



Anomalous behaviors of Wyrтки Jets in the equatorial Indian Ocean during 2013

Lin Liu (1), Yongliang Duan (1), and Guoqing Han (1)

(1) First Institute of Oceanography, State Oceanic Administration, China (liul@fio.org.cn), (2) Laboratory for Regional Oceanography and Numerical Modeling, Qingdao National Laboratory for Marine Science and Technology, China

In-situ measurement of the upper ocean velocity discloses significant abnormal behaviors of two Wyrтки Jet (WJ), boreal spring WJ and fall WJ, over the tropical Indian Ocean on 2013. The two WJs occur within upper 130 m depth and persistent over than one month time. Unlike the climatological peak time of the fall WJ in November, the fall WJ in 2013 unexpectedly peaks in December, one month later than its normal condition, and the exceptional spring jet in May is also unusually stronger than the one in fall. Further analysis illustrates that the anomalous changes in the equatorial zonal wind forcing, associated with obvious intraseasonal oscillation events, primary contribute to the anomalous WJs activities.