

**EXPERIMENTAL STUDY OF AIR MASS ADVECTION OVER THE
GREATER THESSALONIKI AREA**

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ABSTRACT

In this study an attempt is made to examine the wind field and the thermal structure of the lower atmosphere over the greater Thessaloniki area that are directly related to the air quality over this area. Data of surface meteorological stations that operate on a permanent basis have been employed, along with measurements of two acoustic radars and a tethered ballon operating for a selected experimental period. This data set is combined with the results of a numerical model. The weak background flow prevailing during the examined period allows the detailed study of the local circulations that formed in the greater Thessaloniki area, and especially the sea breeze of the Thermaikos gulf.