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CANDELA - standard Candle-based Distance Estimation with Learning Algorithm

Thursday 29 May 2025 12:00 (15 minutes)

CANDELA aims to develop a generalized methodology using machine learning and deep learning techniques to estimate the distances of stars and galaxies, leveraging distance indicators available in catalogs such as Gaia DR3 and the OGLE catalogs of variable stars, in combination with parameters extracted from photometric time series. At the same time, by making use of the rich collection of photographic plates from the archive of the Torino Observatory —containing astronomical observations carried out between 1925 and 1996 —another goal is to identify objects of interest within these plates and integrate any relevant objects into the input dataset for the distance estimation models. In this update, we present the progress of this work compared to what was shown at the second technical meeting in Bologna and provide an outlook on the future developments of the project.

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