

LSST+Euclid: galaxy shape measurement synergies

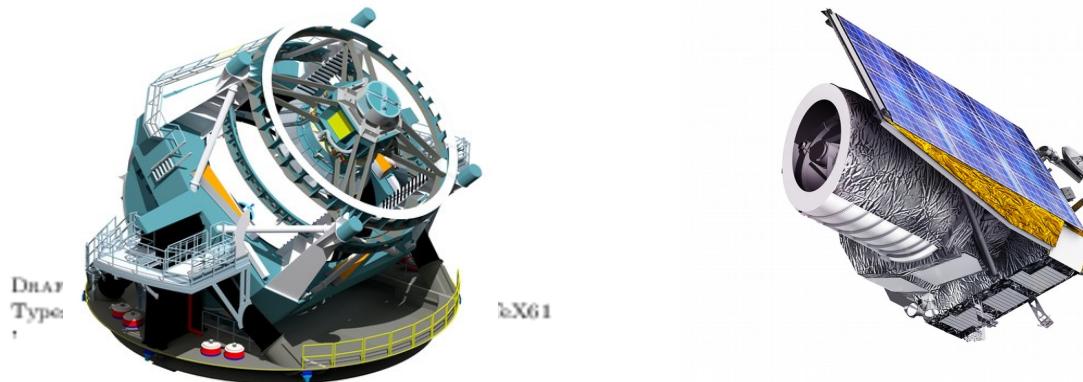
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Collaborators: Joe Zuntz, Catherine Heymans



