**Hydrology and
Earth System
Sciences**

Open Access

Discussions

Interactive
Comment

# Interactive comment on "Evaporation in a Mediterranean environment by energy budget and Penman methods, Lake Baratz, Sardinia, Italy" by F. Giadrossich et al.

**P. Le Moigne (Referee)**

patrick.lemoigne@meteo.fr

Received and published: 4 March 2015

The discussion on how the vertical water column is discretized should be included in the revised version of the paper (and the figure as well of course). You mention that h is defined at page 1909, but this is not a definition: it is mentioned at this place but not described. Now the figure explains it clearly.

Back to A(t): again page 1909 A is a function of z only. And now A is a function of time: if A is a function of both z and t then it should be specified and appear in the equation (4). And if it depends on z then it probably should be in the summation term.

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper

The way of averaging evaporation as a non negligible effect especially during spring. This illustrates that correlations exist between numerator and denominator of Eb. And this is not surprising because for instance the net radiation depends on surface temperature. Concerning the bowen ratio, another approach could be to estimate it as gamma*(ts-ta)/(es-ea) and to average it hourly: is there a big difference between this method and the one proposed by Webb?

Figure 5 is interesting but difficult to read because it's too small, the x-axis and y-axis are reversed. It highlights the time evolution of the total storage and is complementary to figure 4b. This leads me to the following idea that could be interesting to add in the paper: if you consider the temperature gradient between the surface and the bottom, it appears that the largest it will be, then the more storage you'll have in the upper layers in spring and inversely the more release in autumn and winter. This shows the blocking role of the thermocline in the heat transfer between layers. For example comparing September 2011 and November 2013, the temperature inversion limits the heat exchanges to half of the water height whereas in November release affects the whole height.

page 1921 the consideration about survey data should be displaced into the data section.

Anderson 1958 is not in the reference list. Please check that all references in the text are correctly reported in the list

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 12, 1901, 2015.

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper