2m-class telescopes as a tool to disantangle point and extended X-ray sources

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Abstract

X-ray observations of galaxy clusters are impacted by the presence of active galactic nuclei (AGNs) in a manner that is challenging to quantify, leading to biases in the detection and measurement of cluster properties for both astrophysics and cosmological applications. We detect and characterise clusters contaminated by central AGNs within the XXL survey footprint and provide a systematic assessment of the cosmological impact of such systems in X-ray cluster samples. This assessment partially used OHP/MISTRAL spectroscopic observations that we will present in the proposed e-poster. The impact on cosmological estimates from missed clusters explored so far is negligible for XXL, but it produces a tension of $\sim 3\sigma$ with the fiducial cosmology when considering larger survey areas.

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