LSST and Euclid



SCIENTIFIC SYNERGY BETWEEN LSST AND EUCLID

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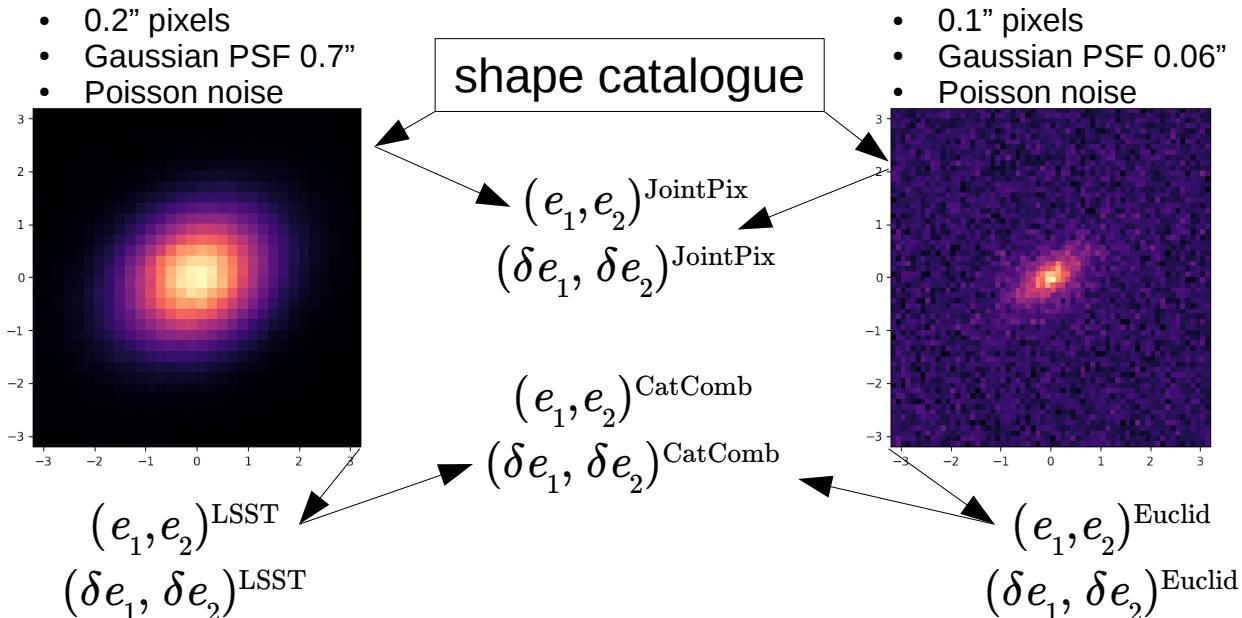
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