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First year of operation of the new southern EMEP UK supersite: Assessing the impact of the relocation on regionally representative measurements

Hannah Walker (1,2), Christine Braban (1), Mat Heal (2), Agneieszka Sanocka (3), Stuart Ritchie (3), Chris Conolly (3), Keith Vincent (3), Ulli Dragosits (1), and Marsailidh Twigg (1)

(1) Centre for Ecology and Hydrology, NERC, Penicuik, United Kingdom (chri2@ceh.ac.uk), (2) Department of Chemistry, University of Edinburgh, United Kingdom, (3) Ricardo Energy and Environment, Harwell, United Kingdom

The Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP) is a body under the UNECE Convention on Long Range Transboundary Air Pollutants (CLRTAP). Over 40 years EMEP has measured at regular time intervals in many locations across the member states to visualise the regional and spatial trends in air pollution. The monitoring data provides the scientific evidence for underpinning legislation and mitigation of atmospheric pollutants.
The UK has two level II/III "supersites" at rural locations under EMEP, one in the north (Auchencorth Moss, Midlothian) and one south of the country. Until 2015 the southern site was at Harwell, Oxfordshire (North West of London), but due to redevelopment the measurement station was relocated. The new site, Chilbolton Observatory, 40 miles south. The site is still in the south west sector from London.
The aim of this study is to provide an informative overview of the atmospheric composition of the species recorded at Chilbolton during the first complete year of measurements (2016), with a comparison to the long term air quality data from Harwell (up to 2015), highlighting any discrepancies that could cause noticeable changes in the trends of the UKs background atmosphere. A comparison of regional and local influences on the concentration measured and the implications for this type of move on long term observation assessments will be presented.