Home
Online Library ACP
- Recent Final Revised Papers
- Volumes and Issues
- Special Issues
- Library Search
- Title and Author Search

Online Library ACPD
Alerts & RSS Feeds
General Information
Submission
Review
Production
Subscription
Comment on a Paper

Volumes and Issues | Contents of Issue 4 | Special Issue

Atmos. Chem. Phys., 4, 1139-1147, 2004
www.atmos-chem-phys.net/4/1139/2004/

A climatological study of rural surface ozone in central Greece

P. D. Kalabokas and C. C. Repapis
Academy of Athens, Research Center for Atmospheric Physics and Climatology, Athens, Greece

Abstract. Recent studies show that surface ozone levels at rural sites in Greece are generally high when compared with rural ozone measurements at northern European sites. The area of SE Europe, including Greece, is not very well monitored regarding rural ozone in comparison to central and northern Europe. In order to have the best possible picture of the rural surface ozone climatology in the area, based on the available data-sets of long-term continuous monitoring stations, the 10-year measurement records (1987-1996) of the Athens peripheral station of Liossia, (12 km N of the city center) and the urban background station of Geoponiki (3 km W) as well as the 4-year record (1996-1999) of the rural station of Aliartos (100 km NW of Athens), are analyzed in this paper. The data for Liossia and Geoponiki stations are screened for cases of strong airflow from rural areas (N-NE winds stronger than 5 m/s). The variation characteristics of the average rural ozone afternoon levels (12:00-18:00), with the best vertical atmospheric mixing, are mainly examined since these measurements are expected to be representative of the broader area. In all three stations there is a characteristic seasonal variation of rural ozone concentrations with lowest winter afternoon values at about 50 μg/m^3 in December-January and average summer afternoon values at about 120 μg/m^3 in July-August, indicating that high summer values are observed all over the area. The rural summer afternoon ozone values are very well correlated between the three stations, implying spatial homogeneity all over the area but also temporal homogeneity, since during the 13-year period 1987-1999 the rural afternoon ozone levels remained almost constant around the value of 120 μg/m^3.

Final Revised Paper (PDF, 1066 KB) | Discussion Paper (ACPD)

Citation: Kalabokas, P. D. and Repapis, C. C.: A climatological study of rural surface ozone in central Greece, Atmos. Chem. Phys., 4, 1139-1147, 2004. Bibtex | EndNote | Reference Manager

Copernicus Publications
The Innovative Open Access Publisher

Search ACP
Library Search
Author Search

News
- Sister Journals AMT & GMD
- Financial Support for Authors
- Journal Impact Factor
- Public Relations & Background Information

Recent Papers
01 | ACPD, 02 Mar 2009: Reassessment of causes of ozone column variability following the eruption of Mount Pinatubo using a nudged CCM

02 | ACPD, 02 Mar 2009: On the importance of small ice crystals in tropical anvil cirrus

03 | ACPD, 02 Mar 2009: Modelling the impacts of ammonia emissions reductions on North American air quality