Geophysical Research Abstracts
Vol. 13, EGU2011-5834, 2011
EGU General Assembly 2011

Halogen-driven ozone radiative impact in the tropical marine troposphere

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Tropospheric ozone is an important climate gas and is produced by photochemical oxidation of carbon monoxide, methane and non-methane volatile organic compounds in the presence of nitrogen oxides. The chemical sinks of ozone in the troposphere are dominated by the tropics, where a large fraction of the tropospheric ozone loss occurs within the tropical marine boundary layer via photolysis to excited oxygen atoms O(1D) followed by reaction with water vapor, reactions with odd hydrogen radicals (HO_x), $and surface deposition. In addition, inorganic halogens (i.e. chlorine, bromine, and iodine species) are known to destr$
$Chem chemistry climate model to examine the role that halogen chemistry has on the ozone budget and radiative forcing in the tr$
$CHEM accurately captures the daily and seasonal observed variation of ozone and halogen oxides in this region. Halogen-$
$driven ozone depletion in the tropical marine troposphere and associated radiative impact will be discussed.$