

## AstroExploration

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This contribution will present the main results obtained by the ICTEA in various areas of astrophysical research over the past few years.

One of the research lines focuses on studying the spin state and morphology of Near-Earth Asteroids (NEAs). For this, photometric techniques are applied, specifically light curve inversion, which allows for the reconstruction of 3D models and the determination of the spin properties of these objects.

Furthermore, we will address the application of Machine Learning techniques in the field of exoplanet detection and characterization. We'll showcase the progress made in developing algorithms to identify and analyze the transit signals of these extrasolar worlds.

Finally, we will present the second phase of the K2-OjOs Project, a pro-am collaboration spearheaded by ICTEA. In this stage, significant advancements have been made in the search for exomoon candidates using light curves from the main Kepler mission, highlighting the synergy between professional research and the contributions of amateur astronomers.

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