



UNIVERSITY  
of HAWAI'I  
MĀNOA

## Department of Atmospheric Sciences Seminar Announcement

Department of Atmospheric Sciences, S.O.E.S.T., University of Hawai'i at Mānoa  
2525 Correa Road, HIG 350; Honolulu, HI 96822 ☎956-8775



# Two-way interactions between MJO and high-frequency waves over the Maritime Continent in MJOTF/GASS models

**Ms. Yan Zhu**

Ph.D. Candidate

Department of Atmospheric Sciences  
University of Hawai'i at Mānoa

**Date:** Wednesday, November 6, 2019  
**Refreshments:** 3:00pm at MSB courtyard  
Cookies, Coffee & Tea Provided  
**Seminar Time:** 3:30pm  
**Location:** Marine Sciences Building, MSB 100

### Abstract:

The Madden-Julian Oscillation (MJO) is one of the dominant tropical rainfall variabilities at intraseasonal time scale (e.g. 20-100 day). Previous studies have shown that the interaction between the MJO and high frequency waves (HFW) can promote the eastward propagation of the MJO convection and zonal wind. In this talk, I will discuss the two-way interaction between MJO and HFW over the MC region with the MJOTF/GASS models' data. The models are chosen into good and poor model groups according to their capabilities in simulating the eastward propagation of the MJO convection and flows. The differences of the modulation of the HFW by the MJO, the upscale feedback from the nonlinear rectification of the intraseasonal condensational heating, and the upscale feedback from the eddy momentum transport between the good and poor model groups will be compared. The results exhibit that the variation of the HFW contributes to the eastward propagation of the MJO convection. However, the eastward propagation of MJO zonal wind is mainly related to simulation of the MJO flows.