Assessing the Impact of Earth Observation Data-Driven Calibration of the Melting Coefficient on the LISFLOOD Snow Module
By Premier et al.

The major revision significantly improved the paper. You addressed:

- The resulting KGE of discharge, without recalibrating the other parameters
- The three layers of the Lisflood snow module
- The ice melt integration
- 2.3. Snow Cover Parametrization is now much better explained
- A daily comparison in fig 12,13

The workflow as fig 1 is beneficial.

You put in some lines about how kaccum is calculated. Still unclear to me, how you select the first day. "… in which both EO-SCF observations and LISFLOOD SWE are greater than 0" .
If Lisflood SWE reacts later than EO, you will already have a higher SCF. Also, the first snow in the Alps occurs Sept-Nov, which usually does not stick and may not represent the winter season. Maybe some more sentences in Appendix B2 will help.

Another issue is the independence of the independent variable when calculating the objective function (KGE). Here, you use EO SCE to calculate kaccum, which you then use in equation 7 to calculate Lisflood SCE, which you then test against EO SCE.
Therefore, the independent variable is no longer independent. I think, because it is only a minor aspect of the Lisflood SCE, you can do this, but it would be worth mentioning in the discussion that you violated this independence criterion a little bit.

My biggest concern is equation 11 (sorry for not pointing it out in the first review). You inverted equation 9, then put SWEmax back into it. This is mathematically correct but does not make to much sense. The original idea of Swenson and Lawrence 2012, and Luce and Tarboton 2004 was a seasonal maximum. Swenson and Lawrence 2012 account for a period of mixed accumulation and melt in their equation 11 (page 12)
https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2012JD018178
Maybe using this equation instead of your equation 11.
BTW the equation is wrong. The second part should be divided from the first part (in utils.py you did it right)

Line 102: 1 arc-minute grid (approximately 1.4 km) 1 arcmin grids = 1.852 x 1.852x cos(lat) (in the Alps ~ -> 1.852*cos(47°) = 1.26. Doesn't have to be stated like this, but not 1.4 km

Fig 3,4, B1: The legend is very small and not easy to read.