

SMEX03 Objectives

- **Validation** of Aqua AMSR-E soil moisture products for a range of land cover types
- Development and verification of soil moisture retrieval **algorithms** for a range of biomass levels for current (C) Band) and future (L Band) passive microwave missions and **Envisat ASAR**
- Soil moisture sampling-scaling, **calibration** and method
- Demonstration of new soil moisture retrieval concepts and **technologies** (GPS, 2DSTAR)
- Robust data sets for follow-on **modeling**

Soil Moisture Experiments 2003 (SMEX03)



- Science



- Algorithms



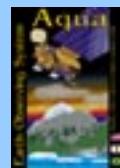
- Technology

- Water Cycle



- Validation

- Satellite Instruments



- AMSR-E
- AMSR
- SSM/I
- TMI
- Envisat, ERS-2
- Radarsat, Quiksat
- MODIS, ASTER
- TM
- GOES, AVHRR



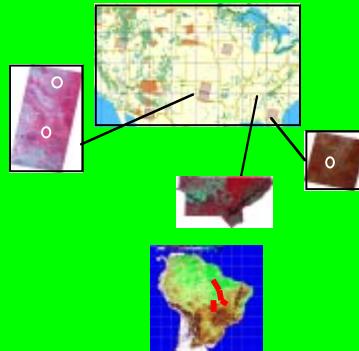
- Aircraft Instruments

- PSR/AESMIR
- ESTAR/2DSTAR
- GPS
- AIRSAR



- Sites (June-July)

- Oklahoma
 - Georgia (Little River)
 - Alabama (NALMNENET)
 - Brazil (Sept.)

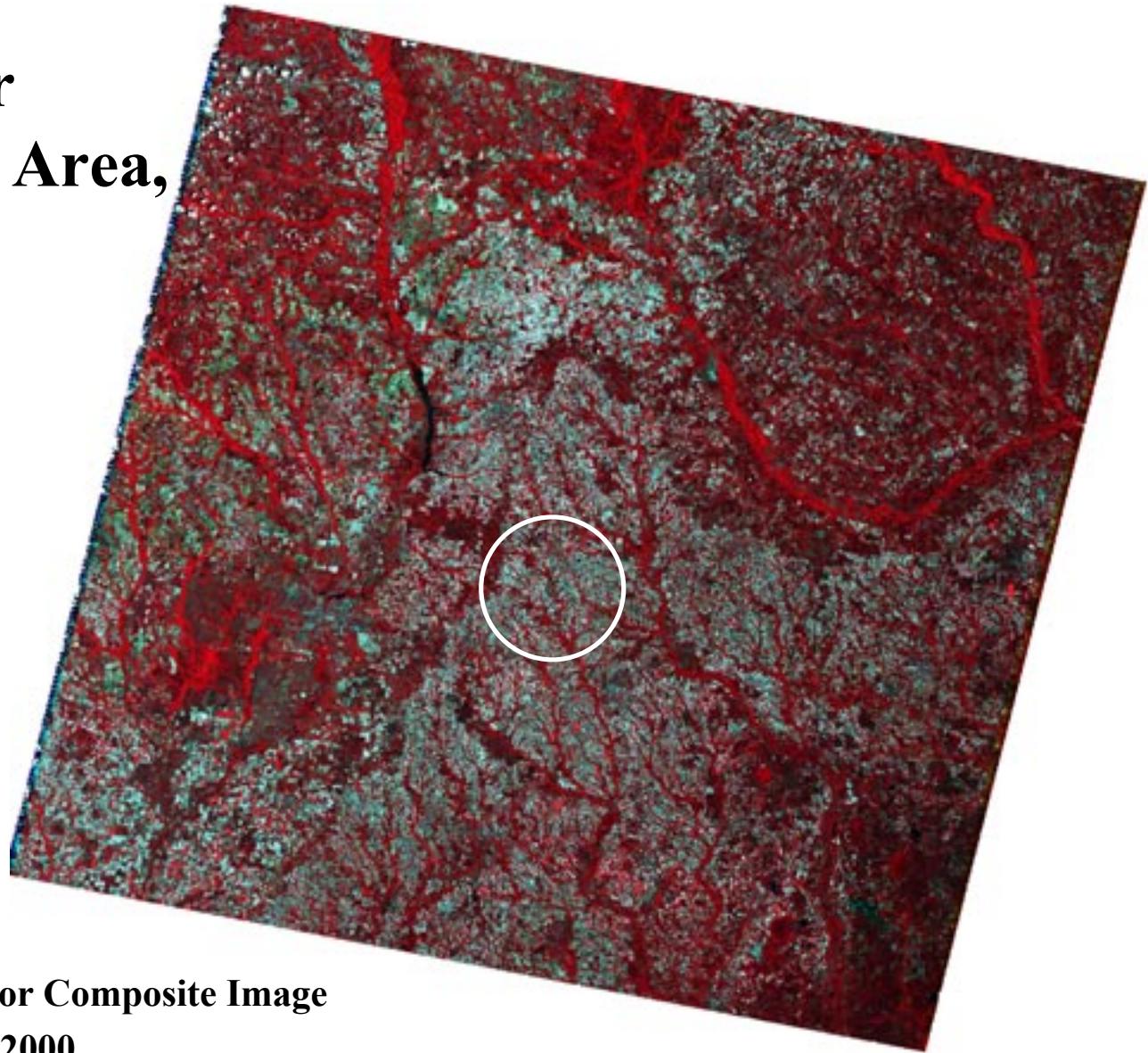


- Ground Investigations

- Soil moisture
 - Soil temperature
 - Surface flux
 - Vegetation
 - Surface roughness
 - Ground based radiometry
 - Insitu calibration
 - Insitu scaling

