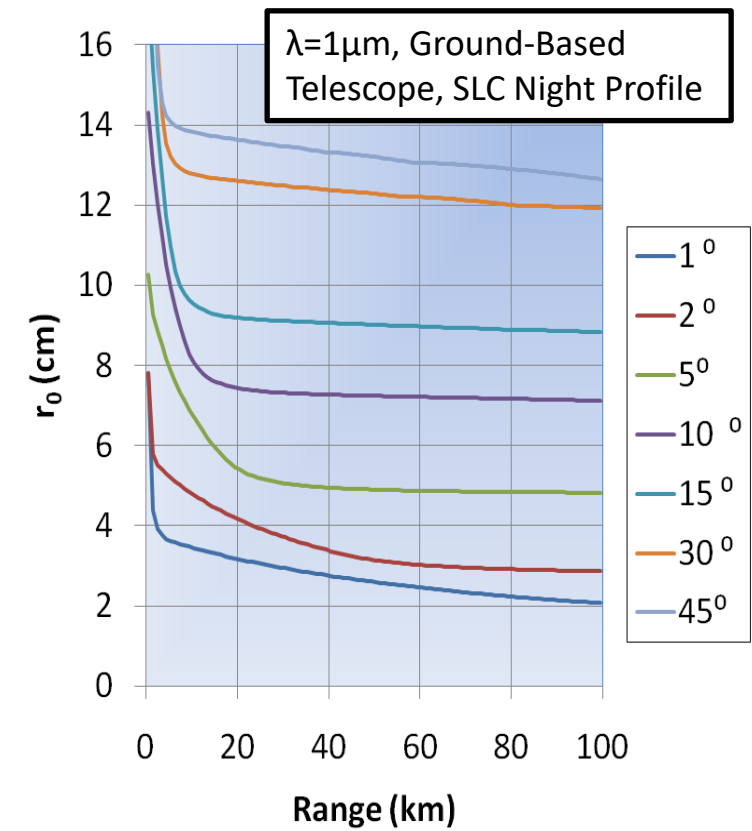
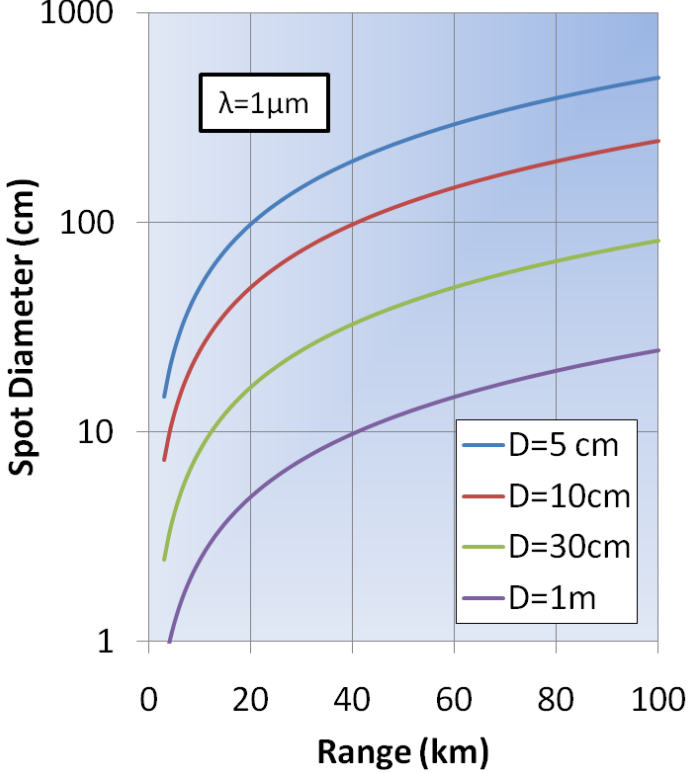


