



Investigation of regional transportation of trace gases using perfluorocarbon tracers

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Two perfluorocarbon tracer experiments were conducted in 2007 in a rural area outside Bristol, UK. The aims were to provide much needed tracer experimental data on a regional scale and to evaluate the British Met Office's NAME III dispersion model.

The release of perfluorocarbon was made by spraying out liquid perfluorocarbon into a hot chimney. The release apparatus resembled the one used in the ETEx (European Tracer EXperiment) experiments. Air sampling was made using Tedlar bags® and the samples were analysed using ADS-GC-MS run in negative ion chemical ionization mode. ADS is an abbreviation for absorption desorption system.

In the first experiment seven receptors were placed in an arc 20 kilometres away from the release site. In the second experiment, six receptors were used; three in an arc 10 kilometres away from the release site and another three 20 kilometres away. The results will be compared to the output from the NAME III model.