Comments on Raimo Sutinen et al 's manuscript titled « Maskevarri Rappat in Finnmark, North Norway ─ is it earthquake induced landform complex? »

Although I am not familiar with glacial landforms of high latitudes, I have read with much interest this manuscript. It provides a description of the Maskevari Rappat, a rough stony terrain with sharp-relief, that is based on geomorphological field observations and measurements of electrical-sedimentary anisotropy. As these observations do not appear to be consistent with a moraine origin of the Rappat stony material, they conclude that these peculiar Rappat landform could be earthquake induced landform.

Basically I have two major critical remarks on the presented manuscript:

(1) The earthquake hypothesis is mainly based on the negative argument that they can hardly relate their observations to glacial processes. It is obviously not robust to base the earthquake hypothesis on a negative rationale.
(2) Even if one would accept the contribution of earthquake to the origin of the Maskevarri Rappat, the author need to state more clearly which kind of earthquake contribution they contemplate. Basically two contributions may be considered either direct or indirect. The first one corresponds to the direct effect of the propagation of a seismic rupture toward the earth surface while the second one corresponds to the shaking effects on the near surface material associated with an earthquake. According to authors' descriptions, I guess the indirect contribution should be more likely. Nonetheless, this point must be clarified explaining how they relate their observations with seismic shaking. This would reinforce the earthquake hypothesis or at least make this hypothesis possible.

Additionally, authors mention in the description of the Maskevarri Rappat the presence of three terraces without providing any detail description and explanations on their origin. I would have appreciated to have one section illustrating the three terraces to discuss the origin of these three terraces. Concerning these terraces, the authors mention these "terraces are separated by escarpments". Why do the authors use the word escarpment? Could their escarpments correspond to terrace risers?

In conclusion, as the three mentioned terraces are located in front of a former ice sheet edge, their possible periglacial origin should be thoroughly discussed. Then, once clarified the possible periglacial origin of these terraces, two hypotheses should be discussed about the origin of the Maskevarri Rappat: (1) periglacial processes related to discontinous permafrost (e.g. talik, pingo), which may create near surface deformations or (2) earthquake induced effects on landform.