

# LSST+Euclid: galaxy shape measurement synergies

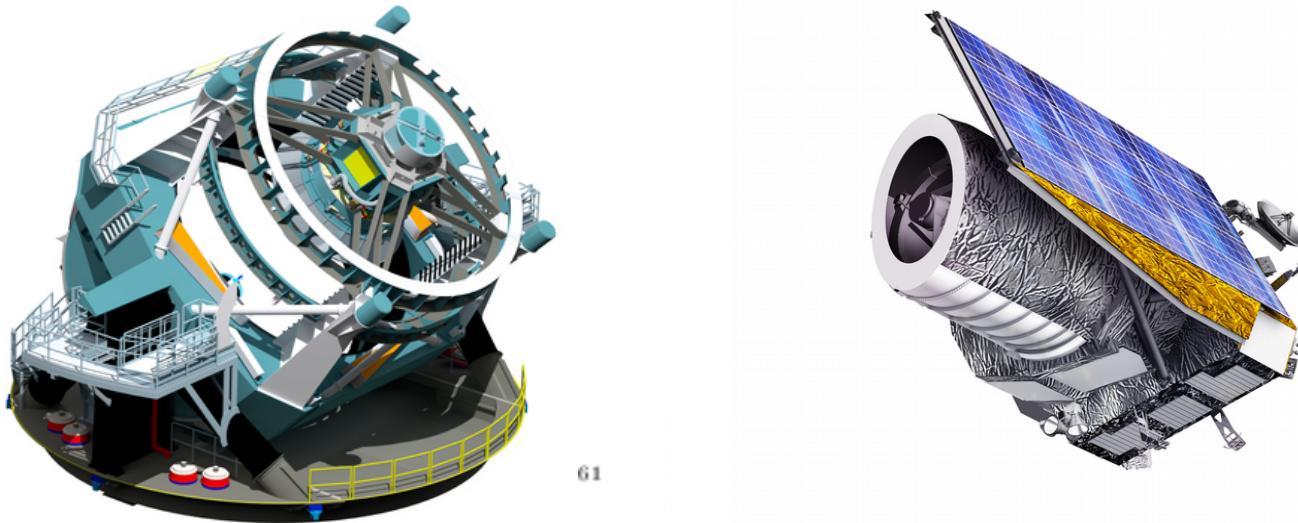
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# LSST and Euclid



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## SCIENTIFIC SYNERGY BETWEEN LSST AND EUCLID

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[ 29 Nov 2017 ]

