# PRiDE
# Puerto Rico Dust Experiment

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Mishchenko → modeling spheroids

→ large nonsphericity as f(Θ)

Kaufman/Remer → AERONET sky data

→ small non-spherical effects
(within range of measurements)

Yang et al. → modeling complex shapes

→ nonsphericity limited to backscattering

# Tentative Solution to the Dust Dilemma

Just model dust as spheres and use Mie theory. We'll make the adjustment later.

PRiDE is where "later" became "now."

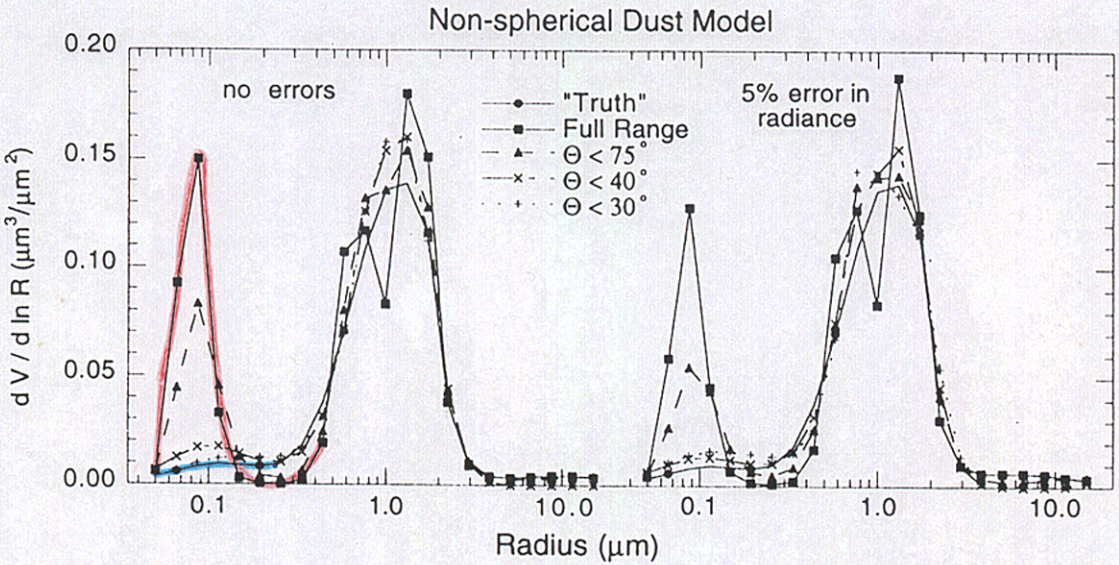
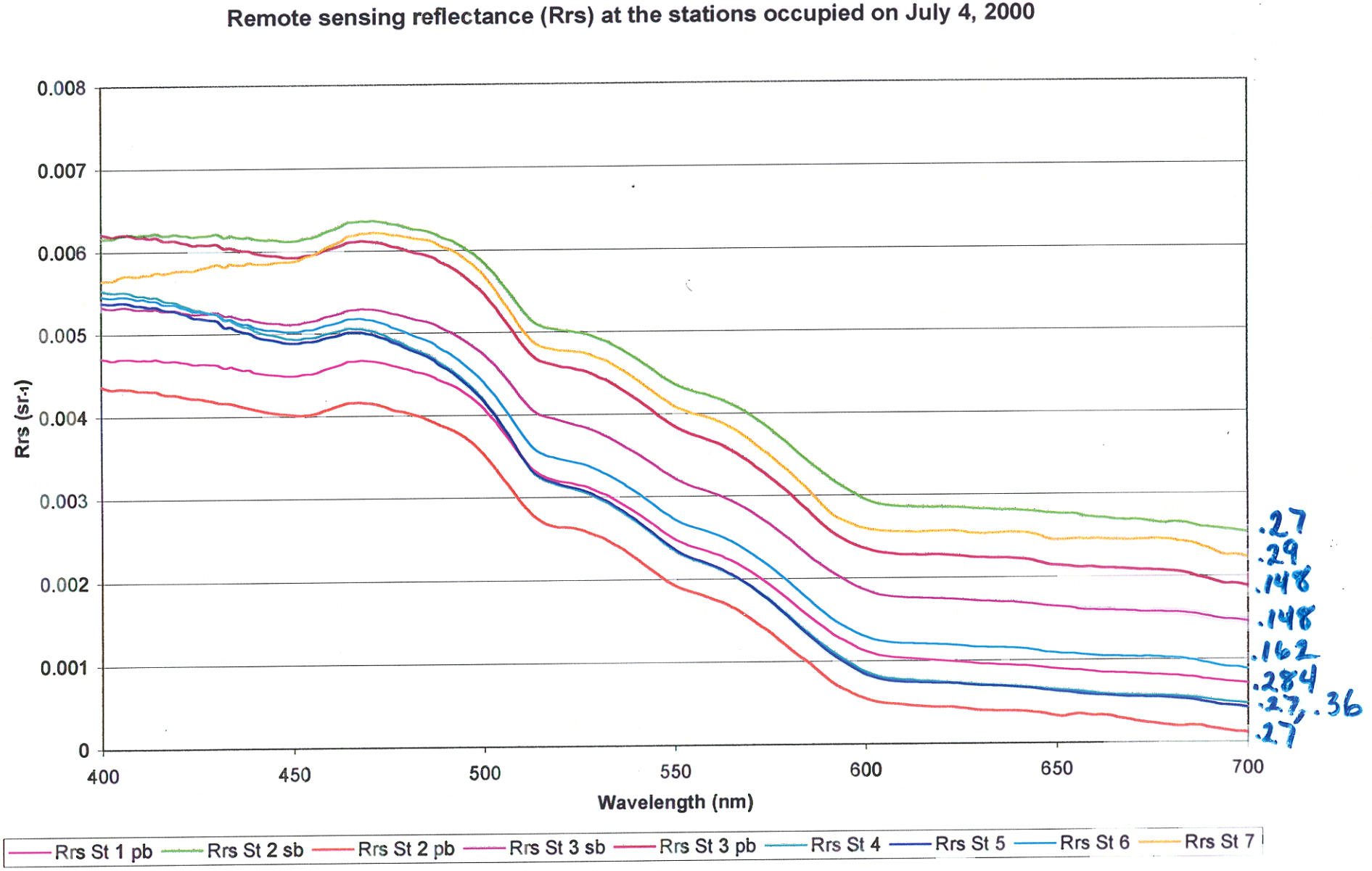
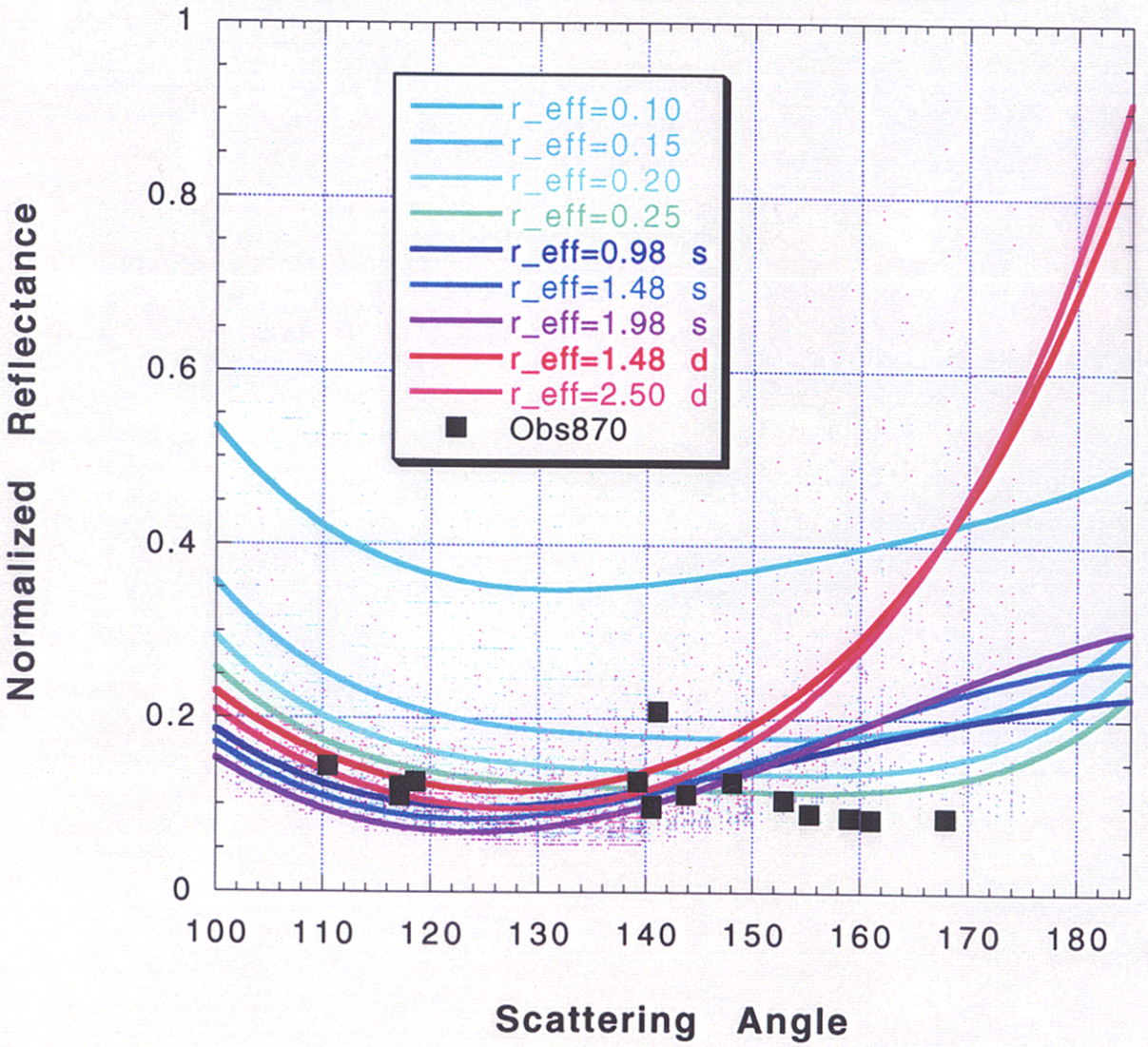



