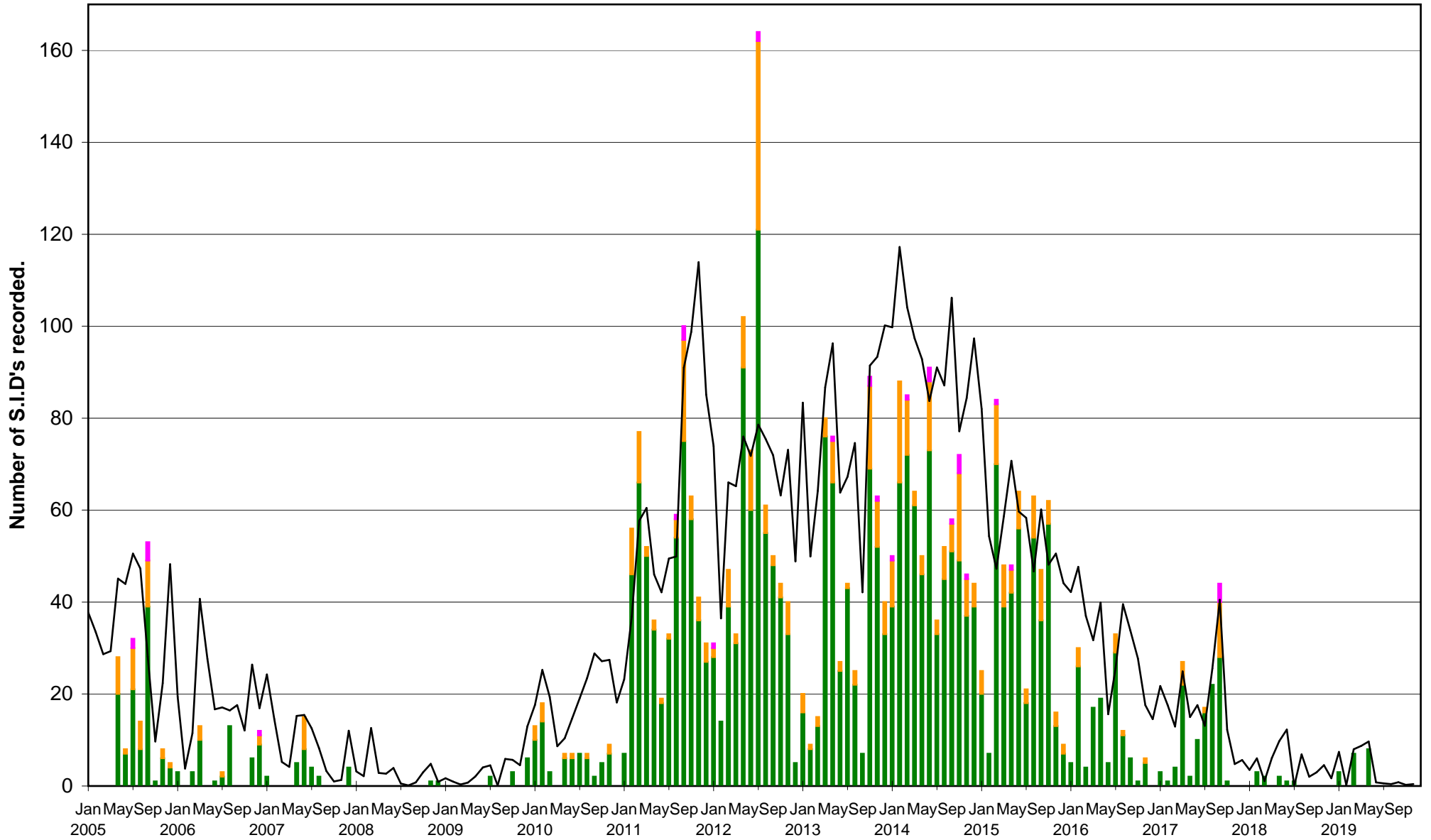
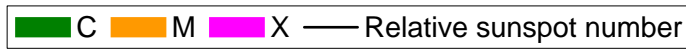


	Xray class	Observers	John Cook (23.4kHz/22.1kHz)	Roberto Battaiola (18.3kHz)	Paul Hyde (22.1kHz/24kHz)	Mark Edwards (24.0kHz)	Colin Clements (23.4kHz/18.3kHz)
			Tuned radio frequency receiver, 0.58m frame aerial.	Modified AAVSO receiver.	Spectrum Lab / PC 1.5m frame aerial.	Spectrum Lab / PC 2m loop 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)

