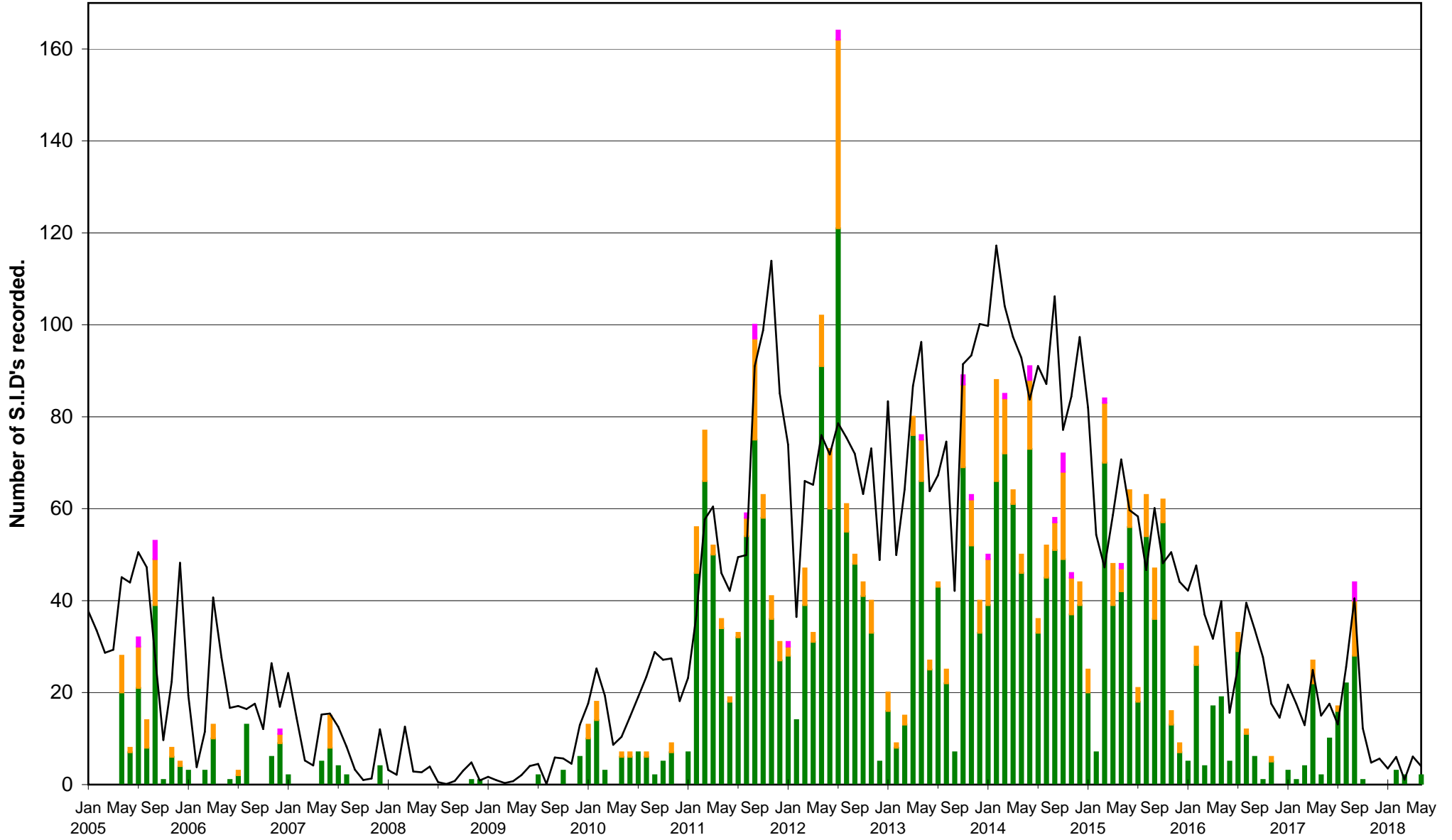


