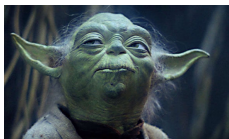


Solar analogs with white dwarf companions: HD 114174, HD 2133 and CD-56 7708

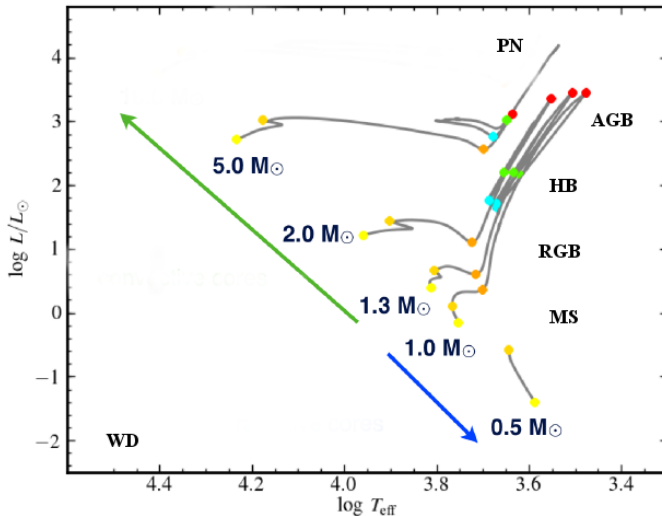
Thayse Adineia Pacheco

Prof. Dr. Jorge Meléndez

5th September, 2019



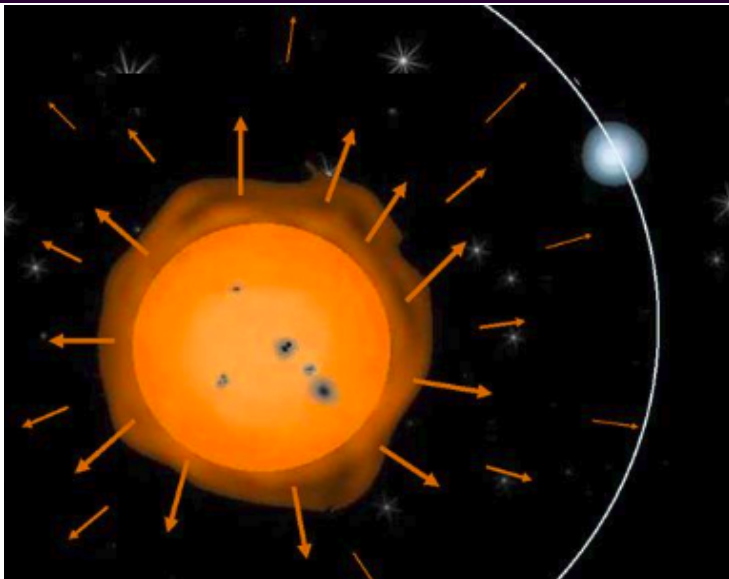
Introduction: Stellar evolution



HR diagram from BaSTi (Lebreton, Y., Goupil, M., Montalbán, J., EAS Publications Series, 2014)



