The Application of the Coupled model in the Numerical Simulation of the Local Radiation Fog

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Fog occurrence is one of the most important events that can lead to low visibility and thus cause casualties and the loss of properties. An effective forecasting method rests upon a perfect initial field and a comprehensive model of the phenomena. The 3D fog model coupling with the MM5 is used to simulate the local winter radiation fog in Chongqing and Changsha respectively. The results show that the unilaterally coupled model can reproduce the circulation and the heavy radiation fog. Especially, the occurrence, location, dissipation and concentration of fog are in accordance with observation. So it is feasible to apply the 3D fog model, coupling with the MM5, in the forecast of fog.