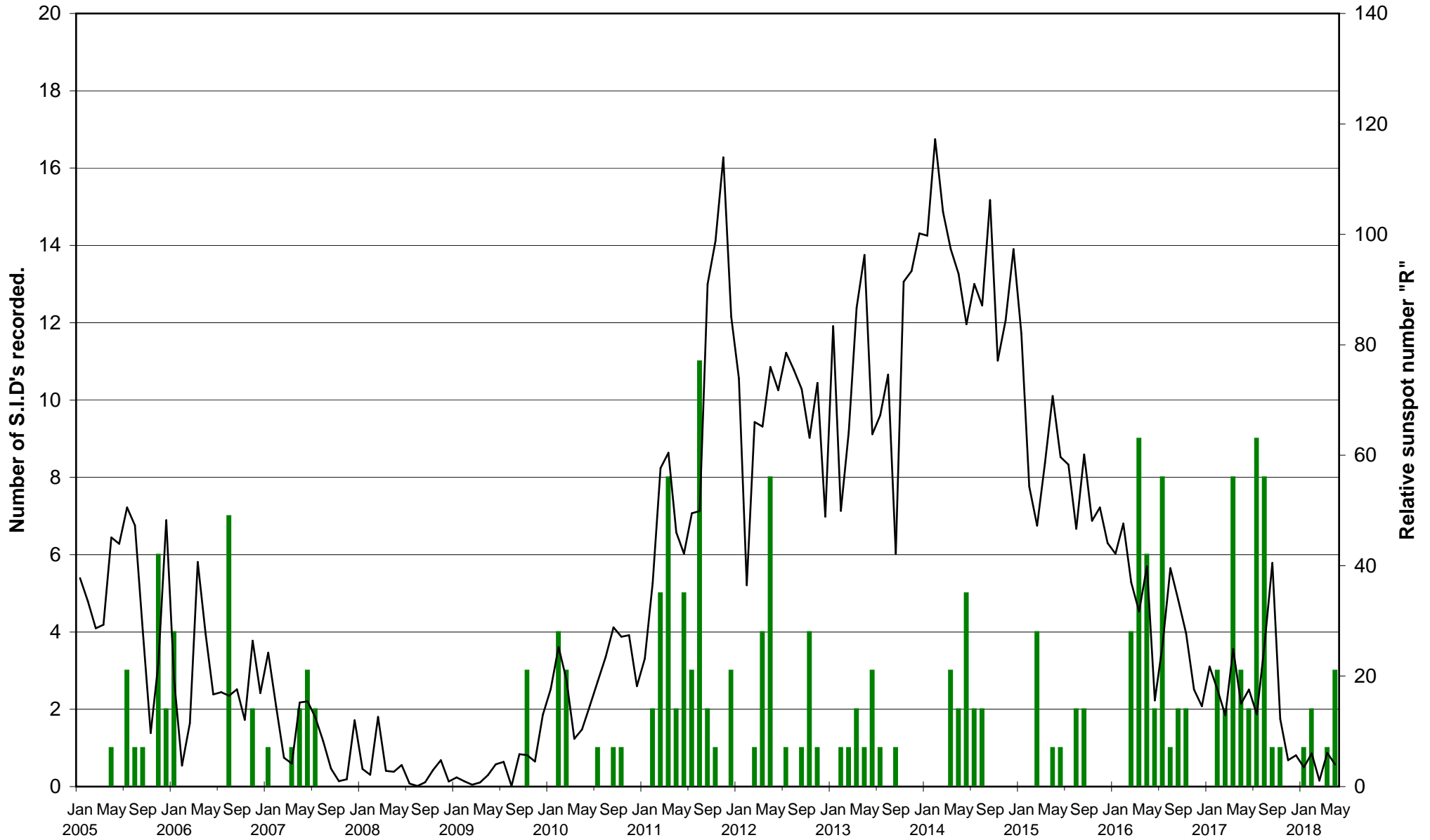
VLF flare activity 2005/18.

