

Interactive comment on “Meteorological context of the onset and end of the rainy season in Central Amazonia during the 2014–15 Go-Amazon Experiment” by Jose A. Marengo et al.

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Response:

Broadly speaking, the influence of the MJO on precipitation over the tropics occurs by eastward propagation of Rossby wave trains from the tropical Pacific Ocean (Muza et al. 2009). Previous observational and modeling studies generally indicated that MJO and ENSO has a decadal variation and seasonal dependence (Tang and Yu, 2008; Hendon et al. 2007), however, them has not been well identified due to nonlinear in nature. These studies also show significantly lagged correlations between MJO and ENSO indices.

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Despite this, recently, Shimizu et al. (2016) examined the regional relationship between ENSO and MJO phases on climatological patterns of precipitation over South America. The results indicated that combined responses showed that precipitation is strongly influenced by the MJO phases rather than by ENSO conditions, especially during the austral summer. Then, our results corroborate with Shimizu et al. (2016) who observed highest percentages of days with active MJO occurred during El Niño and neutral years and an increase of precipitation.

References:

Hendon, H. H., M. Wheeler, and C. Zhang (2007), Seasonal dependence of the MJO-ENSO Relationship, *J. Clim.*, 20, 531 – 543. Tang, Y., and B. Yu (2008), MJO and its relationship to ENSO, *J. Geophys. Res.*, 113, D14106, doi:10.1029/2007JD009230. Muza MN, Carvalho LMV, Jones C, Liebmann B (2009) Intraseasonal and interannual variability of extreme dry and wet events over Southeastern South America and Sub-tropical Atlantic during the Austral Summer. *J Clim* 22:1682–1699. Shimizu, M.H. & Ambrizzi, T. *Theor Appl Climatol* (2016) 124: 291.doi:10.1007/s00704-015-1421-2.

Please also note the supplement to this comment:

<http://www.atmos-chem-phys-discuss.net/acp-2017-22/acp-2017-22-SC3-supplement.pdf>

Interactive comment on *Atmos. Chem. Phys. Discuss.*, doi:10.5194/acp-2017-22, 2017.

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