



## **Thermal spectroscopy for improving weather and climate forecasts**

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Well-developed techniques are available for obtaining thermal spectra from satellites and using the data to update the initial conditions of weather forecasts. For climate forecasting similar data must be used to test and improve the structure of the forecast itself. Two statistical approaches to this problem will be discussed. This discussion leads to requirements on the spectrographic instrumentation that are yet to be achieved by satellite observing systems. Finally, we discuss the possibility of using entropy fluxes to monitor model performance.