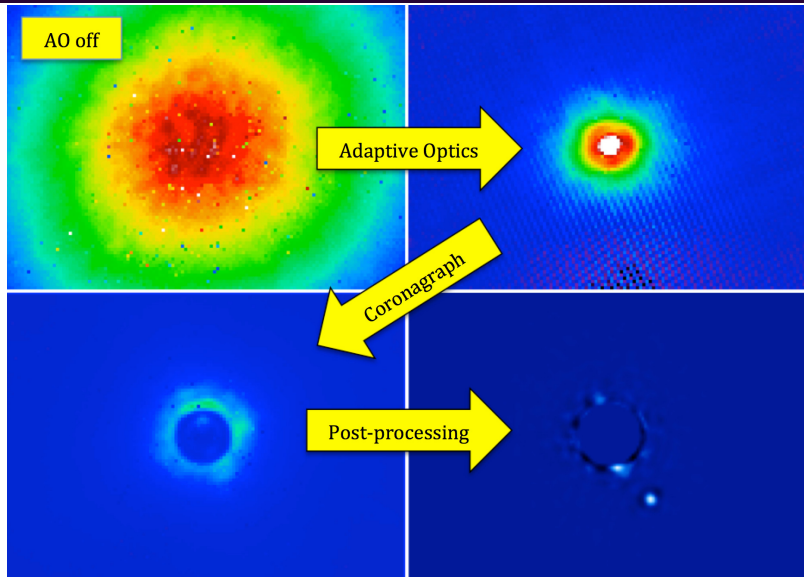
Mass transfer in binary systems



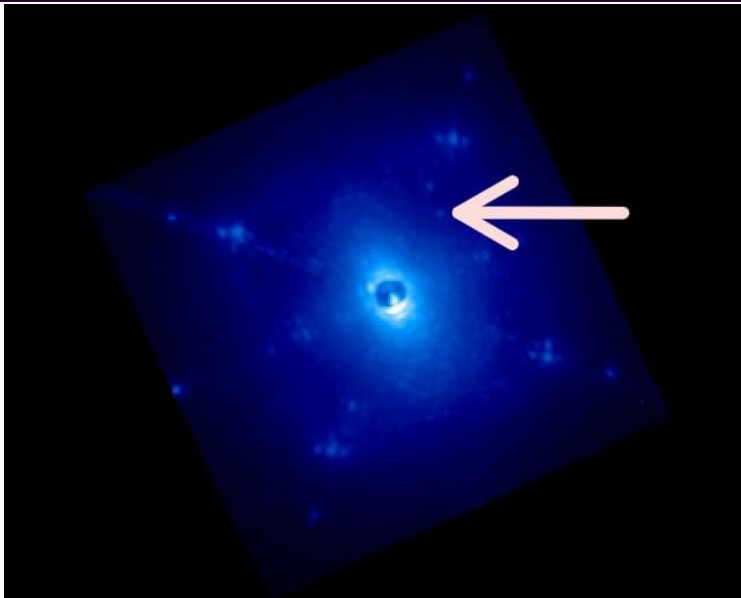
Accretion scheme by stellar winds by Dr. Dirk Terrell (Boulder)

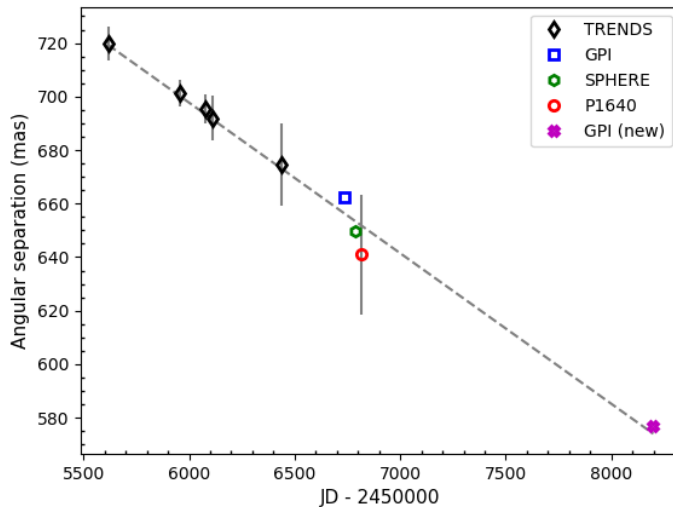


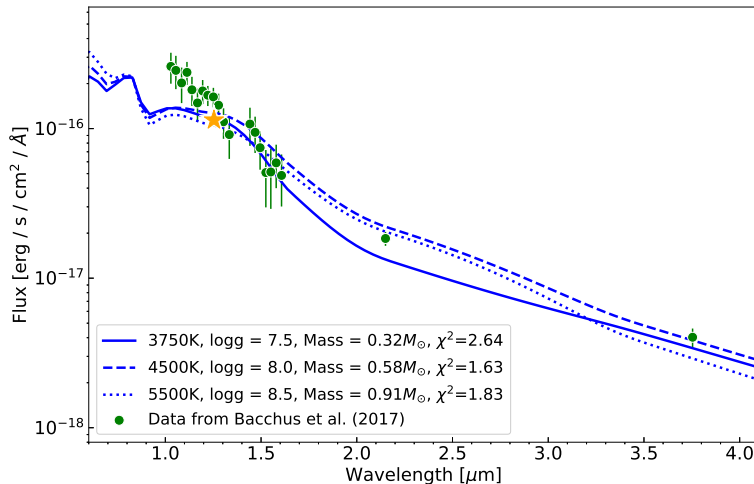
Spectrophotometry: GPI (*Gemini Planet Imager*)



