Hydrol. Earth Syst. Sci. Discuss., 8, C2669–C2671, 2011
www.hydrol-earth-syst-sci-discuss.net/8/C2669/2011/

Hydrology and Earth System Sciences Discussions

Interactive comment on "Classification of thermal waters based on their inorganic fingerprint and hydrogeothermal modelling" *by* I. Delgado-Outeiriño et al.

I. Delgado-Outeiriño et al.

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Received and published: 10 July 2011

Please, find attached: 1) reply to referee 2 (as figure-1.pdf) 2) new manuscript version after revision (as figure-2.pdf)

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 8, 4559, 2011.

Thanks for the comments

Specific comments

Abstracts

- Please locate Galicia. Galicia was located.
- Please replace "partial lest squared" for "partial least squared". "Least" has been already changed.
- Please, consider re-phrasing the last paragraph. The last paragraph has been re-written.

Results and discussion

- I guess there is a mistake in this section. In the section 3 "Results and discussion" should be included:

3.1. Chemical composition of waters and ionic ratios.

3.2. Geothermometer results.

3.3. Hydrogeochemical modelling.

I think I makes no sense the present form of this section.

Yes, there should be a mistake. The subsections "geothermometer results" and hydrogeochemical modelling" should be in the section of "results and discussion".

- Page 4566 in the last paragraph the authors said that samples of cluster I were the youngest ones. Could the authors explain it?

We believe there are enough parameters to conclude that water samples corresponding to group I are young water or maybe water samples that are continually mixing with groundwater. Figure 3 shows as their Ca^{+2}, Mg^{+2} and Fe^{+2} content, as well as hardness and height characterize the waters of this group. Firstly, the higher content in Ca^{+2} and Mg^{+2} of these waters according to the sequence of Chebotarev indicate the presence of young/surface water. These results are corroborated with those obtained by the ratios Cl^-/SO_4^{-2}, Cl^-/HCO_3^- and $(Cl^-+SO_4^{-2})/HCO_3^-$ and by PLS regresión. Nevertheless, we could not conclude if there are young thermal water samples or thermal water samples, which are mixing continuity with surface water.

References

Under the references, some journal titles were abbreviated while others were not. The authors should be consistent.

Journal titles were corrected and also few mistakes that they were found in references.

Fig. 1. reply to referee 2

HESSD

8, C2669–C2671, 2011

Interactive Comment

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Hydrology and Earth System Sciences Discussions

Classification of thermal waters based on their inorganic fingerprint and hydrogeothermal modelling

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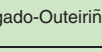

Fig. 2. new manuscript version after revision