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Deep convection east of the Andes Cordillera: test case analysis of air mass origine.

H. Teitelbaum, H. Le Treut, M. Moustaoui, G. Cabrera and G. Ibanez
Laboratoire de Meteorologie Dynamique, Ecole Normale Superieure, Paris, France

Warm and and moist air masses, required to generate deep convection, over the Mendoza region are mainly provided by the so called low-level jet. This northerly wind may weaken and even change its direction, when the eastern side of the South Pacific anticyclone crosses the mountains, and this wind reversal is associated with deep convection suppression. In this paper it is shown that there is another dynamical source of moist and warm air even in the presence of a southerly low-level jet. When the South Pacific anticyclone crosses the continent eastward and its western side has reached the East coast of South America, deep convection can re-appear east of the Andes. This is a direct consequence of the transport of warm and moist air from Uruguay,Southeast Brazil, or even directly from the Atlantic Ocean.