2nd Workshop on Remote Sensing and Modeling of Surface Properties

Conference Goals

- Bring together experts on retrieval and modeling of emissivity and surface properties
  - forward modelers
  - in-situ observers
  - NWP land surface systems

Land Emissivity Modeling

Modeling

F. WENG and B. YAN

Land Surface Emissivity Characterization for Community Radiative Transfer Model (CRTM) Applications

E. BORBAS and C. PRIGENT

Global database of emissivity

Canopy

F. GERBER Modeling reflectance and transmittance of leaves in the 0.4 - 5.7 µm domain (PROSPECT)

Soil

J-P. WIGNERON Improved parameterization of the emissivity of soil surfaces and forests at L-band (L-MEB modelling)

J-C. CALVET Validation of satellite soil moisture products over southwestern France using model simulations and in-situ data

A. LESAIGNOUX (ONERA, France) Soil Moisture Impact on Lab Measured Reflectance of Bare Soils in the Optical Domain [0.35 - 15 µm]

Surface emissivity of Snow, Sea Ice, and Open Sea

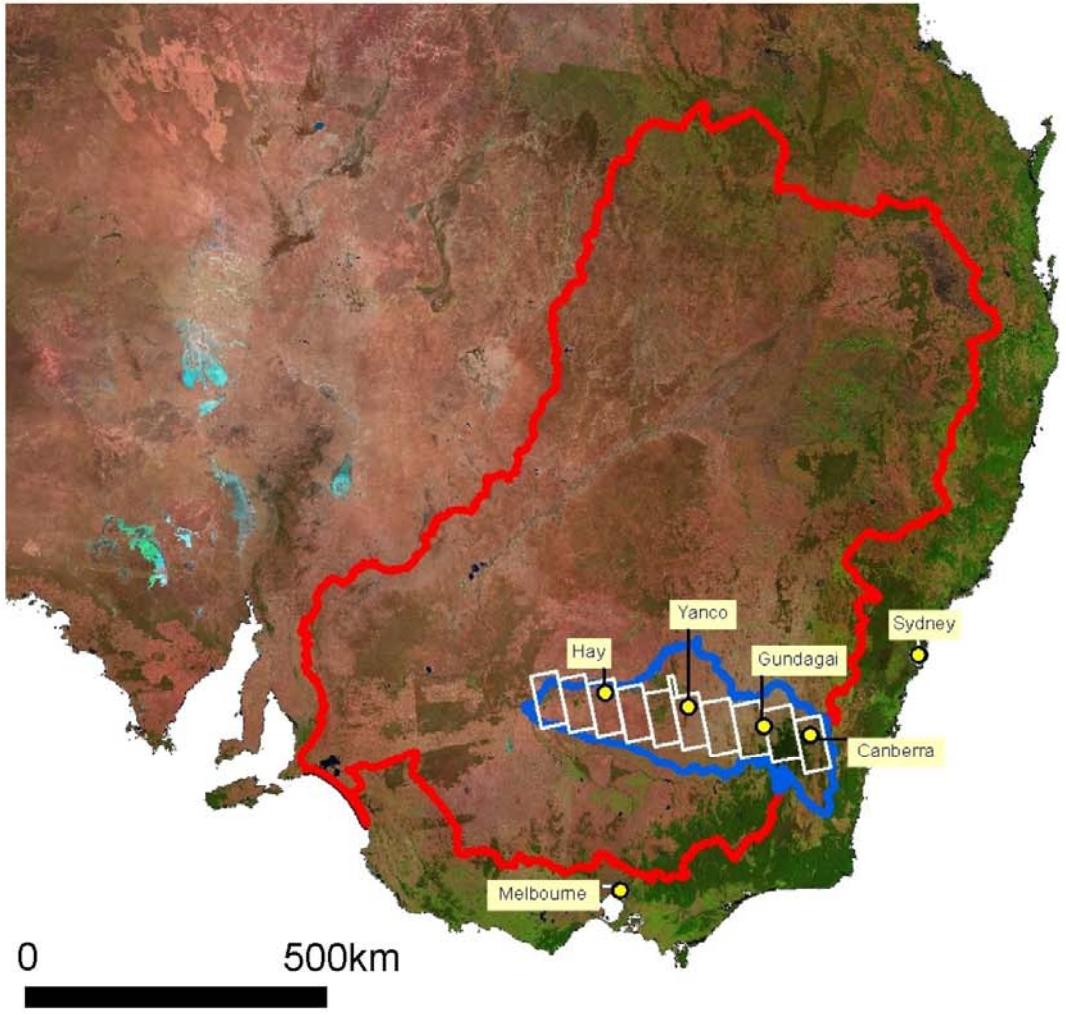
C. MATZLER Advances in passive microwave emission models: snow and ice including atmospheric effects

