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The Gaia Spectrophotometric Standard Stars

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Abstract

The paper describes the spectrophotometric instrument of Gaia ESA's mission and the principles of the internal and absolute calibrations of the measurements. Special emphasis is made on the ongoing observational survey aimed at building a grid of about 200 spectrophotometric standard stars, with an internal precision of 1% and tied to Vega within a few percent, for the absolute flux calibration of Gaia photometry. Until now, more than 400 observing nights were devoted to the project, distributed in several observatories (CAHA in Almería, TNG in La Palma, NTT in La Silla, San Pedro Mártir in México, Loiano in Italy, and many partial nights with robotic REM in La Silla) and for both spectroscopic and photometric campaigns (Pancino et al. 2012, MNRAS, 426, 1767). Additional observations are still needed for finalising the absolute photometric calibrations and for continuing the monitoring of variability (short and long term) in order to discard non optimal candidates.

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