



Simulation of 1991-2005 Meiyu seasons in the Yangtze-Huaihe region using BCC_RegCM 1.0

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By using BCC_RegCM 1.0 (RegCM for short) from Beijing Climate Center (BCC), China Meteorological Administration (CMA), the Meiyu season characters over the Yangtze-Huaihe region during 1991~2005 are simulated. The major conclusions of this study may be summarized as the following: (1) RegCM can reproduce the interannual variation and the spatial distribution of the summertime precipitation and temperature in the Yangtze-Huaihe region. (2) By use of a generalized Meiyu criterion and in accordance with model-calculated precipitation and temperature, the Meiyu onset and ending date have been determined. Compared with the observation, RegCM can simulate the interannual variation of the Yangtze-Huaihe Meiyu with preferable capability for most of the normal Meiyu years (such as 1995, 1997, 2000, 2001, 2002 and 2004), especially for the rich Meiyu years of 1996, 1998 and 1999. (3) In terms of the average simulation for the recent 15a, the timings of onset and ending of Meiyu occur on June 1 and July 13, respectively, which are earlier than the climatological observation. For duration, Meiyu persists for 32 day, 3 days shorter than the observation. The index of Meiyu intensity is 2.45, while the climatological one is 3.00. Therefore, RegCM is capable of simulating the climatological Meiyu duration and intensity, while the capability of simulating the onset and ending date of Meiyu still needs to be improved.