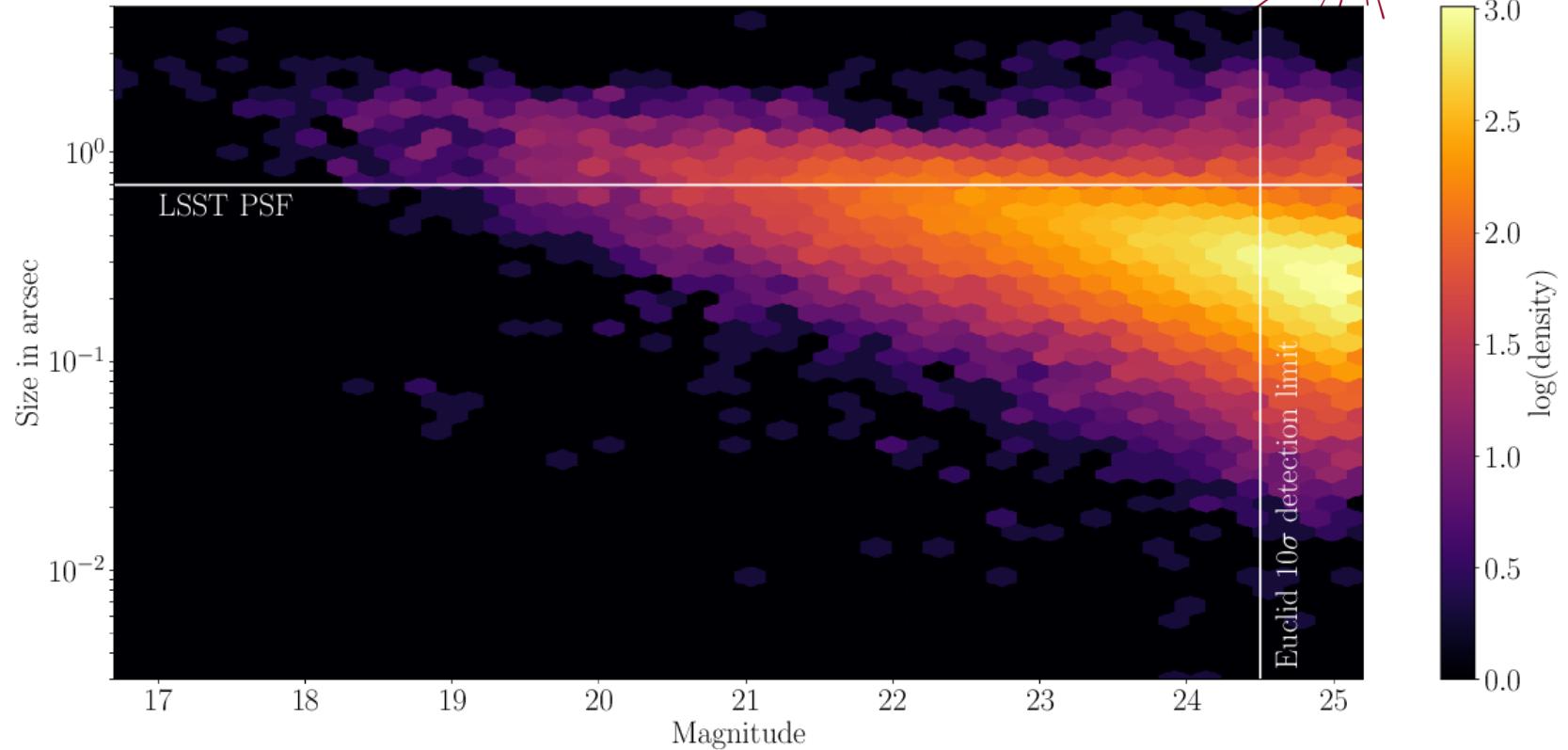
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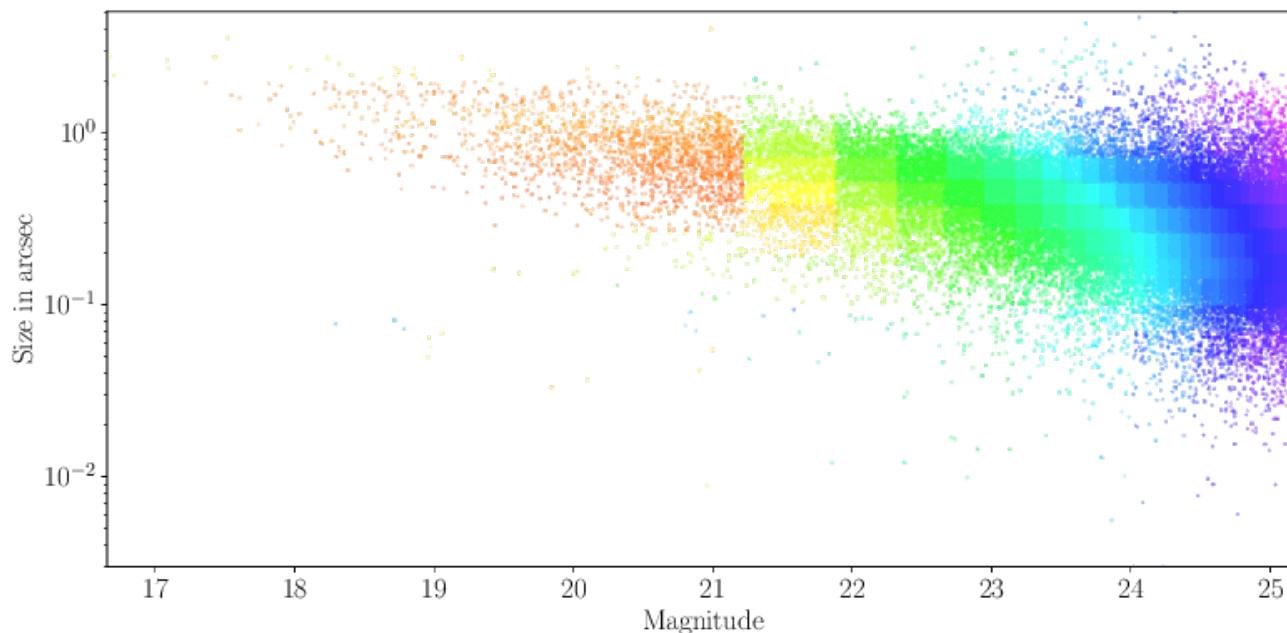
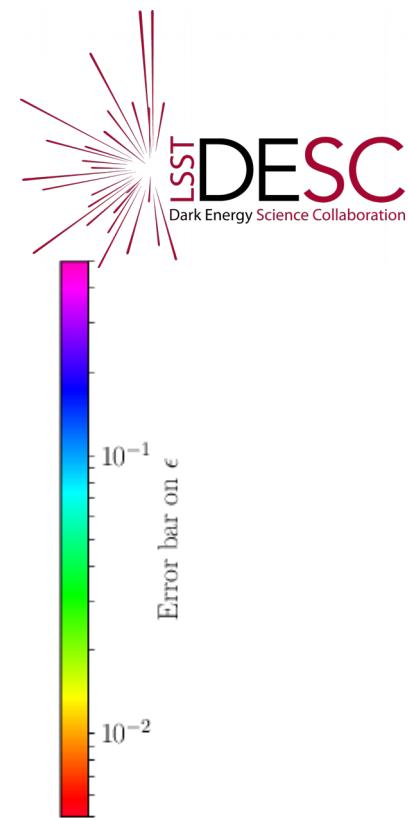
galaxy shapes: exploring synergies



