



Adjoint-based observation impact monitoring

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An adjoint-based method has been developed at NRL-Monterey to monitor in near real-time the impact of atmospheric observations assimilated for numerical weather prediction. The technique uses adjoint versions of a global forecast model and a 3d-variational data assimilation system. It has also been tested in a 4d-variational context. This talk will describe the mathematical approach and accuracy of the method, and present some specific examples in which the procedure has been used to identify observing system issues relevant to the NAVDAS operational data assimilation.