

**SSEC/CIMSS
Seminar**

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**Evaluation of Three Different Data
Reduction Tools on Synthetic Data Sets**

Dense meteorological data (e.g. satellite, radar, etc.) can lead to excessive computational costs with respect to assimilation systems. Various methodologies exist to reduce the amount of data that are used by modern data assimilation systems. Three different thinning algorithms, developed at the University of Alabama's Information Technology and Systems Center (ITSC), are investigated here. The algorithms are tested using three simplified synthetic data sets in which we can easily specify the error characteristics. The performance is evaluated using a two-dimensional variational analysis (2DVAR) via comparison with a subsampling technique. Results are presented whereby the impact is gauged by: 1.) how well the methods retain essential features found in the original data sets and 2.) the relationship between observation retention rate and the relative error.

Monday, 14 April 2008
1:00 p.m.
Room AOSS 351