[<http://cosmicdiary.org/geminiplanetimager/2015/08/06/how-gpi-works-to-see-planets/>]



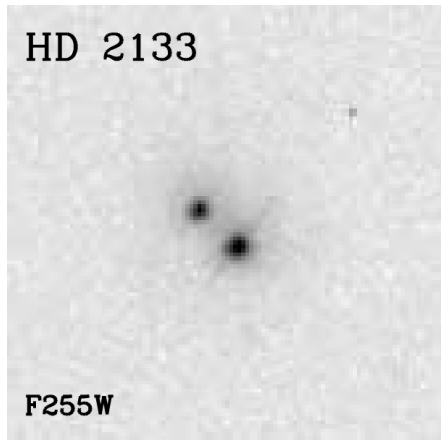




Fast rotators: HD 2133 e CD-56 7708 (Hubble)

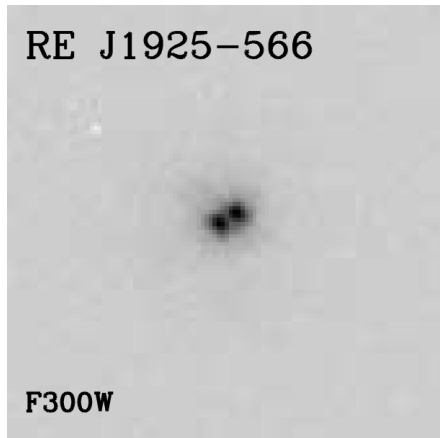
~ 30.000 K

0,6''



~ 50.000 K

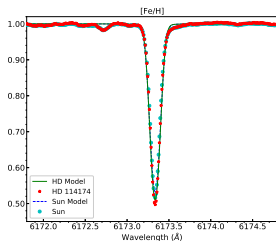
0,2''



- Dr Valentina D'Orazi; Dr Raffaele Gratton; Dr Silvano Desidera
- SPHERE / VLT

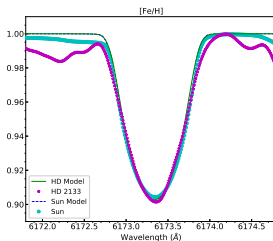
Spectral synthesis: Iron [Fe]

HD 114174



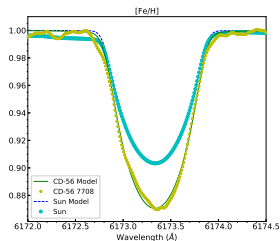
0.016 ± 0.037

HD 2133



0.080 ± 0.062

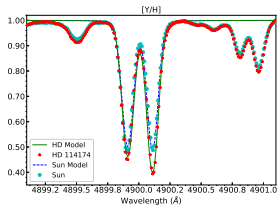
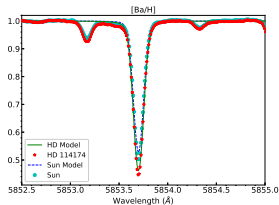
CD-56 7708



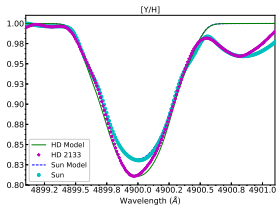
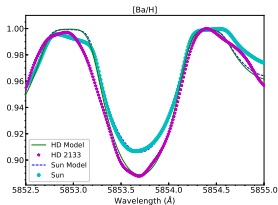
0.380 ± 0.064

