

AQRP Monthly Technical Report

PROJECT TITLE	Use of satellite data to improve specifications of land surface parameters	PROJECT # 14-022	14-022
PROJECT PARTICIPANTS	R. McNider, Y. Wu, K.Doty, Pius Lee, Min Huang	DATE SUBMITTED	12/18/2015
REPORTING PERIOD	From: August 1, 2015 To: August 31, 2015	REPORT #	8

A Financial Status Report (FSR) and Invoice will be submitted separately from each of the Project Participants reflecting charges for this Reporting Period. I understand that the FSR and Invoice are due to the AQRP by the 15th of the month following the reporting period shown above.

Detailed Accomplishments by Task

Task 4. Assimilation of Skin Temperatures in the Pleim-Xiu scheme. As reported in our July 15 (29) Deliverable report we made the first runs of using satellite surface skin temperatures to adjust soil moisture. The main activities during this period were evaluating these initial model runs models runs. This was done using both the satellite skin temperatures as the evaluation metric and NWS observations as the evaluation metric. Also, after evaluation we began the month long runs (September 1, 2013 – September 30, 2013). In the later part of this reporting period we calculated the comparative statistics with and without skin temperature assimilation.

Identify Problems or Issues Encountered and Proposed Solutions or Adjustments – As mentioned above we have solved the skin temperature data problem which we reported last time as an issue. We do see some cloud contamination issues in the afternoon skin temperatures which we use for validation. We applied a third layer of cloud screening for the skin temperature data.

Goals and Anticipated Issues for the Succeeding Reporting Period: Though this was an optional task we hoped to also attempt to adjust the surface heat resistance term (Ct) in PX scheme following McNider et al. 2005. However, time constraints may not allow this for the project. However, we will finish this under other resources after the project but will report these back to AQRP.

Detailed Analysis of the Progress of the Task Order to Date

We believe we are on basically on schedule for the project for completing and testing the skin temperature moisture nudging. Full completion of the optional adjustment of heat resistance coefficient may be delayed if we cannot solve the compiler issue.

Submitted to AQRP by:

Principal Investigator: Richard T. McNider

A handwritten signature in blue ink that reads "Richard T. McNider". The signature is written in a cursive style with a large initial 'R' and 'M'.