Geophysical Research Abstracts
Vol. 17, EGU2015-11498, 2015
EGU General Assembly 2015

Plume height during the 2014-2015 Holuhraun volcanic eruption

Þórður Arason (1), Halldór Bjornsson (1), Guðrún Nína Petersen (1), Elín Björk Jónasdóttir (1), and Björn Oddsson (2)

(1) Icelandic Meteorological Office, Reykjavík, Iceland (arason@vedur.is), (2) National Commissioner of the Icelandic Police, Department of Civil Protection and Emergency Management, Reykjavík, Iceland

Along with the rifting event and caldera subsidence in the Bárðarbunga central volcano in Iceland, an ongoing (as of January 2015) effusive basaltic eruption started in Holuhraun in the end of August 2014. Associated with the eruption is a plume of juvenile water vapour and gases, mainly SO_2 and CO_2. The plume contains very little ash. Due to the effusive nature of the eruption, the plume is weak and controlled to a large extent by atmospheric conditions, including winds and stability. We present a time series of the plume height, derived from various sources, including web cameras, flight and field reports. The maximum plume height close to the eruption site has mainly been in the range 1-3 km above ground and the middle of the plume few kilometers from the eruption site often about 1 km above ground. We show comparison of the plume height time series to atmospheric conditions.