



NEUTRON CAPTURE ELEMENT ABUNDANCES IN GALAH SURVEY: THE CASES OF TYC 9219-2422-1 AND BPS CS 29529-0089

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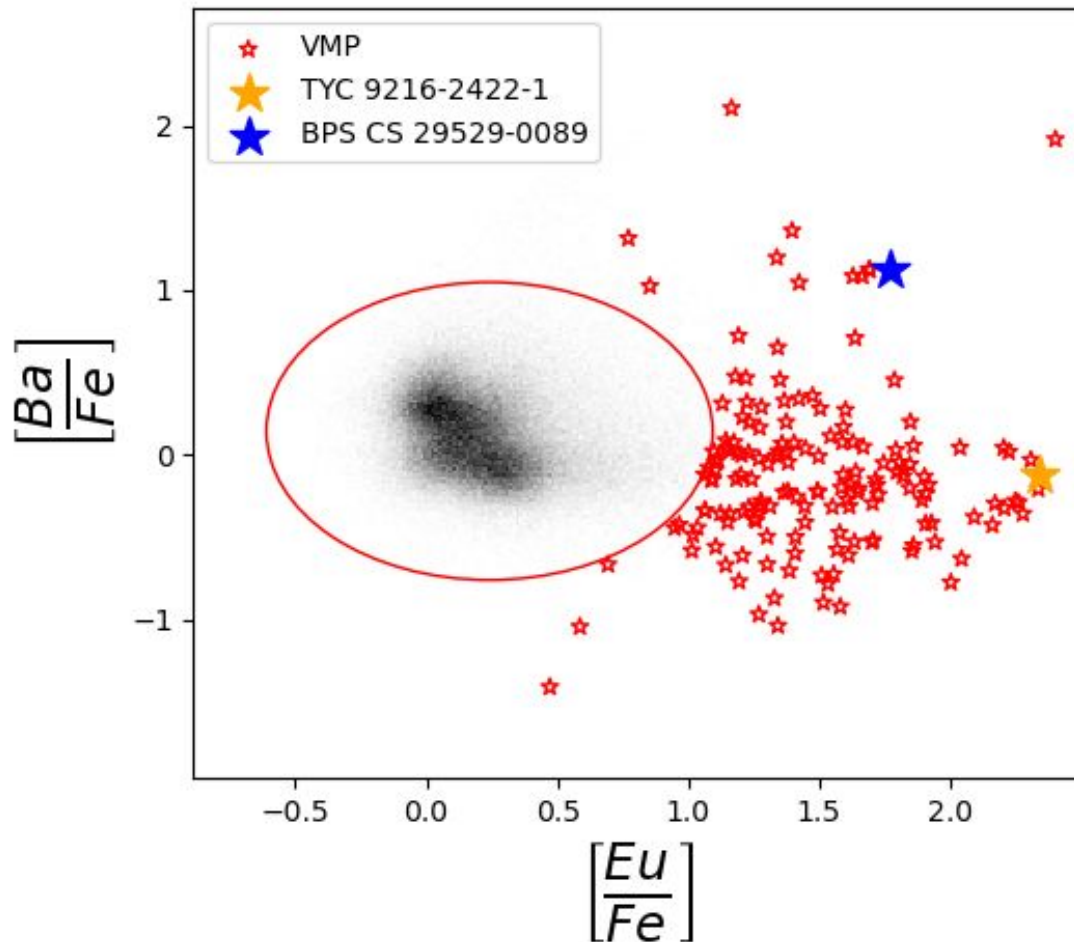
TARGET SELECTION

Astronomical sites of the r-process

Stars that differs more than 3σ from the mean

Stars in red have metallicities lower than -2.0 dex

Without quality cuts in the parameters



METHODS

UVES in the period P108
(February 2022)

