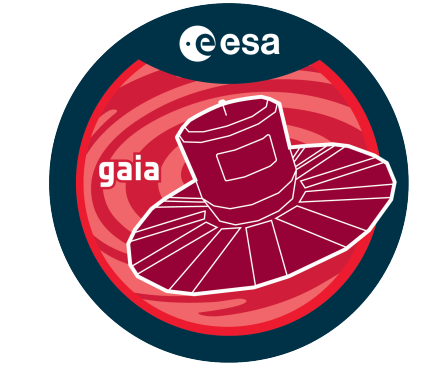


Calibrating the Astrophysical Parameters of Gaia DR3 with Open Clusters

Tang et al. 2023, in prep.



Gaia DR3 BP/RP spectra: [330-680nm, 640-1050nm], R~20-60

GSP-Phot: **APs of 470 million stars** (Andrae et al. 2022)

Speaker: Songmei Qin

Authors: Tong Tang, Jing Zhong, Songmei Qin,

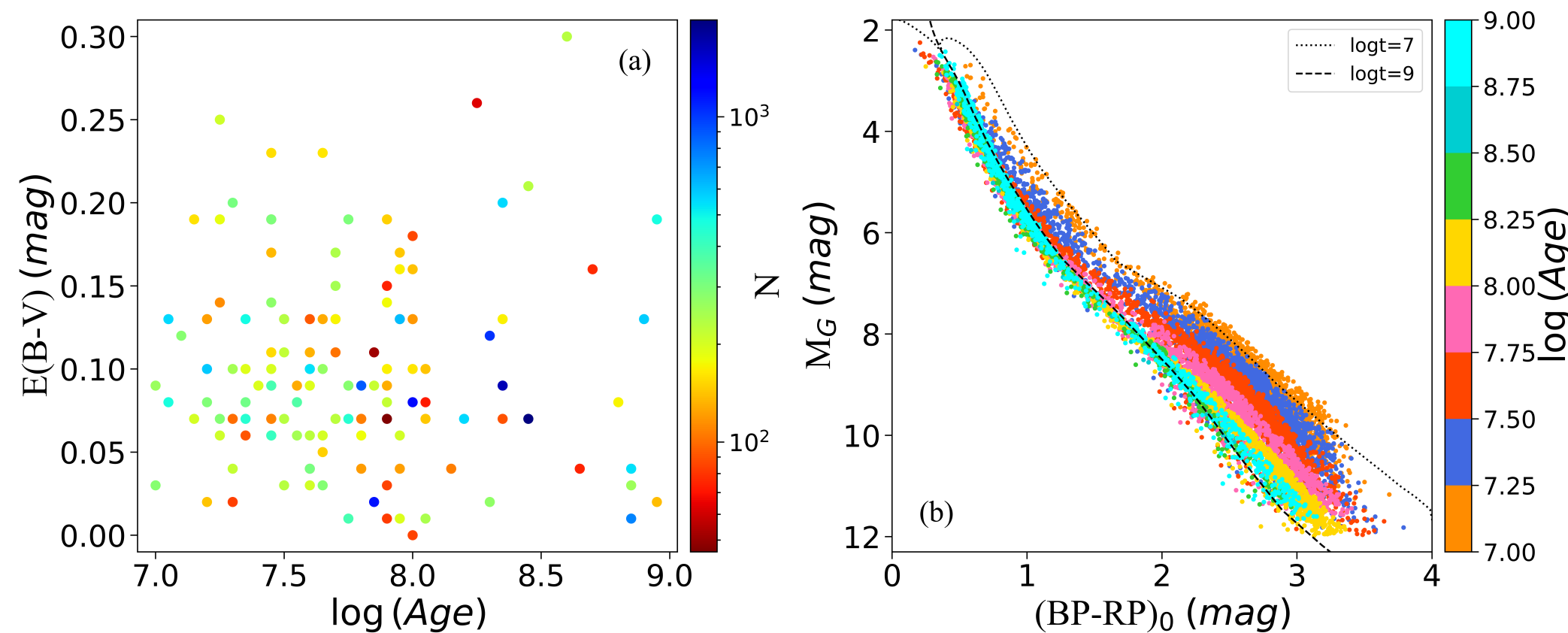
Jinliang Hou, Li Chen

Open Clusters:
more accurate age, ebv from isochrone fitting
effective in assessing the quality of Gaia DR3 APs!

