

Abstract Submitted
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**Polar Vortex and Temperature Diagnostics for Intercomparisons
and MLS Data Inspection: Update on Antarctic 2012 Meteorology in
Relation to MLS Data** ZACHARY LAWRENCE, New Mexico Institute of Mining

and Technology, GLORIA MANNEY¹, NorthWest Research Associates, KEN MINSCHWANER, New Mexico Institute of Mining and Technology — Stratospheric temperature diagnostics are important indicators for evaluating the severity of polar winters and the susceptibility to conditions that lead to ozone loss at the poles. The availability of many meteorological datasets with temperature products that span multiple years allows for direct comparisons between satellite measurements (the Aura Microwave Limb Sounder, MLS), operational data assimilation systems, and reanalysis data sets produced by meteorological forecast centers. We focus on two diagnostics: first, the area where temperatures are less than the threshold temperatures for the formation of Polar Stratospheric Clouds (PSCs), and second, the minimum daily temperatures over the course of the polar winters. Both diagnostics have a long history of use for monitoring the wintertime polar stratosphere, and we will present a comparison of results based on updated data products and analysis techniques, along with an update on meteorological conditions and ozone for the 2012 Antarctic winter.

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