

## **A new BrO from Aura Microwave Limb Sounder**

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This study describes a new stratospheric BrO estimate from the EOS Microwave Limb Sounder on the Aura satellite. BrO is of particular interest, as it is the dominant form of bromine in the stratosphere, a significant contributor to chemical ozone loss, and one whose importance is set to increase in the light of declining stratospheric chlorine levels. MLS BrO observations have weak signal to noise, necessitating significant averaging and specifically optimized retrieval algorithms for the best results. A detailed description of the retrieval methodology, error budget and a comparison with the two previous MLS versions [Livesey et al. 2006, Kovalenko et al. 2007] are presented. In addition, these new BrO observations are compared against the BrO modeled by the Whole Atmosphere Community Climate Model (WACCM) showing a broadly consistent agreement between them.