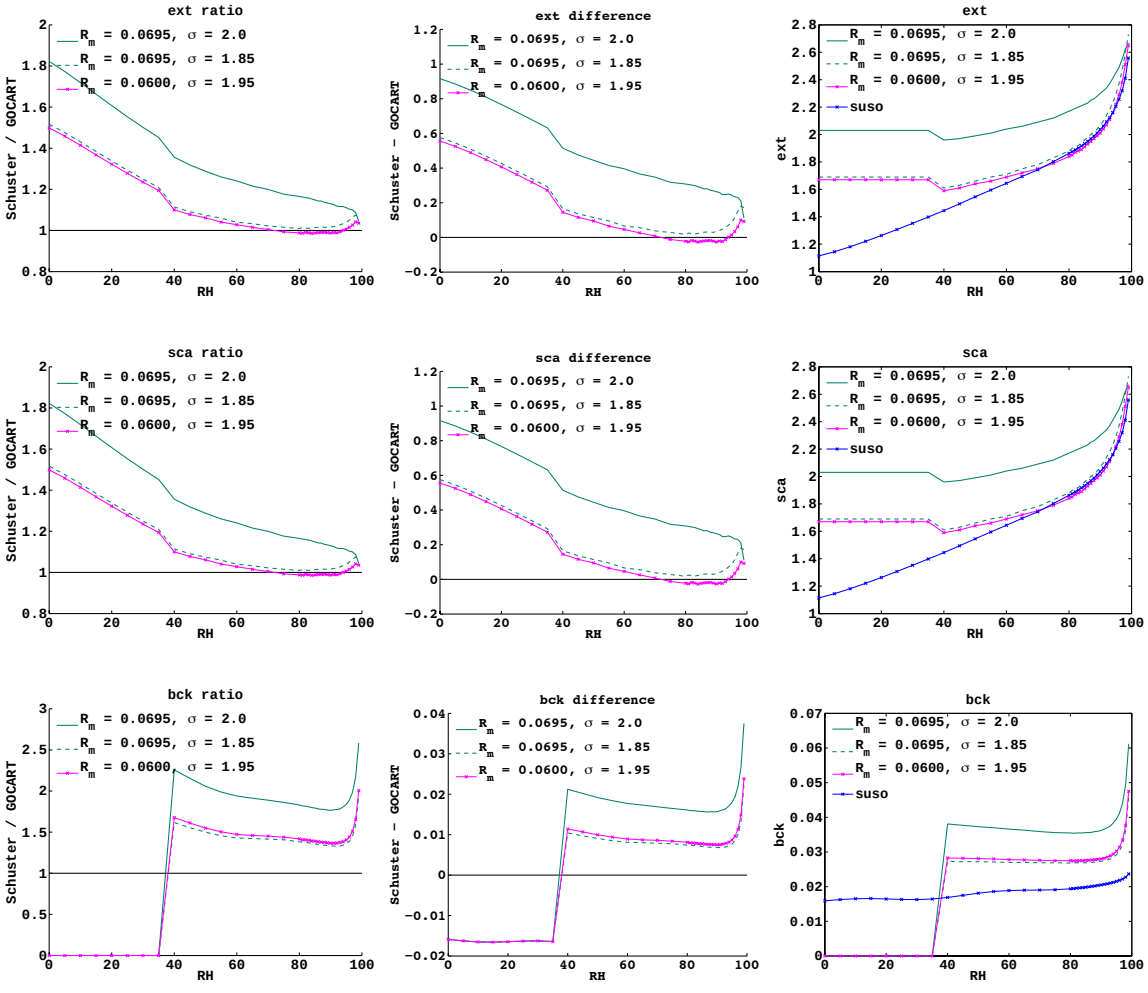
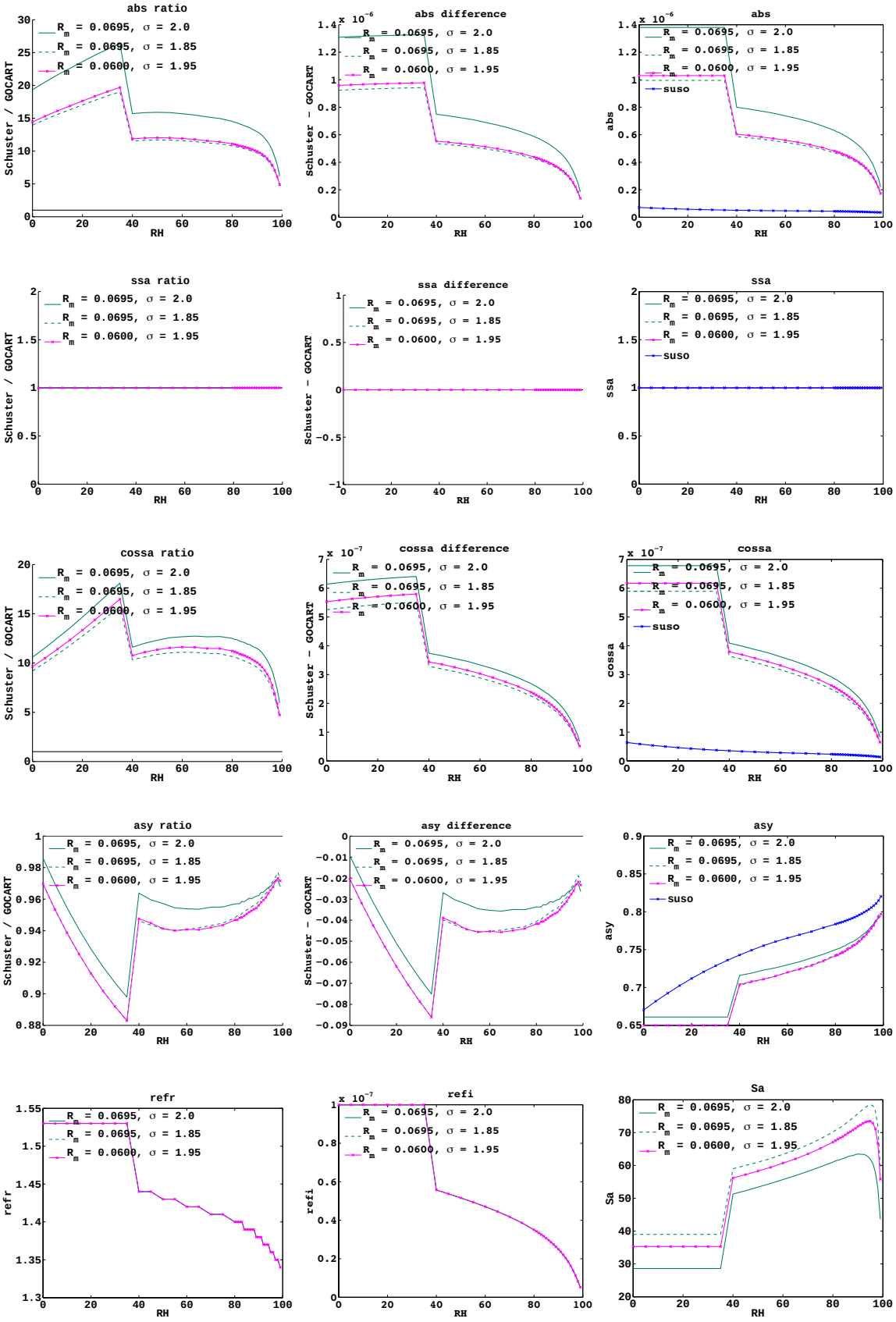
Ammonium Sulfate Optics wrt RH at 0.55 μm Wavelength

$$\frac{dN}{d\ln r} = \frac{1}{\sqrt{2\pi}\ln\sigma}\exp\left(\frac{-(\ln r - \ln r_{mdn})^2}{2\ln^2\sigma}\right),$$

Blue lines in right column are GOCART values for ammonium sulfate provided by Mian Chin; $r_{mdn} = 0.0695$ and $\sigma = 2.03$ with a mode cutoff at 0.5 μm maximum radius. Green lines obtained by using hygroscopic growth from Andy Lacis webpage and a lognormal size distribution with various mode radii and widths.




abs ratio
Schuster / GOCART
RH
abs difference
x 10^-6
Schuster - GOCART
abs
ssa ratio
ssa difference
ssa
cossa ratio
cossa difference
x 10^-7
cossa
asy ratio
asy difference
asy
refr
refi
Sa
R_m = 0.0695, σ = 2.0
R_m = 0.0695, σ = 1.85
R_m = 0.0600, σ = 1.95
suso