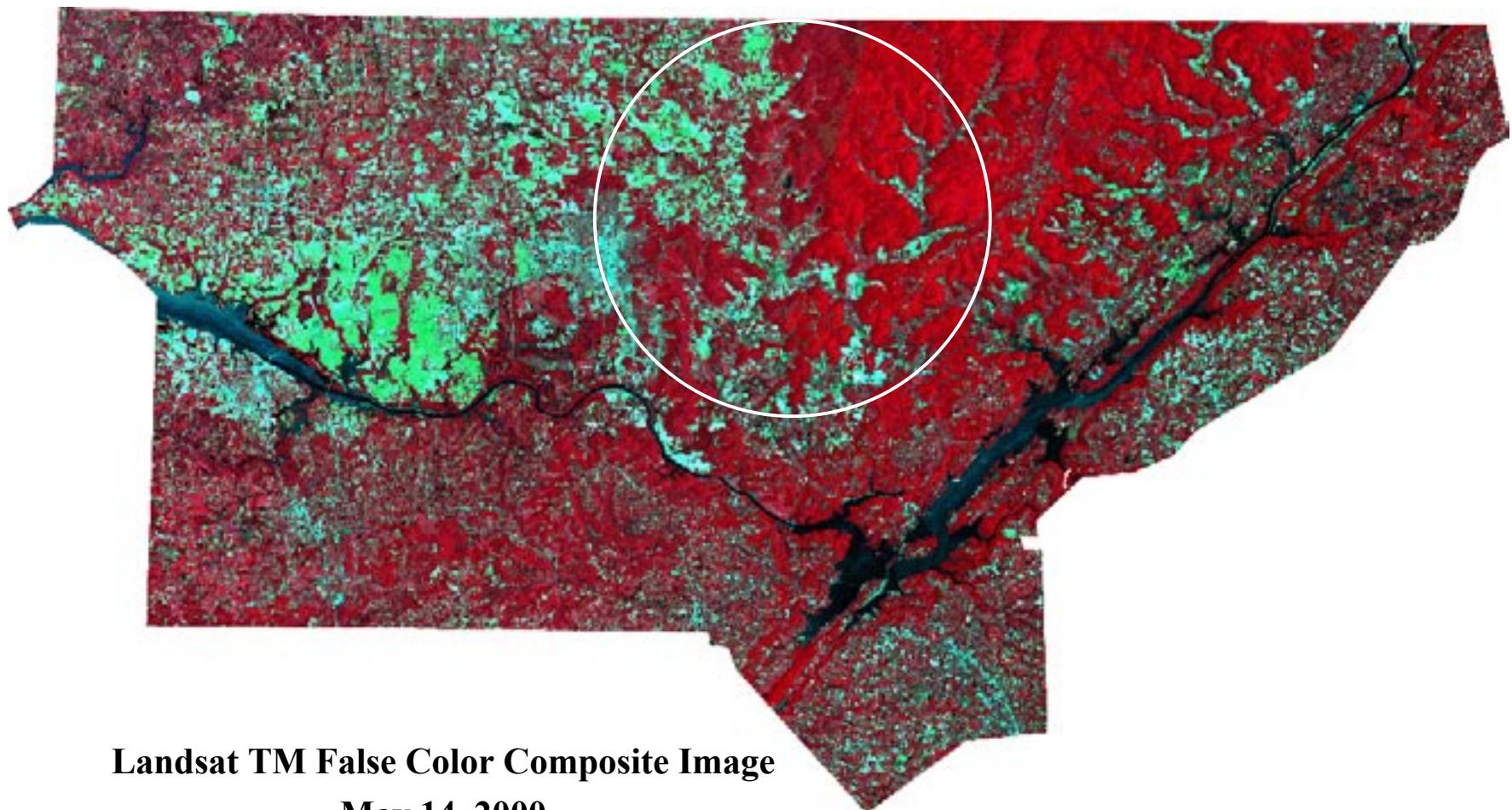


Little River Watershed Area, Georgia



**Landsat TM False Color Composite Image
June 1, 2000**

Northern Alabama Mesonet (NALMET) Area Near Huntsville, AL



**Landsat TM False Color Composite Image
May 14, 2000**

SMEX03 (U.S.) Schedule

15	16 P3 Installations	17	18	19	20	21
22	23	24 P3 to AL/GA	25	26	27	28
29	30	1 P3 to SGP	2	3	4	5
6	7	8	9	10	11	12
13	124	15	16	17	18 P3 to WFC	19

Brazil September 16-26, 2003