Dear Editor,

I attach to the hereby email the revision of the paper:

## Calculation of reference evapotranspiration surfaces in distributed hydrological modelling at different temporal scales

C. Aguilar and M. J. Polo

I appreciate the possibility of taking part in the revision of such prestigious journal.

Principal Criteria	Excellent	Good	Fair	Poor
	(1)	(2)	(3)	(4)
Scientific Significance:				
Does the manuscript represent a substantial contribution to scientific progress within			х	
the scope of Hydrology and Earth System Sciences (substantial new concepts, ideas,			^	
methods, or data)?				
Scientific Quality:				
Are the scientific approach and applied methods valid? Are the results discussed in an		X		
appropriate and balanced way (consideration of related work, including appropriate		^		
references)?				
Presentation Quality:				
Are the scientific results and conclusions presented in a clear, concise, and well-			V	
structured way (number and quality of figures/tables, appropriate use of English			Х	
language)?				

General revision

1. Does the paper address relevant scientific questions within the scope of HESS?

Yes, it does, though the paper is rather simplified.

2. Does the paper present novel concepts, ideas, tools, or data?

Yes, it does. The paper presents an interesting tool to estimate Hargreaves Evapotranspiration.

3. Are substantial conclusions reached?

Yes, they are sufficient.

4. Are the scientific methods and assumptions valid and clearly outlined?

No, they are not. Further description of applied model is necessary. For example, the article does not describe details of the nature of the information: "source of information: it has been achieved from remote sensing data processing"(1). In this case, it has not been specified what data from the remote sensors was used.

5. Are the results sufficient to support the interpretations and conclusions?

Yes, they are.

6. Is the description of experiments and calculations sufficiently complete and precise to allow their reproduction by fellow scientists (traceability of results)?

No, it is not. It is necessary to include the basic equations applied (Section 2.2.4 is incomplete). More details are required.

7. Do the authors give proper credit to related work and clearly indicate their own new/original contribution?

No, they do not. The authors do not provide a significant scientific contribution.

8. Does the title clearly reflect the contents of the paper?

No, it does not. The article discusses the incorporation of the Hargraves' method. It is a poor analysis of hydrological models.

9. Does the abstract provide a concise and complete summary?

No, it does not. The article discusses the incorporation of the Hargraves' method. It is a poor analysis of hydrological models. The title should include the words "Hargreaves" and "watershed scale".

10. Is the overall presentation well structured and clear?

Yes it is. It is well structured, though the methodological section is insufficient.

11. Is the language fluent and precise?

No, it is not. Please check English accuracy.

12. Are mathematical formulae, symbols, abbreviations, and units correctly defined and used?

Yes, they are correctly defined.

13. Should any parts of the paper (text, formulae, figures, tables) be clarified, reduced, combined, or eliminated?

Although the overall organization of the paper was understandable and appropriate, I believe the following changes should be born in mind:

Rewrite Capture Figure 1.

Fig. 1: Study site location, and weather stations number and DEM the Guadalfeo river watershed.

- Check the other Figures and Tables to rewrite them, as well.
- 14. Are the number and quality of references appropriate?

## Yes, they are.

15. Is the amount and quality of supplementary material appropriate?

Yes, it is.

## **Specific comment**

- Page 4817, paragraph 15: Define CH, Hargreves coefficient (CH)
- Page 4819, before paragraph 5 (1): Include further and more detailed description and method applied.
- Paragraph 5: Specify what the numbers, for example the number 802, mean when naming stations: (802 Station in Figure 1), idem in the following example (701 Station...)