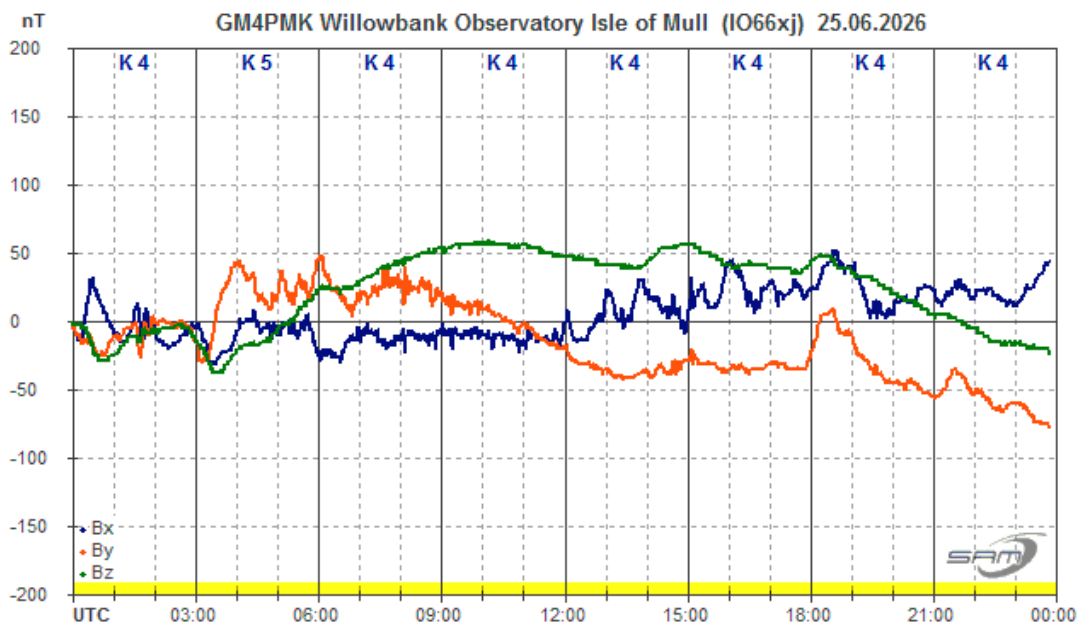
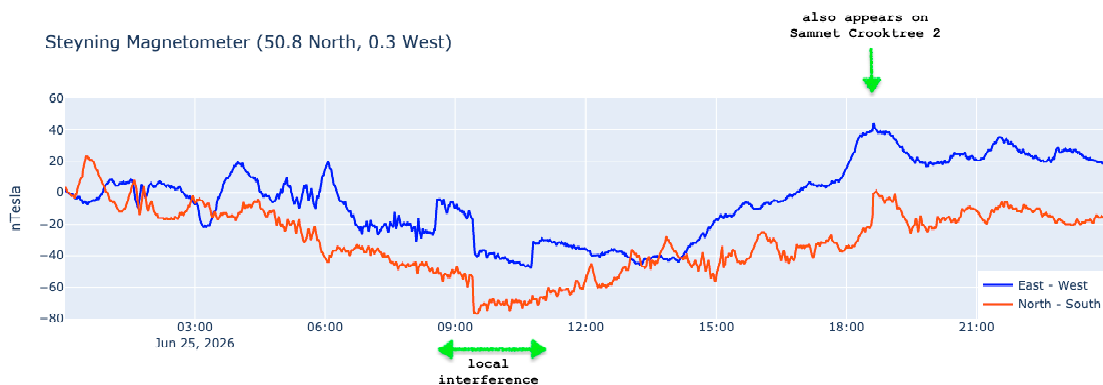


The most active magnetic disturbance was recorded on the 5th, shown here By Roger Blackwell. There is a very small impact feature visible just after 05UT, with the strongest disturbance later in the afternoon. The STCE bulletin lists three CMEs on the 3rd, including one from the X1.0 flare, arriving early on the 5th, so the actual source is not clear. There was also a stronger solar wind present from a coronal hole adding to the picture.

