

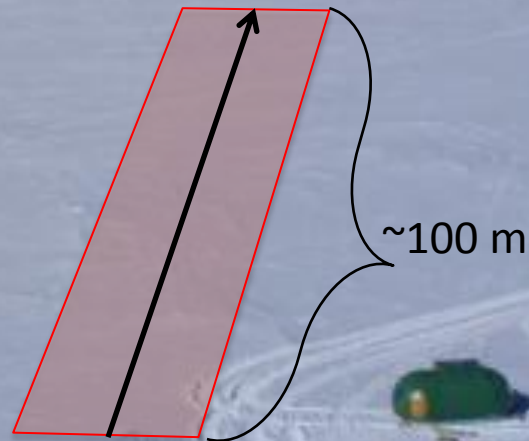
# Characterization of the bi-directional reflectance of Antarctic surface for the inter-calibration and validation of satellite remote sensing products

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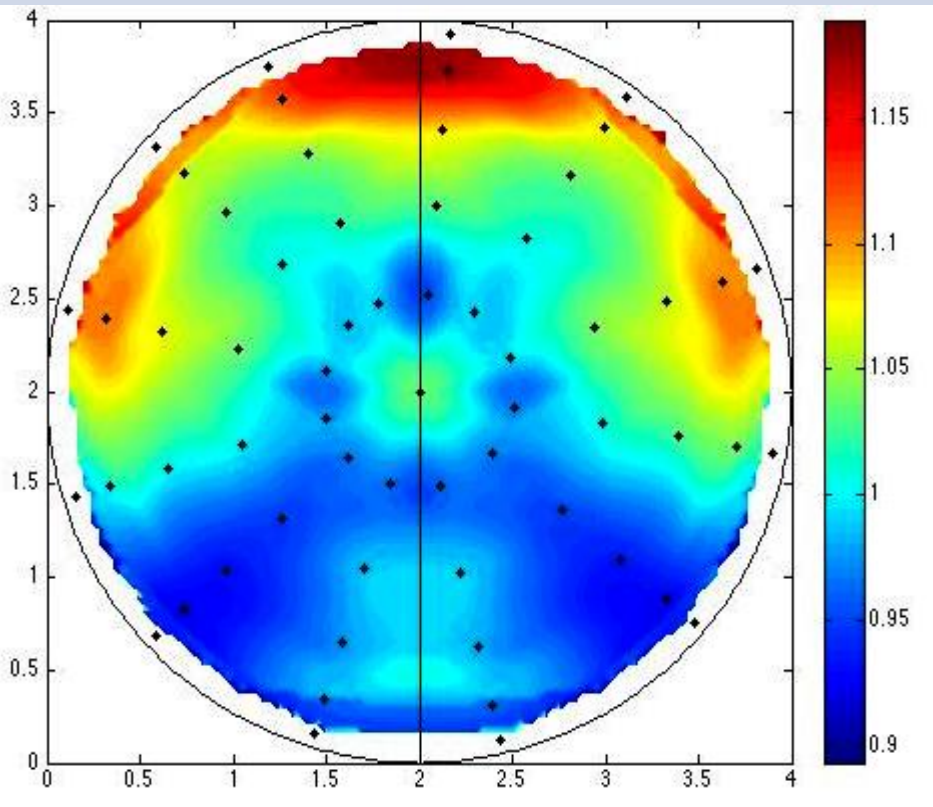
# Measurement location

BRDF measurements of the surface taken every  $\sim 10$  m at suitable sites along section shown