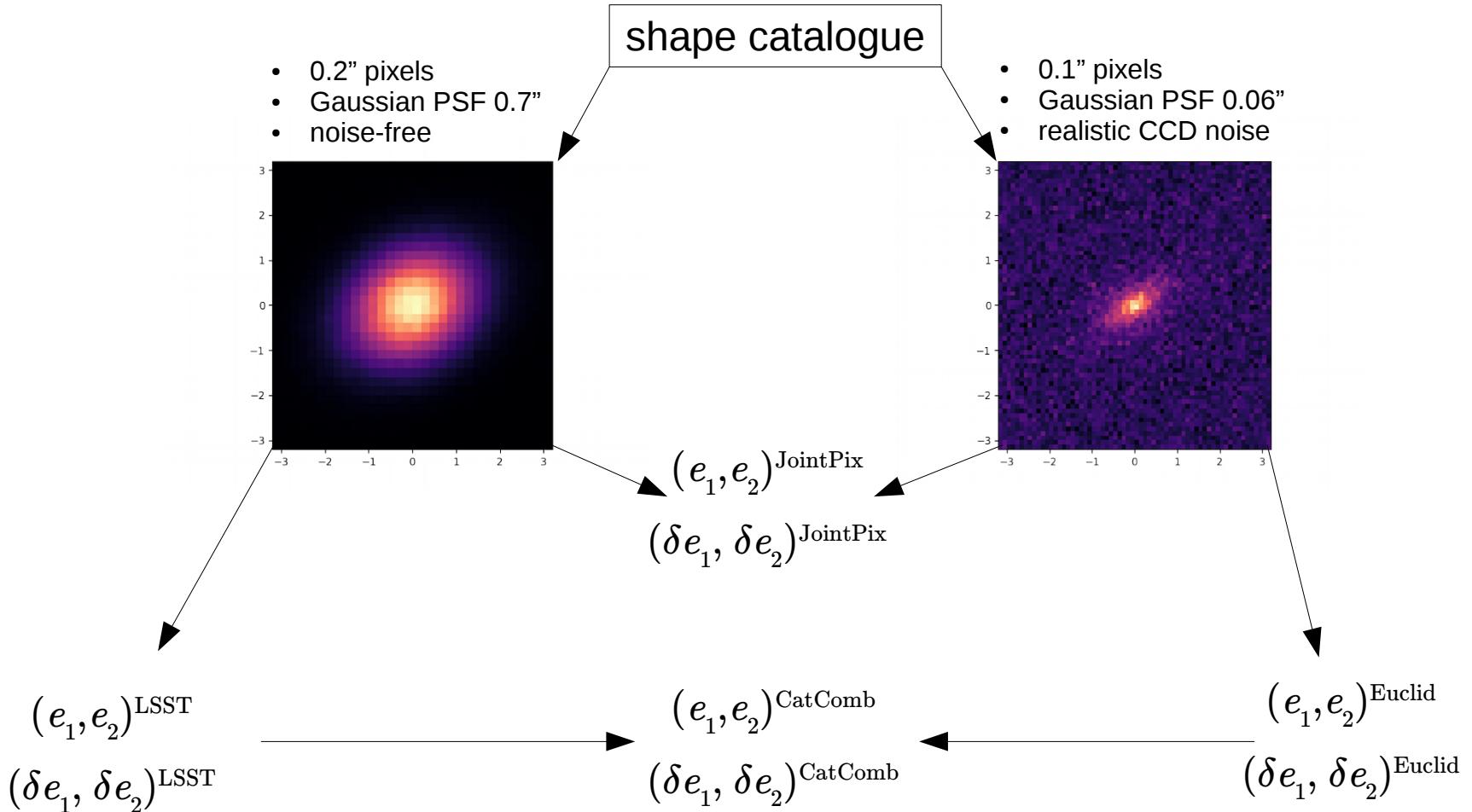
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