

Simulating thin cirrus clouds in Observing System Simulation Experiments (OSSE) for LAWS

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Abstract

It was previously shown (Wood and Emmitt, 1990, 1991) that, by omitting the contribution of thin cirrus by the Observing System Simulation Experiments, will result in severe misrepresentation of both the frequency and the accuracy of wind observations in the upper troposphere. This paper estimates the presence of optically thin (τ less than 1.0) cirrus clouds by using model soundings in a cirrus cloud model. An example is presented showing the location of cirrus cloud profiles over North America for November 10, 1979, which were generated by the LAWS Simulation Model.