Status on SALLJEX related investigations:

Theme IV: Additional SALLJ related topics

J. A. Marengo
CPTEC/INPE

Summary

-Use of SALLJEX data and others data sources (reanalyses, rainfall data sets, remote sensing data)
-Case studies and climatology
-Circulation features associated with LLJ
-Water balance and moisture transport (interactions between Amazonia-La Plata)
-Low-frequency variability of SALLJ
-Teleconnections and associations between rainfall in SACZ/SESA/SALLJ
-Modeling paleoclimate and future climate characteristics of SALLJ and SAMS
-SALLJ and Cold surges studies during SALLJEX
-Diurnal cycle of rainfall and convection
-Interaction between SALLJEX and other experiments (LBA-RACCI, CEOP)

1. **Characteristics and variability of SALLJ during the SALLJEX field experiment: Case study of January 21 2003 W. Soares and J. Marengo (CPTEC/INPE, Sao Paulo, Brazil)**

2. **Characteristics and variability of Cold surges during the SALLJEX field experiment: Case study of January 24 2003. J. Marengo, R. Garreaud, T. Ambrizzi, (CPTEC/INPE, USP-IAG, University of Chile)**

3. Climatology of the LLJ East of the Andes as derived from the NCEP-NCAR reanalyses: Characteristics and seasonal Variability. J. Marengo, W. Soares, C. Saulo, M. Nicolini (CPTEC/INPE, São Paulo, Brazil; CIMA, B. Aires, Argentina)

4. Using ECMWF Reanalysis and NASA Scatterometer Ocean Surface Wind to Study the Processes that Control Seasonal, Interannual and Intraseasonal Variations of SALLJs. R. Fu, H. Wang, Georgia Institute of Technology, USA), W. Timothy, W. Tan (JPL, NASA-USA)

5. Atmospheric characteristics associated with extreme cases of Low Level Jet to the east of Andes. C. A. Souza and I. F. A Cavalcanti (CPTEC/INPE, São Paulo, Brazil)

6. Interannual and Interdecadal Variability of SALLJ events. J. Marengo, W. Soares (CPTEC/INPE, São Paulo, Brazil)

7. Simulation of the South American Monsoon System for future climates derived from the HadCM3 model. J. Marengo, T. Tarasova, R. Betts, P. Cox, V. Barros (CPTEC/INPE, ao Paulo, Brazil; Hadley Centre, Exeter, UK, UBA, Argentina)

8. Simulation of the South American Monsoon System during the Medium-Holocene (6,000 Years BP) using the CPTEC COLA AGCM. L. Melo, J. Marengo (CPTEC/INPE. Sao Paulo, Brazil).

9. LLJ of January 21, 2003: a case of scale interaction. M. Silva Dias (USP/IAG-CPTEC/INPE, Sao Paulo, Brazil)

10. LLJs and the Hydrologic Cycle in The La Plata Basin. H. Berbery, P. Silva, E. Collini, M. Peña (University of Maryland, USA)

11. Precipitation patterns over North Western Argentina. W. Vargas, Minetti and J. N-Paegle

12. Spring and Summer precipitation in SESA amd the SALLJ. R. Terra, A. Diaz, G. Cazes, G. Pisciottano (Universidad de la Republica, Uruguay)

13. The LLJ in the simulations with Regional Climate Model 2 (RegCM2). R. Rocha and T. Ambrizzi (USP-IAG, Sao Paulo, Brazil)

14. Diurnal Cycle of Precipitation Based on CMORPH. V. E. Kousky, J. E. Janowiak, R. Joyce (Climate Prediction Center, NOAA, USA)

15. Synoptic atmospheric circulation patterns associated with the South American low-level jet (SALLJ) events. A. F. dos Santos, M. A. Gan (CPTEC/INPE. Sao Paulo, Brazil)

16. Contributions of LBA-DRY TO WET (RACCI) to SALLJEX. M. A. Silva Dias, A. Plana, A., Manzi, P. Silva Dias, J.Marengo, , L. Machado, G. Fisco (CPTEC/INPE, USP-IAG, CTA, Sao Paulo, INPA, Manaus, Brazil)

17. Associations between LLJs and the onset and the quality of the rainy season in the SAMS area (southern Amazonia-West Central Brazil). J. A. Marengo, L. Horta, H. Miranda, R. Alvala, M. Paraná (CPTEC/INPE, University of Brasilia, University of Mato Grosso, Brazil)

Future:

Need for collaborative efforts on:

-3-D structure of the LLJ

-Diurnal cycle of the intensity of the LLJ

-Mechanisms associated with development and intensification of LLJ

-Diurnal cycle of rainfall related to LLJ and MCS

-Mechanisms that precede the development of summer time and wintertime LLJ

-Relationships between convection/rainfall in Amazonia and the development of LLJ

-Take advantage of the pilot-balloon network in S. America (PACS-SONET plus new potential sites)

-Teleconnection patterns and the LLJ intensity/frequency (e.g. El Nino, Atlantic SST)

-Soil moisture and associations with LLJ and rainfall

-Connection Amazonia-La Plata basins (past, present and future). Altiplano and LLJ or cold surges?,

-Data needs (pibal, RS, P-3, radar, rainfall), models,….

If modelers get together organizing interinstitutional teams, why not the "non-modellers"do the same?.