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Chemical Production and Transport of Ozone in the Central East China -Modeling Study Based on Observation-

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Central East China covering the North China Plain (NCP) and Yanzi Delta (YZD) has been identified as the most widely spread source area of air pollution in the East Asian Pacific region. In the present study, we investigated the budgets of ozone over Central East China by using regional chemical transport model (NAQPMS) based on observations at three mountain sites (Mt. Tai, Hua and Huang) in this region. The observation shows a striking pattern of two sharp high ozone peaks in May-June and September-October. The budget analysis by the model confirms that net photochemical ozone production reaches 25.4, 12.1 and 10.4 ppb/day in monthly average in June at Mt. Tai, Hua and Huang, respectively. The net chemical production dominates the formation of ozone maximum at Mt. Tai and Hua in June, and the importing transport also plays a comparable importance at Mt. Huang.