

Exceptional snowfalls in the region of molise (central Italy) in a context of extremes of climate

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After a first part of winter characterized by a almost total absence of snowfalls, between the end of January and mid February 2012, the Italian peninsula has been affected by the influence of many advections of arctic-continental air. These, that have generate a series of front; this brought to diffuse mainly snowy precipitation, mostly affecting in particular the central-southern regions. Main aim of this study is to analyze the cumulative height of snow measured in 43 stations of the different monitoring networks in the region of Molise and their comparisons to data for other major events observed during the winters of 1929,1956 and 1985 in twelve stations. Compared to these earlier events, accumulations of fresh snow recorded during the events of 2012 can be characterized as "exceptional" in the mid-altitude areas of Molise region, in ordinary contexts thermal and anemometer. After this period extremely cold and snowy, occurs a phase meteorological characterized by near total absence of new snow and temperature much more elevated to climatic averages. An analysis of MODIS images show that at the end of the month, the snowpack has melted completely at odds medium-low; the complementary study of nivometric data evidence that, only above 1200-1400 m a.s.l. the snow remained at the ground until the first day of the month of April. This signal, although limited to a single winter season, can be considered a significant indicator in the context of climate extremes, particularly intense in the mountains of the Mediterranean basin.