Spectral synthesis: Barium [Ba] and Yttrium [Y]

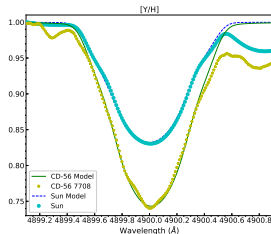
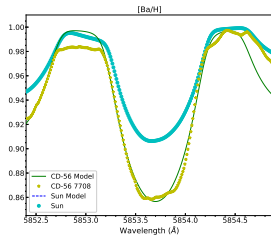
HD 114174

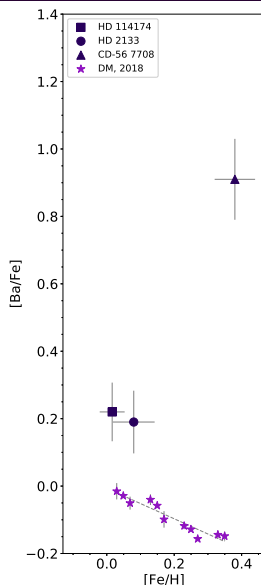
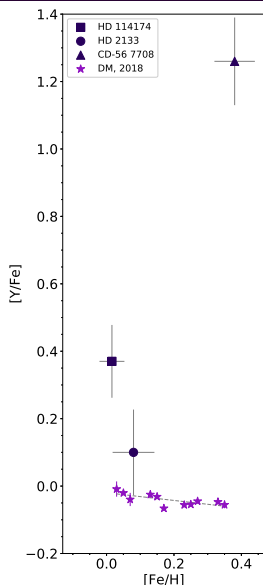


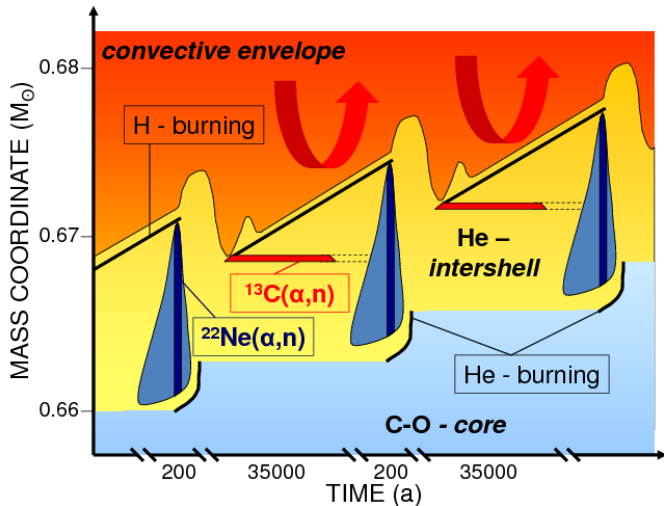
HD 2133



CD-56 7708

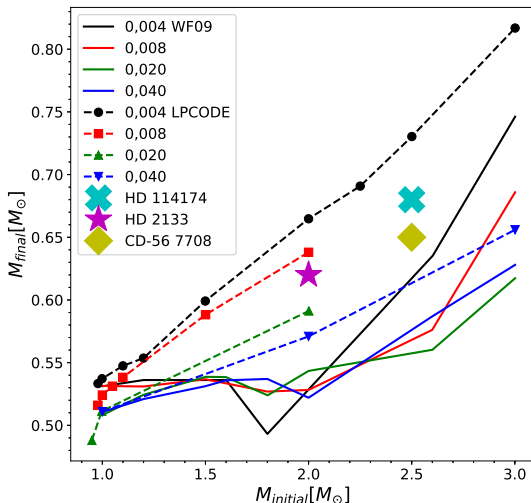






• Dr Amanda Karakas

Msc Marília Carlos



Summary

	Temperature	$\log g$	Age
HD 114174	4500 K	8.0	7.9 Gyr
HD 2133	30000 K	7.7	4.6 Gyr
CD-56 7708	49000 K	7.8	4.4 Gyr

Solar analogs with white dwarf companions: HD 114174, HD 2133 and CD-56 7708

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