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**SED** 

6, C389-C391, 2014

Interactive Comment

## Interactive comment on "Thermal characterization of the active layer at the Limnopolar Lake CALM-S site on Byers Peninsula (Livingston Island), Antarctica" by M. A. de Pablo et al.

## **Anonymous Referee #2**

Received and published: 9 May 2014

Page 680, line 6 and 7, 9 and 10: The writing has grammar errors and the explanation is not very clear. Not understandable.

Page 681, line 1 to 5: Why Deception and not Livingston? Isn't the soil more similar to Livingston? I believe you should explain better the choice to compare with Deception.

Page 682, line 10: The description of the climate in Byers Peninsula is rather poor and confused. This could be in more detail.

Page 682, line 13: You should inform were you got the information that the snow cover lasts 7-8 months?

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Page 682, line 14: In the sentence were you refer the presence of permafrost, if there is permafrost there is always an active layer, otherwise it would be season frozen ground. You should rewrite this sentence.

Page 683, line 5 to 10: The sentence is not clear, mainly the one where you explain how you calculated snow thickness. Not understandable.

Page 683, line 13: The sentences were you explain the logger you used, is not clear. Not understandable

Page 683, line 23: I believe you shouldn't confirm that there is permafrost, but say that it is possible.

Page 685, line 3 to 9: This sentence is confuses. The explanation of the zero curtain is not clear. Not understandable

Page 686, line 5: You could explain better the importance of the n-factor, especially relating to the buffer effect of snow cover.

Page 687, line 4: The sentence is not clear. Not understandable

Page 687, line 9 to 14: The sentence is not clear. The grammar has some mistakes. Not understandable

Page 688, line 7 to 9: Here you refer that permafrost might exist. In Page 683, line 23 you confirm the presence of permafrost. Not understandable.

Page 689, line 12: This should be the first paragraph of the section 3.

Page 691, line 16: The explanation of paragraph 3.7 is very long, and with grammar errors. You should make it simpler and more focused. Maybe explain what why there are differences in the different years.

Page 693, line 8: The explanation of paragraph 3.8 has grammar errors. You should also make it simpler and more focused. Maybe explain what why there are differences

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in the different years.

Page 694, line 22: Another very long explanation. It's too descriptive. May be merge with paragraph 3.5 and write a more focused text.

Page 696, line 23: The discussion is also very descriptive. You should compare the results from the different year and try to explain why you have these results. What is influencing the characterization of the active layer? Snow? Type of Soil? Water content? Its not clear. No discussion just a results.

Page 723, Fig. 3.: Each graph should be separated in a), b) and c), the way tou have in fig. 2. Page 724, Fig. 4.: Each graph should be separated in a) and b). Page 725, Fig. 5.: Each graph should be separated in a) and b). Page 728, Fig. 8: Each graph should be separated in a), b) and c). Page 729. Fig. 9: Each graph should be separated in a) and b).

Interactive comment on Solid Earth Discuss., 6, 679, 2014.

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