Global Assessment of Added Value in the SMAP Level-4 Soil Moisture (L4SM) Product

The SMAP L4SM product provides the most value versus a land model-only baseline in data-poor and lightly-vegetated regions, including much of Africa and central Australia.

Previous L4SM assessments vs. in situ measurements focused on data-rich regions such as the U.S. and Europe and therefore underestimated the contribution of SMAP data assimilation.

SMAP L4SM skill relative to that of a model-only simulation. Red shading indicates areas where L4SM has improved surface soil moisture skill with respect to a land model-only baseline.