

Revisiting well-known pulsating F-type stars: the combination of ground-based observations with TESS



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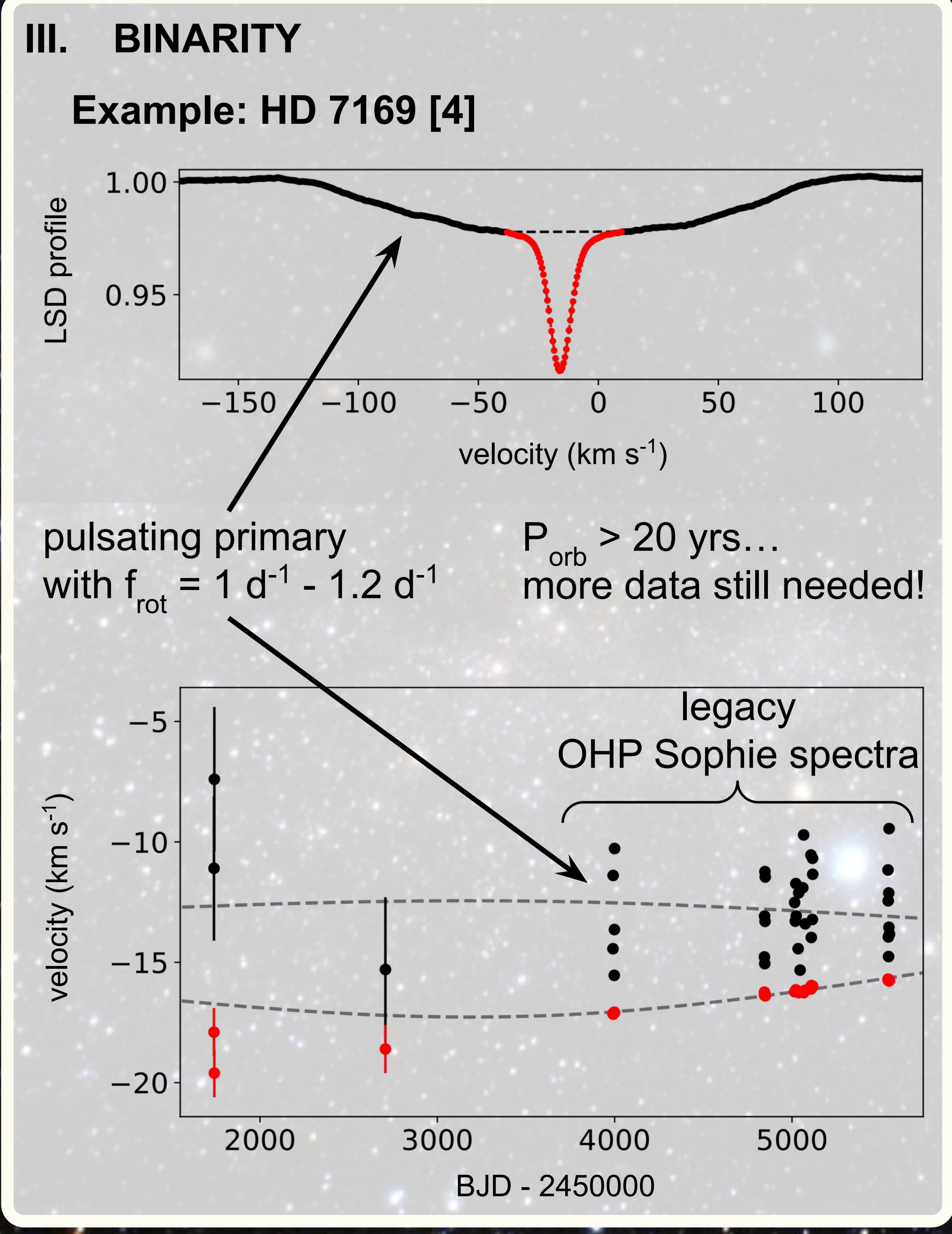
