



Observation of enhanced SO₂ and BrO above Kiruna, Sweden after the eruption of the Bardarbunga volcano (63.38N, 17.31W)

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The Bardarbunga volcano has been active since the end of August, 2014. The activity comprises lava eruptions without release of volcanic ash, but there has been continuous SO₂ emissions. Part of the SO₂ plume in the atmosphere could be detected by the ground based zenith sky DOAS in Kiruna (Sweden) during several days after the eruption. On some of these days, also the BrO Slant Column Densities (SCDs) were enhanced above the stratospheric background.

In this work, we present SO₂ and BrO results for days when the plume from the Bardarbunga volcano crossed the measurement site. We investigate the relationship between both species and compare the results to simultaneous satellite observations.