

Interactive comment on “Enhancing the representation of subgrid land surface characteristics in land surface models” by Y. Ke et al.

Anonymous Referee #2

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The authors proposed an alternative subgrid classification method of sub-grid variability in topography and vegetation cover and claimed it will enhance the representation of subgrid land characteristics in land surface models. Yet it is not clear, based on the paper, how the proposed method enhances the representation of subgrid land surface characteristics. The authors did not explain what weakness the existing methods of subgrid classification have and whether the new method does better. The authors mentioned repeatedly the computational burden of a certain number of total classes without being specific how computationally costly it is. The 18 total number of classes appears to be arbitrary depending on how many classes are used. The authors failed to present a convincing case that the proposed method has any advantages over other

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methods in improving the performance of land surface models. The work is superficial and lacks scientific value.

The paper is not well written, especially the first half, disorganized with many repetitions.

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