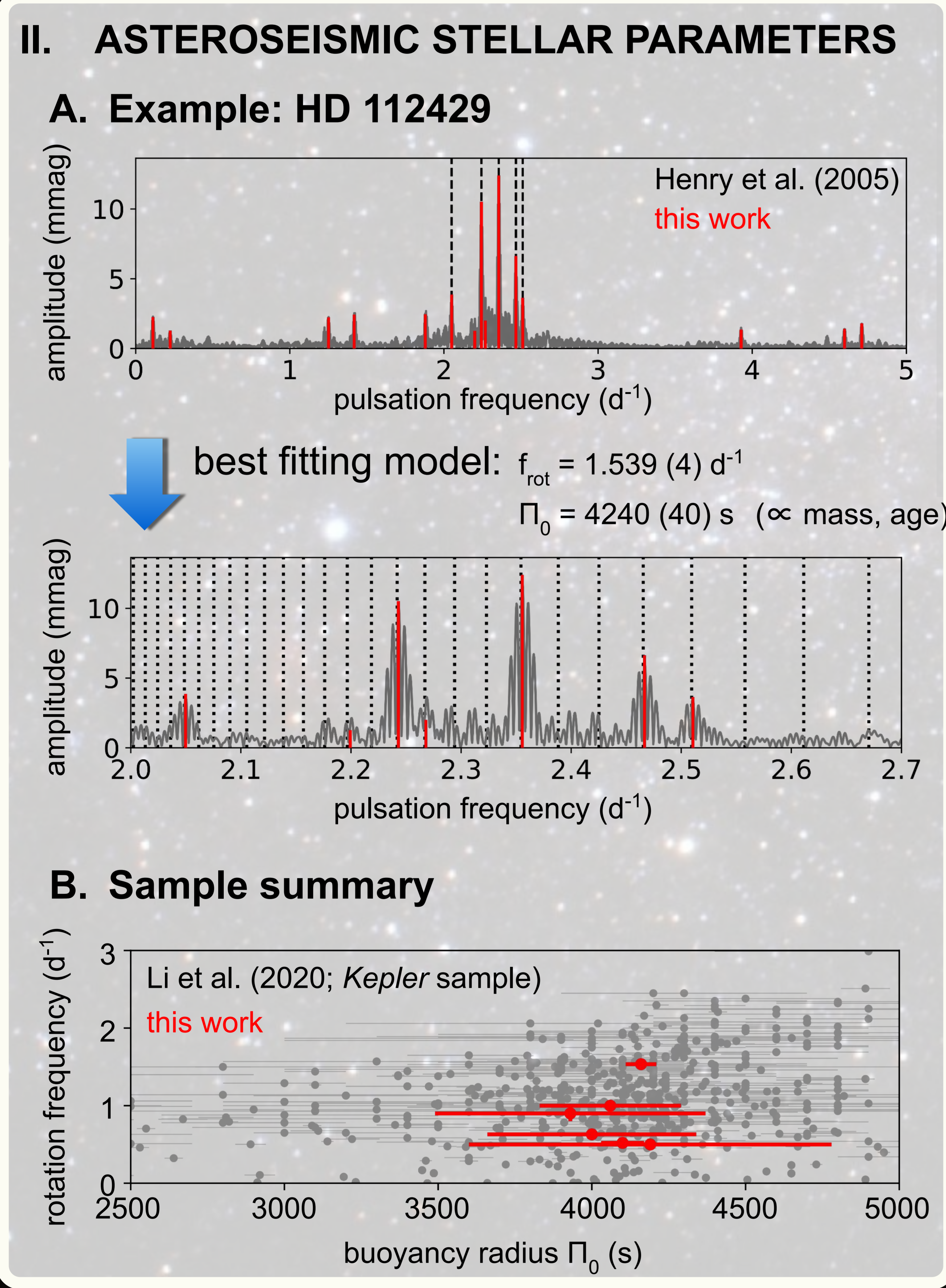
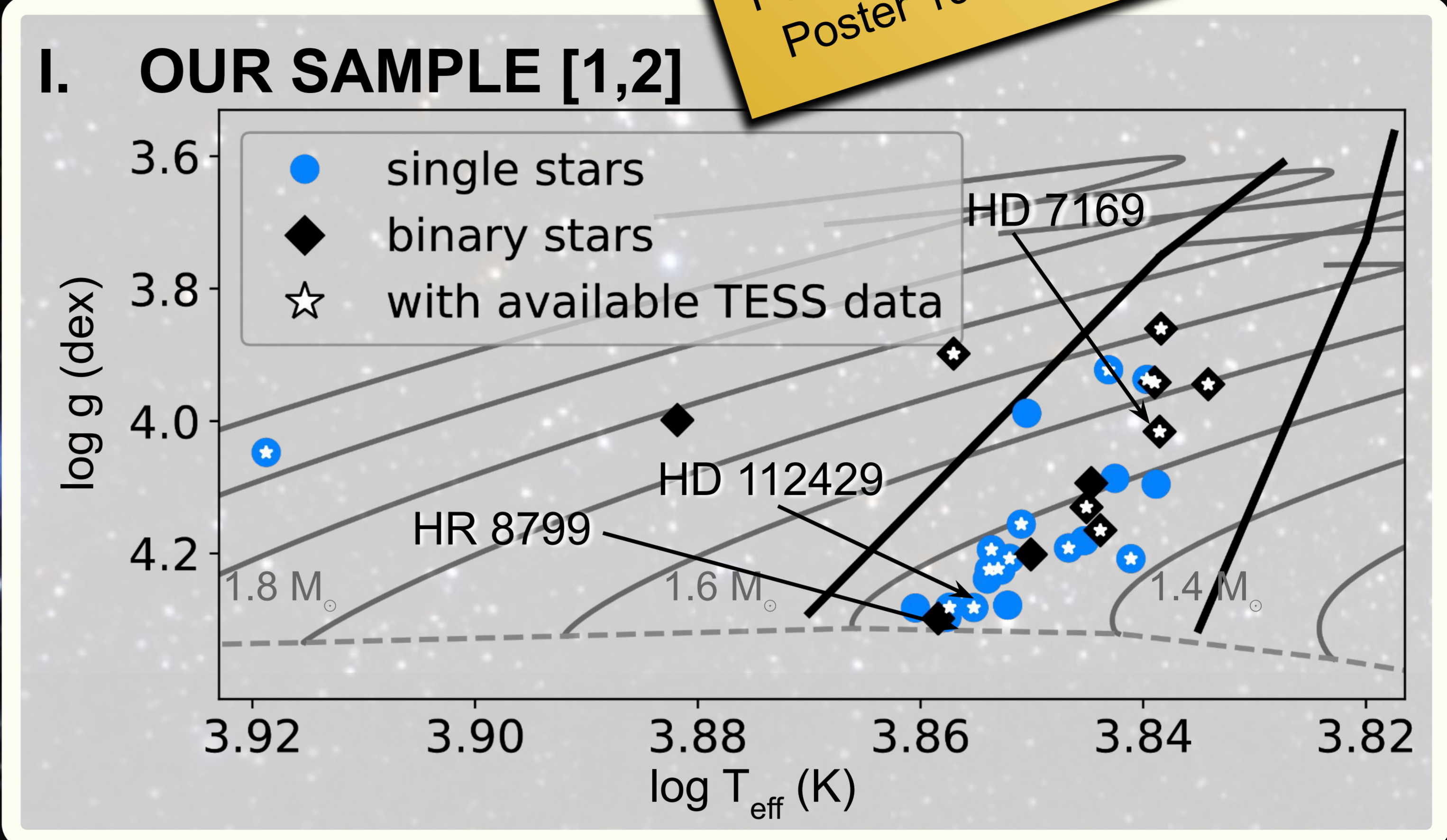
See also:
 Poster 1235 (by Joey Mombarg)
 Poster 1906 (by Peter De Cat)

