

## **Tropical tropospheric bromine and stratospheric injection of Br<sub>y</sub> from VSL compounds inferred from CONTRAST**

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The CONvective TRansport of Active Species in the Tropics (CONTRAST) field campaign was designed to quantify the abundance of very short lived (VSL) bromocarbons in the marine boundary layer (MBL) of the Tropical Western Pacific, the variation with respect to altitude of these compounds from the MBL to the base of the tropopause transition layer, and the abundance of BrO throughout the tropical troposphere. Here we examine the theoretical understanding of VSL source gases by comparing measurements of these bromocarbons provided by two instruments, AWAS and TOGA, to model values found using CAM-Chem. We examine also the bromine budget in the tropical troposphere: i.e., consistency between tropospheric loss of these compounds and the appearance of products using observations of BrO from two other instruments, CIMS and DOAS. Finally, implications for supply of bromine to the lower stratosphere via source gas and product gas injection will be examined, based largely on data collected during flights that probed the extra-tropical, lower stratosphere.