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Calibrating APs of Gaia DR3 with Open Clusters (poster pitch)

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We calibrated the atmospheric parameters provided by the GSP-Phot module from Gaia DR3 using a deliberately selected sample of open clusters in the solar neighborhood. We used Padova isochrone models to estimate the theoretical atmospheric parameters of cluster members and obtained the calibration expression by fitting the deviation between observed and theoretical values. Our results show that for stars with intrinsic colors (BP-RP) in the range of $[0.4, 3.4]$, the T_{eff} provided by Gaia DR3 is underestimated at the blue end and overestimated at the red end, while the $\log g$ is generally underestimated but overestimated at the reddest end. We also discussed a degeneracy between the atmospheric parameters and the extinction from the GSP-Phot module.

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