

# **A preliminary Eulerian modelling study of dispersion of NO<sub>x</sub> emissions over London**

Contribution to subproject SATURN

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Hitherto Eulerian models have not been widely used for London, with emphasis for regulatory purposes on simpler models assuming uniform winds and meteorology across the whole city. This study has applied the Eulerian mesoscale model MEMO to the Greater London area for a preliminary analysis of NO<sub>x</sub> concentrations during an episode in the summer of 1999.

The mesoscale model MEMO ran coupled to the trajectory model TRAPPA in order to model both the wind field and NO<sub>x</sub> concentrations across London for a weak southeasterly flow.

Results obtained from the model simulations have been compared to measurements from the London Air Pollution Monitoring Network. Among the results obtained the influence of the urban surface and the terrain orography was found to be significant. Further work in London should be performed in order to examine the effects of the surface and turbulent exchange on dispersion.

## **References**

V.Assimakopoulos (2001), Numerical Modelling of Dispersion of Atmospheric Pollution in and above Urban Canopies. *PhD thesis, Imperial College of Science, technology and Medicine, London, U.K.*