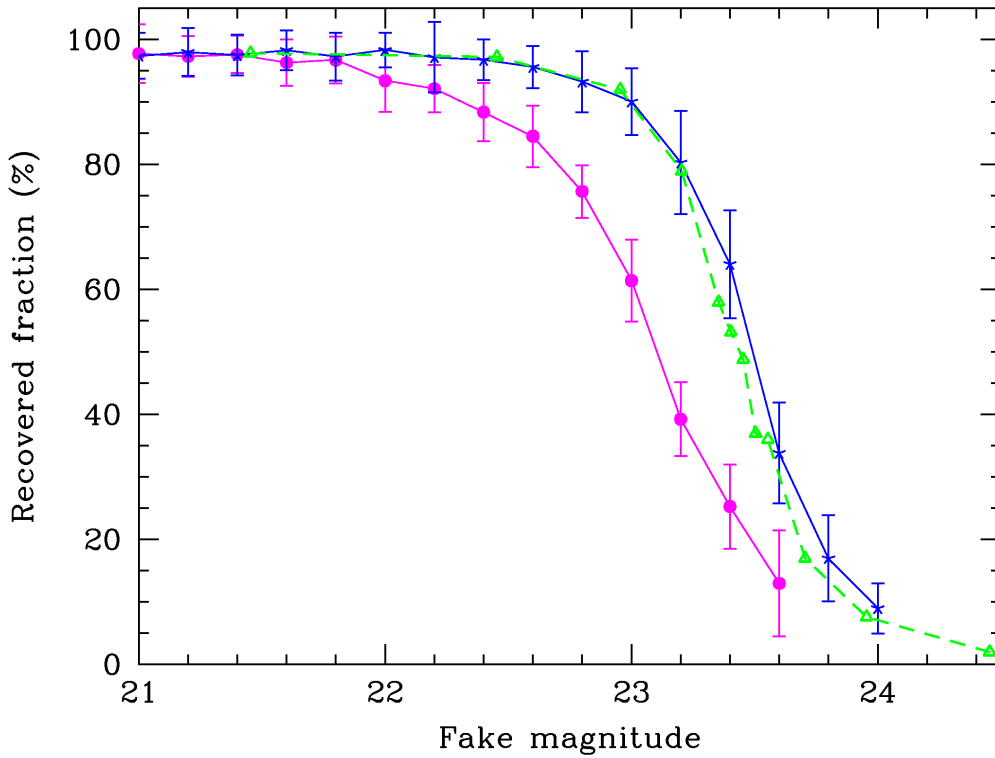


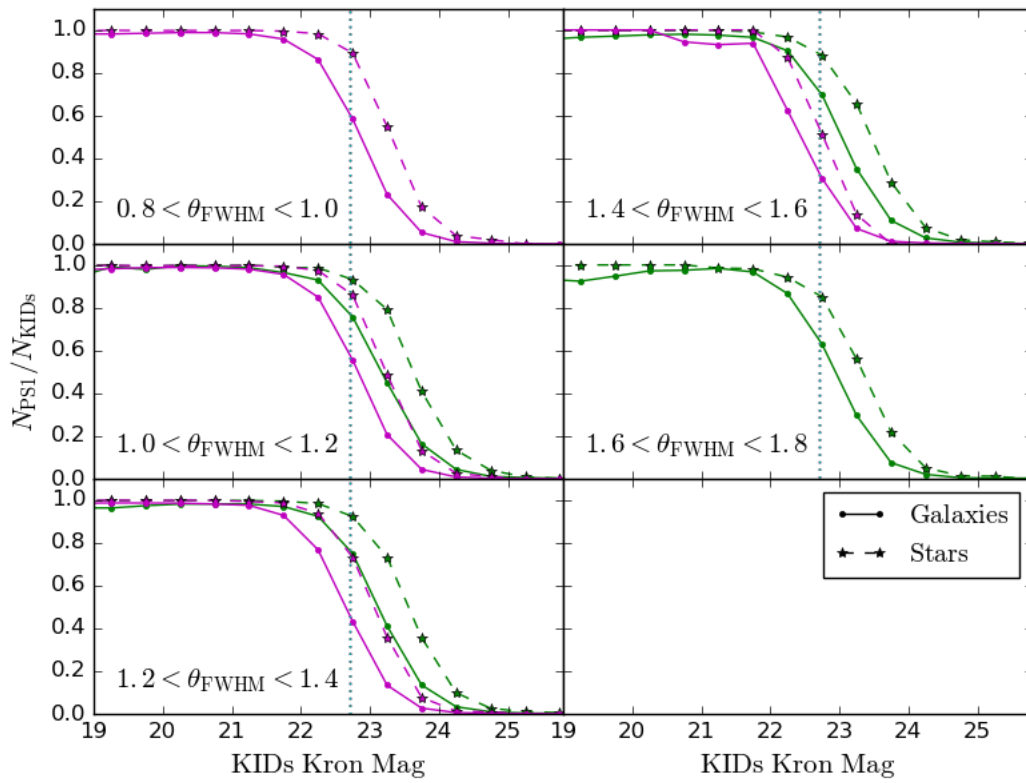
# Depth of galaxies in comparison to point sources

The depth of the PS1 galaxy catalogue is shallower than the stellar catalogue simply because galaxies, being extended sources, have lower surface brightnesses. In the figure below, copied from Fig 12 of [Metcalf et al \(2013\)](#), we show how the depth of simulated stars (green and blue) compares to the depth of simulated galaxies (magenta) on a stack of science verification data (for more details see the paper).



A comparison of star- versus galaxy-completeness was also carried out by comparing the DR1 data to the [Kilo-Degree survey \(KiDs\)](#) DR3 data. The depth of stars and galaxies is presented below, using the KiDs star/galaxy separation down to faint magnitudes. Note that the KiDs star/galaxy separation is imperfect at faint magnitudes. The different panels represent different FWHM values in PS1, showing some image quality dependence on depth.

This figure and further tests of galaxy depth will be presented in Farrow et al (in preparation).



Both of the figures suggest the depth of the galaxy catalogue is typically 0.3-0.4 mags shallower than the stars.