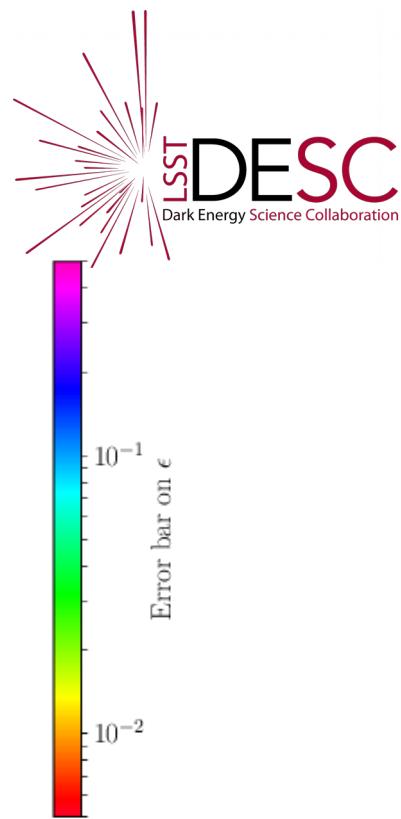
input catalogue



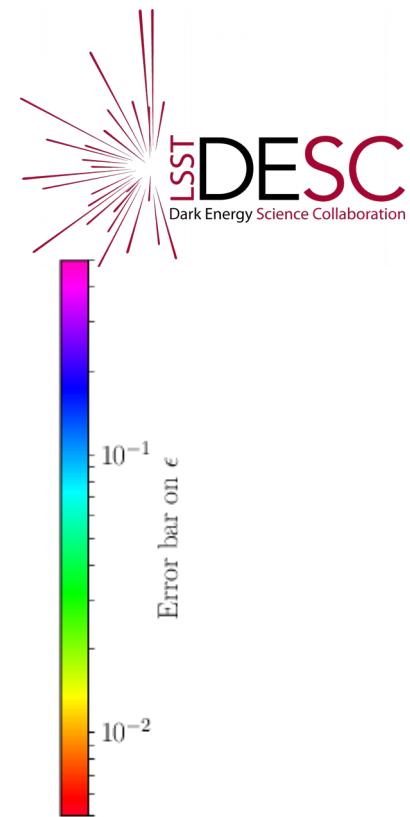
high-res limited-depth imaging (Euclid-like)



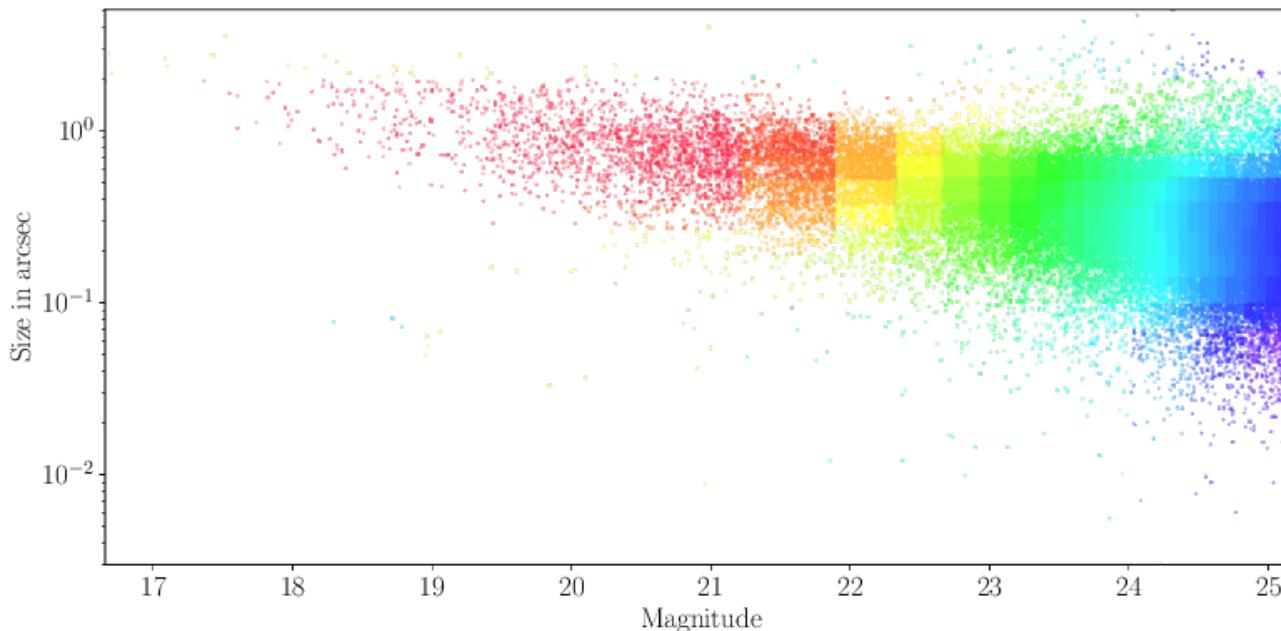
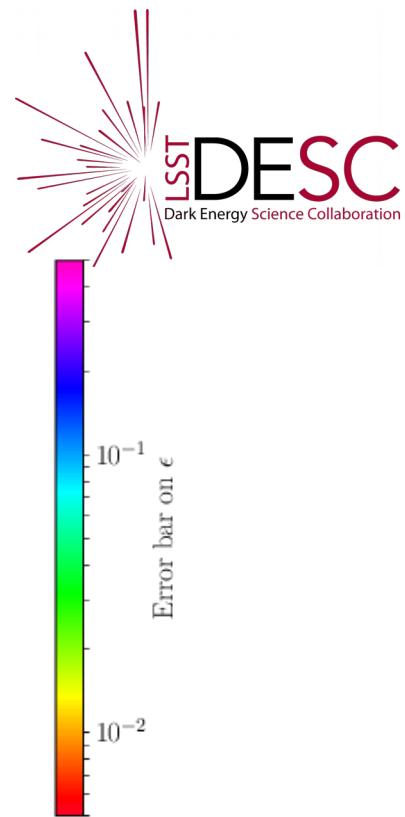
noise-free low-res imaging (LSST-like)



