

Measurements of BrO/SO₂ ratios at Popocatepetl from 2007 to 2012

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We present results from 6 years of scanning DOAS measurements at Popocatepetl, a Stratovolcano located about 60 kilometers to the southeast of Mexico City in the Trans-Mexican Volcanic Belt. The four DOAS instruments have been primarily used for monitoring SO₂ fluxes during the time period; the collected spectral data has been reevaluated to quantify, besides the SO₂ column concentrations, also the ones of BrO. Changes of the ratio of the two species are discussed in the context of the volcanic activity.

Special emphasis is put on the early 2012 volcanic crisis, when high overall gas fluxes were observed, which also included a high bromine output.