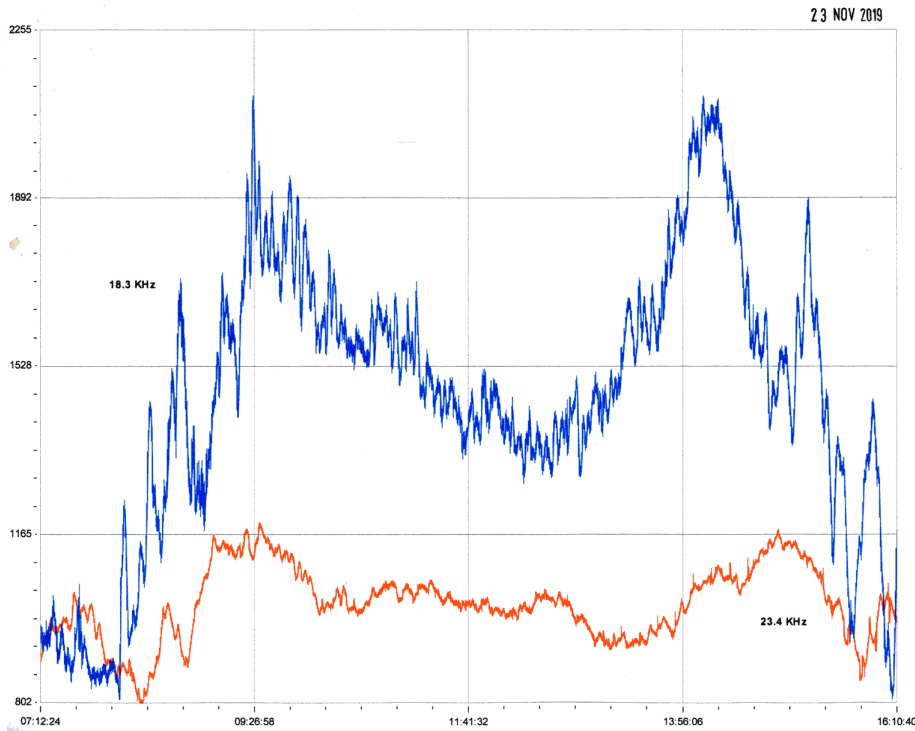
	Xray class		Steve Parkinson (Various)	Andrew Thomas (23.4kHz)	Phil Rourke (23.4kHz)	Jim Barber	John Elliott (18.3kHz)
			Tuned radio frequency receiver, frame aeralis.	Tuned radio frequency receiver, 0.6m frame aerial.	Spectrum Lab, 0.6m frame aerial.	Spectrum Lab, 0.6m frame aerial.	Tuned radio frequency receiver, 0.5m frame aerial.
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 2005/19.

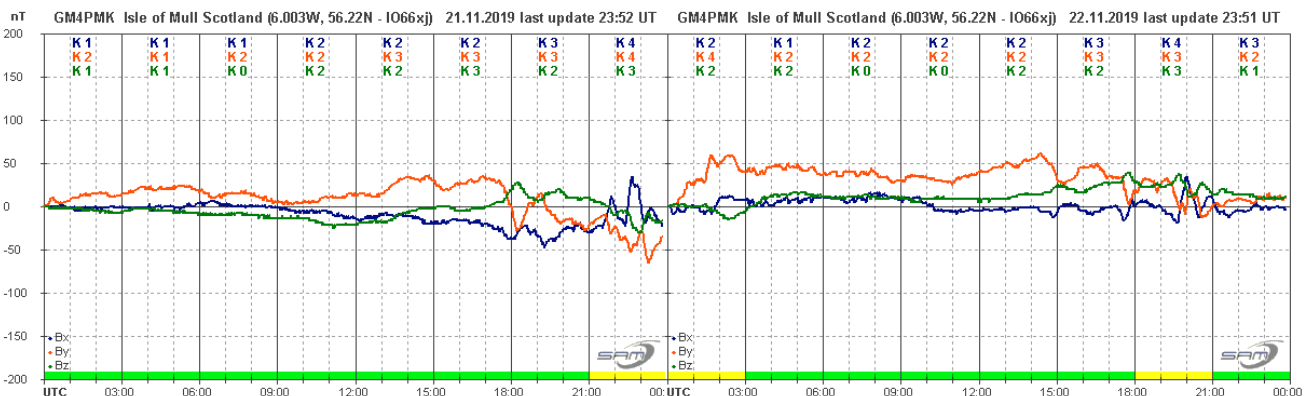


We are now well into solar minimum, with very little sunspot activity and no SIDs recorded. The background X-ray flux recorded by GOESS remained at A-class levels, with just two small B-class flares reported. AR12750 is reported as just plage when a B1.3 flare occurred on November 5th. The source of a B1.1 flare on the 18th is not shown in the space weather reports. The Mercury transit on the 11th was difficult to observe over most of the UK due to cloudy weather, although gaps in the cloud allowed some brief observations. It had no effect on our VLF recordings. Signals often become very noisy when the sun is low in an autumn / winter sky, shown well in this recording from the 23rd by Colin Clements:



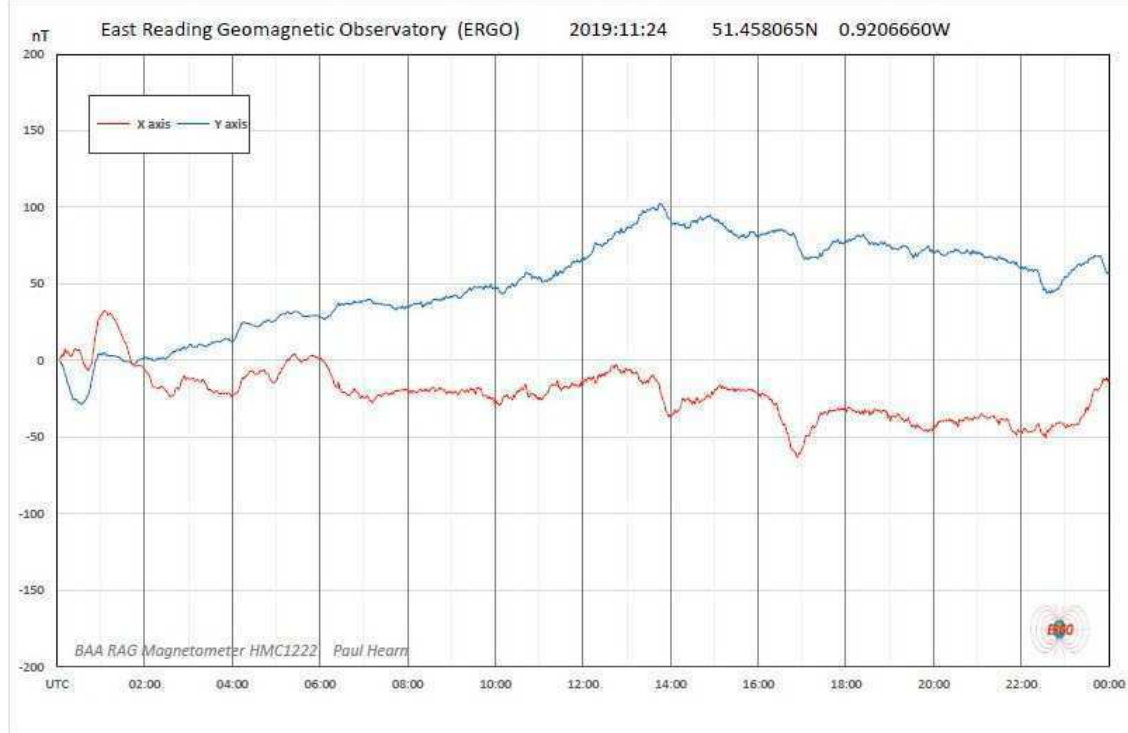
MAGNETIC OBSERVATIONS.

The repeating coronal hole reported in recent months returned again over the 21st and 22nd, although with a very mild magnetic disturbance.