A/F-type stars = massive exoplanet hosts

Gravity-mode pulsations

- probe the deep interior stellar structure
- help to constrain **stellar mass, age and rotation**

Our aim: improve stellar parameter values by combining ground-based observations and TESS space photometry



More info? [Van Reeth, De Cat, et al., 2021, in prep.](#)

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- References**
- [1] De Cat et al. 2006, A&A, 449 (1)
 - [2] Cuypers et al. 2009, A&A, 499 (3)
 - [3] Van Reeth et al. 2016, A&A, 593, A120
 - [4] Henry & Fekel 2003, AJ 126 (6)

Background image: ESA / Hubble (A. Fujii)

Measured rotation for 6 A/F-type stars

at least 2+ TESS sectors required (star & legacy-data dependent)

(Preliminary) new binarity constraints

Towards a better understanding of bright, massive exoplanet hosts

This work has made use of (1) data retrieved from the ELODIE/SOPHIE archives at Observatoire de Haute-Provence (OHP) and from the ESO Science Archive Facility, (2) observations made with the HERMES spectrograph at the Mercator Telescope, operated on the island of La Palma by the Flemish Community, at the Spanish Observatorio del Roque de los Muchachos of the Instituto de Astrofísica de Canarias. (3) data collected with the TESS mission, obtained from the MAST data archive at the Space Telescope Science Institute (STScI).