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Ozone air quality, parameters meteorological and OLS regression model in Burgos (Spain)

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Progress continues to be made in our knowledge about the tropospheric ozone concentration. In several cities of Spain, for years measures of ozone concentration have been made in urban areas like measurement of control of the quality of the air. The modification of some of factors is translated in an increase or diminution of ozone, having been able to be reached high concentrations of this polluting agent. Also ozone in the atmosphere experiences a series of phenomena and, in different geographic points can be detected different levels from ozone air pollution.We have selected Burgos like representative of a region of average type in Spain and has automatics monitoring of air pollution installed by the regional government. The location of the field experiment is sited in three places: Burgos, Aranda and Miranda. Those stations regularly collects measurements of air pollution and meteorological parameters. In this work we have calculated data in several stations and have compared the values. Also, we have compared the ozone values with some of our results obtained in other station near Burgos city that regularly collects measurements of ozone. We have also monitored the main meteorological parameters, including the main meteorological variables associated with photochemical activity, air temperature and solar radiation.For all variables have been carried out daily, monthly and others averages from the data (ten or fifteen minutes interval). For the parameters, air temperature and solar radiation, a positive tendency is observed, like was to hope, being better the linear adjustment of the solar radiation. The marked difference of behaviour between the summer and the winter in every year is clear, and the values in 2003 summer are higher, by the heat wave that was. The number of time exceeding ozone threshold values from the stations in every year is determinate. Have been used the daily averages for study the Ordinary Least Squares Regression (OLS) model. ACKNOWLEDGEMENTS: The partial financial support by the Junta de Castilla y León (project BU18/05)