On Study of Sea Fog over the Yellow and Bohai Seas in China

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A ubiquitous feature of the Yellow and Bohai Sea (YBS) in the eastern Asian region is the frequent occurrence of the sea fog in spring and summer season. The pioneer work on sea fog over YBS can be traced back to Prof. Binhua Wang as early as 1940's. He investigated sea fog systematically and published his book Sea Fog in 1985 (by China Ocean Press and Springer-Verlag). Recently, a research group in the Department of Marine Meteorology at Ocean University of China (OUC) continued sea fog research collaborated with Shandong Meteorological Bureau and Qingdao Meteorological Bureau under the financial supports of National Natural Science Foundation of China and China Meteorological Administration. Their researches involved in both observation analyses and high-resolution modeling of sea fog over YBS. In this talk, the brief history of sea fog research in China will be reviewed firstly. Then, a typical heavy sea fog event over YBS occurred in the morning of 11 April 2004 will be documented by using all available observational data and high-resolution Regional Atmospheric Modeling System (RAMS) modeling results. Finally, the applications of a quasi-operational sea fog forecasting system which was mainly based on RAMS model will be introduced.