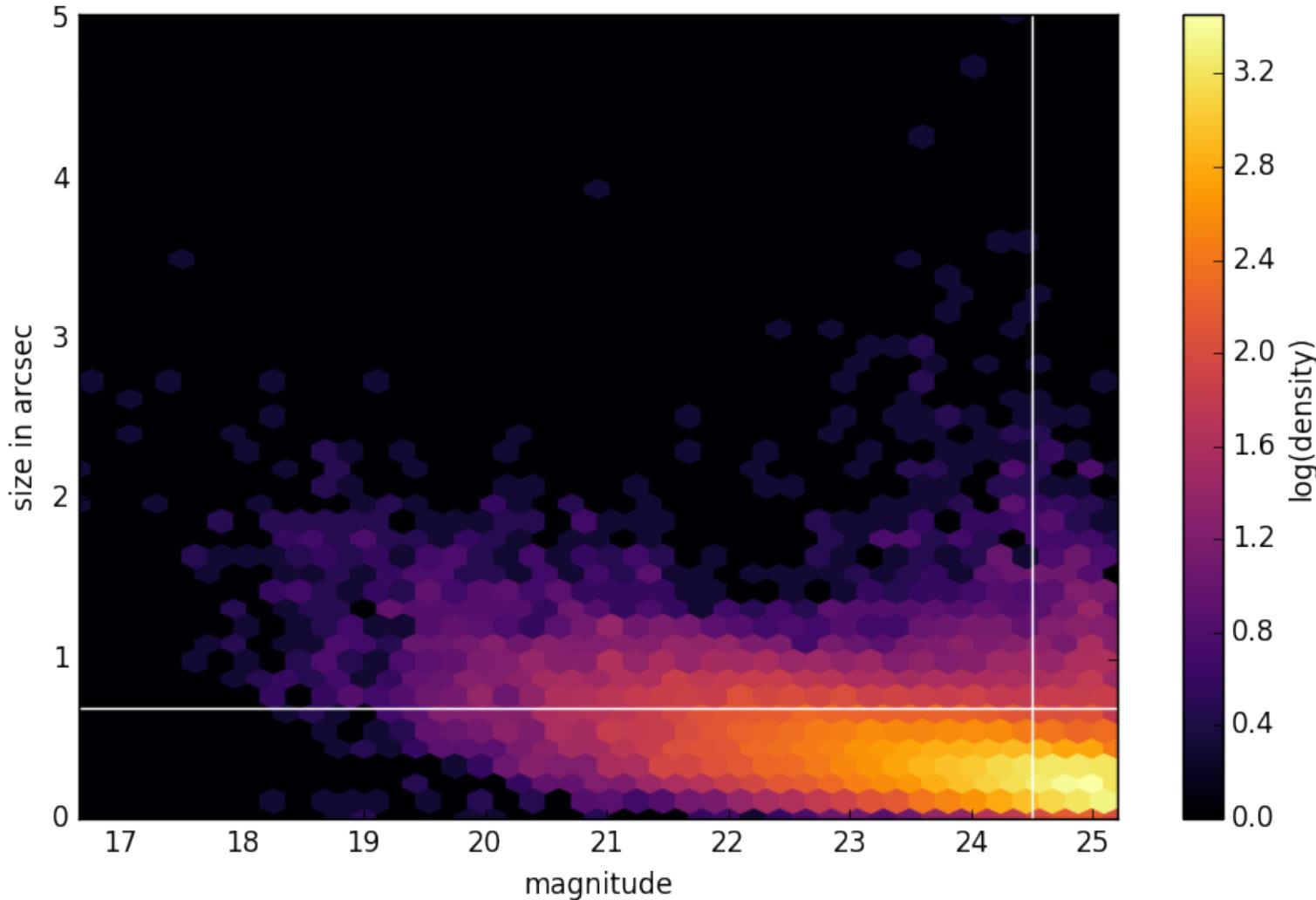
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