C. HARLOW Airborne microwave data measured over snow-covered surface

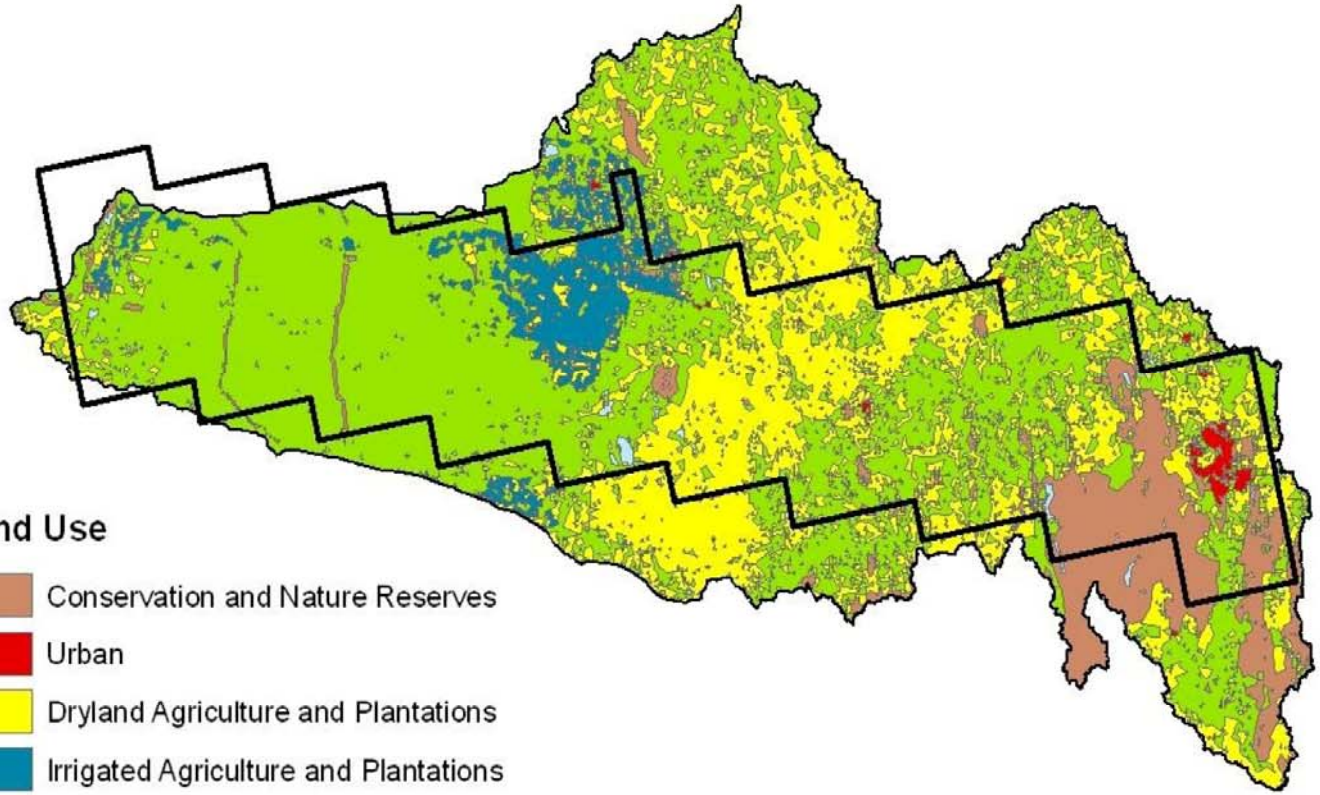
SMOS (Soil Moisture and Ocean Salinity Mission)

