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Weak lensing mass map in DECaLS DR1 survey

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We present the largest weak lensing mass map covering ~3000 square degrees of the DECaLS DR1 Survey. A good agreement can be found between optical and dark matter maps. Comparing with the mass maps from CFHT Stripe 82 Survey (CS82), the similar high signal-to-noise ratio peaks can be found, which means the systematics of the maps are well controlled. We found ~50,000 WL peaks with SNR higher than 3.0. We also study the cross-correlation between WL peaks and massive clusters and galaxies.

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