Equation change for egusphere-2022-106

In the calculation of the RRD (Relative RMSE difference), a positive score should mean that the coupled model performs better than the benchmark when compared to basin runoff observations, and vice versa. The sign is determined by the upper part of the equation, which gives the difference between the RMSE of the Benchmark and the RMSE of the coupled model. The coupled model performs better when its RMSE is lower than the Benchmark, and therefore in the calculation of the RRD the coupled model RMSE should be subtracted from the Benchmark RMSE if we want to obtain a positive RRD for a better performance by the coupled model.

However, in the manuscript it's written the opposite, as follows:

$$RRD = \frac{RMSE(Q_{Obs}, Q_{Coupled}) - RMSE(Q_{Obs}, Q_{Benchmark})}{RMSE(Q_{Bare}, \max(Q_{Coupled}, Q_{Benchmark}))}, \qquad (5)$$

I am sorry for this mistake and for the fact that me nor my co-authors have spotted it earlier. I have made sure the calculation of the RRD was correct in the code and this was in fact the case.

The correction to be made is therefore simply to swap $Q_{coupled}$ and $Q_{Benchmark}$ in the above equation. For the bottom part of the equation it is not necessary but I would still propose it for clarity.

The correct equation would then be:

$$RRD = \frac{RMSE(Q_{obs}, Q_{Benchmark}) - RMSE(Q_{obs}, Q_{Coupled})}{RMSE(Q_{Bare}, \max(Q_{Benchmark}, Q_{Coupled}))}$$