

AEROSOL OPTICAL PROPERTIES AT THREE REGIONAL BACKGROUND SITES IN THE WESTERN MEDITERRANEAN BASIN: SPATIO-TEMPORAL VARIABILITY AND CASE STUDIES

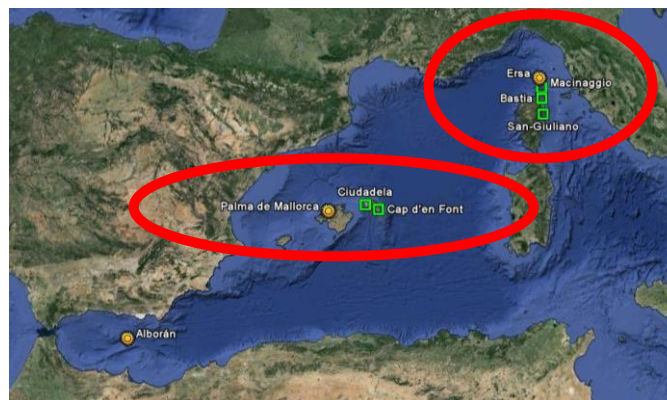
Rubén Barragán Cuesta- Universitat Politècnica de Catalunya

Michaël Sicard, Julien Totems, François Dulac, Marc Mallet, Adolfo Comerón, Lucas Alados-Arboledas, Patrick Augustin, Patrick Chazette, Jean-François Léon, Francisco Jose Olmo, Jean-Baptiste Renard, Francesc Rocadenbosch

OBJECTIVES:

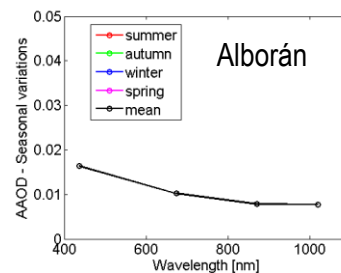
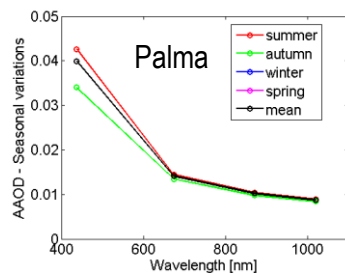
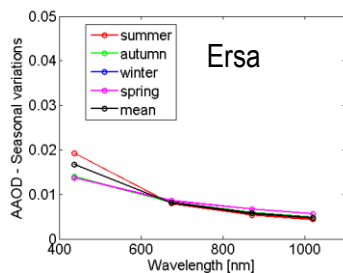
- Compare the optical and radiative properties derived from AERONET sun-photometer measurements at two regional background sites in Erza (Corsica, France) and Palma de Mallorca (Mallorca, Spain).
- Compare the radiative forcing at the Top Of the Atmosphere (TOA) and at the Bottom of the Atmosphere (BOA) from AERONET with calculations from a local, 1D RTM
- Discuss a case of study during the 2013 summer campaign.

SITES:



- Position of lidar systems
- Position of AERONET sun-photometers
- Sites used in the case of study

SEASONAL AND ANNUAL VARIABILITY OF AEROSOL PROPERTIES (I):



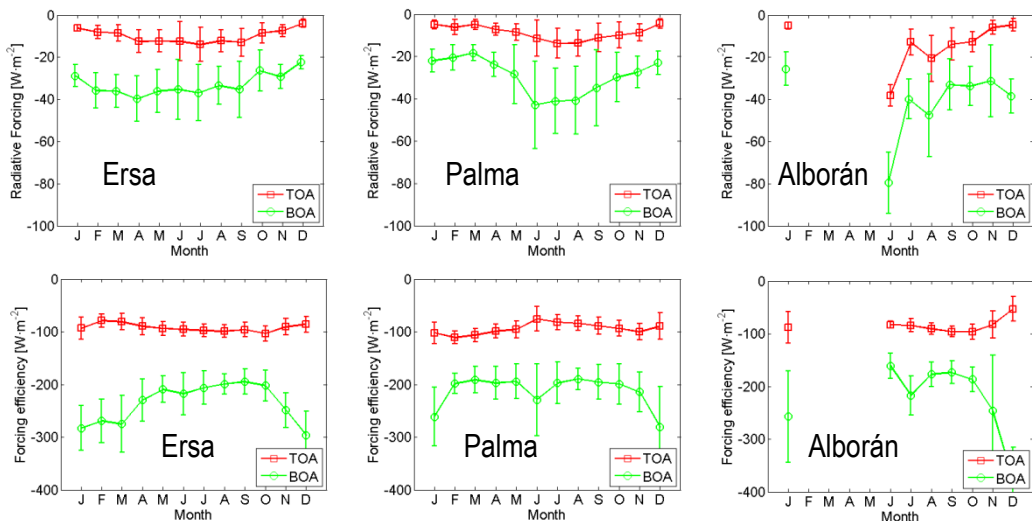
AAOD seasonal variation.

AEROSOL OPTICAL PROPERTIES AT THREE REGIONAL BACKGROUND SITES IN THE WESTERN MEDITERRANEAN BASIN: SPATIO-TEMPORAL VARIABILITY AND CASE STUDIES

Rubén Barragán Cuesta- Universitat Politècnica de Catalunya

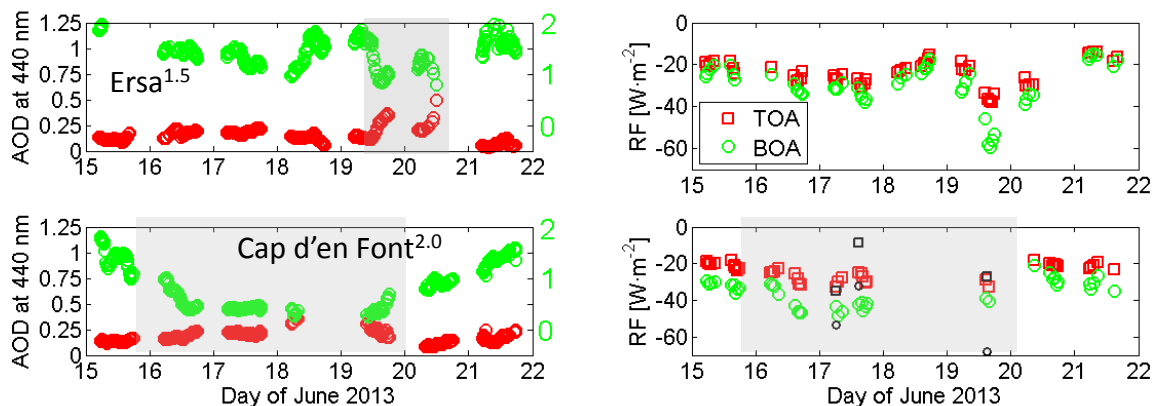
Michaël Sicard, Julien Totems, François Dulac, Marc Mallet, Adolfo Comerón, Lucas Alados-Arboledas, Patrick Augustin, Patrick Chazette, Jean-François Léon, Francisco Jose Olmo, Jean-Baptiste Renard, Francesc Rocadenbosch

SEASONAL AND ANNUAL VARIABILITY OF AEROSOL PROPERTIES (II):



Seasonal variation (top) of the solar radiative forcing and (bottom) of the solar forcing efficiency.

CASE STUDY DURING SUMMER 2013:



(left) AOD at 440 nm and AE 440–870 nm (left axis) during 15–21 June 2012; (right) shortwave radiative forcing at the TOA and at the BOA.