

Volcanism, Geochemical Cycling of Halogens and Climate

K. Kourtidis (Lab. of Atmospheric Physics, Physics Dept., Campus Box 149, Aristotle University of Thessaloniki, 54006 Thessaloniki, Greece; ph. +30-310-998009; fax +30-310-248602; e-mail: kourtidi@auth.gr)

Although emissions of halogenated hydrocarbons from volcanoes have been recently reported, currently neither the mechanism of production of these organohalogens nor their emission strength variation over geological time are well known. If released in significant amounts, chlorine and bromine bearing organohalogens can impact the ozone layer, while fluorine bearing ones are potent greenhouse gases. During present times, emissions of organohalogens from volcanoes do not contribute significantly to their atmospheric budget. In the present work, an attempt is made to quantify organohalogen emissions' variations over geological time and determine whether they could have any impact on the atmosphere.