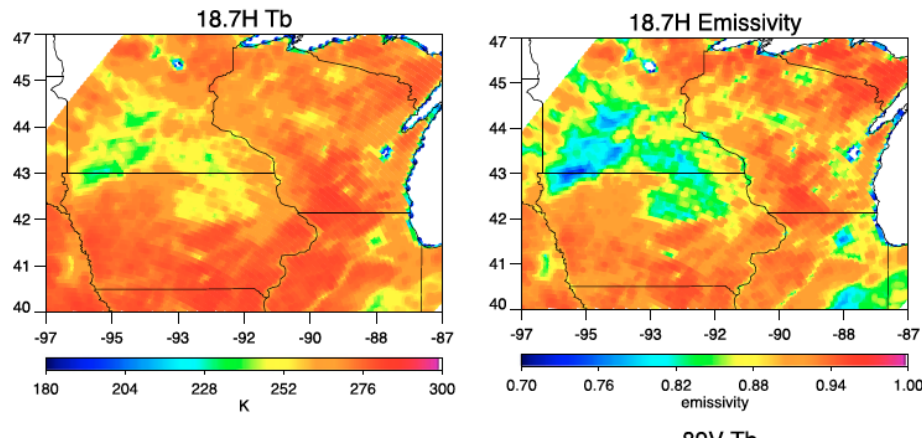
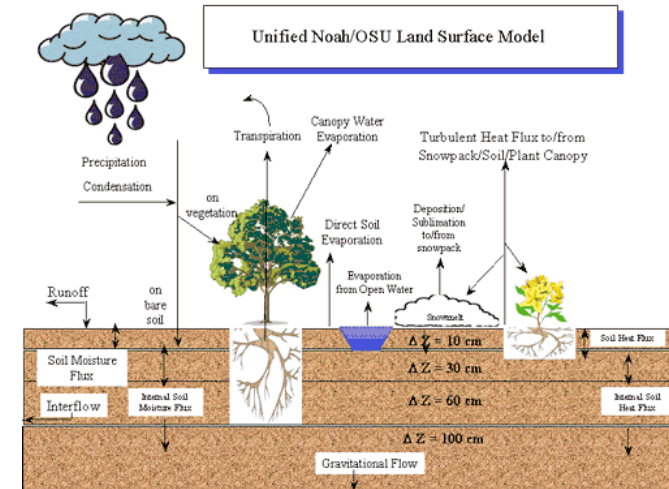


Land Surface Focus Group Report

- What moves this area forward?
 - Better forward modeling of microwave emissivity
 - Snow- lots of work being done here
 - Review paper, reach out to surface working group
 - Work with other communities interested in this (PBL-WHyMSIE)
 - Explore AI/ML capabilities



Microwave Scattering & Emission Processes near Surface

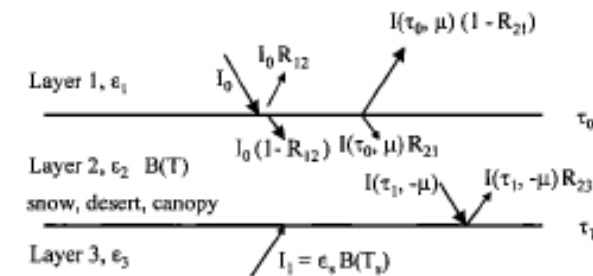
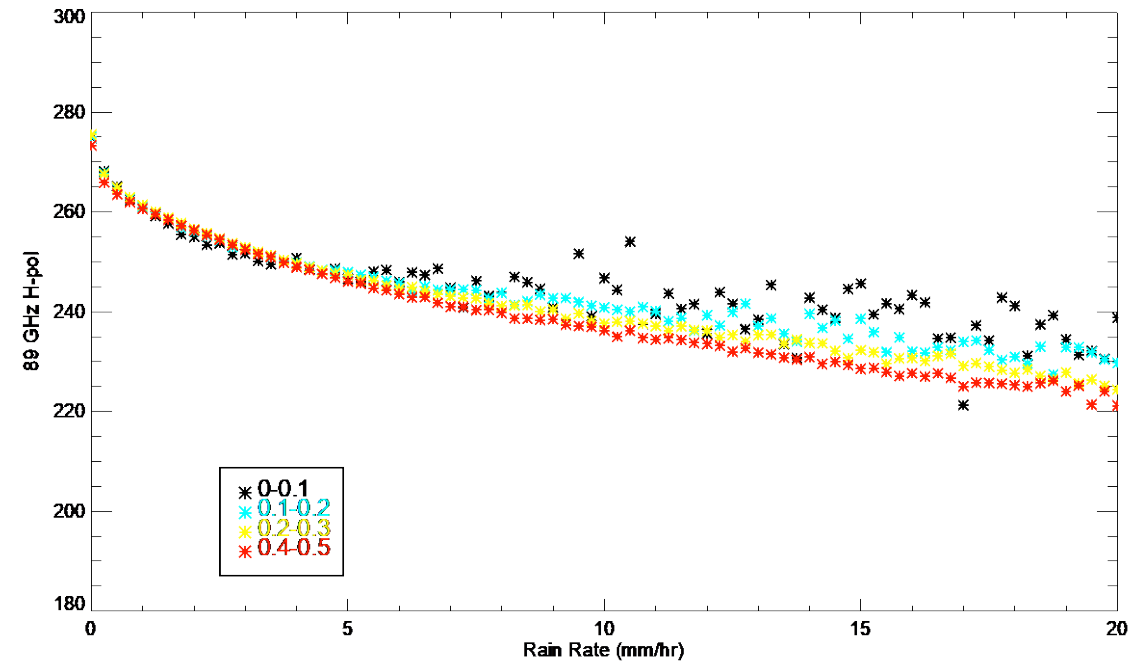


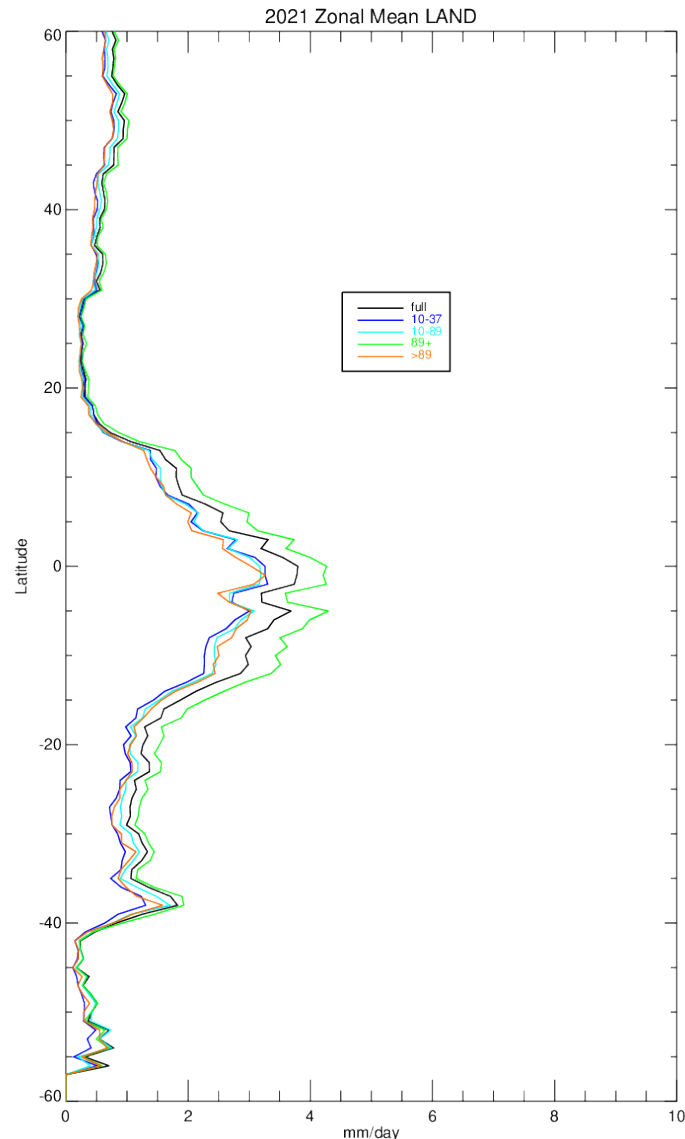
Figure 1. A schematic diagram of radiative transfer process for scattering and emission material on land surface.

Land Surface Focus Group Report

- Understanding relationship of soil moisture (and other surface characteristics) to precipitation vertical structure
 - Physical understanding for models, address non-uniqueness issues in retrievals
 - Discussed approaches and data sets to untangle these relationships (radar profiles, SMAP)
 - Lots of good interest in this – will be a focus of upcoming meeting seminars



Land Surface Focus Group Report



- Quantify impact of channel selection over various surfaces
- Important exercise to make the case for low frequency channels and utility of information content connected to surface dynamics

Land Surface Focus Group Report

- Make better use of available data not traditionally exploited
 - Can be a bit passive microwave biased – what are the best tools to answer these questions?
 - GEO vis and IR, radar backscatter, land cover, field campaign data, etc.
 - High resolution surface parameter datasets for sub-pixel variability
- Land surfaces are changing – changes and heterogeneity connect to precipitation
- Encourage and support student and early career efforts in this area
 - Will also make this a focus of upcoming meetings
 - Enable connection to data and expertise
- Contact sarah.e.ringerud@nasa.gov to join our efforts!