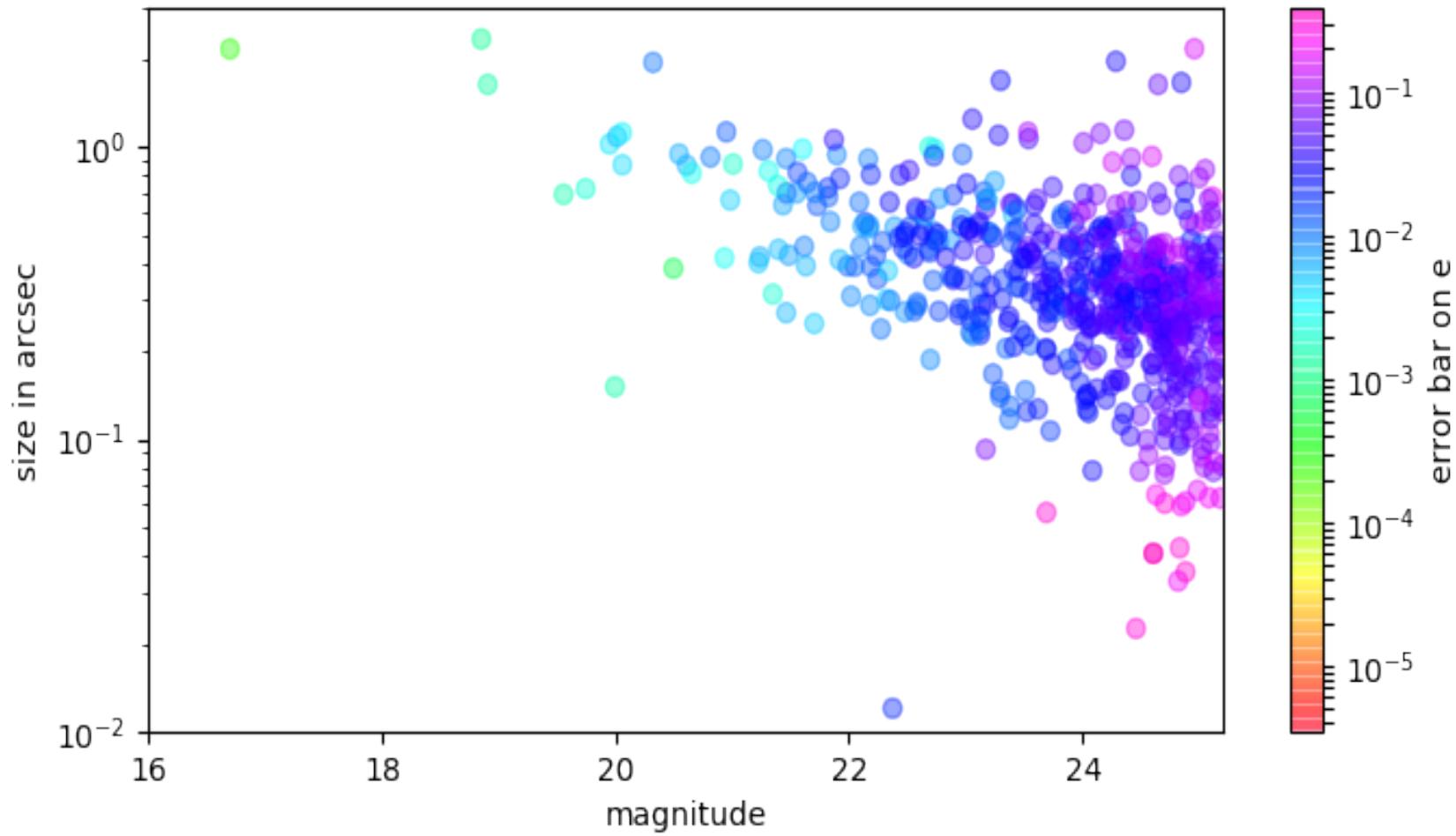
# galaxy shapes: exploring synergies



