

2009 SEPTEMBER

DAY	Xray class	Observers	John Cook (23.4kHz) Tuned radio frequency receiver, 0.58m frame aerial.	Roberto Battaiola (20.9kHz) Modified AAVSO receiver.	Nigel Curtis (23.4kHz) Gyrator receiver, shielded loop aerial.	Bob Middlefell (22.1kHz) Tuned radio frequency receiver, 0.5m frame aerial.	Mark Edwards (20.9kHz) Spectrum Lab / PC 2m loop aerial.
			START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)

DAY	Xray class	Observers	Colin Clements (23.4kHz) AAVSO receiver, 0.76m screened loop aerial.	Karen Holland (19.5kHz) Tuned radio frequency receiver, 0.58m frame aerial.	Mike King (20.9kHz) AAVSO receiver. loop aerial.	John Wardle (18.3kHz) Gyrator MKII receiver, 1m loop aerial.	Peter King (16.8kHz) Own designed receiver, 1.4m loop aerial.
			START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)	START PEAK END (UT)

DAY	Xray class	Observers	Paul Hyde (22.1kHz) Tuned radio frequency receiver, 0.58m frame aerial.
			START PEAK END (UT)

The GOES record for September shows a B2.2 flare on the 8th, with further B-class events on the 21st, 22nd, 24th, and 25th. There was also a C2.0 flare at 01:02UT on the 25th. Although there were 2 active regions during this period, other than these 8 events, the solar X-ray flux remained at a very low level.

BAA Radio Astronomy Group VLF Receiver.

This has been 'in development' for quite a long time now, so I am pleased to be able to report that it is now available. Peter King has asked me to say that he has built the receiver kit, and has it working with the loop aerial. The circuit design originated with Peter some 10 years ago, and has been developed by myself since then. Getting it into production has been undertaken by other members of the RAG committee. It is available as follows:

VLF receiver kit (pcb + components),	£60 + £4.50 postage.
VLF receiver built (pcb with components soldered),	£90 + £4.50
VLF receiver complete (built pcb in enclosure),	£120 + £5.50
Loop aerial kit (wood only)	£15 + £6.50
Loop aerial kit (wood + wire)	£31 + £6.50
Loop aerial built.	£35 + £8.50
Aerial tuning unit,	£25 + £2

Also available:

23.4kHz test signal generator	£15 + £2
15v Regulated power supply	£8.50 + £3

Most items should currently be in stock, but please check first at info@ukraa.com, where Andrew Lutley will be pleased to advise the availability.

Finding VLF signals.

A very useful website has been brought to my attention by Paul Hyde.: <http://www.df3lp.de> It contains links to a list of VLF transmitters (Worldwide, not just European), and a link to an interactive spectrogram. A vast amount of data is available, and it is well worth investigating. A simple real-time spectrogram of VLF signals is also available at: www.togashef.sheffield.ac.uk/%7Esferix/vlf.png I have used this for some time as a quick check as to which signals are currently active, and comparative signal strengths. These are both very useful facilities. If you have found other websites with similar features, then please do let me know.

Solar Activity.

Firstly, thank you for your continued support during this extended period of solar minimum. There have been so many predictions of cycle 24 activity, that someone surely will be right! A recent study of the magnetic field strength within sunspots (NASA) suggests that a steady decline in field strength has been occurring for the last 15 years. The current field strength is just 2/3rds of its value in 1995, at 2000Gauss.

Cycle 24 sunspot activity is present, but the spot groups that I have seen have been small, simple in structure, and not producing much in the way of flares. Each of the last 13 months has seen some new spot groups present. Day length is now decreasing rapidly, and so our chances of catching a flare are much less over the next few months. But then anything could happen!