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Paving the way to a Euclid weak lensing selected galaxy cluster catalogue

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Weak lensing effect is a sensitive probe for galaxy cluster detection, that needs of a large enough number of background galaxies observed to be profitable.

Euclid will conduct a 14,500 square degree weak lensing survey, measuring the shapes of billions of galaxies and opening a unique window for detecting galaxy clusters in this way.

The task of coordinating the science within Euclid related to galaxy clusters detected via weak lensing is carried out from the CG-WP10 (Clusters of Galaxies - Work Package 10).

On behalf of its members, I will describe our current activities, which right now are focused on testing and comparing different methods to detect clusters of galaxies on Euclid-like mocks from the DUSTGRAIN-pathfinder simulations. All of our work is aimed to the construction of a weak lensing selected cluster catalogue, which will be used for cluster counts, mass estimations, mass-observable relations, and other interesting properties of clusters.

Primary author(s): MANJÓN GARCÍA, Alberto (Universidad Politécnica de Cartagena); Mr LEROY, Gavin; Mrs PIRES, Sandrine; DIEGO, Jose M (IFCA)

Presenter(s): MANJÓN GARCÍA, Alberto (Universidad Politécnica de Cartagena)

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