



## **Failures and successes of tropospheric ozone CAMS forecasting as related to local and regional transport-chemistry conditions in the Mediterranean region**

John Kapsomenakis (1), Pavlos Kalabokas (1), Christos Zerefos (1,2), Antje Inness (3), Henk Eskes (4), and Lida Dimitriadou (1)

(1) Academy of Athens, Research Center for Atmospheric Physics and Climatology, Athens, Greece (johnkaps@geol.uoa.gr), (2) Navarino Environmental Observatory (N.E.O.), Greece, (3) ECMWF, Reading, UK, (4) Royal Netherlands Meteorological Institute, De Bilt, the Netherlands

Tropospheric ozone forecasts at rural stations in the Mediterranean performed through CAMS (Copernicus Atmospheric Monitoring Service) reanalysis are studied as to their successes and failures when compared to observations. Local and regional effects can provide additional sources of errors in the CAMS reanalysis forecasts and these are studied separately at stations exposed in contrasting environments in the Mediterranean. These environments include the eastern Mediterranean with the higher tropospheric ozone background concentrations as well as the western part of the Mediterranean with relatively lower background observed ozone levels. These contrasts are due to a number of physical and chemical processes namely subsidence, precursor pollutant paths from Europe to SE Europe and to the eastern Mediterranean as well as the contrasting irradiances between the eastern and western Mediterranean, among others. The analysis includes day and night differences, observed and modelled, as well as the effects of elevation and distance from the sea.