

Reconstruction of the gravitational potential field and galaxy environment



A progress report



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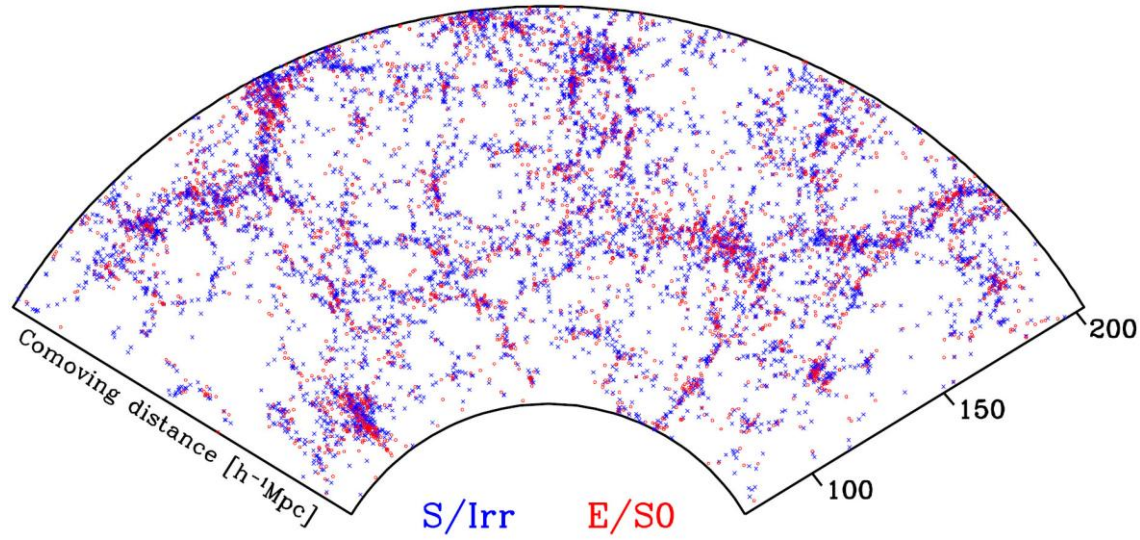


Motivation



Environmental effect on galaxy formation

Environmental factors : local density, **gravitational shear**





Test for the estimation of gravitational potential from observational data



❖ Edge effects

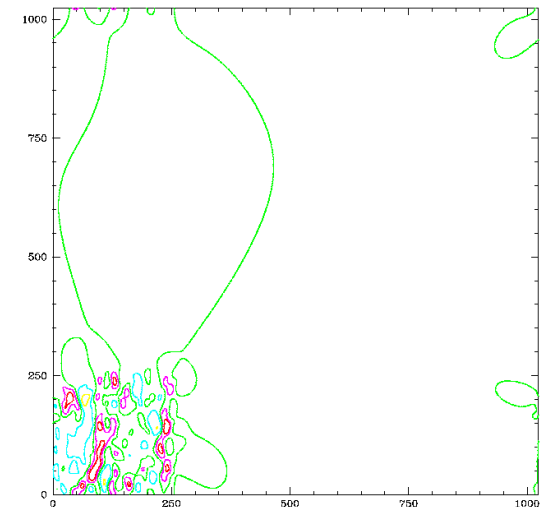
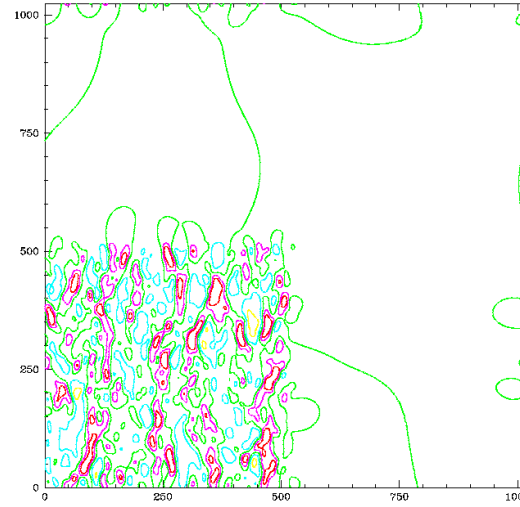
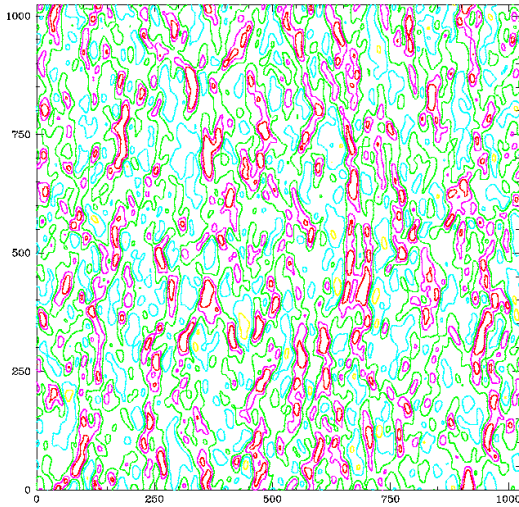
❖ Redshift distortion effects

