

## Field Trip to the [Auchencorth Moss Atmospheric Observatory](#) – Wednesday 7<sup>th</sup> September



Auchencorth Moss, is a low lying ombrotrophic peat bog, a few miles south of Edinburgh, it's been in operation since 1995 and is one of CEH's most important monitoring sites. It is a valuable location for long-term monitoring of surface/atmosphere exchange fluxes, wet and dry deposition, concentrations and measurements indicating environmental change. As a result of the large number of parameters measured at the site it is part of a wide range of monitoring networks and is also used in collaborative work with the wider scientific community.



Auchencorth Moss:

- Forms part of the [ACTRIS](#) network
- Is one of two [UK supersites](#) under the EMEP monitoring programme
- Serves several UK networks (including the Ammonia Network, Acid Gases and Aerosols Network, the Heavy Metal Network)
- Forms part of the UK [Automatic Urban and Rural Network](#)
- One of CEH's Carbon Catchments sites
- [GAW](#) European Regional Station

At the site we measure the concentrations and surface/atmosphere exchange fluxes of trace gases and aerosols, including physical and chemical properties. We are one of the few sites measuring ozone deposition fluxes continuously using a fast eddy-covariance sensor and until 2015 we also ran a 5-point gradient system. Of particular significance is also the continuous operation of a MARGA wet-chemistry analyser for hourly measurement of gas-phase  $\text{NH}_3$ ,  $\text{HNO}_3$ ,  $\text{HCl}$ ,  $\text{SO}_2$  and aerosol inorganic chemical composition of  $\text{PM}_{2.5}$  and  $\text{PM}_{10}$  ( $\text{SO}_4^{2-}$ ,  $\text{NO}_3^-$ ,  $\text{Cl}^-$ ,  $\text{NH}_4^+$ ,  $\text{Na}^+$ ,  $\text{Mg}^{2+}$ ,  $\text{Ca}^{2+}$  and  $\text{K}^+$ ). The instrument is based on denuder/steam jet aerosol collector technology, coupled with online ion-chromatography, which provides an attractive reference for a range of gas/aerosol measurements.

On Wednesday 7 September you will have the opportunity to visit the site, which is close to Spring Field Farm, and see the wide range of instrumentation continuously operating. We will leave from the EICC after the morning session, on arrival at the site lunch will be available, including pork rolls made from the farm's own free-range pigs and other dietary options, and posters showing some of the research at the site will be on display. After a briefing on safety procedures we will make the short walk to the site, past the farm's wind turbine and the field site team will show you around. Depending on numbers we may split into groups to allow everyone full participation.

Please note that we will be outdoors and visiting a working farm as well as the field site so appropriate **outdoor footwear and clothing will be required**, Scottish weather can sometimes be very cold, wet and windy, even during the summer; access to the site is via a rough track and boardwalks so unfortunately it may not be suitable for those with severe mobility issues (*please contact **Dr. Mhairi Coyle** [mcoy@ceh.ac.uk](mailto:mcoy@ceh.ac.uk) if you have any queries*).

This field trip is receiving financial support from the [Institute of Physics](#)

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