Atmospheric Adaptive Optics

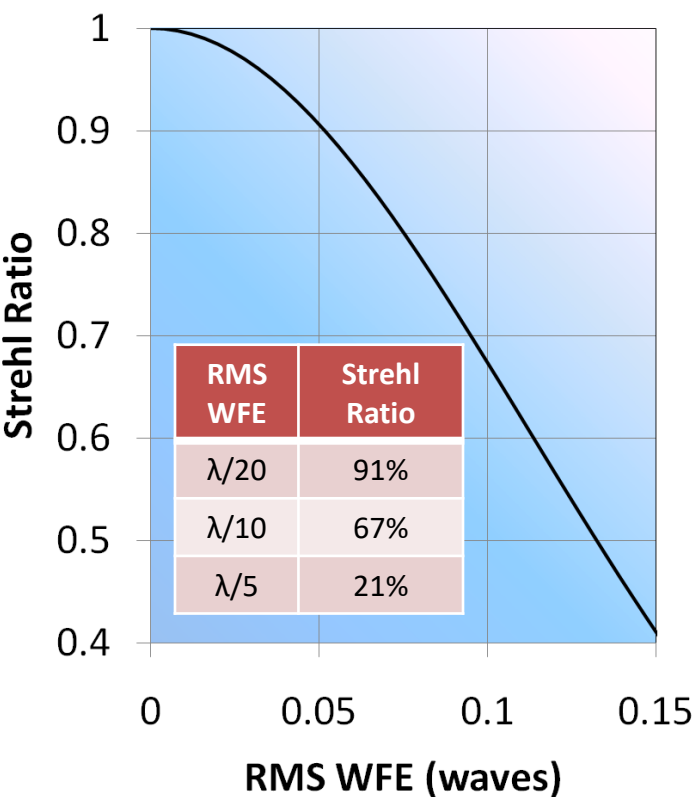
Fried Coherence Length



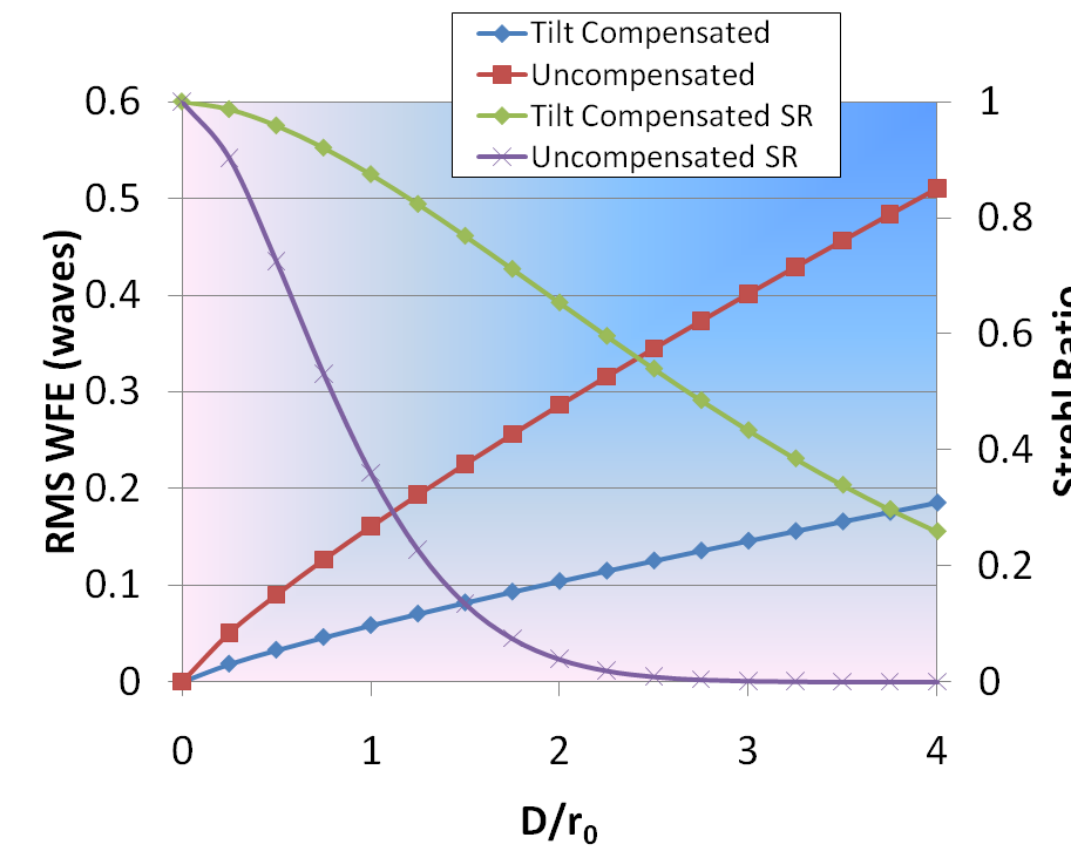
Diffraction Limit



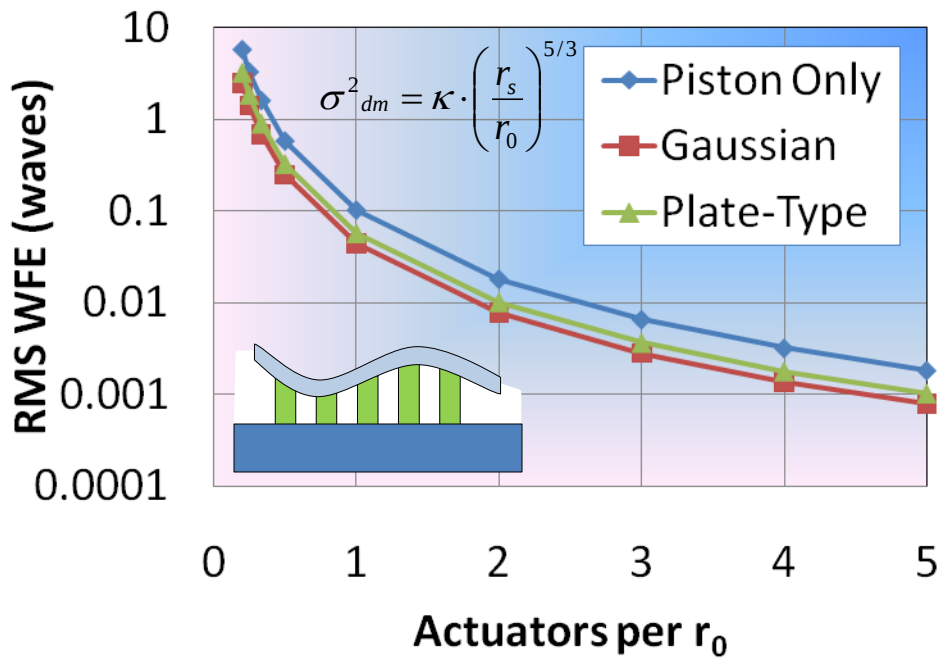
Marechal Approximation



Atmospheric Aberrations

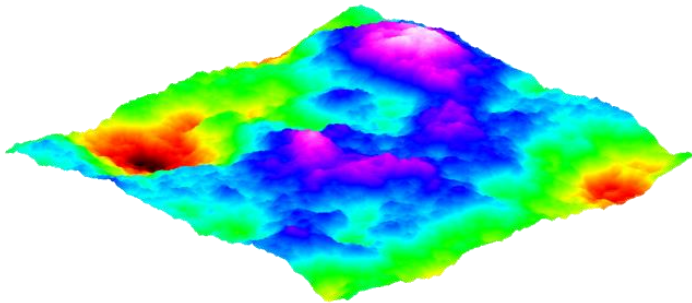


Atmospheric Aberration Compensation



$$\sigma^2_{\text{uncompensated}} = 1.02 \cdot \left(\frac{D}{r_0}\right)^{5/3}$$
$$\sigma^2_{\text{tilt comp}} = 0.134 \cdot \left(\frac{D}{r_0}\right)^{5/3}$$

Typical Kolmogorov Turbulence Shape



IF Shape	κ
Gaussian	0.23 to .35
Plate-Type	0.39
Piston	1.26
Membrane	0.30