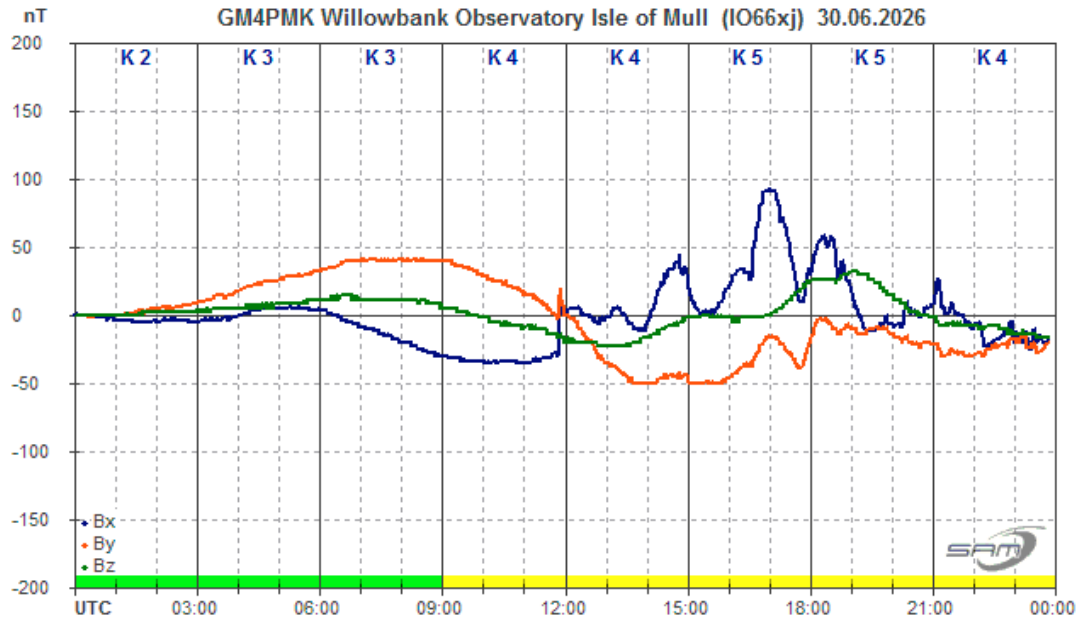
Colin Briden also recorded a strong disturbance to the 37.5kHz signal from Iceland during this activity:



The chart runs from 13:00 to 22:25UT. The effects of the combined C4.1 and C4.0 flares around 15:20 are visible to the left of the magnetic pulses.

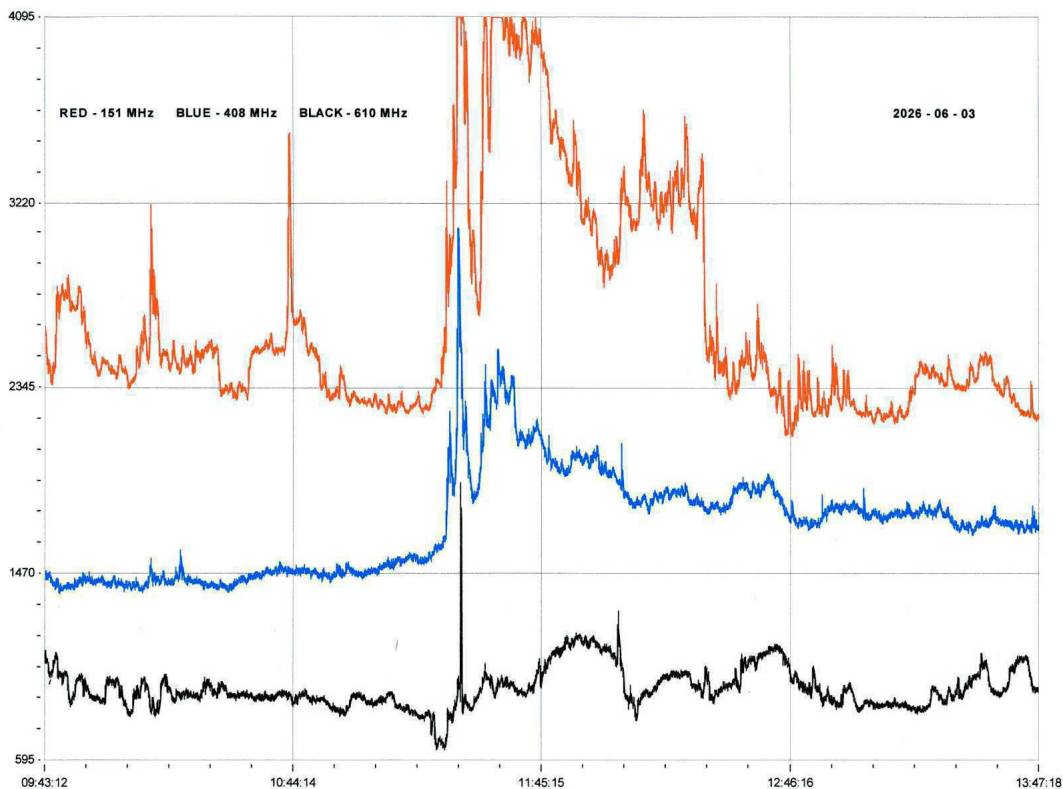


There was a mild magnetic disturbance lasting all day on the 25th, shown in the two charts on the previous page. The first is by Nick Quinn, and highlights a small spike around 18:30..19:00UT. Roger Blackwell's recording also shows a similar feature. The STCE bulletin identifies the source as a coronal hole high speed wind. Nick Quinn's recording also shows some local interference, standing out with much sharper edges than the solar effects. The Bartels chart shows that this activity had been present for several days around the 25th, another strong disturbance ending the month on the 30th:

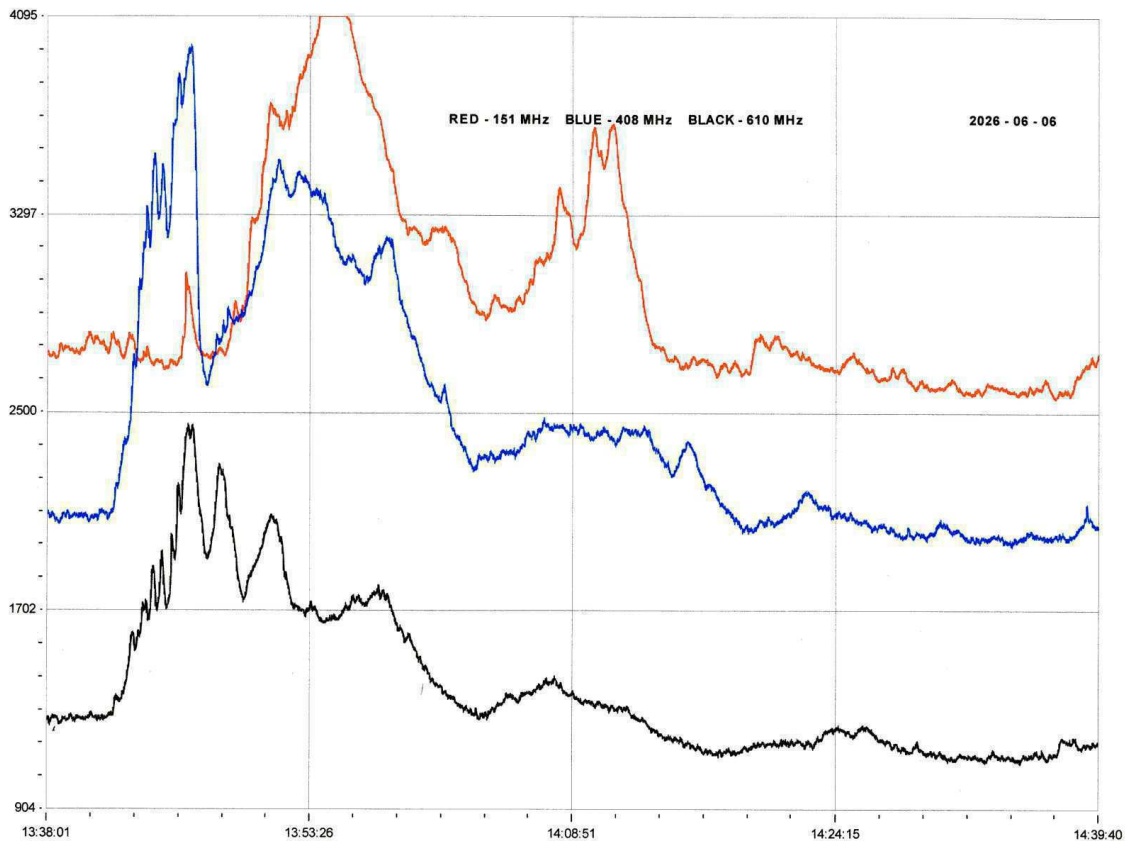


Magnetic observations received from Roger Blackwell, Colin Briden, Nick Quinn and John Cook.

SOLAR EMISSIONS



Colin Clements' VHF/UHF recording from the 3rd shows a very strong emission from the X1.0 flare. Red is 151MHz, and blue is 408MHz. The emission at 610MHz (black) shows a strong spike at 10:26UT, followed by a weaker signal over the next hour. The source of the 151MHz spikes before the X1.0 flare is not clear, although the SWPC satellite data includes a C2.4 flare peaking at 10:59.