C M X — Relative sunspot number

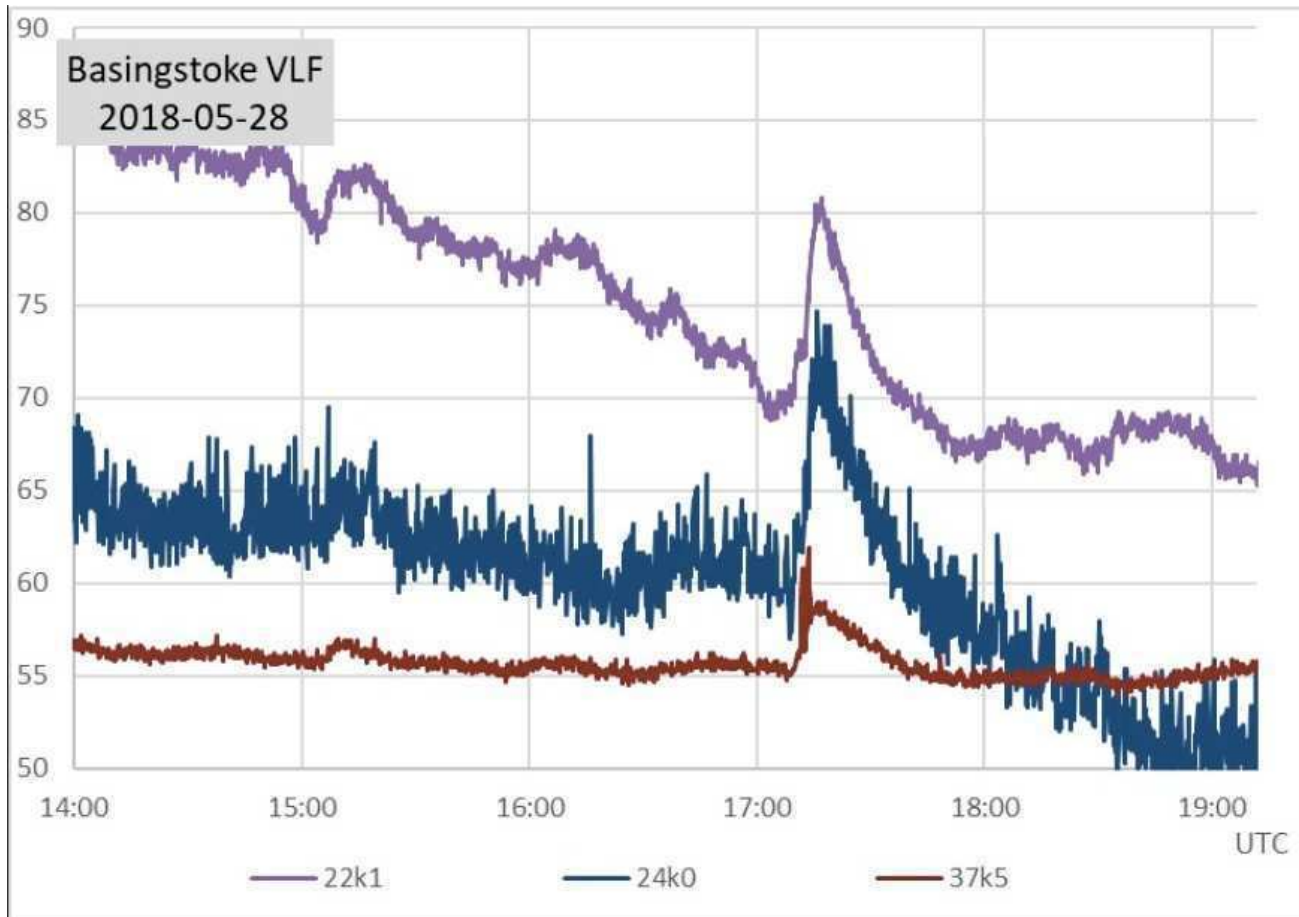


VLF flare activity 2005/18.

