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Multiscale study of O3 Tropospheric in middle Italy

Project(s) or EGEE activity presenting the demo or poster (project or activity names only)

NA4.2 Computational Chemistry Cluster

Special requirements other than the set up mentioned in the CfA text.

None.

Abstract

A family of computational applications considered for implementation on the grid is the multiscale suite of codes modeling the production of secondary pollutants in the atmosphere. The major threat to the air quality is usually represented by the pollutants released in the atmosphere by human activities. These emissions modify the atmosphere composition and worsen its quality with a consequent damage to human health and to the ecosystem. This kind of computational simulations allow to simulate short term acute episodes as well as long-term sustained trends. The steps for implementing on the EGEE grid the necessary computational tools are here described, a study case concerning the modeling of air quality in the middle Italy is considered and the comparison of the calculated results with the measured ones, are discussed. In particular the production of secondary pollutants during the summer 2004 and its impact on the territory has been studied.

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