VIRENDRA
GOSWAMI
'Environment and Peace Foundation ' & Indian Institute of Technology(IIT)
Poster
The study examines High-resolution Satellite imageries; with emphasis on the Tropical Atlantic Climate Variability due to large scale kinematic and thermodynamic behavior of selected mesoscale Convective Systems, e.g. intense Cloud Cluster s, Depressions & Thunderstorms, Tropical Cyclones (hurricanes) over the SE-Atlantic & Caribbean regions during Jul-Oct-2017; by making use of aircraft and conventional data over the domain.

The values of characteristics, e.g. lifetime, distribution, trajectories, size
and three-dimensional structure, i.e., the vertical extent of these systems would be computed in order to develop a Tropical Atlantic Climate- Variability (TAC-V) Model through the Study of the Correlation of Climate Variability with the Energetics of Meso-Scale Convective Systems (e.g. southeast Atlantic Hurricanes) through the detailed analysis of morphological, dynamical properties, and Hurricanes energetics by computing the optimum values of cluster characteristics, kinematic and thermodynamic structural parameters.

Based on Suchman, Martin & Sikdar (1977), and the Cloud Cluster studies of Goswami, et.al. (1990); wherein, the two plausible Models of Monsoon Depression studies have been postulated in terms of Cluster Coalescence Theory (CCT) and Giant Cluster Theory (GCT) along with technique described for inferring vertical mass circulations within and around the Tropical Cyclones(Hurricanes) in tropical
Atlantic regions by making use of high-resolution satellite imageries, would be employed to study the three Hurricanes during Jul-Oct-2017 over the domain in order to study the Correlation of Climate Variability with the Energetics of the Cyclonic Storms develop Tropical Atlantic Climate- Variability (TAC-V)Model for Atlantic & Caribbean regions, and extending later for Cyclonic Storms over South-East Asian tropics.
Download to PDF