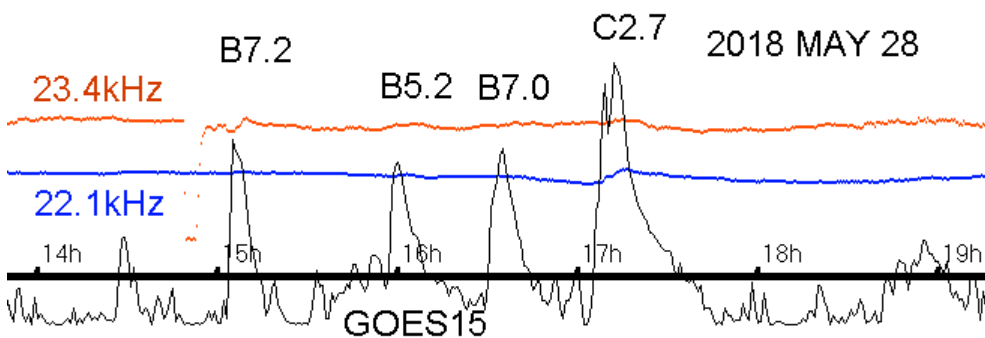
■ B — R



The month started with the X-ray background flux at around the A2 level, dropping below A1 on May 17th. It rose a little above B1 on the 22nd when active region AR12712 began producing some minor flares. The B8.9 on the 22nd being the strongest flare recorded since April 1st. The C2.0 flare on the 23rd was the first C-class since March 30th. Mostly small flares continued through to the end of the month, with a C2.7 recorded on the 28th. They were all produced by AR12712.



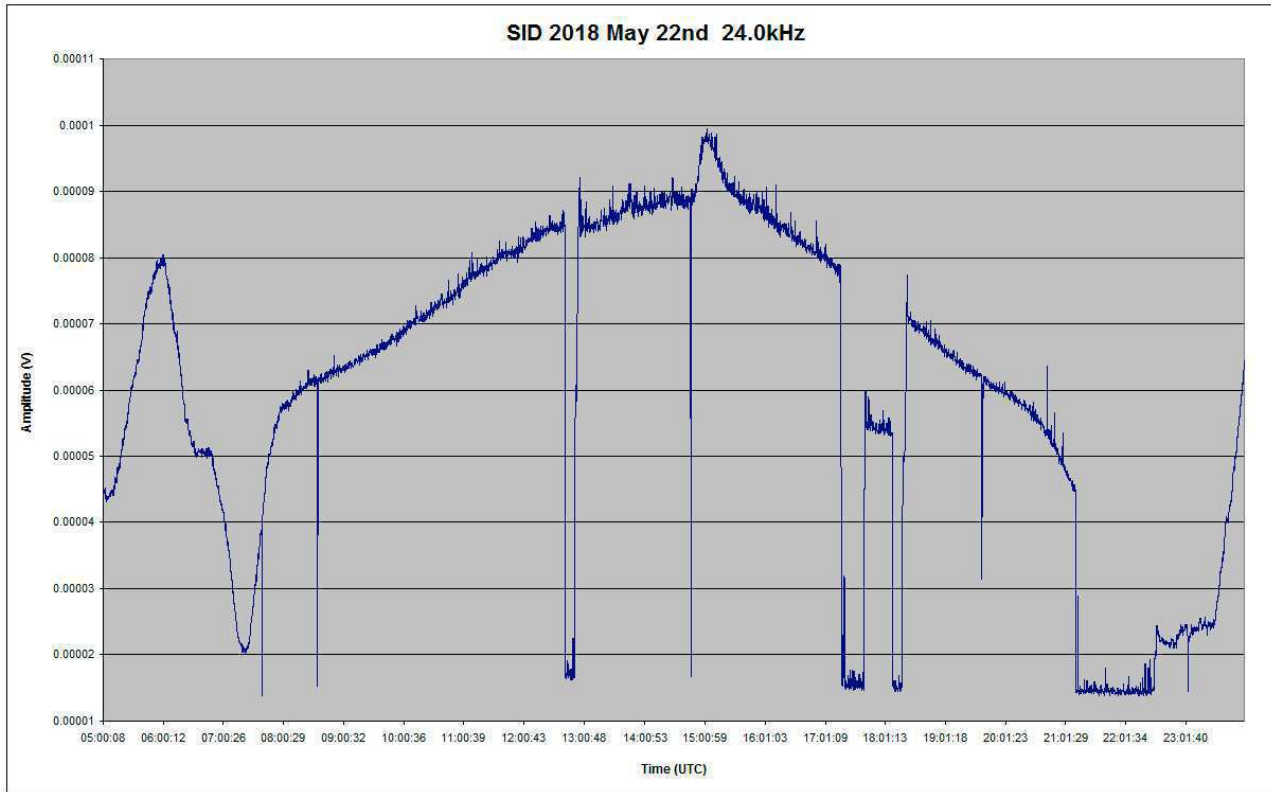
This chart shows the C2.7 flare recorded by Paul Hyde. There are clear SIDs at all three frequencies, despite a rather noisy signal at 24kHz. There is also a very small response to the B7.2 flare at 15:07 on the 37.5kHz signal.