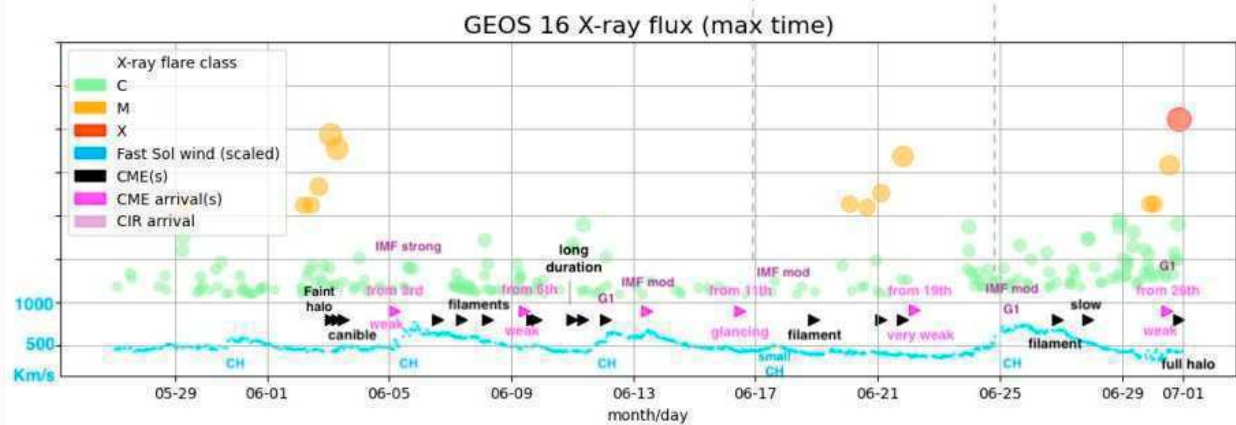
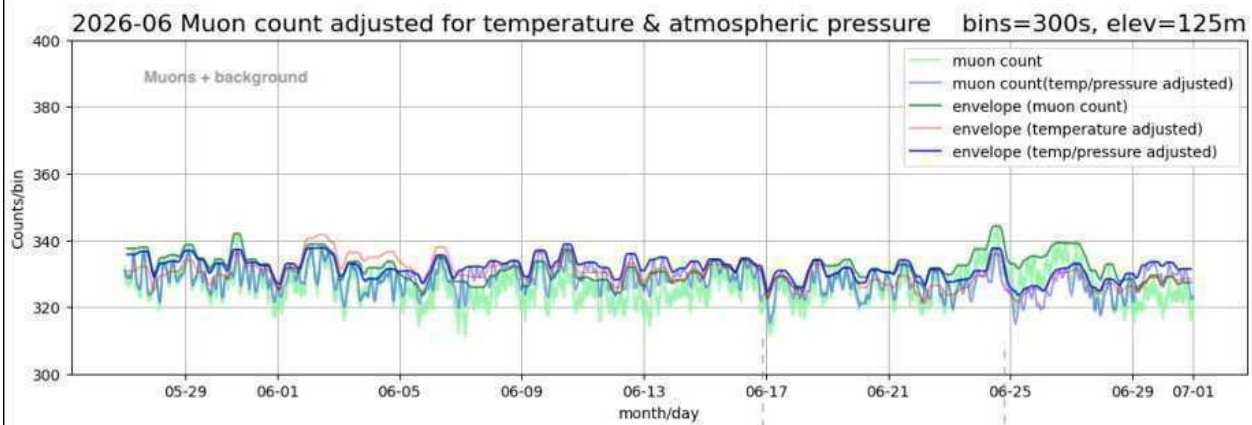
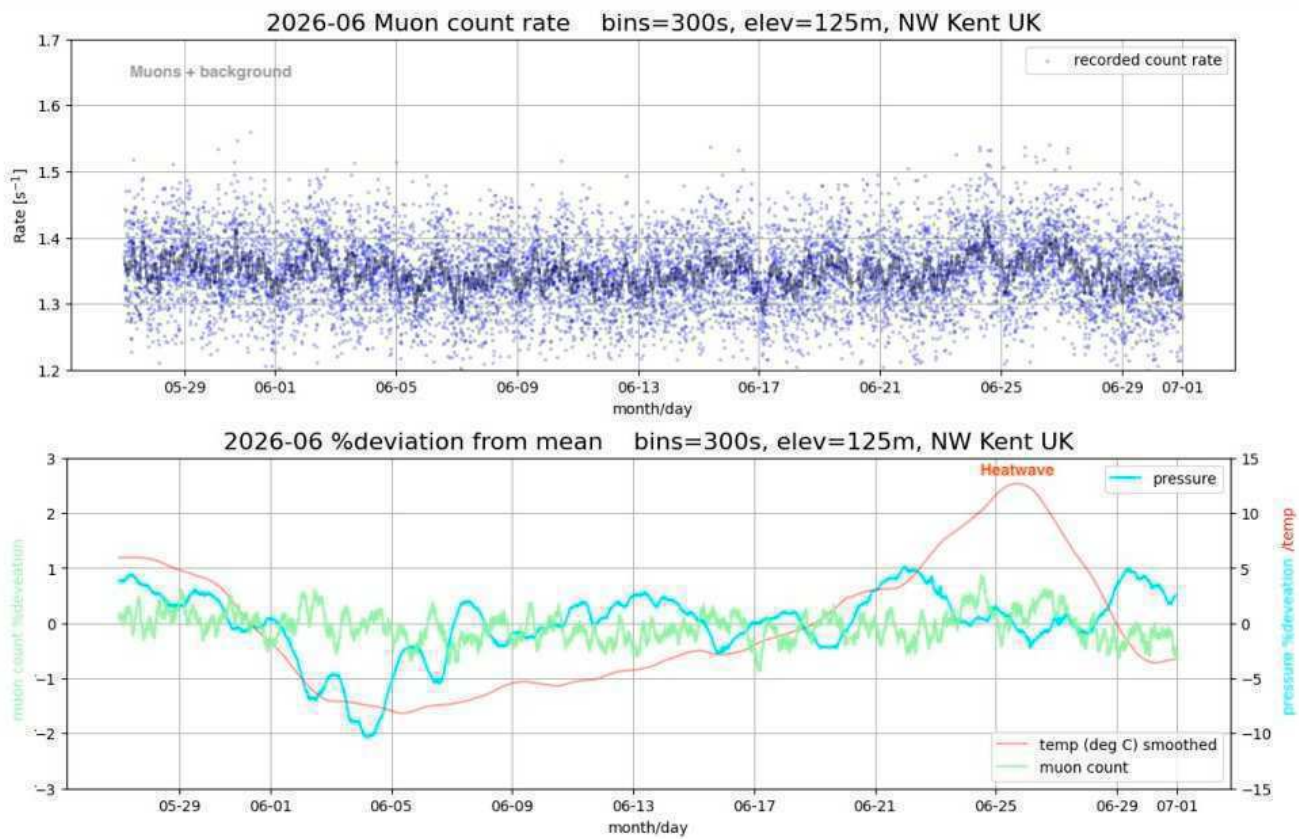


