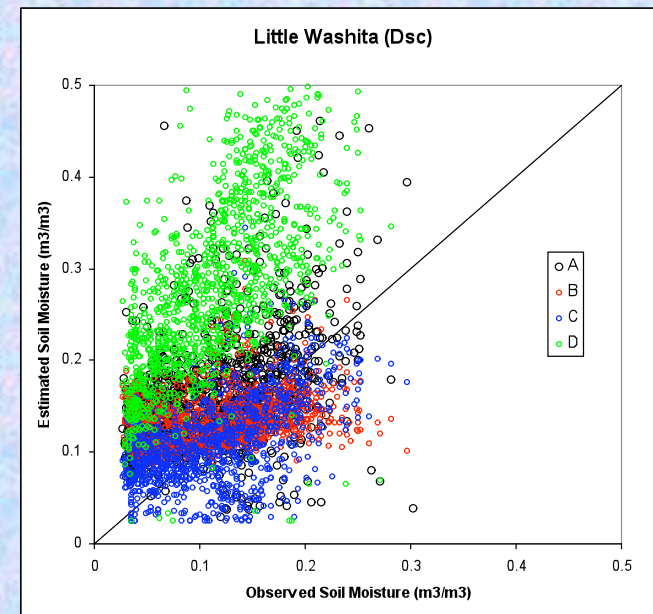
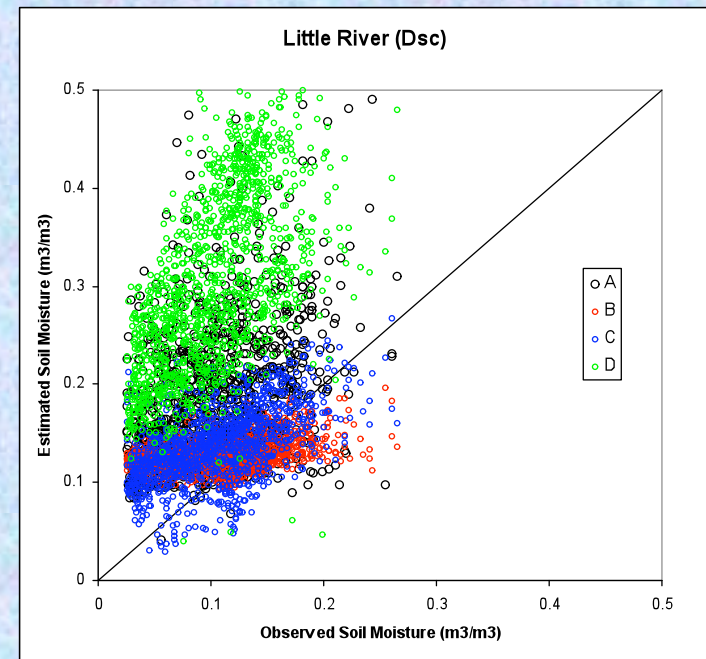


Soil moisture estimation using Passive Microwave

- Several retrieval approaches have been proposed using tau-omega model
 - Single Channel Algorithm
 - Multi-channel Algorithm
 - Polarization Ratio
 - Look-up table
 - LPRM
- Current (SMEX, AMSR-E) and future datasets (SMOS, Aquarius) can be used to evaluate these approaches
- These have been tried and evaluated using AMSR-E observations
- Each approach has its advantages and disadvantages
- Performance can be evaluated using in-situ observations from validation watersheds (Little Washita, OK; Little River, GA; Walnut Gulch, AZ; Reynolds Creek, ID)

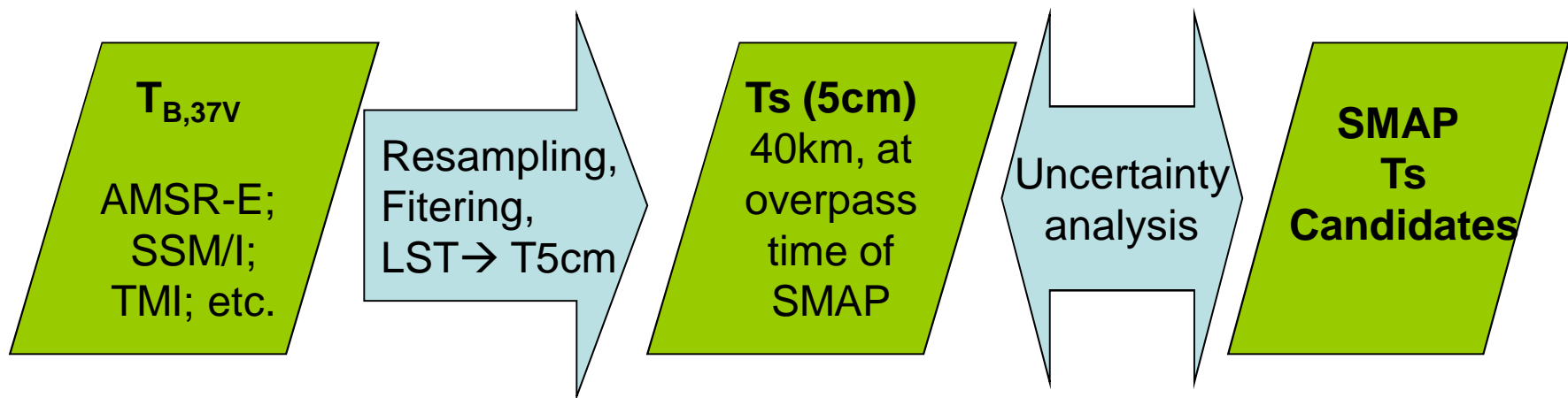


Error Statistics for Dsc (2002-2007)				
Algorithm	SEE	Bias	R	N
A	0.074	0.052	0.464	3823
B	0.063	0.044	0.330	4366
C	0.039	0.008	0.542	3747
D	0.181	0.164	0.640	3499

Soil Temperature for L-band

Thomas Holmes, USDA ARS Hydrology and Remote Sensing Lab

- SCA and LPRM soil moisture retrievals have successfully used Ka-band ($T_{B,37V}$) derived soil temperature.
- Can Ka-band be used to analyze potential ancillary soil temperature data for SMAP?



- Is ancillary T for SMAP available for study?

Radiometer Angular Response from a Forest Canopy (Models vs Data)

