Geophysical Research Abstracts
Vol. 14, EGU2012-13713, 2012
EGU General Assembly 2012

The Reykjavík storm of resuspended ash

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During the Eyjafjallajökull volcanic eruption, large quantities of ash were deposited in S-Iceland. On several occations, the ash was resuspended into the atmosphere and transported long distances. On one such an occation, synoptic-scale winds were only moderate and yet there was great uptake and transport of ash from the Eyjafjallajökull area towards Reykjavik. Numerical simulations with two different models have revealed that local-scale gravity wave activity produced the necessary winds to resuspend the ash. The winds leading to resuspension and the transport of the ash are not sensitive to which model or inital conditions are used. However, they are extremely sensitive to the horizontal resolution and at a resolution of 9 km, the meteorological conditions are not reproduced. This is of considerable concern, since many operational systems are based on much coarser grids.