

Soil Moisture Impacts on Subseasonal Forecast Skill and Uncertainty

Under MAP funding we have developed a simple water balance framework that allows new and insightful investigations into soil moisture impacts on subseasonal forecasts.

Sample result: Illustration of how initial soil moisture content affects uncertainty in the 3-4 week forecast of ET (and thus, to an extent, the corresponding forecast of air temperature).

According to simple framework, uncertainty (ensemble spread) will be larger for drier initializations...

... than for wetter initializations.

Evidence of forecast system behavior newly uncovered with the simple framework is seen in the output of the full GEOS S2S forecast system.