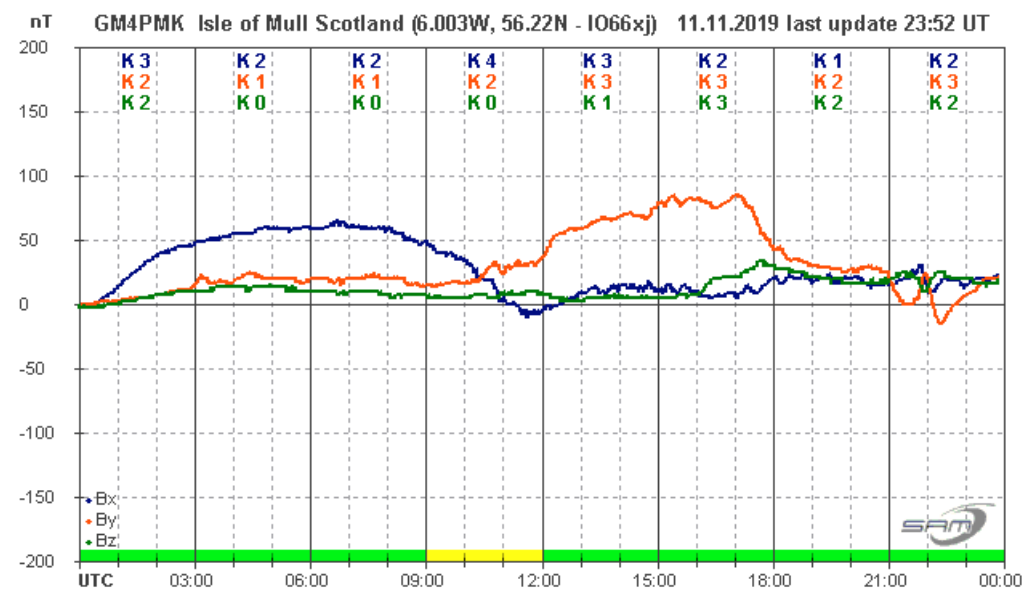


This recording by Roger Blackwell shows a peak disturbance of just over +/- 50nT, very weak compared with previous returns. The 23rd remained quiet, but there was a further small disturbance on the

24th, shown in this recording by Paul Hearn:

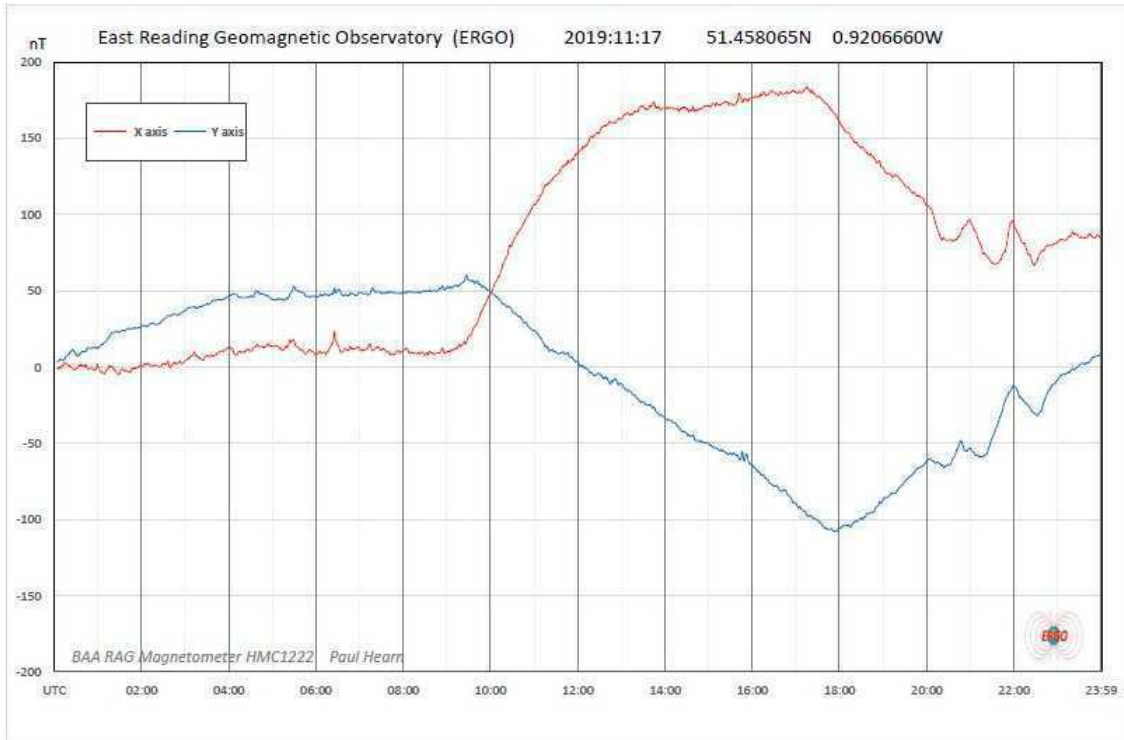


The disturbance on the 11th does not have a definite origin, but may be from a slow CME visible in satellite images from November 6th. This recording is by Roger Blackwell:



This CME was not directed towards the Earth, and appears to have made just a glancing blow at a very low speed compared to CMEs recorded in the past.

A similarly slow disturbance was recorded on November 17th. This was caused by increased wind speed from a small coronal hole that crossed the solar meridian a few days earlier. The chart on the next page was recorded by Paul Hearn.



Magnetic observations received from Colin Clements, Paul Hearn, Roger Blackwell and John Cook.

ALPHA MONOCEROTIDS.

Following on from Christopher Bailey's recordings of meteor induced VLF spikes, he has correlated detections via the GRAVES radar of alpha-Monocerotids with VLF recordings. VLF measurements were made over the range 100Hz to 1.8kHz, with GRAVES at 143.05MHz. His chart shows the numbers of detections recorded over the period 02 to 06UT on November 22nd, with a strong peak around 04:50 to 05:10. This peak matches well with predictions for a visual peak, and does seem to link the VLF signals quite strongly.

