

A new approach to sensitive climatology: The DTS-MEDEX-2009 Campaign

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The Data Targeting (DT) method as a way to improve the forecasting of high impact weather has been already tested in some experiments in the past, even including Mediterranean cases (North-Atlantic TReC 2003, Eurorisk-Preview 2008), but the DTS-MEDEX-2009 campaign is the first campaign in which the DT method has been used to face Mediterranean high impact weather events only, without reference to other regions. For that reason, apart from being an important stage in the MEDEX development, this campaign can provide significant learning for the use of the DT method with operational radio-soundings (and AMDAR) in other Mediterranean campaigns, HYMEX EOP in particular. The DTS-MEDEX-2009 campaign has covered from 1st October to 20 December 2009. During this period 132 Mediterranean cases of high impact weather have been selected; in association with them, 484 extraordinary radio-soundings have been launched from 50 upper-air-stations, located in 15 countries. Funding and operational facilities were provided by EUCOS and the software was the Data Targeting System (DTS) developed at the ECMWF for the Eurorisk-Preview 2008 campaign. Although specific diagnostic studies are needed to assess the impact of the extra-observations on the forecast skill and demonstrate the effectiveness of the DTS-Medex 2009, some preliminary findings can be deduced from a survey of this targeting exercise. Indeed, some indications about the ability of the adaptive network to respond to the uncertainty constraint requested by (lead-) user(s) can be deduced when examining the extra-soundings frequencies with respect to the spread of the sensitive, observation request and verification areas.