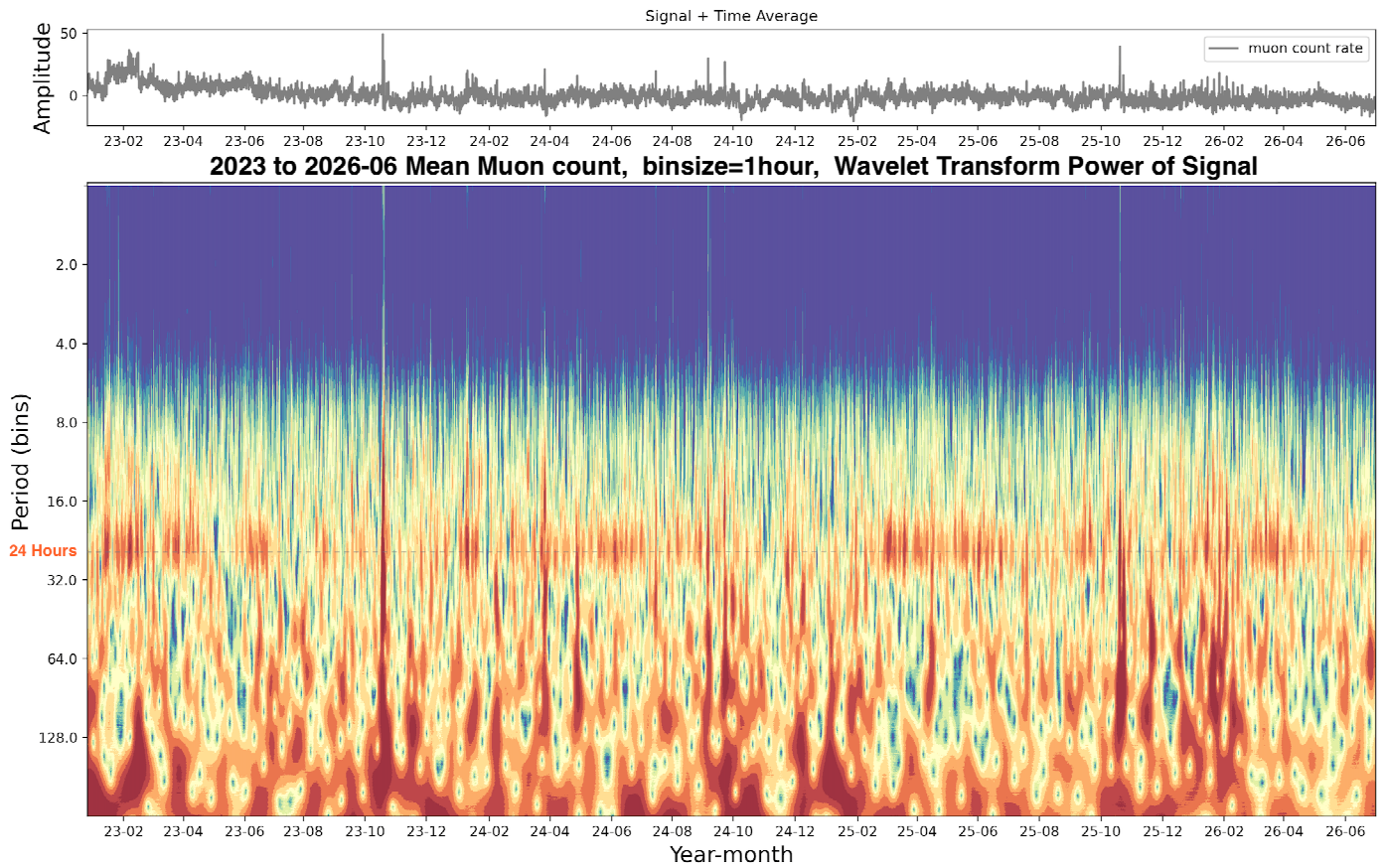
Colin's recording from the 6th shows strong emissions on all three frequencies, linked to the C8.8 and M1.8 flares. The first 408MHz peak is between the two flares, while the second peak lines up with 151MHz, timed to match the M1.8 flare. The 610MHz emission covers both, extending for nearly an hour in total. The third 151MHz peak is during the decay phase of the flare. Colin also recorded strong emissions on the 26th and 30th.

