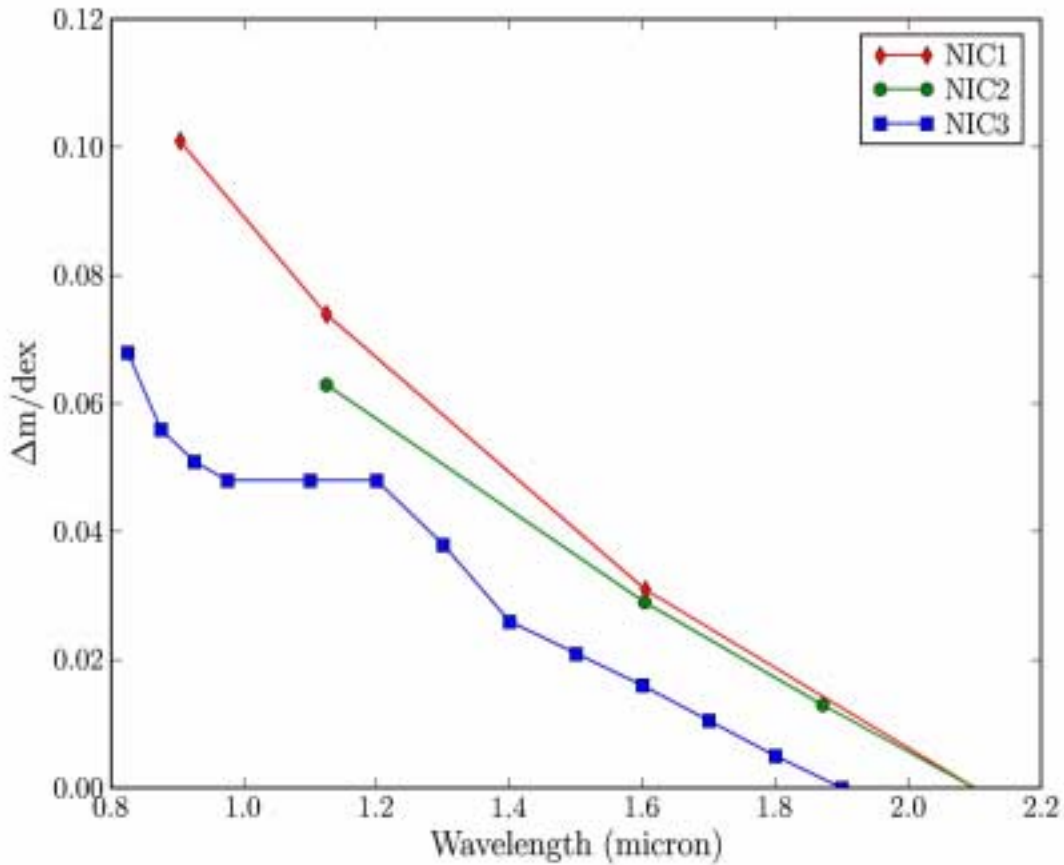


Figure 4.4: Wavelength dependent non-linearity amounts for all three cameras.



4.2.5 Intrapixel Sensitivity Variations

The response of a pixel in the NICMOS detectors to light from an unresolved source varies with the positioning of the source within the pixel due to low sensitivity at the pixel's edges and dead zones between pixels. The interpixel sensitivity was found to be an important effect and it varies by as much as 30%. This effect has no impact on observations of resolved sources, and little effect on well-sampled point sources (e.g. observations with NIC1 and NIC2 through most filters). However in NIC3, point sources are badly under-sampled, especially at short wavelengths where the telescope diffraction limit is much smaller than the NIC3 pixel size. Therefore, object counts may vary by as much as 30% depending on the wavelength positioning of a star within a pixel. Well-dithered exposures will average out this effect, but NIC3 observations of stars with few dither