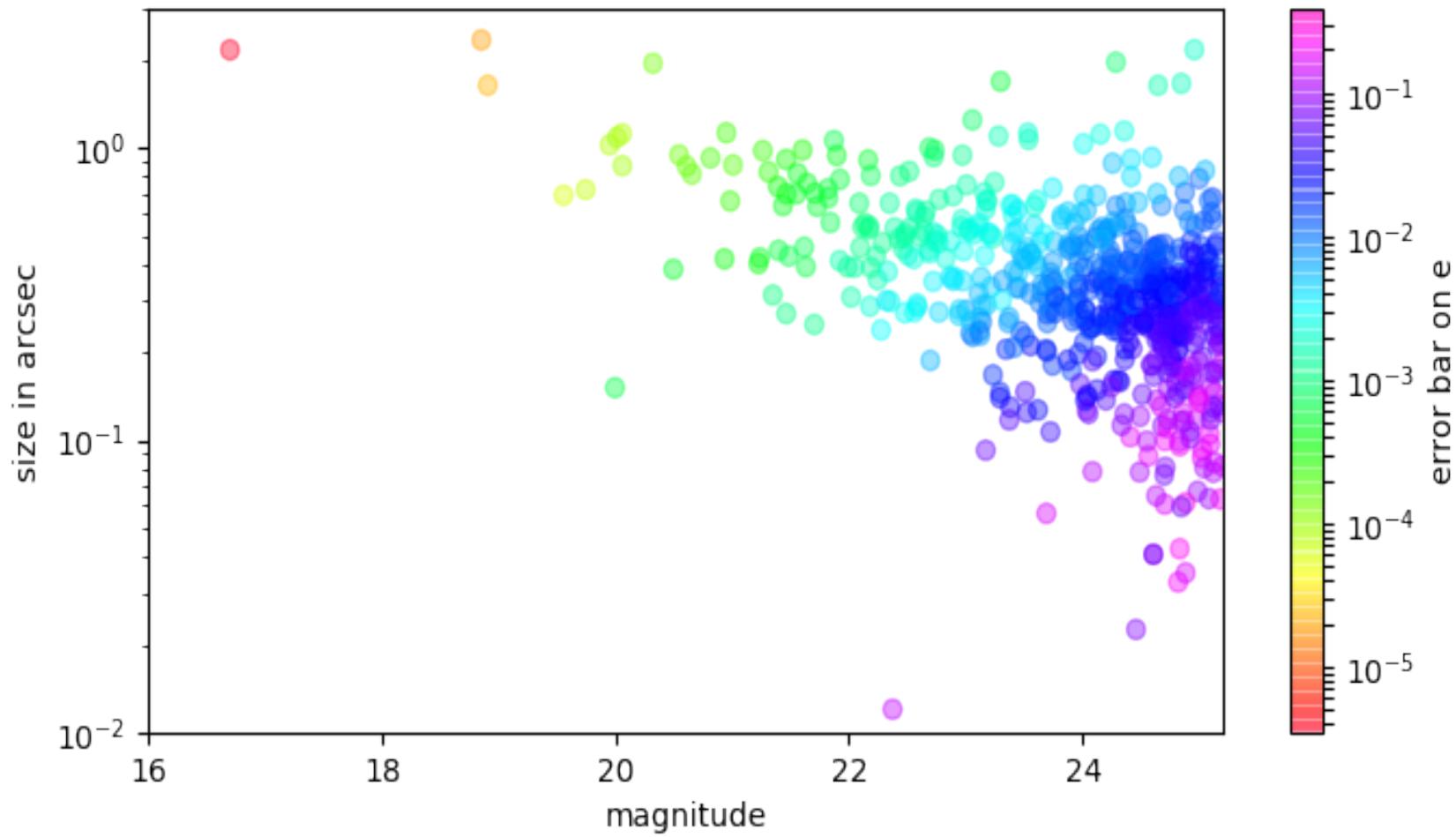
# input catalogue



