E1-12: Behaviour of Outgoing Longwave Radiation over the Indian Ocean during EL-Nino and normal year

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In this investigation an attempt has been made to identify the variation of Outgoing Longwave Radiation (OLR) from an El-Nino year to a normal year over the Indian ocean by using monthly mean OLR composites. It is obvious the OLR field over the Indian ocean shows considerable differences during the El-Nino year as compared to a normal year.

During El-Nino January to April, the north-western Indian ocean shows low convective activity and Sri Lanka experience dry conditions as compared to a

normal year. High convective activity occurs over the central Indian ocean in the Southern Hemisphere. In May, the high convection area gradually moves in the North-East direction towards the Northern Hemisphere during the El-Nino year. Convective activity increases over the Indian subcontinent and maritime continent from May to August and low convective activity occurs over the Arabian sea and Northern Australia during the El-Nino year. During a normal year, elongated narrow band of low convective activity forms in the north-south direction in the western Indian ocean. In November, it gradually increases in the same location. September to December high convective areas begin to propagate towards the maritime continent and low convective area spreads from the Arabian sea in the northwest direction.

Fluctuation of Northern Hemisphere convective activity is significant as compared to Southern Hemisphere during the El-Nino year.