

## ***Interactive comment on “Ash plume top height estimate using AATSR” by T. H. Virtanen et al.***

### **Anonymous Referee #2**

Received and published: 31 May 2014

This is a very good manuscript, well done! The structure is good, as well as the use of English language and the science is sound! But I would suggest some small corrections/additions.

First, it would be fair to mention at least some other operational cloud height monitoring methods (BT and CO2). And then you can say that these methods cannot offer the same accuracy as the photogrammetric methods.

What I would suggest to the authors is to add 2-3 sentences to explain how specifically is their work different from study described in the paper of Prata and Turner (1997).

As the first reviewer also noticed, you are describing not the operational MISR product but the results obtained by the Minx software, so add reference to: <http://www.mdpi.com/2072-4292/5/9/4593>

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In addition, it would be nice to know, how fast is your implementation, because this is important information for real time volcano monitoring. Furthermore, what kind of software / programming language did you use? Is the code available...?

You mentioned that semi-transparent plumes are not as easy to detect in visible data, but what about the correlation? Is it of the same order in VIS as in TIR? The shades provide extra contrast which is probably not the case in the TIR data so I would assume that if clouds/plume has rough topography, then is image matching robust in the VIS data. A short discussion. . .

3887/15 KM, not HM

As I have only these minor remarks, I suggest accepting the paper after minor corrections.

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Interactive comment on Atmos. Meas. Tech. Discuss., 7, 3863, 2014.

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