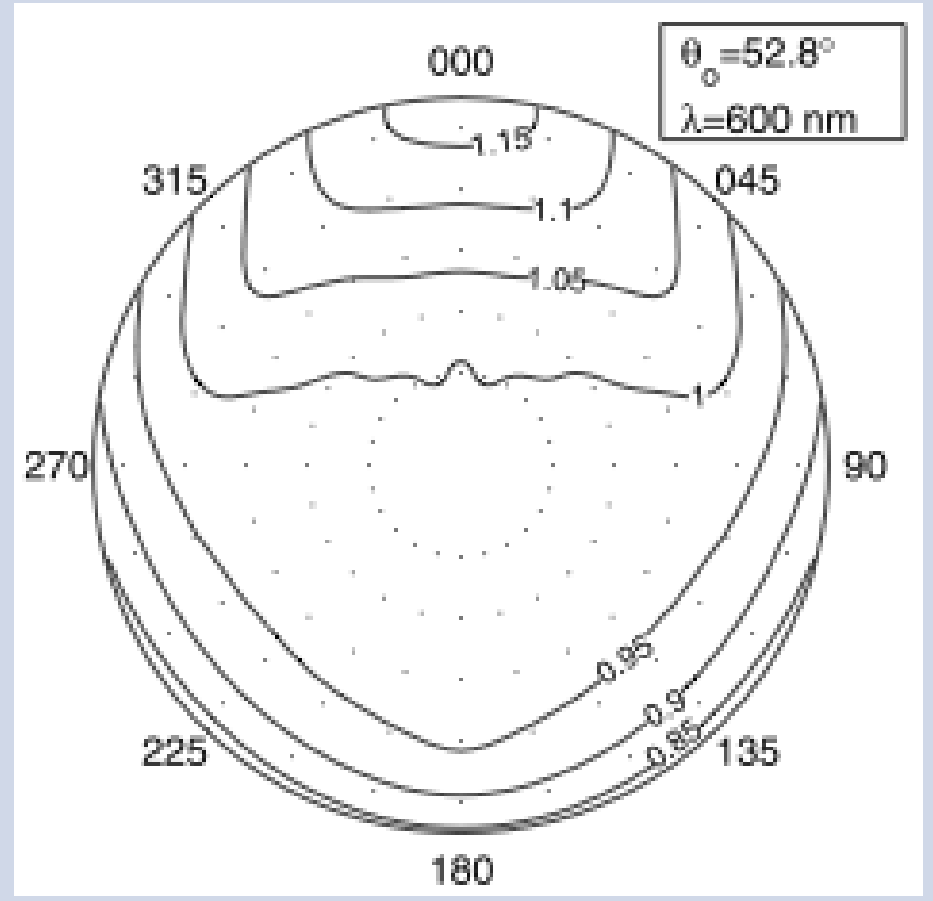
# Comparison of our average measurements to previous Dome C measurements

Average of our BRDF measurements from all locations



Measurements at 600 nm  
SZA: 52–63°  
Sun at base

Example from Hudson *et al.* (2006) of BRDF recorded from top of a 32m tower at Dome C

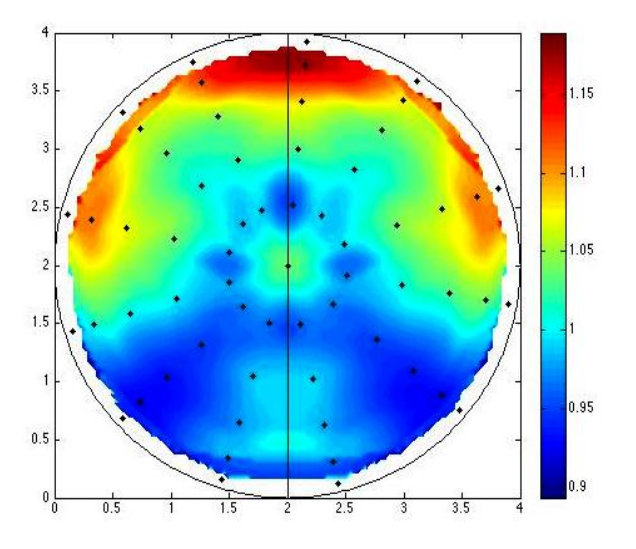


Measurements at 600 nm  
SZA 52.8°  
Sun at base



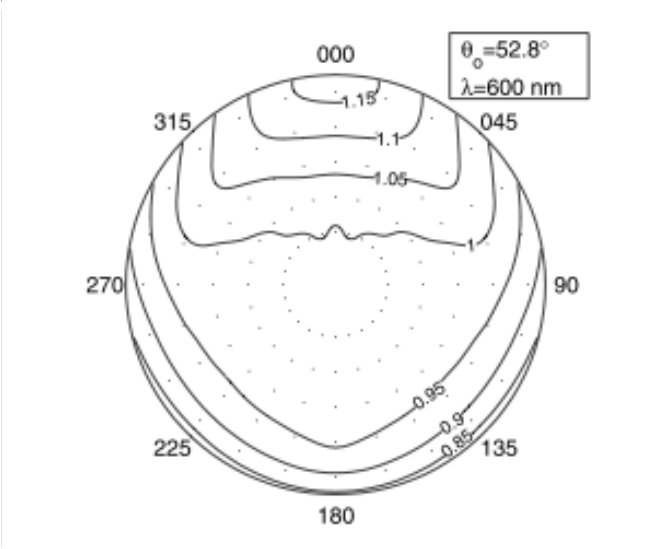
# Comparison of average measurements to other snow measurements

