Beacon Satellite Presentations

****

Thunderclouds contribution to the longitudinal and seasonal variations of Observed EEJ

Cesar Mbane Biouele
Laboratory of Earth's Atmosphere Physics
Univerity of Yaoundé I - Cameroon

Abstract

Formations of negative static charges (e−) throughout troposphere are natural phenomena revealed by some weather events such as storms and lightning flashes that accompany thunderclouds. These meteorological phenomena (formation of negative charge in that case) have long been considered as events limited in time (*i.e*., transient process) and space (*i.e*., isolated process). Now we have good reasons to say that this perception of troposphere electrical status was totally meaningless. Indeed, it is now easy to show that thunderstorms provide significant numbers of electrons to troposphere at each of their (thunderstorms in this case) appearance. Thereafter, movement implemented in the troposphere by winds (e.g., West African aerojet) contributes to the formation of low altitudes Electrojets (e.g., West African Equatorial Aerojet gives birth to West African Equatorial Electrojet). Until today, the existence of *low layers Equatorial Electrojets* (*LL-EEJ*) was totally ignored by researchers who use space or ground base data to study Ionosphere's Equatorial Electrojet (EEJ) and this has led many of them to errors, in their attempt to explain ***the longitudinal and seasonal variations of observed EEJ***. In this poster, we are giving very useful and unique explanations on the manner in which clouds provide oxygen to troposphere and thereafter trigger negative static charges (e−) throughout both troposphere and ionosphere. Indeed, this paper will also explain how, opportunely, the ITF (inter tropical front) plays the role of the tap which provides oxygen to ionosphere: which oxygen thereafter triggers ionospheres' Equatorial Electrojet (EEJ).