

AAS006-01

Room: 202

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Equatorial fountain

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We discuss the behavior of energy flow and transport/mixing of atmospheric constituents in the equatorial region, extending from the boundary layer, troposphere, middle atmosphere up to ionosphere, which can be comprehensively treated as the equatorial fountain peculiar in the low latitudes. In particular, we will focus on such phenomena in the tropical Asia and western Pacific where variations of the equatorial fountain are the largest. We will continue observational studies at an integrated station in west Sumatra with the equatorial atmosphere radar (EAR) as the main facility, and also coordinate observation networks in the troposphere/stratosphere and ionosphere. Satellite observations and numerical modeling are very important to understand the global characteristics of the equatorial fountain.

Keywords: equatorial atmosphere, cloud convection in the tropics, transport and mixing of atmospheric materials, atmospheric waves, middle atmosphere circulation, plasma fountain