**Review of “Lightning and electrical activity during the Shiveluch volcano eruption on 16 November 2014” by B.M. Shetsov, P.P. Firstov, N.V. Cherneva, R.H. Holzworth and R. R. Akbashev**

This study is a valuable contribution to the literature on volcanic lightning, and deserves to be published after some further attention to other relevant results in the literature, and in particular to published suggestions that two distinct kinds of lightning may occur: vent lightning and plume lightning. This aspect is discussed by McNutt and Williams (2010) but also by Behnke et al. (JGR, 2014) in a more recent publications pertaining to an Iceland eruption. This distinction may also be relevant to distinguishing the lightning flashes listed in Table 1. In the Conclusions, reference is made to “ash cloud fragmentation process” which seems to this reviewer to be tied with vent lightning rather than plume lightning that in turn might be linked with water substance, and ice in particular.

English is not the native language of the authors, and so numerous edits on the text have been implemented for the authors to consider in the preparation of their final draft.

**Summary: Publish after appropriate revision**

The authors may also wish to consider their characterization (twice in the manuscript) that the WWLLN is an “efficient” detector of lightning. The literature can be consulted for the efficiency of WWLLN as a detector of CG lightning and it is not very high. The efficiency for detection of total lightning is of course even less. As a consequence, it is quite possible that many more lightning flashes were produced by the eruption under study than the seven events listed in Table 1.

Somewhere it should be stated that all seven lightning flashes are sufficiently far from the electric field mill to enable a detection of their electrostatic field changes (if this is the case).

Since VEI estimates are increasingly included of volcanic eruptions that make lightning, the same information would be welcome here if that is available. Also any visual information on the maximum height of the plume would help to play this eruption in the context of other eruptions that do and do not produce lightning flashes.

Given that this is not the first time that lightning has been detected in eruptions in this particular volcano (see Williams and McNutt), it may be useful to include a short paragraph about earlier findings by other investigators.

A better reference for the physical basis that volcano lightning may be linked with ice particle collisions (‘the dirty thunderstorm hypothesis’) can be found in Williams and McNutt (2005) and that reference is now included for the authors to consider.

Other editorial comments on Table and Figures

Table 1 ‘UT’ should be indicated in the ‘Time’ column. It is quite possible that the initial three lightning flashes are in the “vent lightning” category, and the remaining flashes in the “plume lightning” category. The authors should look into this suggestion (and the literature references pertaining to it) in greater detail. One should also consider deleting “eruption” from the Table caption as it is redundant.

The Figure 1 caption would usefully identify all locations shown in the Figure. Also the seismic station Baidarnaya has not been included in the Figure and would be helpful to see.

In Figure 2, it is suggested not to use the term stratification, but rather to speak about vertical profiles of temperature of wind direction and speed.

In Figure 3, and reminder about the consistency between plume displacement and the wind speed and direction aloft would be appropriate.

End review