

Joint Seminar
TIIMES and RAL Seminar

The Institute for Integrative and Multidisciplinary Earth Studies and
The Research Applications Laboratory

Sue Grimmond

King's College London
Department of Geography

***Surface-Atmosphere Exchanges in Urban
Areas: Measurements and Modeling***

Observations of atmospheric conditions and processes in cities provide a cornerstone for advances in the understanding of urban climates and are crucial for improving the performance of urban atmospheric models. Ultimately, urban climate effects are due to differences in the exchanges of heat, mass, and momentum between the city and its pre-existing landscape. Thus understanding, prediction, and mitigation of urban climate effects are intricately tied to knowledge of these surface – atmosphere exchanges in cities. This presentation will focus on methods and results from studies of these exchanges conducted in a range of urban areas in North America, Europe and Africa. The sites selected represent a range of urban surfaces (in terms of structure, cover, fabric and metabolism) in different synoptic and climatological settings. Specific attention will be directed to the critical importance of scale, siting of instrumentation, integration of GIS/Remote Sensing to model source areas/footprints of sensors, and key surface controls on flux partitioning.

Wednesday, 14 May 2008
3:30 p.m. (refreshments, 3:15 p.m.)

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Foothills Lab, Room 1022

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