

## Addendum

In our Consolidated Response to referee comments, we noted a discrepancy between the simulated patterns of soil moisture in northeastern Russia and the patterns shown in the NCEP re-analysis. The SPLASH-simulated soil moisture Figure presented there contained unrealistically sharp boundaries which we had previously attributed to a spin-up issue. However, we have now traced the problem to an incorrect specification of the specific heat capacity of air at low air temperatures, which we have now corrected. We have also imposed a mask over the Greenland ice sheet where the simulation of soil moisture does not make sense. The following Figure is the corrected version, which will be included in the revised manuscript.

*IC Prentice, on behalf of all authors*

