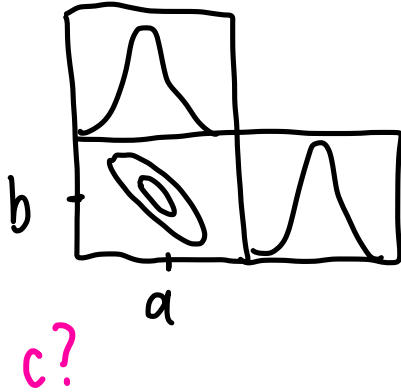


modelling of astrophysical systematics for cosmology with lsst



niko šarčević // newcastle university & lsst desc

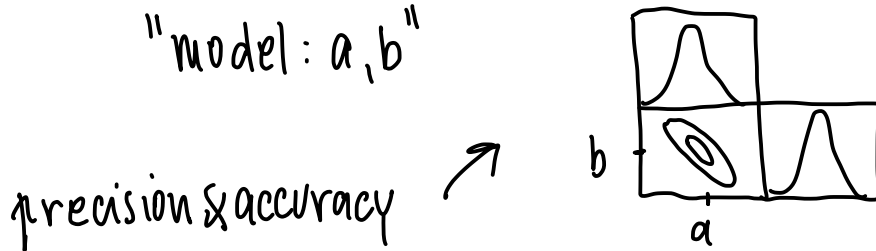
third eucapt symposium // cern // may 2023

LSST: a photometric survey (late universe)

WANT: cosmological parameters $[\Omega_m, \sigma_8, w_0, w_a, h, n_s, \Omega_b]$

↑ how well can we truly constrain our parameters?

FRAMEWORK: Fisher analysis / Bayesian formalism



observable: angular power spectra

↖
ft of the 2pt correlation function

⊖ lenses

⊖ sources



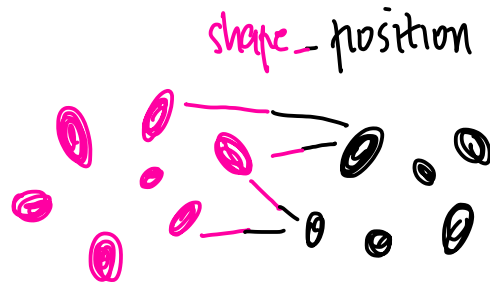
shape-shape

cosmic shear



position-position

galaxy-clustering



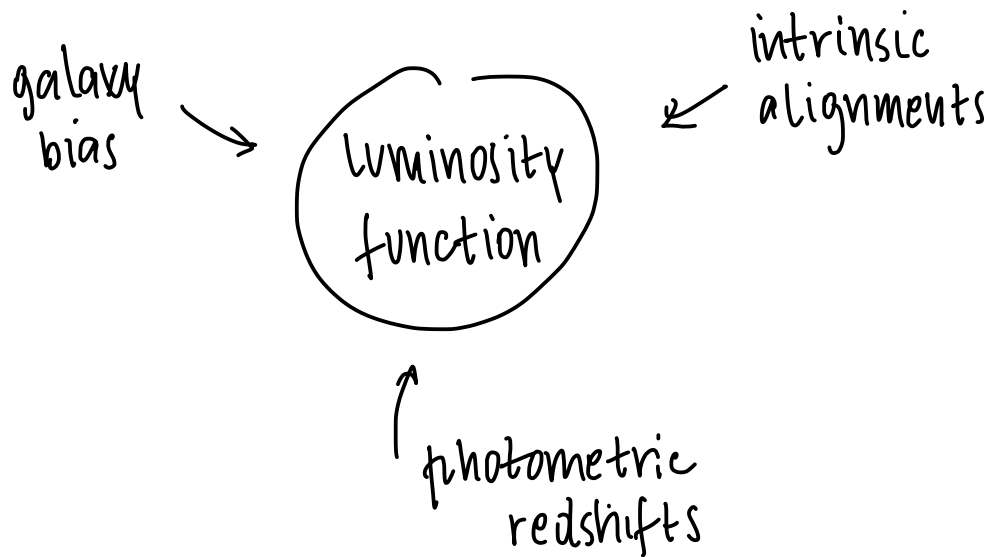
shape-position

galaxy-galaxy lensing

3x2pt

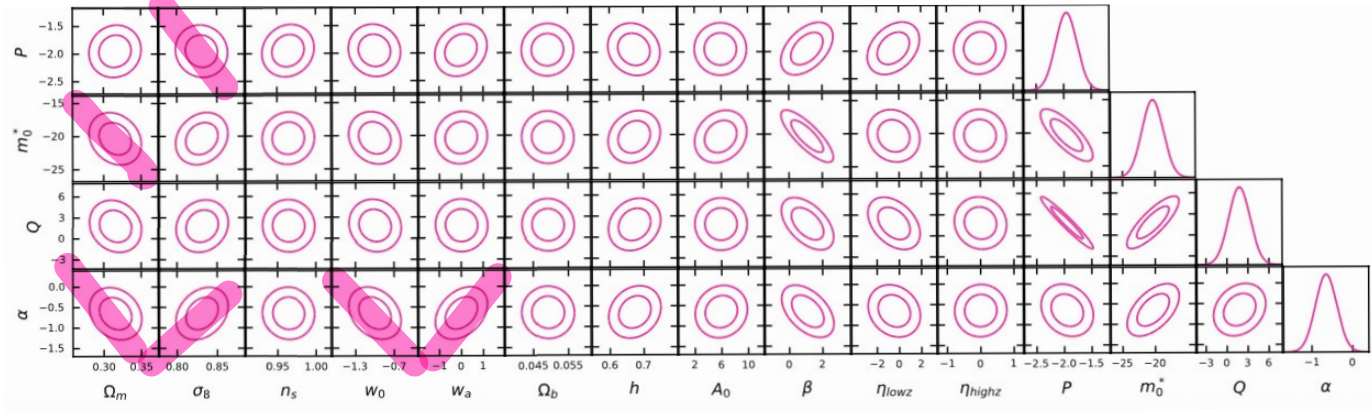
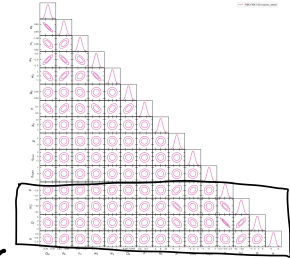
problem : systematics , ignorance / biases

idea : jointly model the systematics  how?



result: parameter degeneracies
a definite indication of bias

need informative priors



thank you for your attention!

@NikoSarcevic