ATMOSPHERIC MOISTURE SOURCES ASSOCIATED WITH EXTREME PRECIPITATION DURING THE PEAK PRECIPITATION MONTH

*Luis Gimeno[1], Marta Vazquez[1,2,3], Raquel NIETO [1], Margarida Liberato[2,3]

1. Environmental Physics Laboratory (EPhysLab), CIM-UVigo, Universidade de Vigo, Ourense, Spain, 2. Instituto Dom Luiz (IDL), Faculdade de Ciências, Universidade de Lisboa, 1749-016 Lisboa, Portugal, 3. Escola de Ciências e Tecnologia, Universidade de Trás-os-Montes e Alto Douro, Vila Real, Portugal

The moisture transport is a crucial element in the understanding of the continental precipitation and its extremes. In this work, a Lagrangian approach was used to investigate the contribution of the main oceanic and continental global moisture sources to extreme precipitation during the peak precipitation month (month showing higher climatological precipitation). This was done for every grid point using four different precipitation thresholds to define precipitation extremes. Compared with the climatological sources, it is remarkable the increase of the contribution for extreme precipitation of the North Atlantic and the Mediterranean Sea sources over Eurasia, the Indian Ocean over Australia, the North and South Pacific sources over North and South America respectively and the South Atlantic source over Africa

Keywords: hydrological cycle, atmospheric moisture sources, extreme precipitation