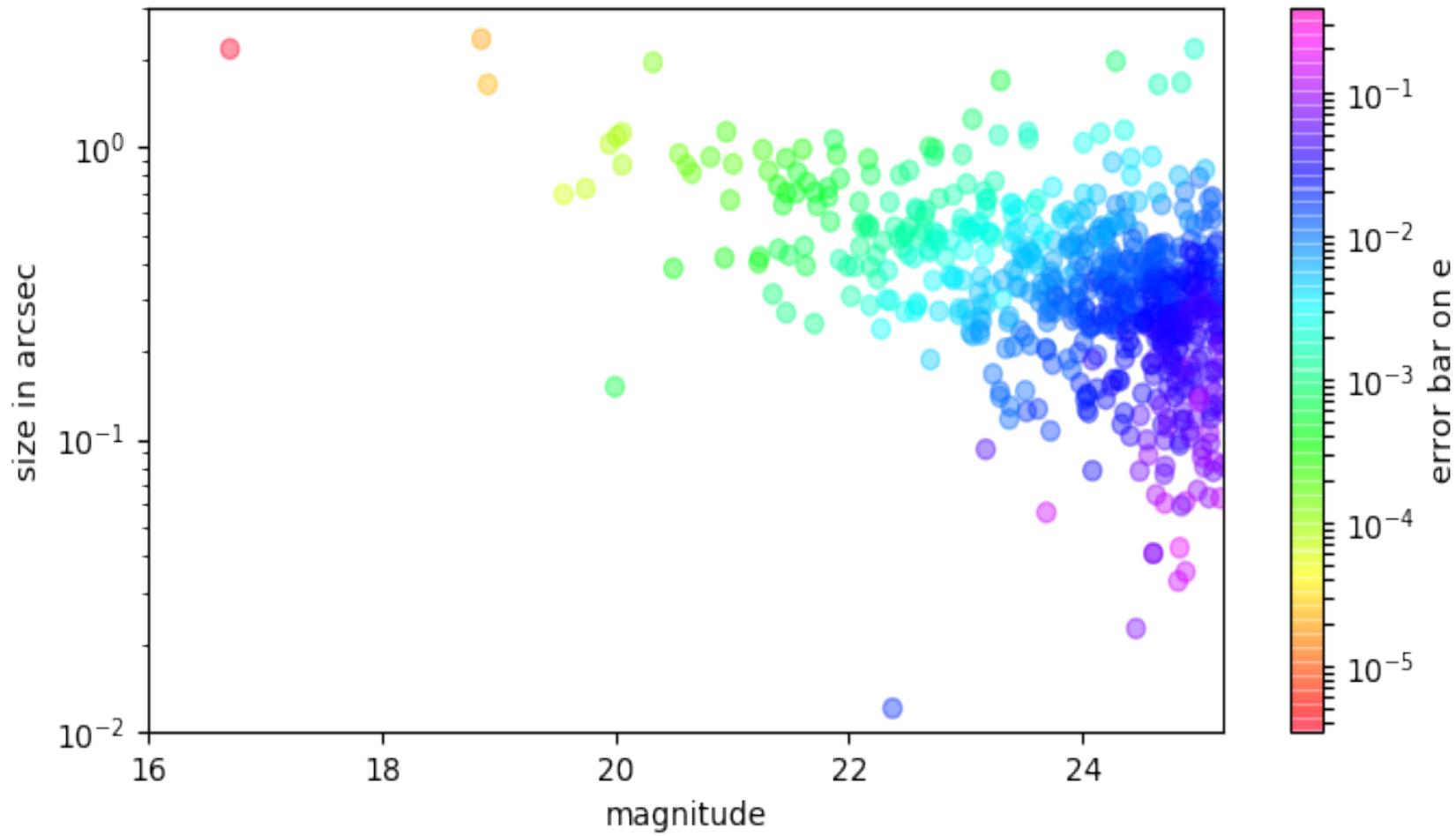
# high-res limited-depth imaging (Euclid-like)



