Bubble occurrence and interhemispheric plasma transport

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We have compared here the seasonal average of the plasma density with the EPB occurrence in a given longitude sector, using KOMPSAT-1 and DMSP data. It could be evidenced on a global scale that the EPB occurrence was nearly anti-correlated with the poleward drift speed parallel to B-field, and with the degree of asymmetry of the latitudinal plasma distribution. But, the seasonal-longitudinal change of the asymmetry was different from what the current theory expected. Then, we can conclude that the interhemispheric plasma transport controls the occurrence of EPBs predominantly, but is not a simple function of the magnetic declination and the neutral wind.