



Methyl bromide emissions as derived from continuous measurements at Mt. Cimone (Italy)

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Methyl bromide (CH_3Br) is the most abundant bromine-containing species in the free troposphere and the most important source of bromine atoms in the lower stratosphere. The role of bromine in destroying the stratospheric ozone layer is well known. Methyl bromide, unlike other ozone-depleting species which are only synthetic, is emitted into the atmosphere by both anthropogenic (agriculture and industry) and natural sources (ocean, plants, soil). It is regulated under the Montreal Protocol which calls for its complete phase out in 2005 in developed countries. Italy, however, asked and obtained critical use exemptions in cultivation of a number of high value-added agricultural products.

Methyl bromide is continuously measured at the semi-remote research station of Mt. Cimone (2160 m a.s.l, Northern Apennines, Italy) with a number of halogenated compounds, in the frame of the SOGE (System for Observation of Halogenated Greenhouse Gases in Europe) network.

Such *in situ* measurements, together with air-mass back-trajectories analysis are used in order to estimate seasonal trends and source regions. Natural sources other than those reported above are hypothesised as well.