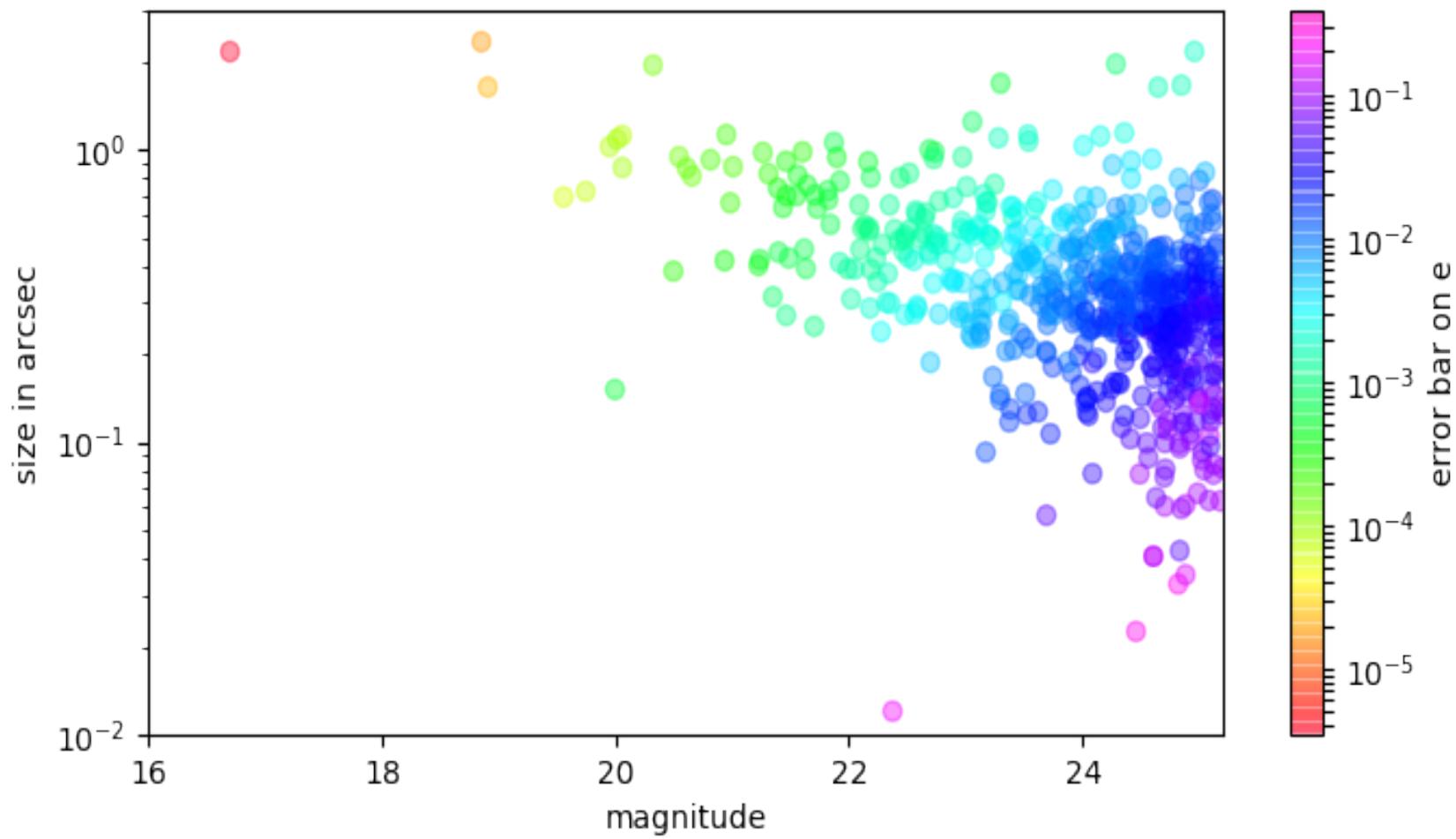
# noise-free low-res imaging (LSST-like)



# joint shapes: catalogue-level comb.



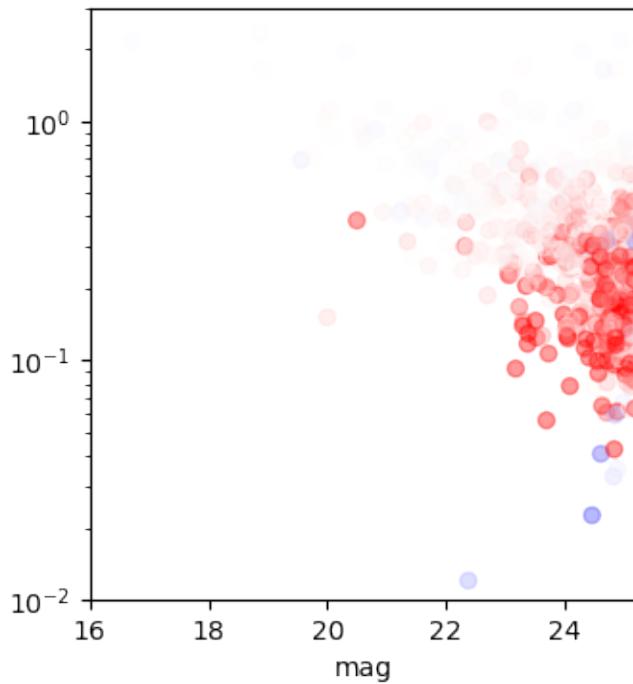
# joint shapes: pixel-level comb.



