



Austral Summer Monsoon-like Circulation and the Madden-Julian Oscillation over the Indian Ocean

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The average seasonal evolution of the Sea Surface Temperature (SST) over the Indian Ocean between the equator and 10°S exhibits a secondary minimum around the end of January. This average cooling is due to convection that develops south of the equator during this season in association with a westerly low-level jet that can be considered as a monsoon-like flux. This convective activity, together with the westerly jet, is strongly modulated at intraseasonal time-scales in association with the development of Madden-Julian Oscillations (MJO). Using accurate SST measurements from the Tropical Rain Measuring Mission (TRMM) Microwave Imager (TMI), together with the NOAA OLR datasets and ECMWF re-analysis, we examine the monsoon-like onset of the convection over this region and its link with the surface cooling and the development of MJO events.