I have added the GOES X-ray flux to my own recording, above, to show the twin-peaked nature of the C2.7 flare. All of our reports time the peak SID response at 17:14 to 17:17UT, Mark Edwards covering the whole time span across four signals. The SWPC list this flare starting at 15:52, peak 17:04 and ending at 17:05. From the GOES data file, the first peak appears to be C2.7 at 17:10, with the second C2.8 at 17:13.

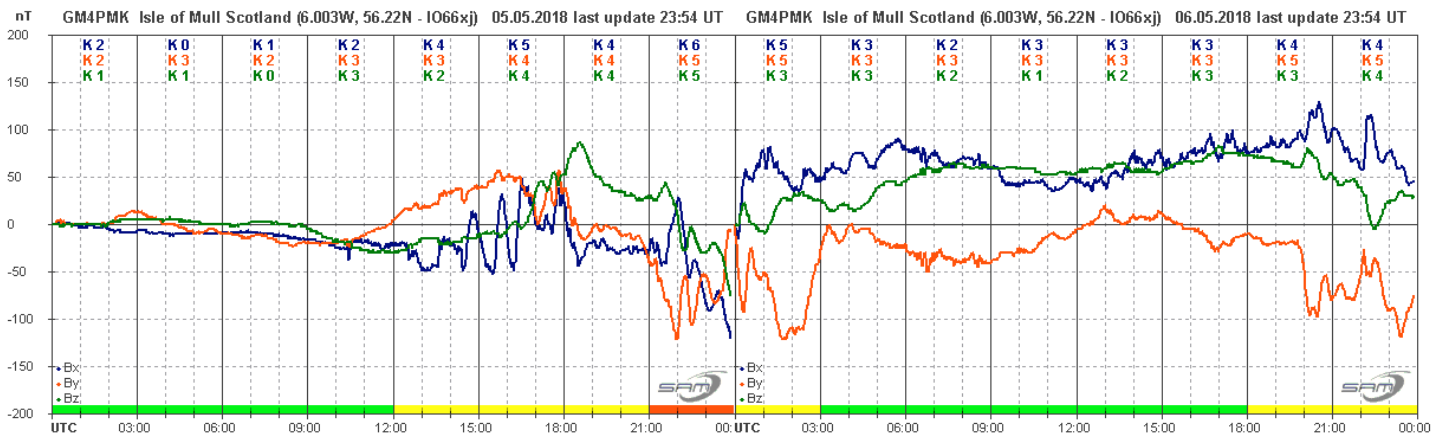
There is just a hint of the first peak at 22.1 kHz in my recording, as well as Paul's. Strangely, there is little evidence of the flare at 23.4 kHz. The earlier B7.2 flare occurred just at the end of a 23.4 kHz signal break, and so the small 'bump' on my chart is probably not a SID.

Both 22.1 and 23.4 kHz have suffered some long breaks in transmission through May, although both seem to have resumed normal operation after the 25th. Even 24 kHz had some signal breaks on the 22nd, but luckily it was on during the B8.9 flare, showing a good SID in this recording by Mark Edwards:



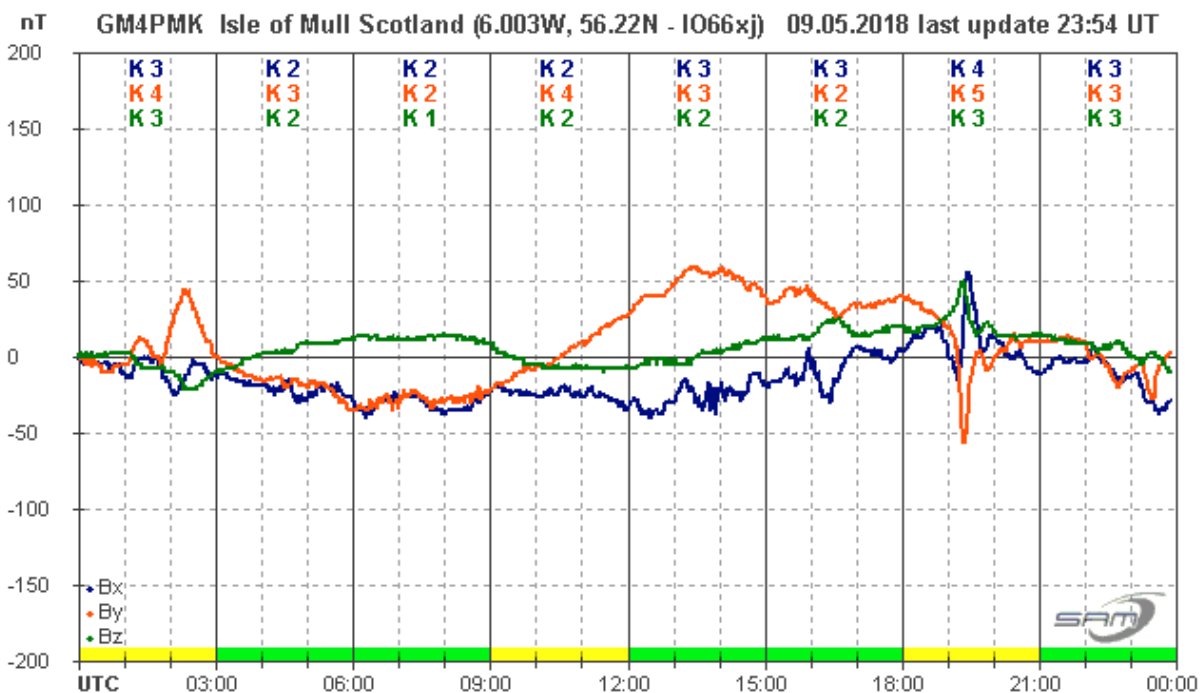
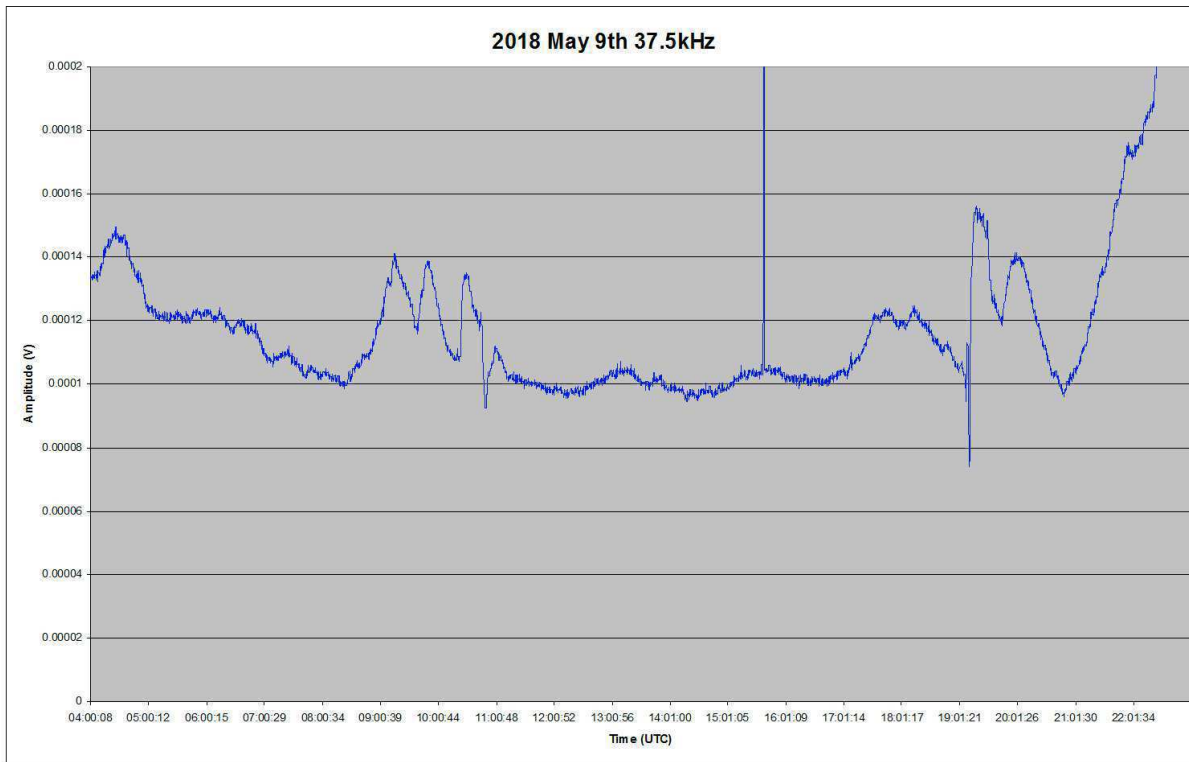
MAGNETIC OBSERVATIONS.

