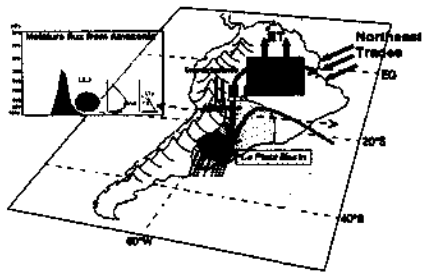
Importance of the Low Level East East of the Andes (LLJ) and the moisture transport from the Amazon Basin to the la Plata Basin

José A. Marengo, CPTEC/INPE, marengo@cptec.inpe.br (Presenting)
Pedro Leite Silva Dias, USP/IAG, pldsdias@master.iag.usp.br
Maria Assução Faus da Silva Dias, CPTEC/INPE, assuncao@cptec.inpe.br
Tercio Ambrizzi, USP/IAG, ambrizzi@model.iag.usp.br
Gilberto F Fisch, IAE/CTA, gfisch@iae.cta.br
Luiz Augusto Toledo Machado, CPTEC/INPE, machado@cptec.inpe,br
Iracema F Cavalcanti, CPTEC/INPE, iracema@cptec.inpe.br

The Low Level Jet East of the Andes (LLJ) represents a mesoscale circulation feature located to the East of the Andes, and which maximum speed is on the first 2 km in the vertical. The LLJ brings moisture from the Amazon basin into the La Plata basin, and seems to be stronger in summer, producing rainfall in the southeaster South American region. We present some results of the SALLJEX field Campiagn of summer 2003, expl,aining some of the opbserved features of the LLJ, as well as upper and low-level circulation for seasonal means and SALLJ composites during the warm and cold seasons. On the circulation characteristics, SALLJ composites during the warm season show the enhanced low-level meridional moisture transport coming from equatorial South America as well as an upper level wave train emanating from the West Pacific propagating towards South America. The intensification of the warm season LLJ obeys to the establishment of an upper-level ridge over southern Brazil and a trough over most of Argentina. The circulation anomalies at upper and lower levels suggest that the intensification of the LLJ would lead to an intensification of the South Atlantic Convergence Zone SACZ later on, and to a penetration of cold fronts with an area of enhanced convection ahead at the exit region of the LLJ.

Equação:



Submetido por Jose A. Marengo em 16-MAR-2004

Tema Científico do LBA: PC (Física do Clima)

Tipo de Apresentação: Poster

ID do Resumo: 52