21/09/06	**Soil temp** check at AWS @1050GMT = 15ºC
27/09/06	**Soil temp** check at AWS @ 1400GMT = 14.9, 15.1, 14.9 (average=14.97°c)
10/11/06	**AWS calibration** **Soil temperature** 2.5 ^{o}C too high. This has been adjusted so data from now on should be correct. **Air temp.** 0.25 ^{o}C too low. This has been adjusted so data from now on should be correct. **Humidity** 4% too low. This has not been corrected for. **Pyronom.** and net rad. Seem sensible but this cannot be verified without the appropriate calibration kit. **Wind dir.** Ok. **Care must be taken during download and connecting not to disturb unit too much.** Loss of data could be as a result of a fault in the memory
16/11/06	**Net. Rad.** Was inspected and found to be in good condition.
28/11/06	Installed **new logger**. Recalibrated **Pyro.**
03/01/07	It was discovered that the screw holding the **anemometer** had fallen out and as a result, the anemometer was sitting a t a slight angle. This was fixed on the day of discovery
24/01/07	Around 11:00-12:00 took **pyronometer** off AWS and disconnected from logger. Battery had to be disconnected for a while. Also Removed and re-inserted **soil probe** at 5cm, 2 or 3 feet downhill and to the left of the AWS.
15/02/07	Discovered that the there was a **problem with the programme** that DW had set up for the AWS. There was a conflict in that the **Net rad** was set up to measure across diff channel 6 whereas the **humidity probe** was wired and programmed into SE 11. These are the same channels – therefore the net rad. Was not being measured and looked something like a humidity trace
20/02/07	Updated and installed **new programme** 20/02/07
07/03/07	Downloaded AWS yesterday. Pyro. Not yet installed. Net rad. Would appear to be working although now **problem with temperature.**
08/03/07	Around 11:00GMT: **Pyronometer** re-installed and connected to logger. Battery had to be disconnected for a while.
19/03/07	**Temp.** problem resolved since submitting new prog. on 20/02/07. Subtract 40 from value and this should be the correct figure
20/03/07	New program submitted at around 15:00GMT. Pyronometer appears to be working.
01/05/07	Guy ropes tightened
19/07/07	Discovered that **Net. Rad** was at 45^{o} to the horizontal. This may have been the reason as to why we had observed some strange readings. This was reset to the horizontal at approx 10:15 GMT. Guy ropes need tightening.
24/07/07	Noticed that **Net rad** was again at an angle. It was damaged and has therefore been removed. Tightened guy ropes. Heights above G'level

	Net Radiometer ~1575 mm Humidity / temperature probe ~1475 mm Wind vane ~ 2395 mm Anemometer ~ 2500 mm Solarimeter ~ Average of 2870 + 2865 = 2867.5 mm
27/06/07	Installed different **net. Rad.**
27/07/07	On this day at 15:40 till the end of the month **wind speed** data is mostly 0 which could not be correct.
15/08/07	Discovered that the strange wind speed data was due to the wire being chewed through by sheep. Therefore removed **anemometer**. Another wire was slightly damaged but not cut so taped over this.
21/08/07	Re-installed anemometer with wires re-soldered.
06/11/07	**Air Temp** calibration check. The offset value was set at -3.8 V. There was an apparent difference between MORECS value and AWS value since DEC 06 – possibly when the last calibration was carried out. The offset was set to 0 and 5 temperature checks were carried out with a calibrated temp. probe. The figures are shown below AWS PROBE DIFFERENCE 9.39 9.6 0.21 9.33 9.6 0.27 9.39 9.6 0.21 9.26 9.5 0.24 9.26 9.5 0.24 Average difference = 0.234 Therefore the offset was reset to +0.234 to bring the AWS temp probe up to the calibrated probe value. Therefore previous data needs to be adjusted by adding 4.034 oC. The **Pyronometer** was checked because it was observed that the data was going to 0 rather early in the day. Please check data to see. There were large differences between comparisons with a handheld probe and that the AWS seemed to be sticking on values. See data below AWS PROBE 61.85 100 123.7 109.9 123.7 104.3 61.85 94 61.85 90.7 61.85 90.6
14/11/07	The **air temperature** probe was tested again with it's new calibration offset and it was in exact agreement with the calibrated temperature probe. The problem with the **pyronmenter** was solved. The range set in the programme was 2500 mV when it should be 25 mV therefore a more accurate reading should be given. The **soil temperature** probe was tested at three different temperatures along with the calibrated temperature probe. The

	original offset was set at -2.58 ^{o}C. In the field an average offset figure of +0.51 was given to the programme with a gradient of one. However, on analysis it may be more accurate to programme the probe with the equation y = 0.9845x + 0.5942. Therefore previous data if it is to be adjusted needs to have 2.58 degrees added and the equation above applied (or +0.51 added).
20/05/08	**Soil temperature** probe removed for calibration – hence spike and trough in data. For some reason (unknown) data was lost between 28/04/08 – 05/05/08
25/07/08	AWS at an angle. Top guy peg had come out. Was OK last Friday 18/07/08.
17/02/09	There was a loss in data between 6th and 12th January. Could this be as a result of lack of solar radiation recharging the battery via the solar panel. Also there seems to be a gradual inc. in the **relative humidity** – could this be drift in the probe?
02/04/09	Removed flying saucer to check details of the **temp/humidity probe**. So there may be a glitch in readings during this time – check data.
20/04/09	Altered the programme so as to allow recording of the data from the new Vaisala HMP **temp./rel. humidity probe**. Not yet installed.
22/04/09	Installed **Rh/Temp probe** but did not manage to get it working properly until the 23rd when we changed the signal channels
28/5/9	Downloaded aws and there was no 10 minute data from the new temp/rh probe all there is daily data,
01/06/09	**Pyronometer** calibration check. The pyronometer was checked with the pyronometer of Simon Grant. Readings where compared every minute AWS SG pyro Wm-2 Wm-2 Wm-2 % diff. 806 834 -28 -3.36 802 834 -32 -3.84 802 834 -32 -3.84 800 834 -34 -4.08 802 834 -32 -3.84 **Ave -3.79** **Std. 0.26** **Soil temperature probe** calibration check. The probe was checked with a temperature probe of Simon Grants. Readings where compared every minute. AWS SG Temp probe Difference Difference oC oC oC oC 0.64 0.5 0.14 0.14 0.67 0.6 0.07 0.07 0.52 0.4 0.12 0.12 0.5 0.4 0.1 0.1 0.56 0.5 0.06 0.06 0.52 0.4 0.12 0.12 **Ave 0.101667** 0.18 **Std. 0.031252** 0.18

					0.09
13.78		13.6	0.18		0.05
13.78		13.6	0.18		0.17
13.59		13.5	0.09		0.15
13.75		13.7	0.05	**Ave**	**0.119167**
13.87		13.7	0.17	**Std.**	**0.046015**
13.95		13.8	0.15		
	Ave		**0.136667**		
	Std.		**0.054283**		

	Soil temperature probe was reinstalled at 10 cm depth.
03/06/09	A new **net rad**. Is to be installed tomorrow 04/06/09 with a new multiplication factor 113.77 as opposed to the old factor of 112.86
04/06/09	New net rad installed AWS reprogrammed with AWS_03_JUNE