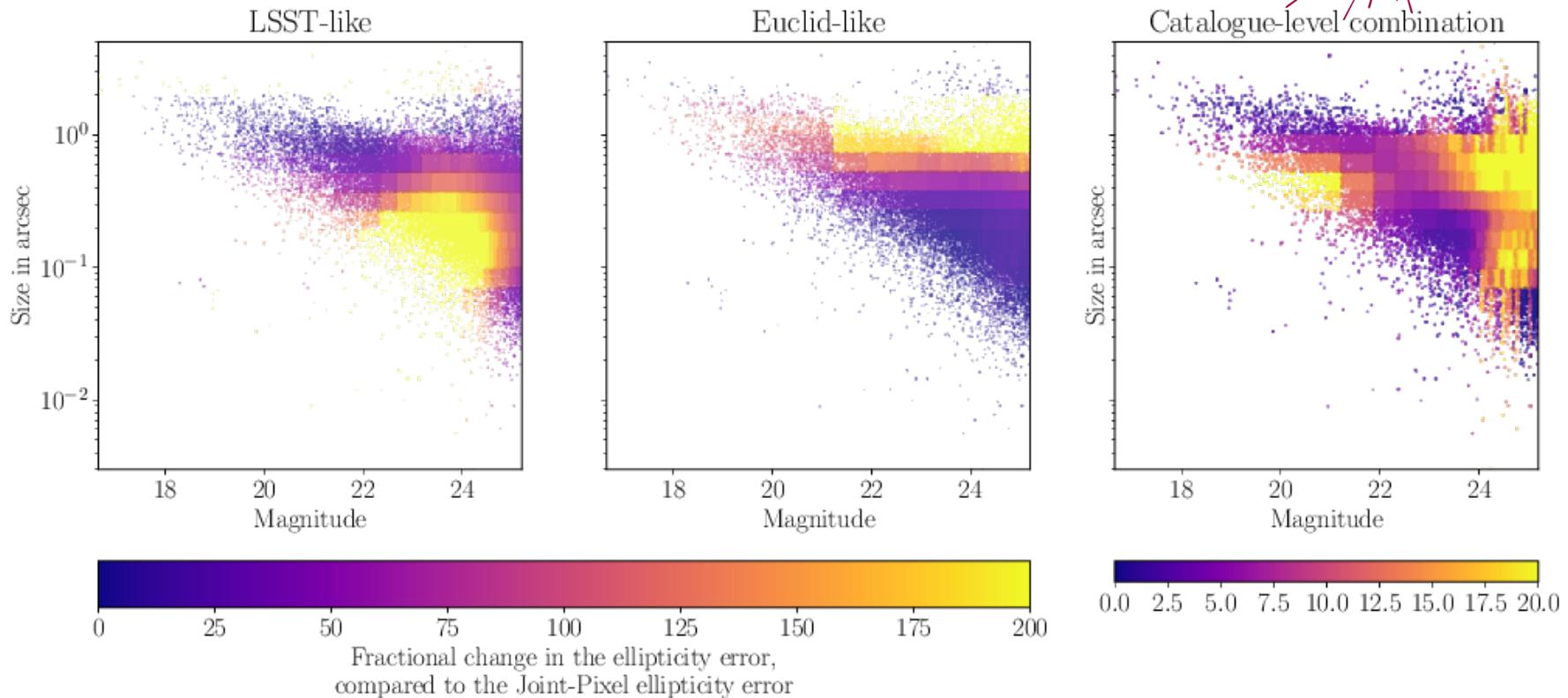
joint shapes: catalogue-level comb.



