

(2/26, 60 minutes) As we'll discuss, seeing causes the observed shape of a star to *roughly* be a (2D) Gaussian. For a star that has a (2D) Gaussian profile, calculate the radii at which 50%, 95%, and 98% of the total light is enclosed as a function of the FWHM of the star. Given your calculations, what is a reasonable choice for an aperture radius to choose to count a significant fraction of the total light from a star? If the seeing (FWHM) varies by 10-20% from exposure to exposure, what radius might be required to insure that the fraction of the total flux from exposure to exposure varies by less than 1%?