❖ Biasing effects of galaxy distribution





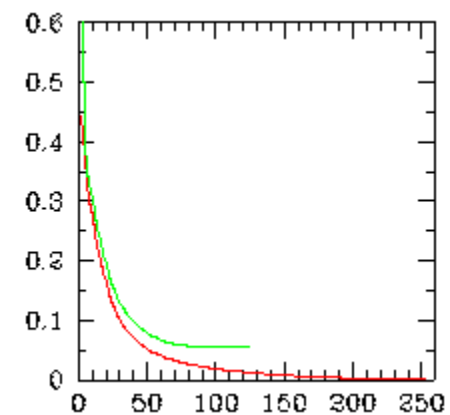
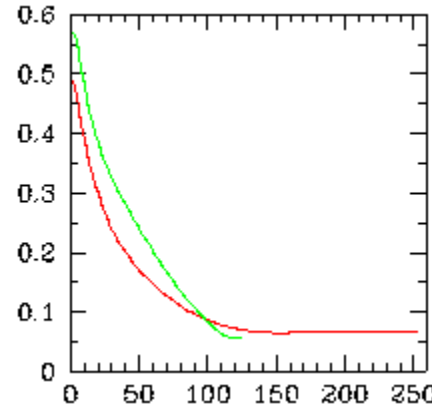
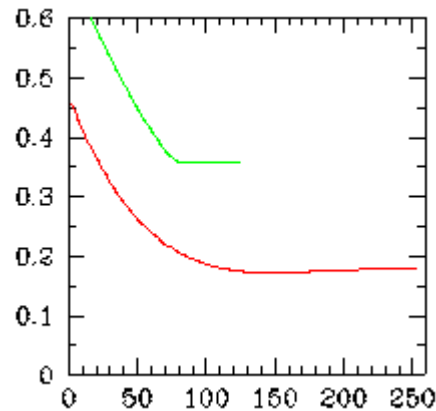
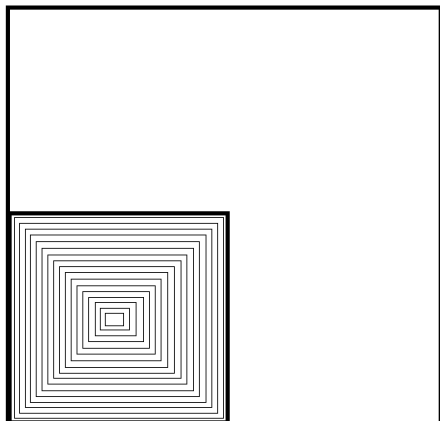
Edge effect



