Short Range Cloud Cover Forecasting[1] JARED BUCKLEY, Bridgewater State University — The Advanced Regional Prediction System (ARPS) from the University of Oklahoma, a regional/storm scale numerical weather prediction model, was installed and run on a desktop computer and used as the foundation for the prediction of cloud cover conditions over Bridgewater, Massachusetts. Predicted cloud cover conditions of the ARPS were extracted from relative humidity output using a hand based graphing technique developed using data from the Modern-Era Retrospective Analysis for Research and Applications (MERRA) reanalysis. Cloud cover forecasts were developed daily using a subjective blend of output from the ARPS, Bufkit soundings from the National Weather Service (NWS), and numerical weather model output from the National Centers for Environmental Prediction (NCEP). The accuracy of the cloud cover forecasts was assessed using observations from an upward facing all sky camera located on the roof of the Conant Science Building at Bridgewater State University (BSU).

[1]Massachusetts Space Grant Consortium

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