

LONG-TERM OZONE EXPOSURE CALCULATIONS WITH AN EPISODIC METHOD

A. Coppalle and C. Phillippe
UMR 6614 CORIA, Rue de l'Unversite,
St Etienne du Rouvray, 76801, France

The long-term exposures are an important issue, they have an impact on human health and vegetation (Coe and al. 1995, Heck and al. 1982). To evaluate it, averaged concentrations and Accumulated dose Over a Threshold of 40 or 60 ppb (AOT40 or AOT60) are currently used. The knowledge of these parameters requests to carry out long time simulations (several months, or several years). In the case of photochemical pollution, the computing time push towards the simulation of scenarios representative of the studied period (Eder, 1993, 1994).

This method is called 'episodic scenarios'. Within the framework of CITY DELTA project (<http://rea.ei.jrc.it/netshare/thunis/citydelta>), such a method was developed to evaluate the background concentrations over Paris area. The method, based on the statistics selection of meteorological days, was validated by comparison with data provided by monitoring station (April to September 1999).

We will present the Air Qualit Model (AQMs) used, and after a brief presentation of the test case, we will show results obtained with the simulations. The selections of the scenario are based on the meteorological data. For a given period, we have developed a method which selects the scenario as the closest day to the mean day. Comparison between other classification methods will be shown, as k-means and Ward for example. Two point will be discussed: How many scenario are necessary? how long a period is well represented by one scenario?