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StarDICE: A photometric calibration experiment to anchor standard stars on the NIST flux scale at the milli-magnitude level.

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The number of type Ia supernova observations will see significant growth within the next decade, especially thanks to the Legacy Survey of Space and Time undertaken by the Vera Rubin Observatory in Chile. With this improvement, statistical uncertainties will decrease and flux calibration will become the main uncertainty for the characterization of dark energy. The StarDICE experiment proposes to overcome this uncertainty by measuring the spectra of stars from the CALSPEC catalog at the millimagnitude level, and make it the new calibration reference for the LSST experiment.

The StarDICE experiment is currently operating at l'Observatoire de Haute-Provence, and has been taking data since the beginning of 2023. To reach a sub-percent precision, the instrument throughput will be calibrated and monitored with a LED-based artificial star source, calibrated on NIST photodiodes. In this talk, I will present the ongoing analysis over the slitless spectrophotometric data, and the photometric analysis on the data obtained with the "ugrizy" filters.

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