Imaging Final Report

DESI Science Workshop, Argonne 2015

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Imaging Requirements

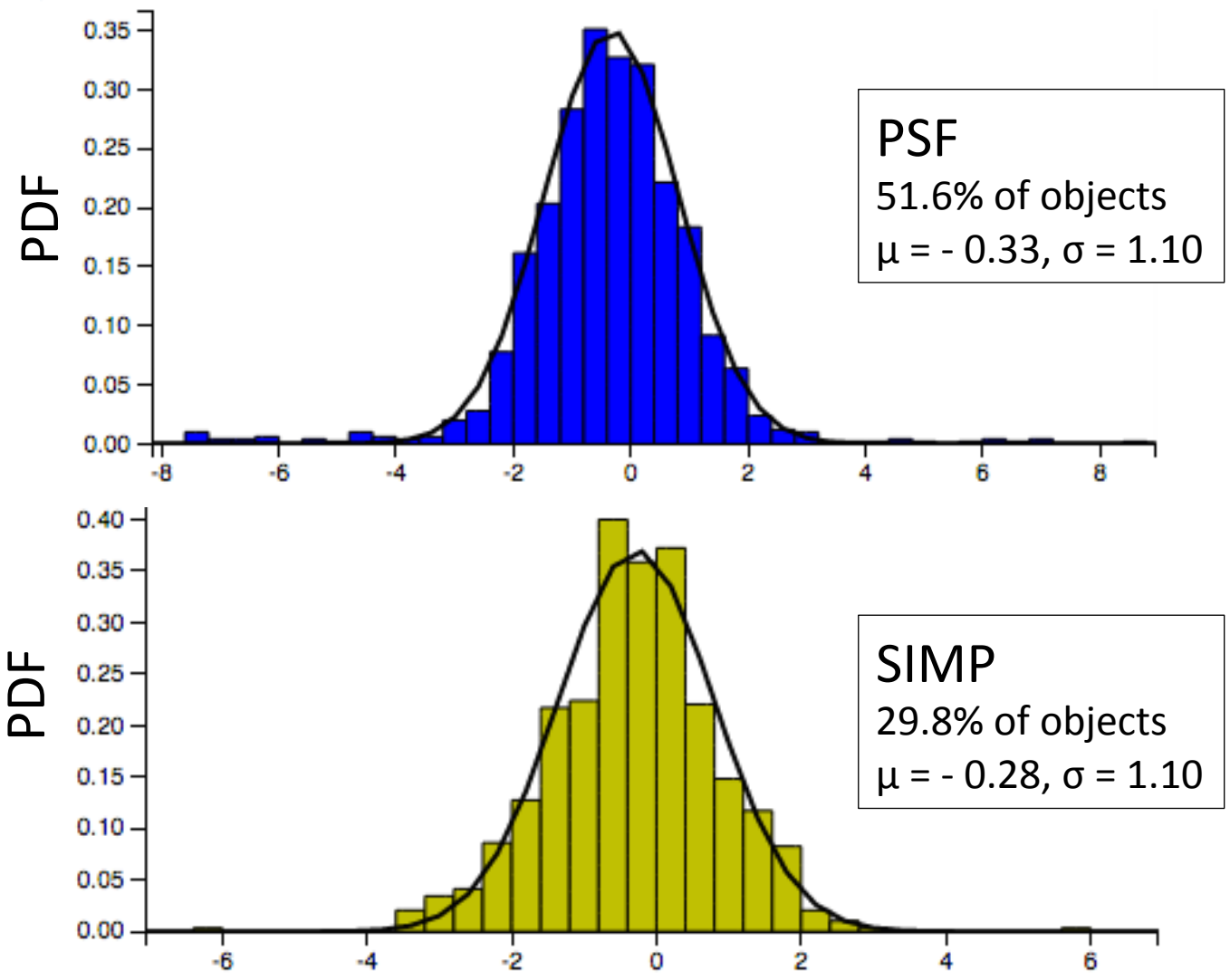
2 Imaging Bandpasses and Depths

2.1 *Imaging will be in three optical bands to a depth of at least g=24.0, r=23.4 and z=22.5 (5-σ galaxy detection) in extinction-corrected magnitudes.*

6 Astrometry

6.2 *The random errors in astrometry will be less than 95 mas RMS.*

Test with COSMOS



$$X = (F_0 - F_1) / (I_0^{-1} + I_1^{-1})^{0.5}$$

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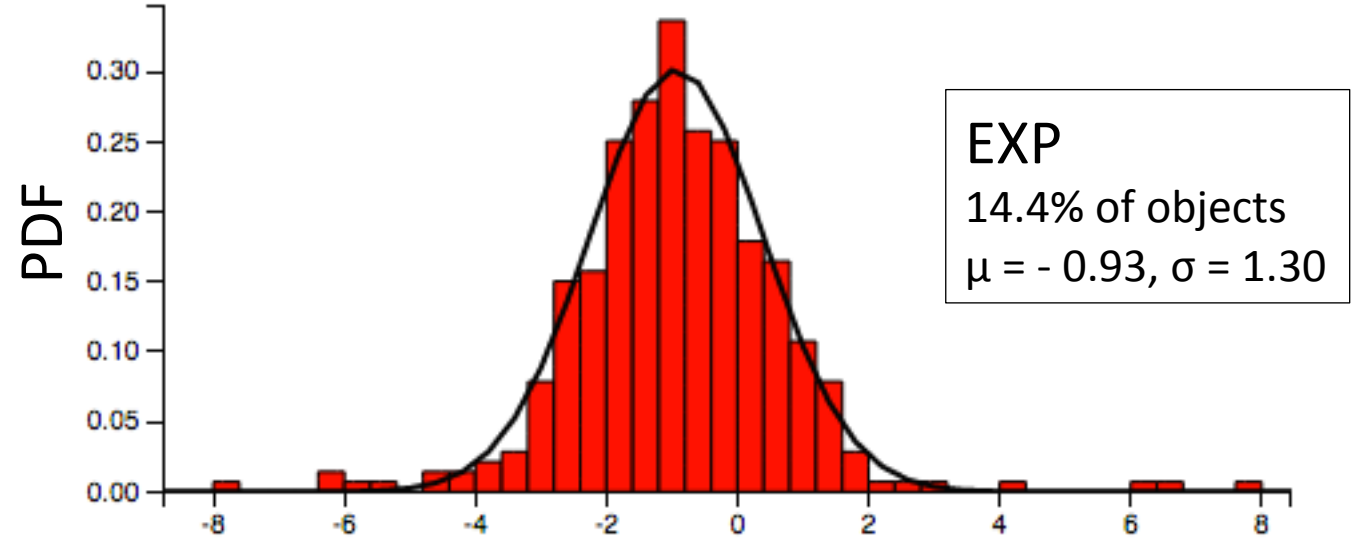

$$X = (F_0 - F_1) / (I_0^{-1} + I_1^{-1})^{0.5}$$

Imaging Requirements

7 Image Reduction Requirements

7.5 ***Systematic S/N-dependent biases due to PSF mis-estimation will be controlled to better than 2% RMS.***

7.6 ***Systematic S/N-dependent biases due to galaxy model mis-estimation will be controlled to better than 2% for galaxies with half-light radii below 1 arcsec, and to better than 4% for galaxies with radii between 1 and 4 arcsec.***

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Validate with COSMOS