

Topographic Issues

BRDF/Albedo

- planned production of sub-1km statistics, viz.
 - slope distribution
 - aspect distribution
 - variance distribution
 - sub-pixel shadow distribution
- DTED (in 100m) best possible source after removal of artifacts
- 30-40% of Earth's surface - no DTED available
- either spaceborne DEMs will be created (once resources can be liberated) from
 - stereo - SPOT
 - stereo - TK350
 - interferometric SAR - ERS-1
 - (radar altimetry ERS-1)
- or calculation of statistics from 1km and slope/aspect statistics

Validation - UCL

BRDF/Albedo

- multi-scale studies over international test sites
FIFE, HAPEX-SAHEL, BOREAS (AMAZONAS)
using PARABOLA, ASAS
to test different BRDF models & sensitivity
- UCL Botanical Plant Modelling System (BPMS)
tree/plant architecture (from stereo)
leaf, bark, soil optical properties
to simulate using a Monte Carlo ray-tracer
PARABOLA & ASAS - level radiance
to test different BRDF models
- ATSR2 (MODIS G, R, NIR, 1.6, 3-7, 11, 12)
2 looks (nadir + 57°)
500 km swath
to combine with 1km AVHRR to produce a
MODIS/MISR-like BRDF product
- GAC - GOES Pathfinder proposal for BRDF/albedo
- POLDER regional data
- SPOT4 - Vegetation (if successful)