J. WALKER An in situ-model-aircraft cross validation strategy for SMOS

The Murrumbidgee: A demonstration test-bed



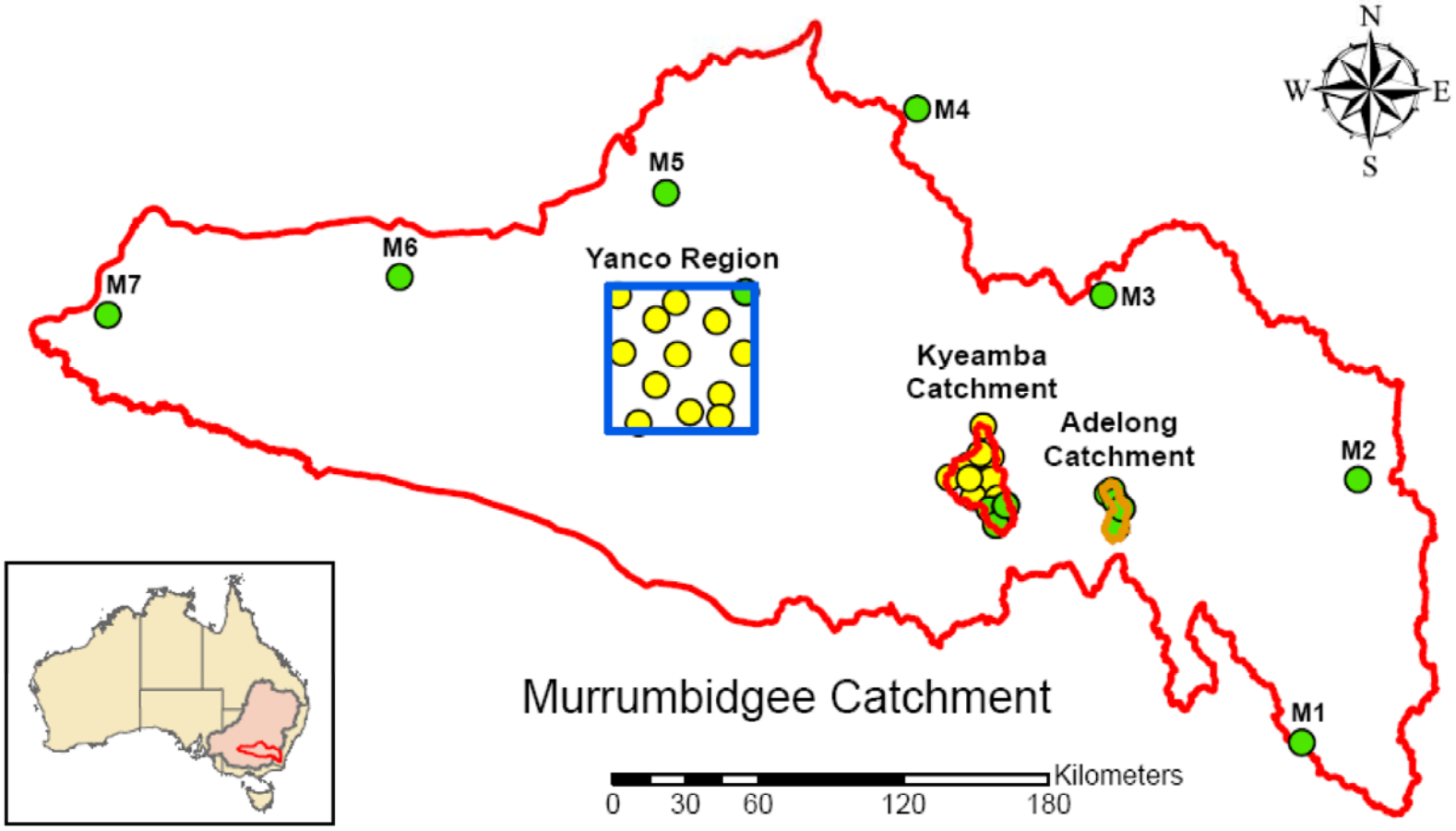
Murrumbidgee Catchment characteristics



Land Use

- Conservation and Nature Reserves
- Urban
- Dryland Agriculture and Plantations
- Irrigated Agriculture and Plantations
- Grazing and Production Forestry
- Water

Murrumbidgee Catchment monitoring



Land Data Assimilation and Applications

P. DE ROSNAY ECMWF land surface analysis: current status and developments

J-F. MAHFOUF Preliminary steps towards the assimilation of satellite derived soil moisture in the Météo-France NWP models

M. CARRERA The Canadian Land Data Assimilation System (CaLDAS)

W. LAHOZ Development of a land data assimilation system at NILU

Land Fluxes

C. JIMENEZ (Observatoire de Paris, France) Using microwave emissivities for the estimation of global land surface heat fluxes

C. BACOUR (LSCE, France) Assimilation of satellite fAPAR within the ORCHIDEE biosphere model and its impacts on land surface carbon & energy fluxes

Surface Property Retrievals

F. FURUZAWA - Land Emissivity Map Obtained from TRMM PR, TMI and JRA-25 Data from AMSR-E and MODIS Measurements

R. KNUTESON - Assessing the error in calculated OLR due to uncertainties in surface properties using AIRS, MODIS and CERES observations

D. ZHOU - Seasonal products of global land emissivity retrieved from the Infrared Atmospheric Sounding Interferometer

B. PINTY - Operational retrieval of land surface parameters from MODIS and MISR albedo products

S. FREITAS - LST and EM retrievals from SEVIRI on board Meteosat: Algorithms, uncertainties and validation

Impact of Surface Radiances on NWP

F. KARBOU - On the importance of land surface emissivity to assimilate low level humidity and temperature observations over land

S. HEILLIETTE - Assimilation of surface sensitive infrared channels in the CMC global forecast system

N. FOURRIE - Studies on the assimilation of AIRS/IASI near surface channels in the French Global Numerical Weather Prediction model

E. GERARD - Towards the use of SSM/I observations over land in the French global and limited-area models

B. YAN - Improvement of Satellite Data Utilization in NCEP Operational NWP Modeling and Data Assimilation Systems

3rd Conference

- Tentative – June 2011
  - City University of New York