Coronal hole high speed streams were again responsible for the magnetic activity in May. A coronal hole seen over the last four Carrington rotations was again present early in the month.

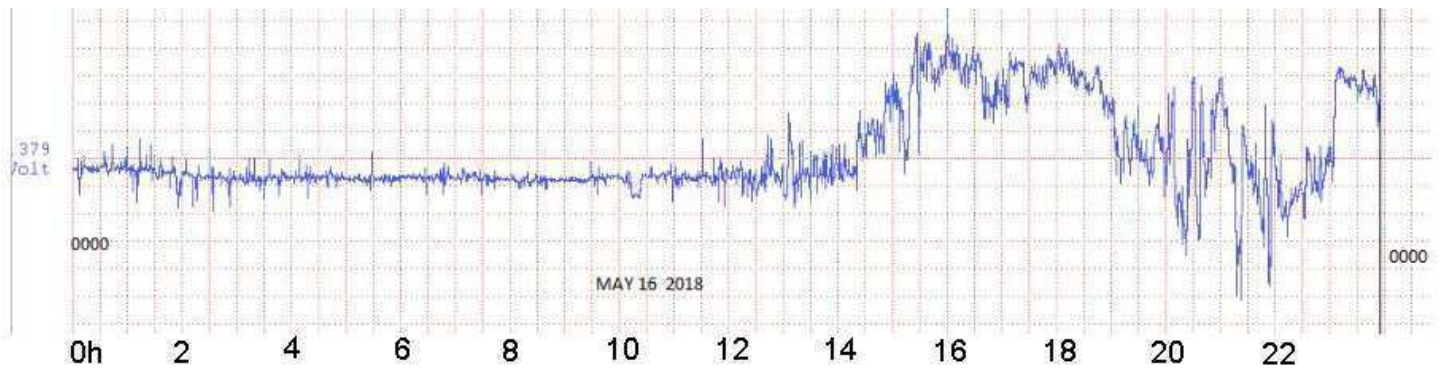


This recording by Roger Blackwell shows the disturbance starting at about 10:30 UTC on the 5th, and continuing for the rest of the day and through the 6th. It faded out in the early hours of the 7th, with only minor

