

## IberiCOS 2022



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## The age of weak lensing surveys

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I will present the cosmological weak lensing results from the Dark Energy Survey (DES) using its first three years of data taken using the Dark Energy Camera on the 4m Blanco telescope at CTIO. This analysis spans the full DES footprint, more than 4000 sq. deg. of sky, with the final shear catalogue containing more than 100 million galaxies in  $riz$  photometric bands, constituting the most powerful weak lensing dataset to date. The comparison of DES cosmological constraints on dark matter and dark energy from WL and LSS in the low-redshift Universe to CMB constraints provides an unprecedented test of the standard cosmological model, across high and low redshift. I will detail the main challenges that our analysis is susceptible to, and summarise the approach to account for these and deliver robust cosmological constraints. Finally, I'll summarise new developments necessary to exploit future datasets.

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