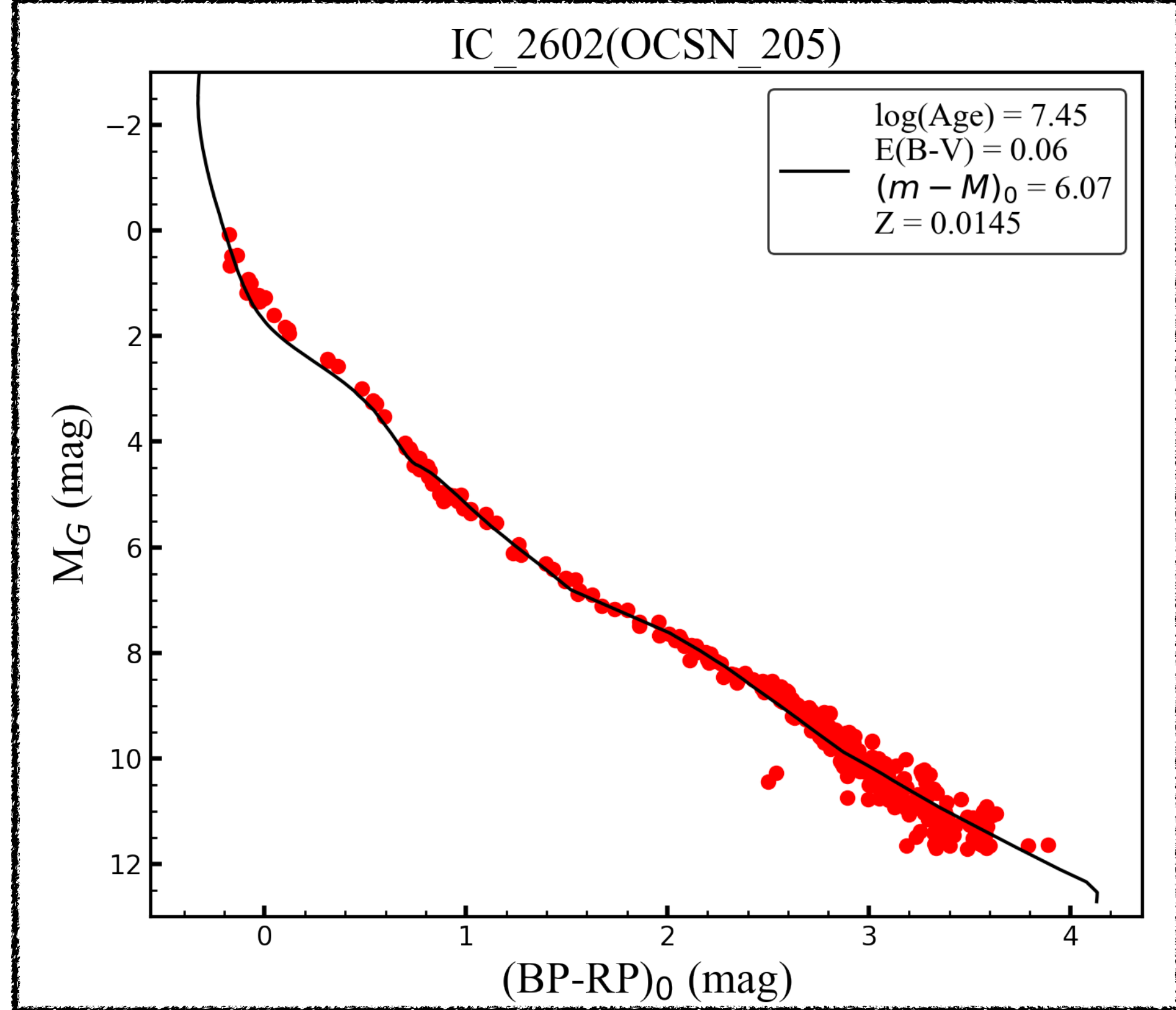
Cluster sample

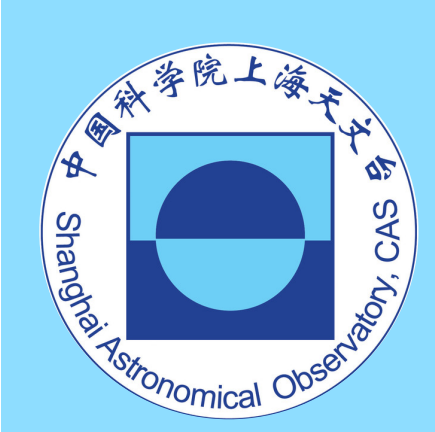
137 open clusters from OCSN catalog(Qin et al. 2023)

