



The 8th-10 th January 2009 snowfalls: a case of Mediterranean warm advection event

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From 8 th to 10 th of January 2009, significant snowfalls were reported in many areas of the Iberian Peninsula and the Balearic Islands. This relevant event was very important from the meteorological and social impact point of views. The snow affected many zones, especially the regions of Madrid, Castilla & León and Castilla-La Mancha (Spanish central plateau) with the persistence and thickness of solid precipitation. Up to twenty-five centimetres of snow were reported in some places. On 9th of January the snowfalls caused great social and media impact due to the fact that they took place in the early hours in the Madrid metropolitan areas, affecting both air traffic and land transport. The “Madrid-Barajas” airport was closed and the city was collapsed during several hours. A study of this situation appears in the poster. The snowstorm was characterized by the previous irruption of an European continental polar air mass, that subsequently interacted with a wet and warm air mass of Mediterranean origin, all preceded by low level easterly flows. This type of snowfall is called “warm advection”. These winter situations are very efficient from precipitation point of view, generating significant snowfalls and affecting a lot of areas.