MUONS

Mark Prescott has provided his Muon charts, shown on the next page. The most obvious feature is the red temperature trace, showing the strong heatwave towards the end of June. The raw counts in the upper chart show an increase during this period. There was also a period of low atmospheric pressure at the start of June, although the raw counts do not show much deviation. The adjusted Muon counts show mostly very small variations, with a more noticeable change from the 25th to the end of the month. This is during the period of stronger solar wind from a coronal hole illustrated in the magnetic charts. The 25th and 26th show the largest drop in flux.

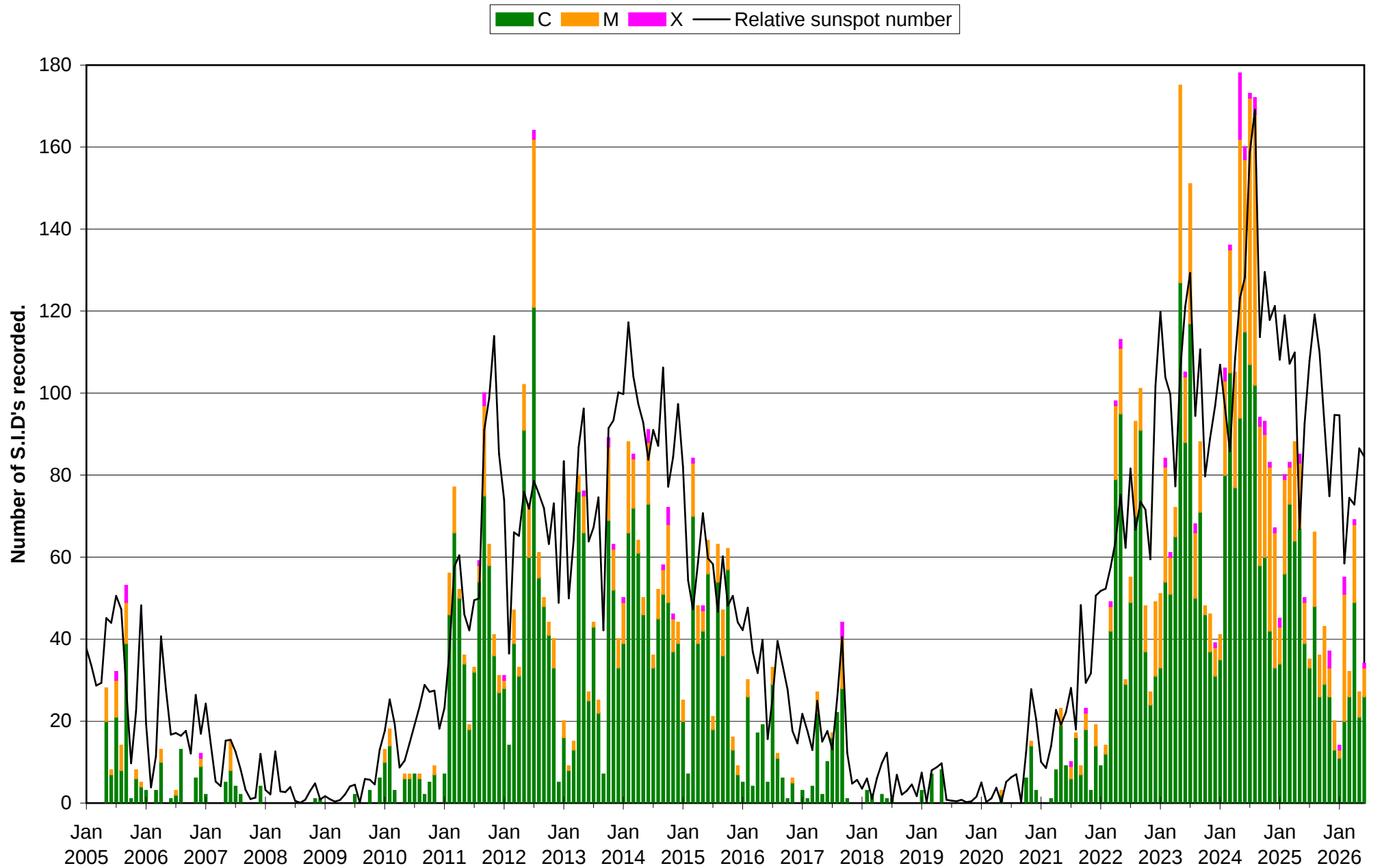
Mark has also included a wavelet transform chart covering 2023 to 2026. This shows the 24 hour diurnal period quite strongly, while the longer periods are far more random. There are also three vertical spikes, each during October, source unknown.





