



An open - sky laboratory: when atmosphere and soil meet

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A campaign has been carried out in Sicily in collaboration with the Agro-Meteorological Service of the Sicilian Region in an area with arid and dry characteristics in order to measure physical parameters affecting the low level atmosphere - soil layer energy balance. Major aim of this activity is to assess and mitigate the impact of desertification in Italy. Hydro resources availability in arid, semi-arid and sub-humid dry zones influences natural environment as well as producing activities. Therefore there is a need for new tools to support the efficient management of these resources. During the campaign described in this work the atmosphere-soil energy balance has been investigated by using an innovative technique based on optical scintillation instead of the traditional empirical methods. Integration of the field data together with satellite data into simulation models allows an accurate area estimation of surface energy exchanges and balances.