

Interactive comment on “Possible application of a compact electronics for multilayer muon high-speed radiography to volcanic cones” by H. K. M. Tanaka and I. Yokoyama

Anonymous Referee #2

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This is a useful paper, although there is not a strong link between technical improvements, and their application to tomography of a particular volcanic area.

I agree with the previous comment that more quantitative information on the advantages of the MURG12 over the MURG08 would be desirable. It appears from the paper that the MURG08 could handle 4 planes, each with 11 X and 11 Y strips, whereas the MURG12 handles 7 planes, each with 14 X and 14 Y strips, but this could be clearer. What proportion of data was lost with the “relatively high operation failure rate” of the MURG08?

The volcanology results of Usu volcano are interesting, but there could have been

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more about the only actual results, the density distribution of Fig 6. Making some reasonable assumptions of the shape of the high density under Craterlet A, e.g. it is roughly circular, what density contrast is indicated, and how does this compare with the density difference between dacitic lava and the average density of Usu, or with the density variations seen in Showa-Shinzen? What density variation is suggested by the gravity anomaly of Fig 9?

In the conclusions, the section p18,14-21 seems to mix the 1910 and 1944 eruptions, they need to be distinguished.

Technical Comments: (This could have been usefully checked at an earlier stage)

p2, 2 and elsewhere “requiring” rather than “requesting”. p2,10 Delete “According”
p2,11 “has been” instead of “is are” p2,25 “characteristic stages of a magma intrusion”
p3,18 Delete “he applied” p3,24 Delete “for” p4,28 “The larger” p4,29 “, the longer”
instead of “larger” p5,1 “time” not “times” p6,17 Delete “which is” p6,20 “Each daughter”
p8,22 What is “octet coincidence”, I get 6 adjacent angles being compared? p9,22
What is “larger longer” saying? p10,13 /h or h-1 p10,27 perhaps “orally” rather than
“legendarily” p11,1 “directly” rather than “straightly” p11,7 “large diameter” p14,25 Fig
7, not Fig 6 p14,27 “dense” p15,22 “dense material exists”

Gravity anomalies. Use “positive” for “high”

Fig 4 NM and HM need explanation.in caption

Missing Reference: Kusagaya et al., 2012.

Interactive comment on Geosci. Instrum. Method. Data Syst. Discuss., 3, 1, 2013.

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