Please note the new email address on the front page. All reports and observations should now be sent to this address.

VLF flare activity 2005/26



BARTELS DIAGRAM

ROTATION	KEY:	DISTURBED.		ACTIVE		SFE		B, C, M, X = FLARE MAGNITUDE.										Synodic rotation start (carrington's).												
2597	F	6 C	7 C	8 CC	9 CM	10 CCM	11 C	12 C	13 C	14 CC	15 CC	16 CC	17 C	2280 18 C19 CCC20 C21 C22 C23 CMMM24 CCC25 CCCC26 C27 C28 CCC29 CCC30 C31 C1 CC																
2598	F	2024 February 2 CCCC3 CCCC4 MMMM5 CC6 CC7 CCM8 MMMM9 CXM10 C11 C12 CMCM13 CC14 MCCC15 C16 XCC17 C18 C19 C20 C21 CCCC22 XCCM23 CMMM24 MMMM25 CM26 C27 C28 CC										2281 15 C16 CC17 C18 C19 C20 C21 CCCC22 XCCM23 CMMM24 MMMM25 CM26 C27 C28 CC																		
2599	F	2024 March 29 C		1 C	2 CCC	3 C	4 CC	5 C	6 C	7 CCCC	8 C	9 C	10 CMCC	11 CC	12 CCCC	2282 13 C14 MCC15 C16 CCMC17 C18 CCCC19 CCCC20 MCCC21 CC22 CCCM23 MMMM24 MMMM25 MCCC26 MMMM														
2600	F	27 MCCC	28 MMM	29 MX	30 CCCC	31 CCC	2024 April 1 C		2 C	3 C	4 C	5 C	6 C	7 C	8 C	2283 9 C10 CCCC11 CCCM12 CCCC13 MCCC14 CCCC15 MMMM16 CCCM17 CCCC18 CMCC19 MCCC20 CCM21 MMM22 MMMM														
2601	F	23 MCCM	24 CCMC	25 CCMC	26 CC	27 MC	28 CC	29 CCC	30 CCMM	2024 May 1 MC		2 CCCM	3 CMCC	4 MMCM	5 XMXM	6 XMXM	7 MMMM	8 XMMX	9 XMMX	10 XMMX	11 XMMX	12 XMMX	13 XMMX	14 XMMX	15 XMMX	16 XMMX	17 XMMX	18 XMMX	19 MM	
2602	F	20 C	21 CCCM	22 CM	23 C	24 C	25 C	26 C	27 XCC	28 CCCC	29 MMX	30 CM	31 CMCX	2024 June 1 XCCM		2 C	3 C	4 C	5 C	6 C	7 C	8 C	9 C	10 C	11 C	12 C	13 C	14 C	15 C	
2603	F	16 CCCC		17 MCCM	18 CCMC	19 MCCC	20 CMCC	21 CCCC	22 MMCC	23 MCMC	24 MMCM	25 MC	26 C	27 C	28 C	29 C	2286 30 C1 MC2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C													
2604	F	13 MMMM	14 MCCM	15 MMCC	16 MCXM	17 MMMM	18 MMCC	19 CMCM	20 MCCM	21 MCCM	22 MCCM	23 C	24 C	25 C	26 C	27 C	28 C	29 C	30 C	31 C	2287 27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C									

BAA Radio Astronomy Section.