Φ

$\partial_x \Phi$

$\partial_x^2 \Phi$

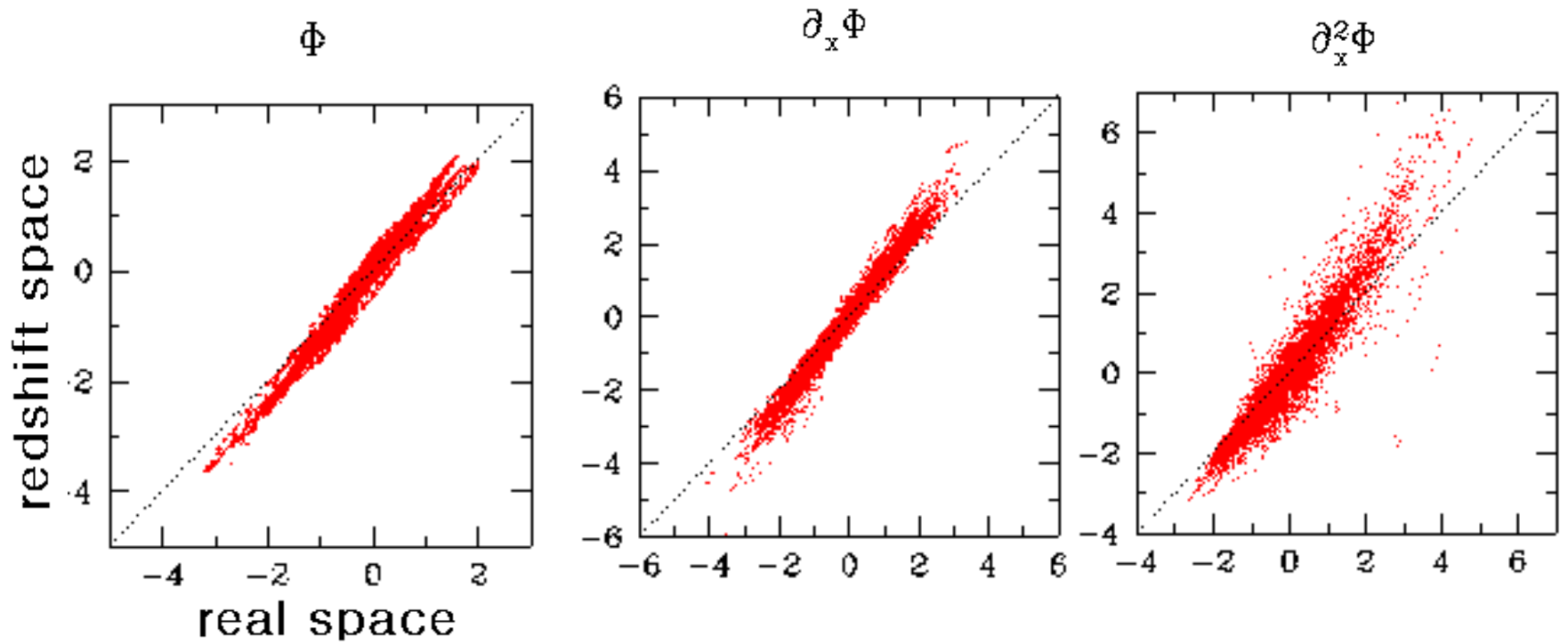


depth

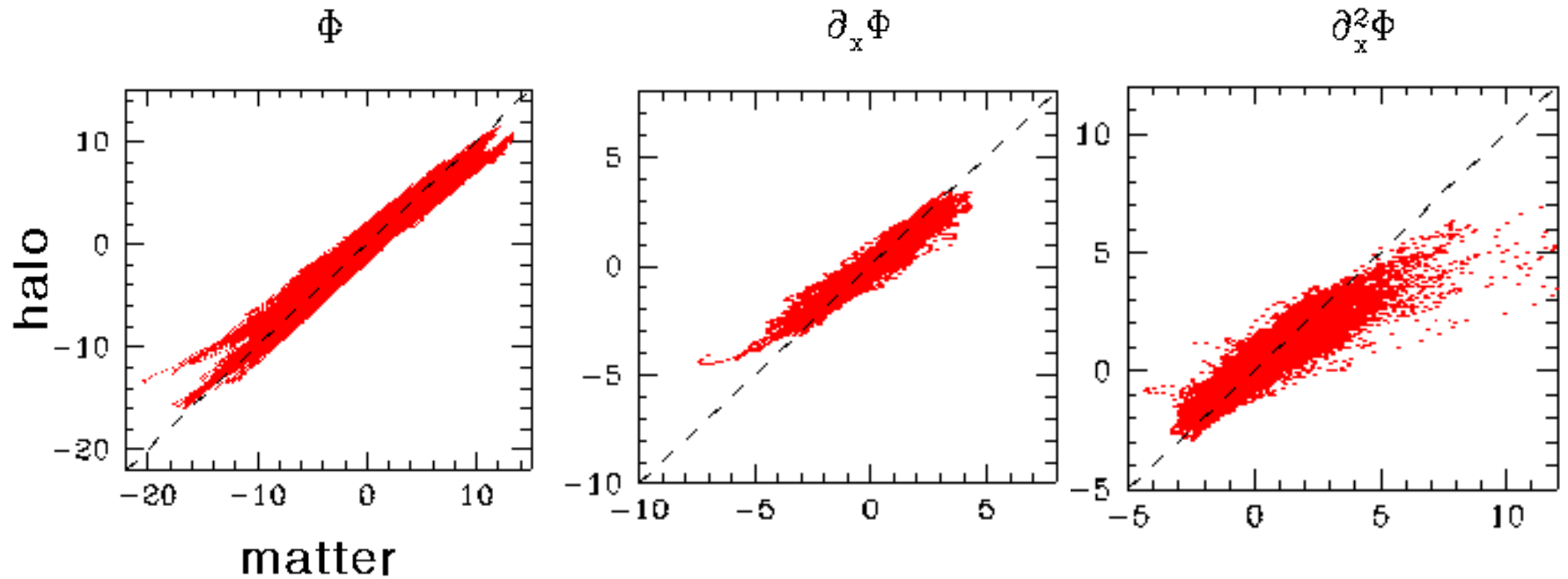




Redshift-space distortion



Biassing effects of galaxy distribution





Future Work



- ❖ Calculate gravitational shear for SDSS galaxies
- ❖ Analyze relations between galaxy properties and shear force