Average of our BRDF measurements from all locations



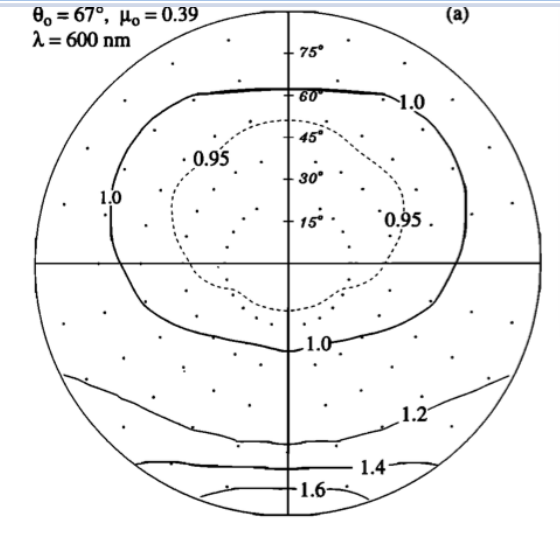
600 nm  
SZA: 53–60°  
Sun at base

Example from Hudson *et al.* (2006) of BRDF recorded at Dome C



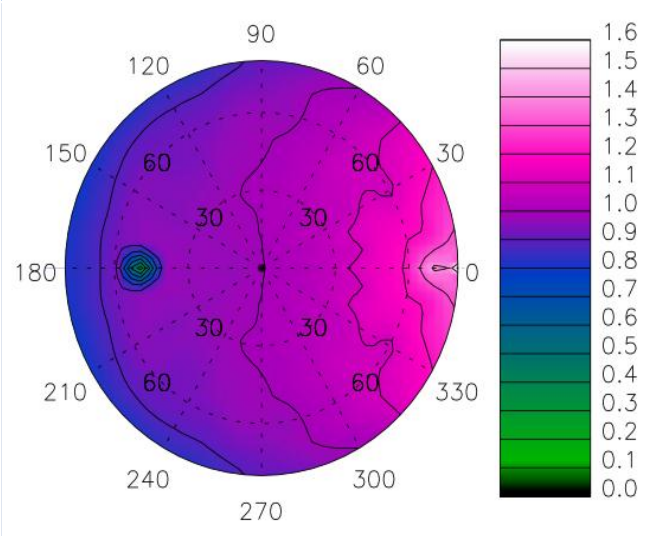
600 nm  
SZA: 52.8°  
Sun at base

Example from Warren *et al.* (1998) of BRDF measurements from South Pole station



600 nm  
SZA: 67°  
Sun at top

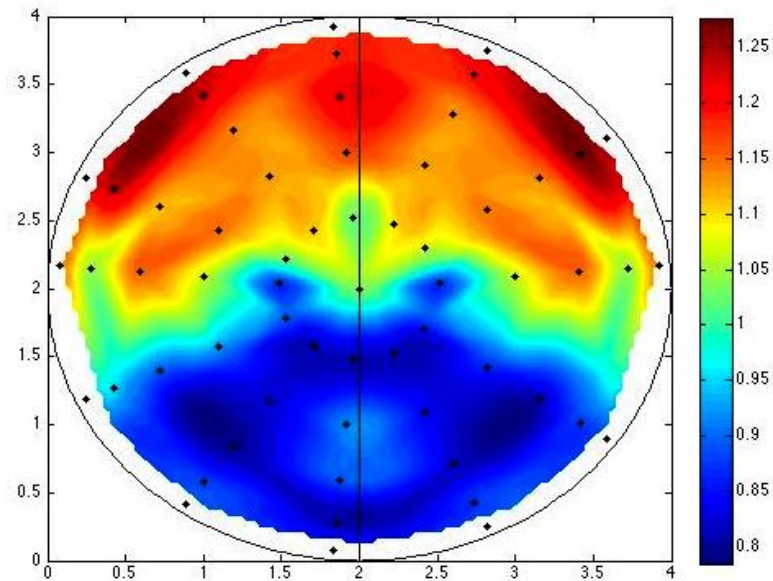
Example from Painter (2002) of BRDF of snow on Mammouth Mountain, California