2026 JUNE.

	Xray class	Observers	John Cook (23.4kHz/22.1kHz)	Roberto Battaiola 20.27kHz	Paul Hyde (22.1kHz/24kHz)	Mark Edwards (24.0/18.3/37.5kHz)	Colin Clements (23.4kHz/21.75kHz)
			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			START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)
2	C3.1	1		06:51 07:00 07:47 2+			
2	C3.7	2		08:29 08:48 09:29 2+			
2	M1.2	6	10:00 10:07 ? -	09:52 10:52 12:16 3+	10:00 10:11 11:44 3		10:04 10:17 10:50 2+
2	C4.3	2	11:00 11:02 11:14 1-				11:00 11:04 11:13 1-
2	M3.3	5		16:39 16:48 17:50 2+	16:44 16:51 17:09 1		16:46 16:54 18:20 3
3	M7.7	4		06:50 06:59 08:30 3	06:58 07:04 07:51 2+		06:57 07:00 07:50 2+
3	C2.4	2		10:54 10:58 11:10 1-			
3	X1.0	5	11:22 11:29 13:01 3	11:18 11:27 11:52 2	11:21 11:29 12:52 3		11:20 11:28 12:22 2+
5	C4.1/C4.0	4	14:57 15:10 15:45 2+	14:53 15:00 15:42 2+			
6	C3.1	2		06:24 06:30 06:36 1-			
6	C8.8	6	13:13 13:19 13:37 1	13:10 13:20 13:30 1	13:15 13:24 ? -		13:14 13:22 13:42 1+
6	M1.8	6	13:43 13:55 14:42 2+	13:38 14:00 14:35 2+	13:46 14:04 15:12 3		13:42 14:00 15:20 3
11	C9.0	5	08:24 08:29 08:53 1+	08:26 08:31 09:00 2			08:35 08:37 08:41 1-
17	C2.5	2	14:56 15:06 15:31 2				
18	C1.8	1					
20	M1.0	5	14:58 15:02 15:47 2+	14:53 15:03 15:41 2+	14:59 15:07 17:20 3+		14:59 15:05 15:28 1+
21	M6.8	4	19:26 19:31 19:54 1+	19:25 19:32 ? -			
24	C3.5	3	07:09 07:13 07:32 1		07:09 07:14 07:45 2		
24	C3.8	5	14:35 14:42 15:06 1+		14:32 14:42 15:25 2+		13:57 14:44 15:30 3
24	C2.7	3	16:15 16:16 16:23 1-		16:15 16:18 16:35 1		
25	C3.2	3	09:03 09:06 09:16 1-		09:02 09:09 09:42 2		
25	C2.7	1	13:30 13:34 14:00 1+				
25	C6.6	4	15:01 15:04 15:33 1+		15:00 15:07 15:27 1+		
26	C5.7	5	12:38 12:50 13:47 2+		12:38 12:48 13:42 2+		12:38 12:49 13:20 2
26	C3.5	2			13:59 14:07 14:34 2		
26	C2.0	1			14:56 15:02 15:15 1		
27	C1.9	1	15:09 15:13 15:33 1				
29	C6.5	2	07:46 07:53 ? -		07:46 07:58 ? -		
29	C8.1	1			08:20 08:32 08:55 2		
29	?	2			09:06 09:08 09:22 1-		
29	C6.1	1	17:32 17:40 18:11 2				
30	M5.8	6	12:41 12:51 14:36 3	12:38 12:53 13:42 2+	12:42 12:52 14:21 3		12:33 12:48 14:30 3
30	C3.2	1			16:24 16:31 ? -		
30	C5.7	2	16:42 16:47 17:15 2		16:45 16:50 17:12 1+		
30	C5.6	3	17:24 17:26 17:45 1		17:24 17:29 18:01 2		

BAA Radio Astronomy Section.

2026 JUNE.

	Xray class		Steve Parkinson (Various)	Colin Briden	Phil Rourke (23.4kHz)	Mark Prescott (19.6kHz/23.4kHz)	John Elliott (18.3kHz)
			Tuned radio frequency receiver, frame aerals.		Spectrum Lab, 0.6m frame aerial.	SpetrumLab/Starbase, mini-whip aerial. Active	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)
2	C3.1						
2	C3.7			08:39 08:50 09:13 2			
2	M1.2			10:00 10:10 10:38 2		10:04 10:17 10:58 2+	
2	C4.3						
2	M3.3			16:44 16:52 17:08 1		16:47 16:55 17:40 2+	
3	M7.7			06:57 07:04 07:22 1			
3	C2.4			10:55 11:05 11:10 1-			
3	X1.0			11:22 11:30 12:00 2			
5	C4.1/C4.0			14:59 15:09 15:18 1		15:02 15:18 15:51 2+	
6	C3.1			06:28 06:33 06:41 1-			
6	C8.8			13:15 13:27 ? -		13:18 13:29 ? -	
6	M1.8			13:45 14:03 14:38 2+		13:50 14:08 15:12 2+	
11	C9.0			08:27 08:32 09:02 2		08:30 08:37 09:29 2+	
17	C2.5					15:06 15:24 15:58 2+	
18	C1.8					11:53 12:02 12:32	
20	M1.0					15:02 15:08 15:55 2+	
21	M6.8			19:26 19:32 19:51 1		19:30 19:36 20:09 2	
24	C3.5			07:09 07:14 07:18 1-			
24	C3.8			14:34 14:43 14:52 1-		14:40 14:50 ? -	
24	C2.7			16:15 16:18 16:23 1-			
25	C3.2			09:03 09:10 09:30 1+			
25	C2.7						
25	C6.6			15:02 15:07 15:14 1-		15:05 15:10 15:45 2	
26	C5.7			12:39 12:48 13:04 1		12:43 12:54 13:43 2+	
26	C3.5			13:59 14:07 14:12 1-			
26	C2.0						
27	C1.9						
29	C6.5						
29	C8.1						
29	?			09:07 09:12 09:23 1-			
29	C6.1						
30	M5.8			12:43 12:54 13:42 2+		<i>12:48 13:00 13:42 2+</i>	
30	C3.2						
30	C5.7						
30	C5.6			17:25 17:30 17:43 1-			