

Review of the paper entitled "Some possible correlations between electro-magnetic emissions and seismic activity during West Bohemia 2008 earthquake swarm" by P. Kolar in Solid Earth Discussion, 2, 145-160, 2010 [se-2010-4]

The manuscript presents an interesting comparison of electromagnetic emissions and seismic records measured in the West Bohemia (Czech Republic). I think that the subject is worth publication in Solid Earth Discussion. The title and abstract summarizes well the contents of the paper. The first part of the paper, namely, sections 1 and 2 are well written. I believe, however, that the section 3 deserves a better description and discussion of presented methods and results. See the specific comments.

I also think that an additional, similar analysis of data from a magnetic station which is not located in the earthquake area would be useful to exclude possible external (magnetospheric) sources of increased magnetic field fluctuations during the earthquake swarm.

Specific comments:

- 1) The author mentions that a microphone effect is observed on magnetic signal when P (S) waves arrive at the station of the magnetic antenna. It is not clear why this effect is not observed after the summation of one minute averages (Figure 3, 4c).
- 2) page 150, lines 7-10, It is not clear why the author takes a different length (5-50 s) of the time interval for summation. It should also be explained, what kind of signal the author expected ("Neither such signal ...", line 7).
- 3) Figure 3 caption: how is computed the statistical significance >0.95 of extremes in the spectrogram? It is only related to the maximum spectral power (amplitude) of the summed signal or does it really mean that 95% of events, before summation, have a spectral peak at these periods?
Also, page 150, line 21., maximum "14-17 min". It seems that the maximum goes to lower periods (up to 8 minutes) in the Figure 3
- 4) Figure 4b and related text. It is not clear which component (horizontal, vertical, amplitude,..) of the seismic signal is analyzed.
- 5) Page 150, line 22, the term LTA/STA should be introduced
- 6) Page 150, line 25, replace "Origin of *this* EME spikes is not *know*" by "Origin of these EME spikes is not *known*"
Anyway, the meaning of the rest of this sentence is not clear to me.