

**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.