

Interactive comment on “Multi-decadal analysis of root-zone soil moisture applying the exponential filter across CONUS” by Kenneth J. Tobin et al.

Anonymous Referee #2

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The paper shows an important systematic study of the application of the exponential filter to estimate SWI and RZSD from various SM satellite products. The results are of great interest for research and applications that use these products and prefer a simple and reliable method such as SWI for estimating RZSD. However, the conclusions are limited to commenting on the different performance of the SWI method comparing RZSD estimates and in situ measurements, using a series of literature metrics (N-S, bias, RMSE). I think the paper conclusions would surely be more effective if it could include further insights in the discussion e.g. linking the failure of the exponential filter in some areas and under some conditions, tying the behavior to hydrological/morphological factors, e.g. The nature/type of the soil, the landscape, LU/LC, etc.

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