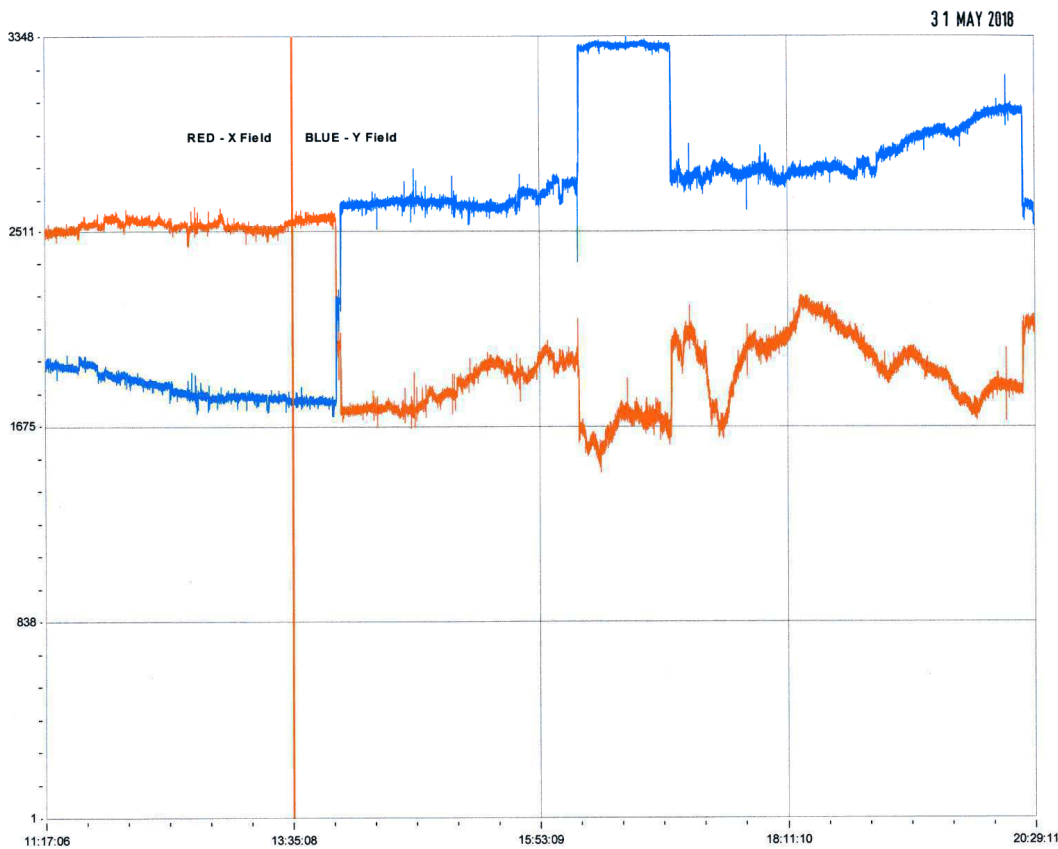
disturbances on the 8th and most of the 9th. There was an isolated impulsive disturbance from 19:00 to 20:00UT on the 9th that produced a strong effect on the 37.5kHz signal recorded by Mark Edwards:



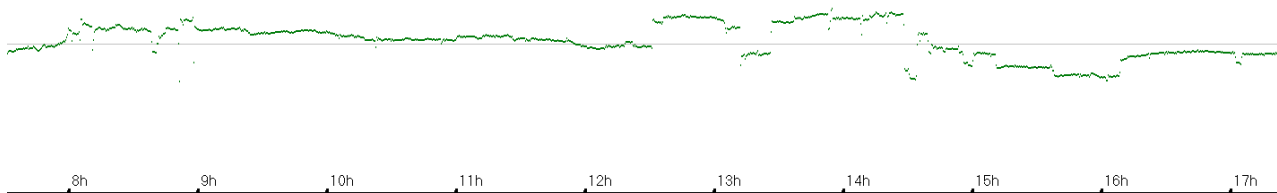
Roger Blackwell's magnetic recording links quite well with Mark's recording over this period, but does not appear to show any magnetic link with the VLF disturbance between 09 and 11UT. Colin Clements recorded a small disturbance in the afternoon of the 13th, after which magnetic conditions remained quiet in the UK until the end of the month. From Bolivia, Gonzalo Vargas recorded some unusual activity on the 15th and 16th, with some very rapid oscillations present in the evening of the 16th. His recording is on the next page. Gonzalo is within the South Atlantic Magnetic Anomaly, which may have some bearing on the fact that nothing was recorded here in the UK.



Gonzalo Vargas, all times are in UT.



This chart is from May 31st, by Colin Clements. While the X-field (red) shows some genuine disturbance from the solar wind, the recording is dominated by some severe local interference. There is very little that we can do to avoid this problem, as a recent recording of my own shows:



This is the result of workmen digging up the road outside the house in order to install new optical fibre internet cables. The work (and interference) continued for several days.

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

