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Abstract for an Invited Paper for the APR21 Meeting of the American Physical Society

Dark Energy Survey: Year 3 cosmology from large-scale structure ALEXANDRA AMON, Stanford University

I will present the weak lensing cosmology 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. With the Year 3 weak lensing catalogue containing more than 100 million galaxies in riz photometric bands, this constitutes the most powerful weak lensing dataset to date. I will focus on some of the main challenges that weak lensing analyses are susceptible to, such as redshift estimation and blending, and describe several novel methodological leaps that DES has implemented in this round of analyses to account for these issues and deliver robust cosmology.