
Systematics for weak lensing: Redshift Estimation, Galaxy Orientation and PSF

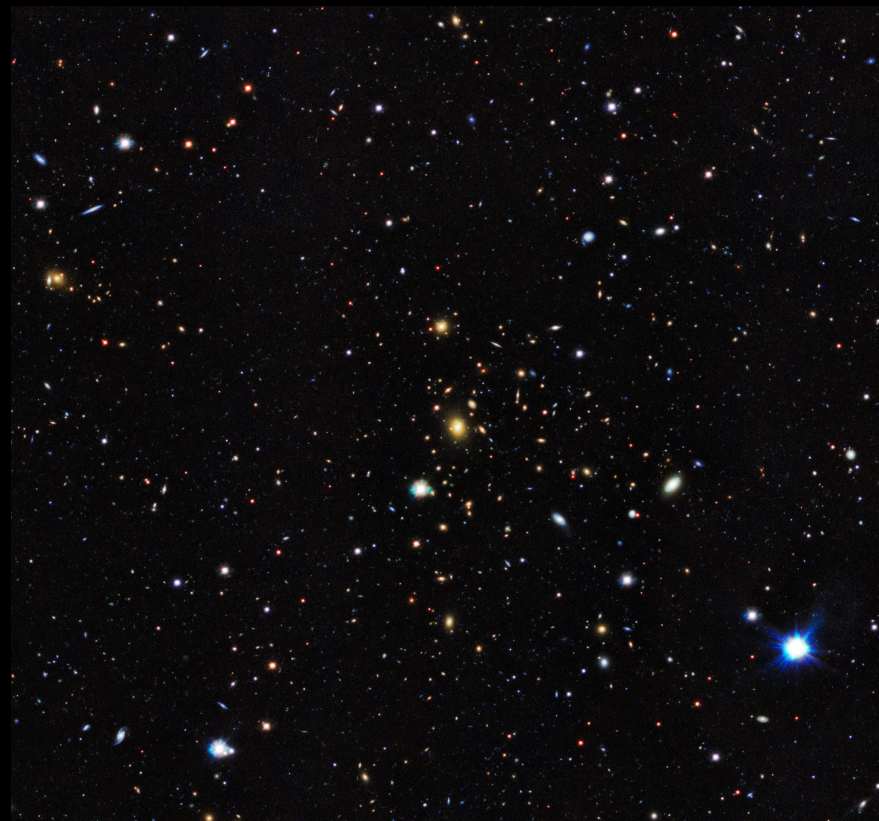
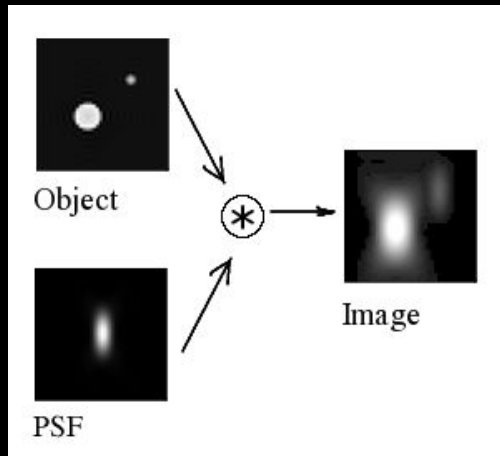
— Marika Asgari, Catherine Heymans —

What's WL and why we care about systematics?

Weak lensing is Challenging, because it is a very weak effect!

Example of systematics:

Point Spread Function (PSF)

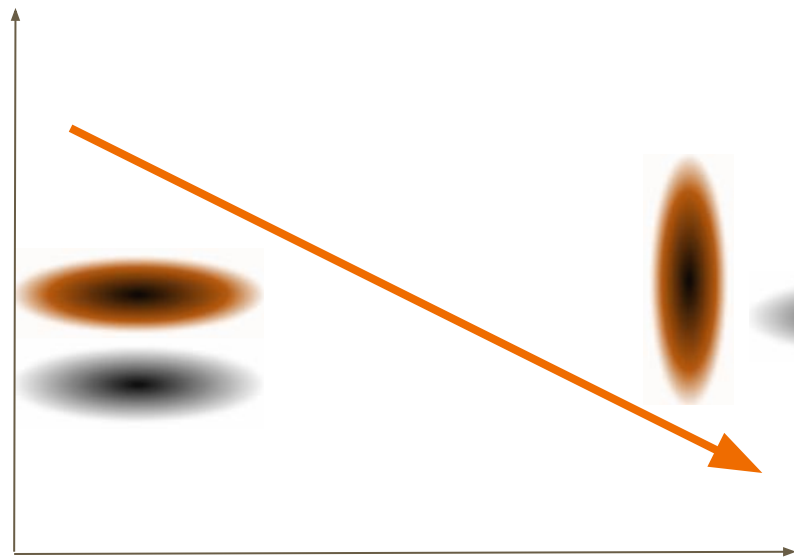


But there is a more subtle effect related to PSF

Observed flux S/N vs Galaxy relative orientation to PSF ellipticity.



S/N



It is harder to accurately measure the Photo-z of a galaxy with lower S/N.

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Observed Galaxy Ellipticity

PSF Ellipticity

Example for two different set of galaxy orientations

- 6 SED templates + 270 combinations
- z_B is given for each galaxy by the best fitting value
- The blue sample shows more outliers