- with **narrow and well defined MS**
- quality control and remove binary stars ($q > 0.5$)



Padova isochrone (Marigo et al. 2017):
Synthetic temperature, surface gravity



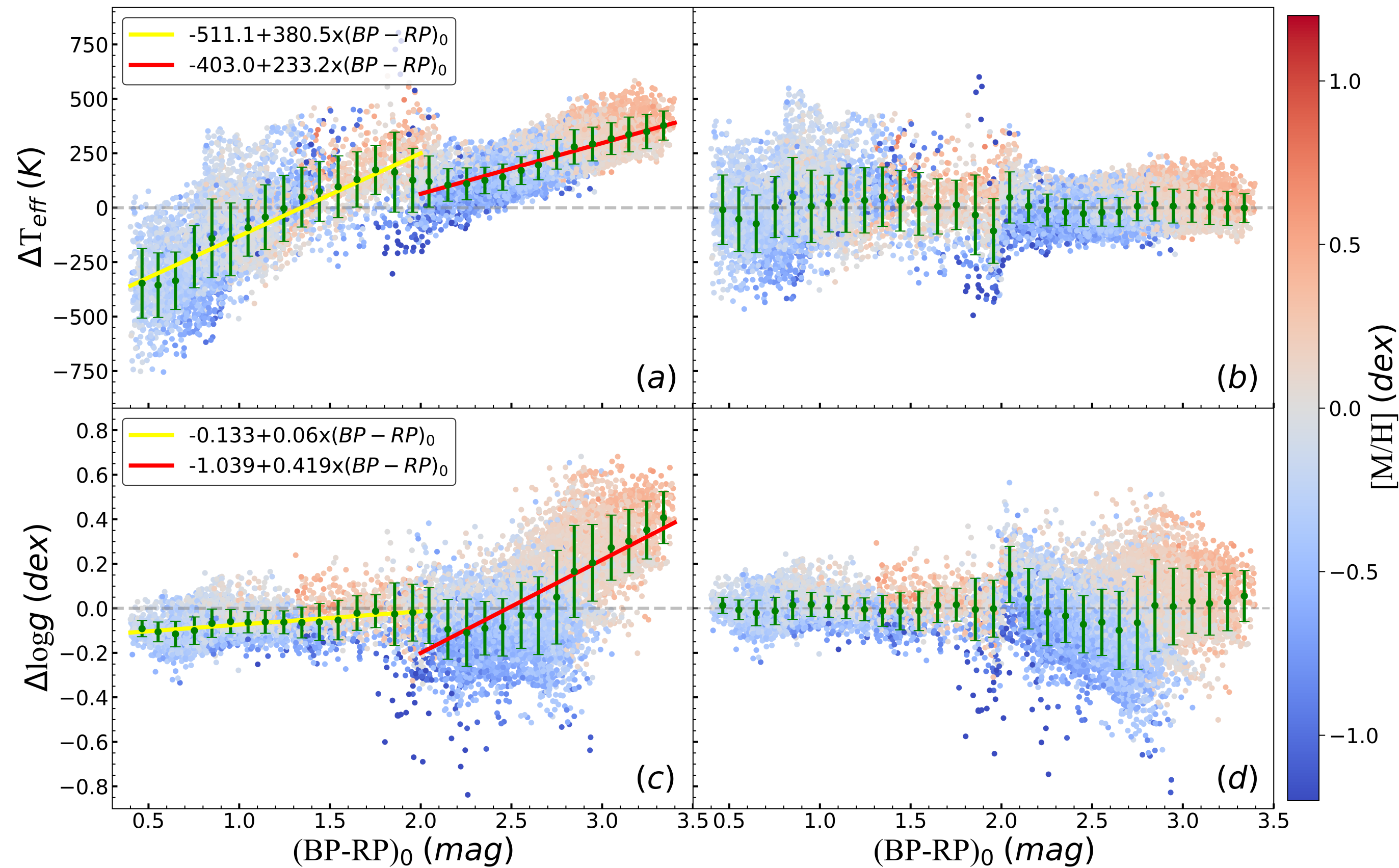


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Calibration function

- Calibration function
- Abnormal metallicity distribution



Temperature-extinction degeneracy

- The degeneracy of T_{eff} with extinction is similar to that indicated by Andrae et al. (2023)

