

Monsoon dynamics and the Indonesian maritime continent

Manabu D. Yamanaka[1]; Shuichi Mori[2]

[1] GSST, Kobe Univ; [2] JAMSTEC

<http://www.ahs.scitec.kobe-u.ac.jp/~yamanaka/>

Asia-Australian monsoon is annually-oscillating continent-ocean circulation. Its meridional component is anti-symmetric to the equator, and is superimposed on the symmetric Hadley circulation. The zonal component of the monsoon circulation is interacted with the interannually-varying zonal Walker circulation and the eastward travelling intraseasonal variations along the equator. Cloud systems pumping the Hadley and Walker circulations and making intraseasonal variations are strongly affected by local topographic effects of the Indonesian maritime continent surrounded by so-called warm water pool. Some highlighted observational results such as a giant diurnal cycle of cloud systems over Sumatera Island and its interactions with circulations mentioned above are introduced.

In order to understand and predict these interactions which are also major origins of global climatic variations, we need an observational network covering the both Indian and Pacific Oceans and the maritime continent region between them.

Future plans on such network observations are also introduced.