

Mediterranean aerosols: Satellite observations, atmospheric circulation and direct radiative effect

Speakers

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Summary

In this talk my intention is to present a summary of results from my research activity in the field of aerosol studies as well as to present the main tasks of the MDRAF. At first, emphasis is given to the analysis of satellite retrievals for the description of aerosols' regime in the Mediterranean and the surrounded areas, the intercomparison of satellite measurements, their implementation in neural networks in order to retrieve dust microphysical and optical parameters and their usage as initial conditions in radiation transfer models for the estimation of UV irradiances and the direct radiative effect (DRE). In the second part, is going to be presented an objective and dynamic algorithm which classifies, in terms of intensity and type, the aerosol episodes occurred in the broader Mediterranean basin over the period 2000-2007. Based on its outputs, the main characteristics of aerosol episodes (e.g. frequency), their relation with the prevailing atmospheric circulation and their effect on the radiation field, are analyzed. At the end, the main tasks of the MDRAF, a project funded by the European Commission in the framework of Marie Curie-IEF (Marie Curie Intra-European Fellowships for Career Development), are briefly described.

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