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Cosmic tomography with weak gravitational lensing

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Stellingen

behorende bij het proefschrift

Cosmic tomography with weak gravitational lensing

1. The amplitude parameter in the prevailing intrinsic alignment model is notably degenerate with redshift uncertainties. (Chapter 2)
2. Using multi-band image simulations for joint shear and redshift calibration is both possible and crucial for upcoming weak lensing surveys. (Chapter 3)
3. Merely improving shear measurement and calibration is insufficient to solve the S_8 tension between cosmic shear results and the *Planck* CMB constraints. (Chapter 4)
4. Ambiguities in modelling halo central profiles can affect halo masses derived from a weak lensing analysis. (Chapter 5)
5. No matter how sophisticated, simulations can never fully replicate real data, highlighting the value in reducing reliance on their realism.
6. Given the statistical nature of cosmology, outliers are inevitable.
7. Sharing your code publicly not only promotes reproducibility but also encourages more polished coding practices.
8. Advocating changes, regardless of scale, often meets with skepticism or opposition.
9. The GALSIM package, although primarily designed for image simulations, is also suited for cover design.
10. In the realm of human experience, time never reverses.
11. If you are granted twelve propositions, consider using them all, but reserving one for the future is also wise.

Shun-Sheng Li
Leiden, 25 October 2023