

## ***Interactive comment on “Autonomous thermal camera system for monitoring the active lava lake at Erebus volcano, Antarctica” by N. Peters et al.***

**M. Patrick (Referee)**

mpatrick@usgs.gov

Received and published: 19 December 2013

### General comments

This is a very nice description of the thermal camera system at Erebus, and provides some important insights on instrument development in isolated and extreme environments that could be useful for other types of volcano monitoring.

### Specific comments

- In section 2.8 there is no mention of the IR window used. This is an important part of the enclosure and I'm hoping that the authors can supply this. - The reader will also wonder about the imaging assumptions. What is the assumed emissivity for the thermal

C231

images, and is there an assumed atmospheric transmissivity applied? These values will be necessary for those using the images for research. - The camera has several temperature ranges it can operate at, and each has upper and lower temperature limits. What temperature range is the camera set to? (I imagine it might be the mid-range setting, at 0-600 C) - There is no mention of the cost of the system. Can you provide the reader with an approximation of the different costs? This would help readers gauge what is feasible for their own applications.

### Technical comments

- Figures 4 and 5: it would be useful to know the rough scale here, perhaps by including a statement like “For scale, the lake is approximately X m wide in this view” - Figures 4 and 5 include thermal images, so temperature scales should be provided.

---

Interactive comment on Geosci. Instrum. Method. Data Syst. Discuss., 3, 627, 2013.