**P32 Numerical investigation of a heavy snowfall event over the tropical Andes.**

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We study the atmospheric characteristics of a snowfall event over the Bolivian Andes in August 2013 that caused severe damage to people, infrastructure and livestock. This event was associated to a cold front episode following the eastern slope of the Andes-Amazon interface. Using the Weather Research and Forecasting (WRF-ARW) model, we conduct a series of high resolution numerical experiments that includes sensitivity studies to initial conditions and microphysics schemes. We compare our findings to TRMM rainfall estimates and ground measurements. Our results highlight the importance of orography for moisture transport and microphysics schemes for capturing better the snowfall spatial distribution and intensity than originally forecasted.