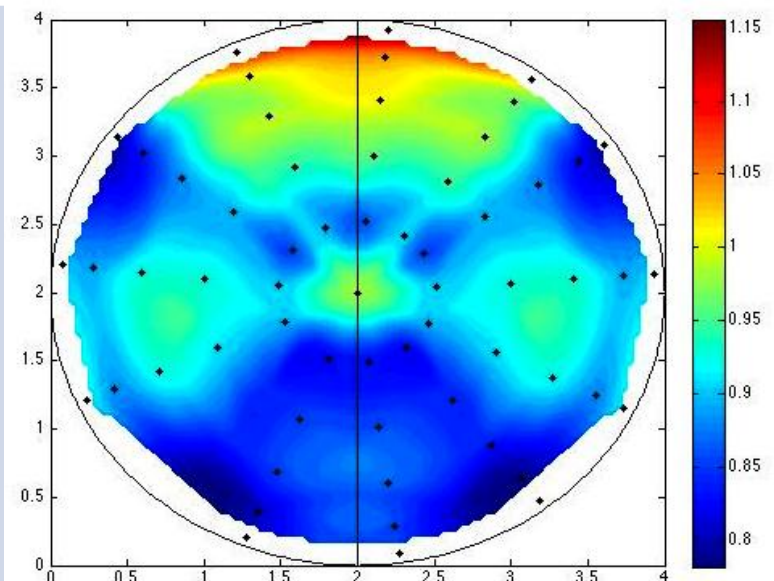
550 nm  
SZA: 47°  
Sun on left

# Variation within our measurements

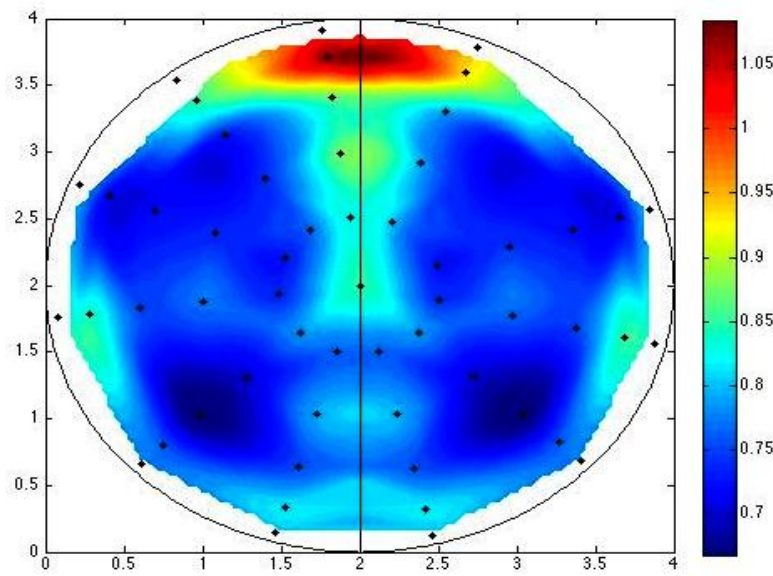
Site 4



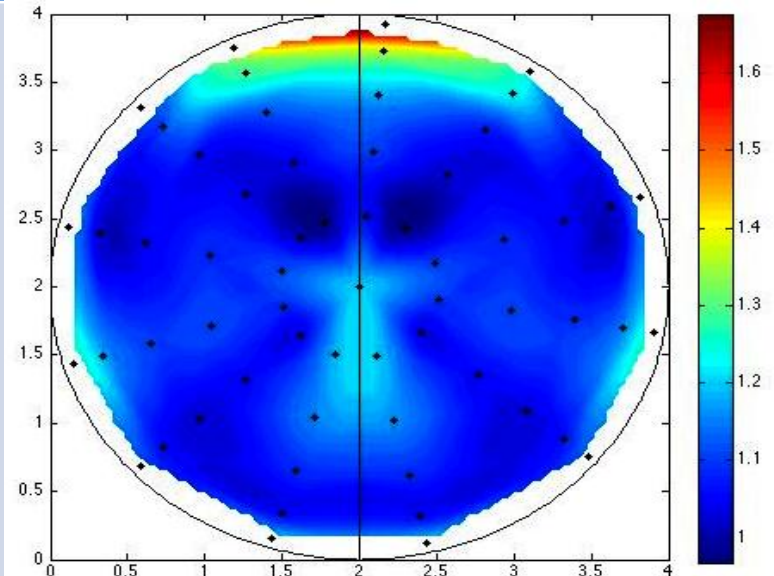
Site 5



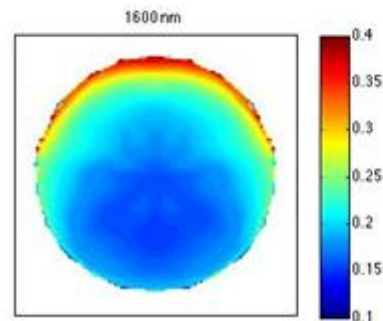
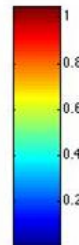
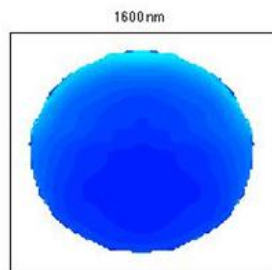
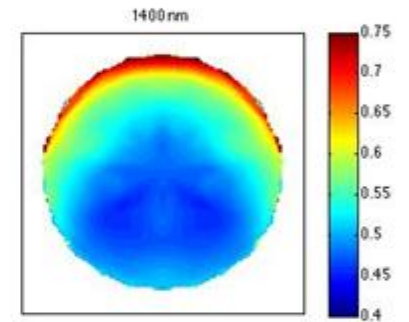
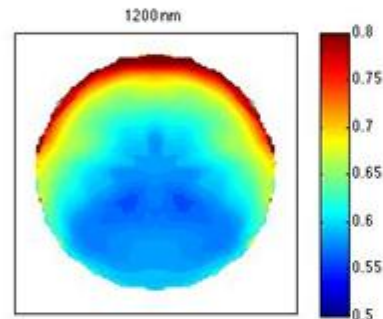
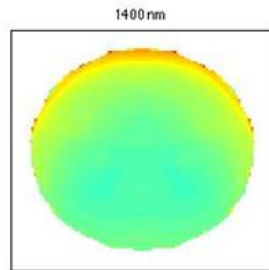
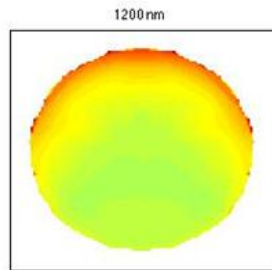
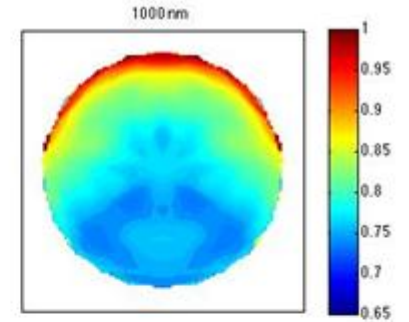
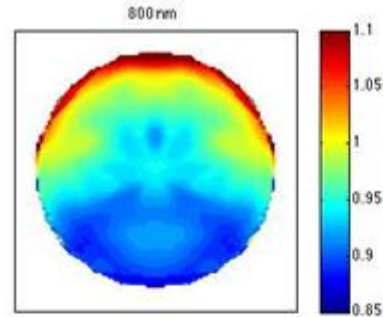
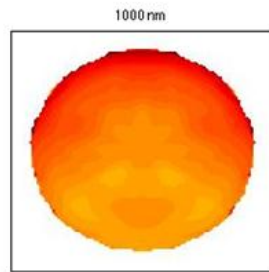
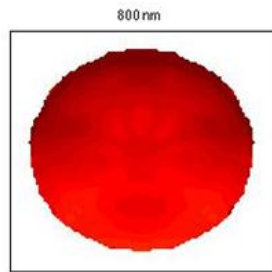
Site 8



Site 9



# Spectral BRDF



BRDF as a function of  
Spectral band

Spectral variation

# Summary

- **Results currently subject to publication and will be placed on Cal/val portal for use to cross-compare with sat observations**
- **A number of agencies collected data but very poor weather in 2010/11**
- **Further work needed to extend study to other areas near Dome-C (evaluate variances & features) (and possibly northern snow fields) – resources required**