

## MJO と赤道越え冬季アジアモンスーンによるジャカルタ豪雨 The Impact of Trans-equatorial Asian Winter Monsoon and the MJO on Extreme Precipitation over Western Java Island

伍 培明<sup>1\*</sup>, Ardhi Adhary Arbain<sup>2</sup>, 森修一<sup>1</sup>, 濱田純一<sup>1</sup>, 服部美紀<sup>1</sup>, 山中大学<sup>1</sup>, 松本淳<sup>3</sup>, Fadli Syamsudin<sup>2</sup>  
Peiming Wu<sup>1\*</sup>, Ardhi Adhary Arbain<sup>2</sup>, Shuichi Mori<sup>1</sup>, Jun-ichi Hamada<sup>1</sup>, Miki Hattori<sup>1</sup>, Manabu D. Yamanaka<sup>1</sup>, Jun Matsumoto<sup>3</sup>,  
Fadli Syamsudin<sup>2</sup>

<sup>1</sup> 海洋研究開発機構 地球環境変動領域, <sup>2</sup>Agency for the Assessment and Application of Technology, Indonesia, <sup>3</sup> 首都大学東京 大学院都市環境科学研究科

<sup>1</sup>Japan Agency for Marine-Earth Science and Technology, <sup>2</sup>Agency for the Assessment and Application of Technology, Indonesia, <sup>3</sup>Tokyo Metrop. Univ

An extreme precipitation/flood event that occurred in the Indonesian capital of Jakarta in Java Island in the middle of January 2013 coincided with an active phase of the Madden-Julian Oscillation (MJO) with the enhanced convective phase centered the western Pacific. Analyzing upper-air sounding data showed that strong upper westerly winds persisted over the island prior to and during the heavy rain event, which were caused by the active phase of the MJO. Ocean surface winds from the WindSat satellite showed a persistent trans-equatorial monsoonal flow from the Northern Hemisphere in mid-January prior to and during the extreme precipitation event. Meteorological radar observations indicated regular genesis of convection at night over the sea to the northwest of the island, and southeastward propagation over the island from the nighttime to early morning. The results suggest that the eastward propagation of an active phase of the MJO exerted a strong influence on the formation of extreme heavy rain over western Java Island.

キーワード: 豪雨, モンスーン, MJO

Keywords: heavy rainfall, Asian winter monsoon, MJO