joint shapes: pixel-level comb.

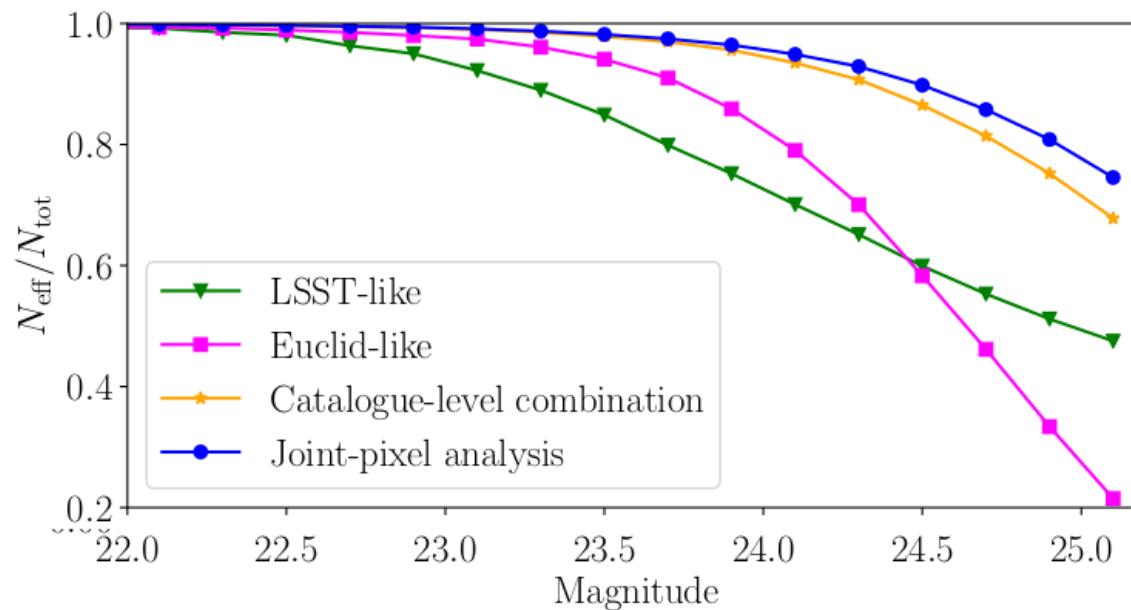


relative comparison to Joint Pixel Analysis



Effective number of galaxies

$$N_{\text{eff}} = n_{\text{eff}} \Omega = \sum \frac{\sigma_{\text{SN}}^2}{\sigma_{\text{SN}}^2 + \sigma_e^2} \quad (\text{Chang+13, arXiv:1305.0793})$$





future work

- simulating proper co-adding; more complex PSF models
- more galaxy profiles
- astrometry + PSF confusion
- blending!!

Thank you for your attention!



... questions?