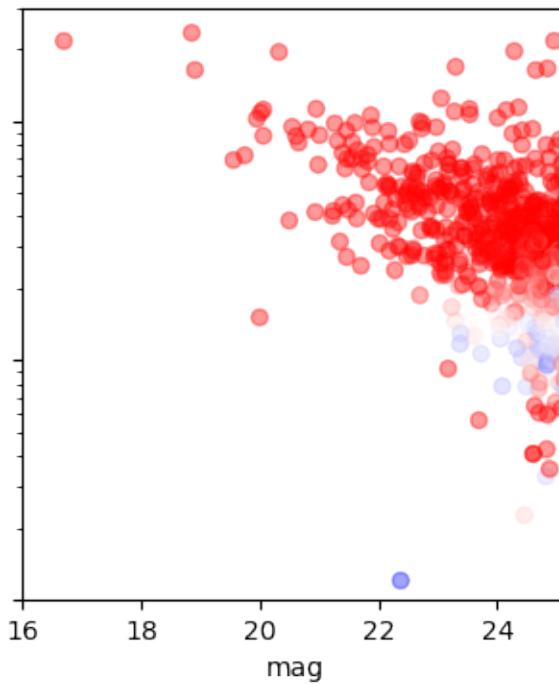
# relative comparison to Joint Pixel Analysis



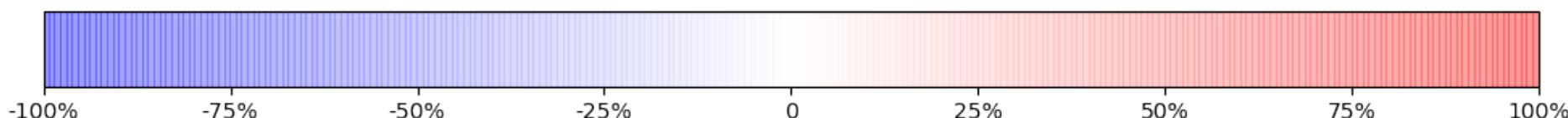
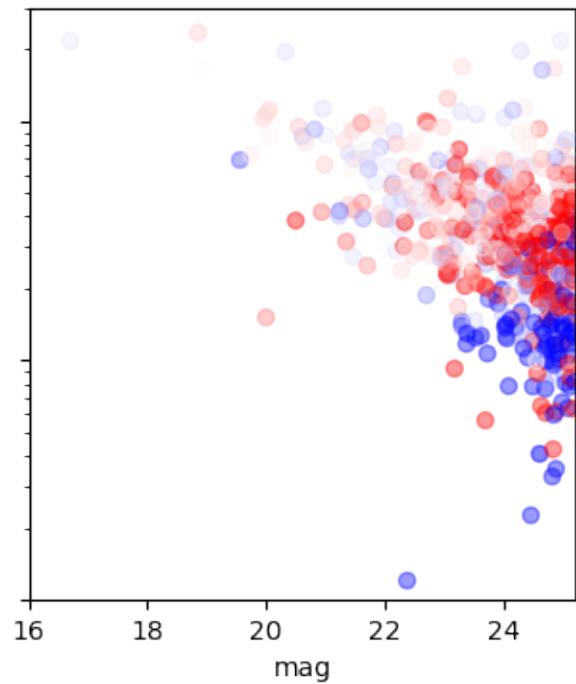
LSST-like



Euclid-like



CatComb  $\times 10$



$$(\delta e^D - \delta e^{\text{JointPix}})/\delta e^{\text{JointPix}} \text{ for } D \in \{\text{LSST}; \text{Euclid}; \text{CatComb}\}$$



# future work

- improvements in calibrating multiplicative bias
- simulating proper co-adding; more complex PSF models
- more galaxy profiles
- astrometry + PSF confusion
- blending!!
- ... (your suggestion here!)



# Thank you for your attention!



... questions?