

更好的應用 MJO 於東亞冬季次季節雨量分析與預報

陳雲蘭
中央氣象局氣象科技中心

摘 要

熱帶季內振盪(MJO)是支持次季節科學預報最重要的物理基礎之一，在各種代表 MJO 變化的指數中，RMM 指數(Wheeler 與 Hendon, 2004) 為最常被拿來在預報作業應用上。RMM 指數的建立方式為採用熱帶經向平均的一維資料，本研究將介紹一個使用 SVD 方法及採用二維資料所建立的 MJO 新指標，並說明此新指標可以如何更好的幫助判別 MJO 移動過程各階段對東亞降水多寡變化的影響。同時，本研究探討更好的應用 MJO，亦將把應用主題延伸至對於氣象局發展中數值模式預報能力的校驗，以及發展中衛星估計降水資料品質的評估。

To improve the MJO application on the sub-seasonal rainfall analysis and forecasting

Yun-Lan Chen

Meteorology Research and Development Center, Central Weather Bureau, Taiwan

Abstract

The Madden-Julian Oscillation (MJO) is the primary mode of intraseasonal variability in the Tropics, it has been recognized as a major source of predictability for both the tropics and extratropics in the sub-seasonal time-scale. Researchers used the all-season Real-time Multivariate MJO (RMM) index (Wheeler and Hendon, 2004) as the MJO index and presented how East Asia coastal region (EA) winter rainfall is modulated by MJO. This study adopts a 2D SVD approach to define MJO, the new approach allows the meridional variation in tropical heating and leads to better describe the MJO impacts on EA rainfall variation. This study is also for taking good advantage of the MJO to help model evaluation and satellite IRQPE data quality check, the results will be presented in the talk.