**Figure 11.** Volume size distributions of nonspherical aerosol particles retrieved using the model of scattering by homogeneous spheres. The different data sets used in the retrieval included spectral optical thickness measurements and sky radiance in full almucantar (scattering angle up to 120°), limited by scattering angles of 75°, 43°, or 30°.

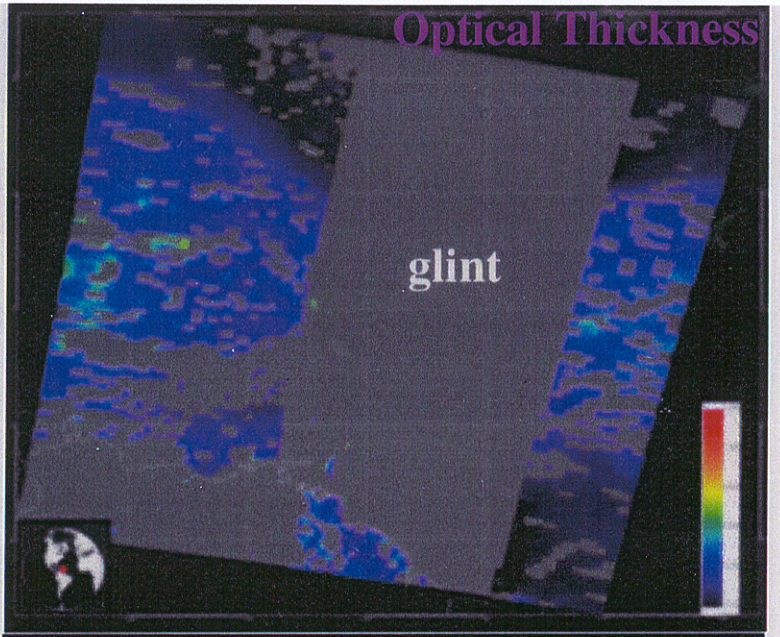
Dubovik et al 2000

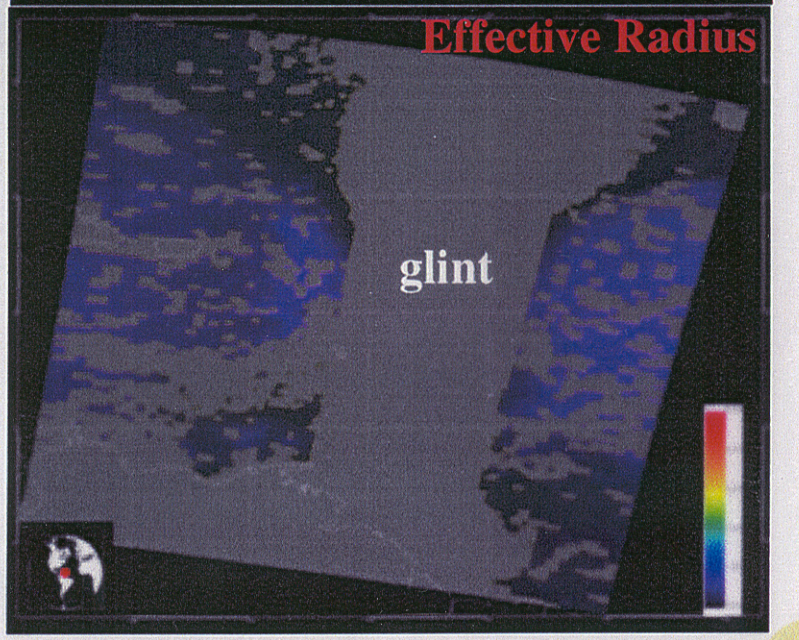

Remote sensing reflectance (Rrs) at the stations occupied on July 4, 2000
0.008
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0
Rrs (sr-1)
400
450
500
550
600
650
700
Wavelength (nm)
Rrs St 1 pb
Rrs St 2 sb
Rrs St 2 pb
Rrs St 3 sb
Rrs St 3 pb
Rrs St 4
Rrs St 5
Rrs St 6
Rrs St 7
.27
.29
.148
.148
.162
.284
.27, .36
.27

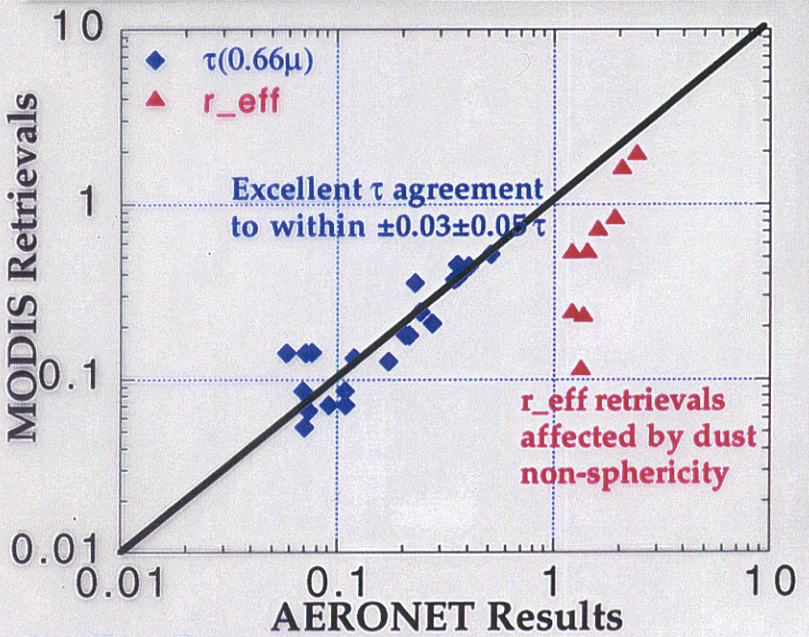
# MODIS Lookup Table/Observations: Normalized Reflectances at 870 nm



# MODIS Aerosol Retrieval

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