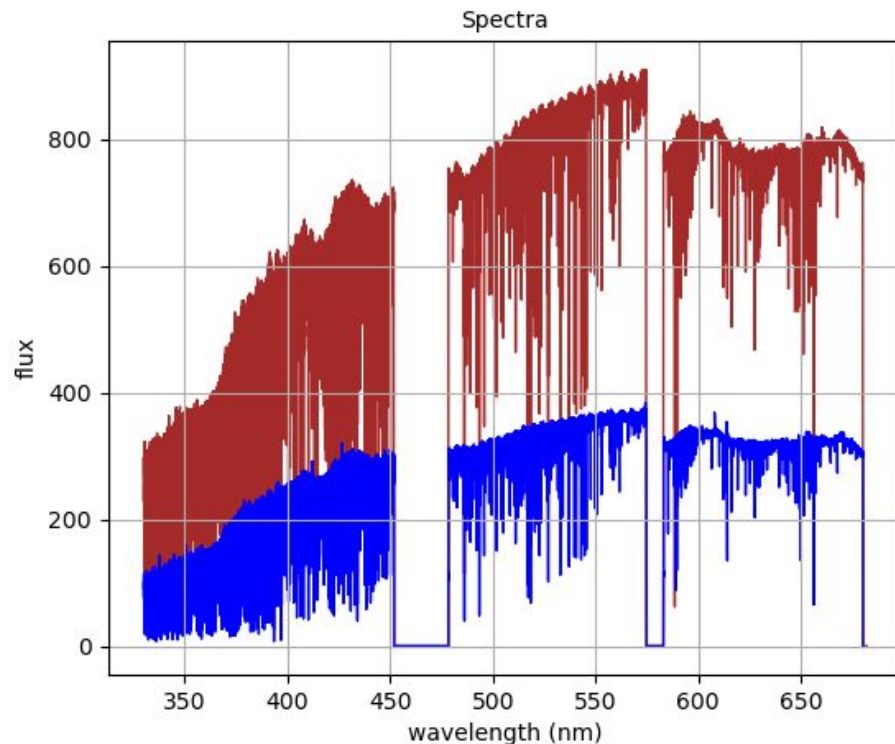
2 spectra were obtained for
TYC 9219-2422-1

3 spectra for BPS CS 29529-0089

R~41,000 and S/N~50 at 372.4 nm

blue (centered at 390 nm)

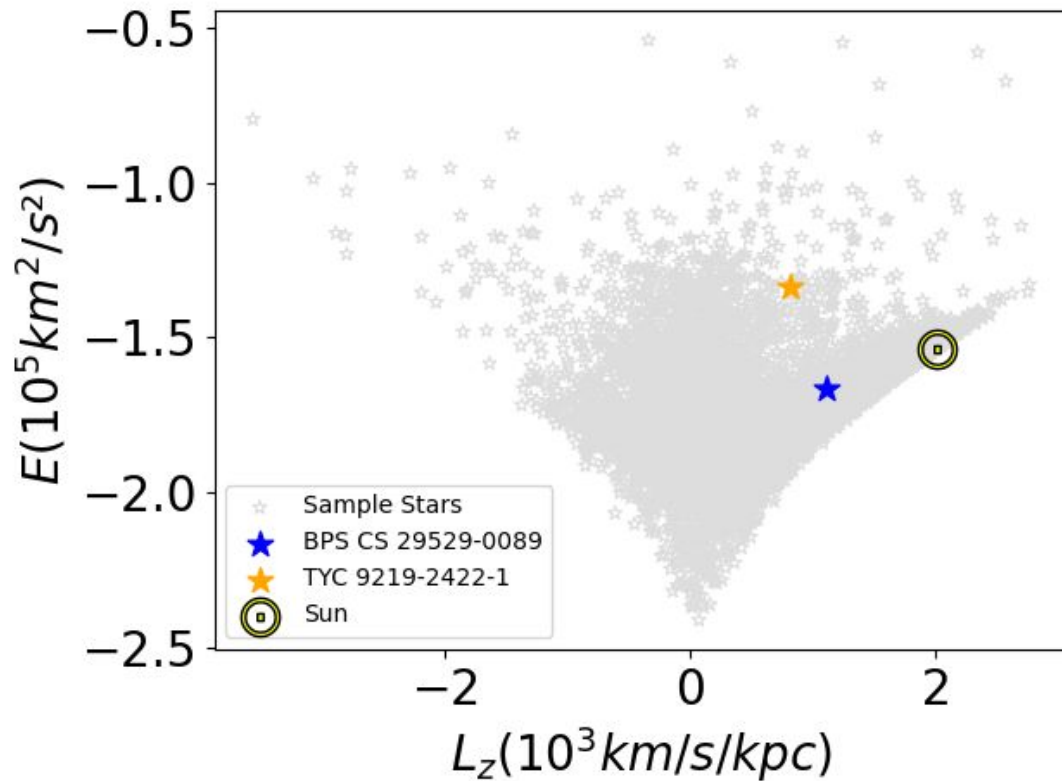
red (at 580 nm) spectra.



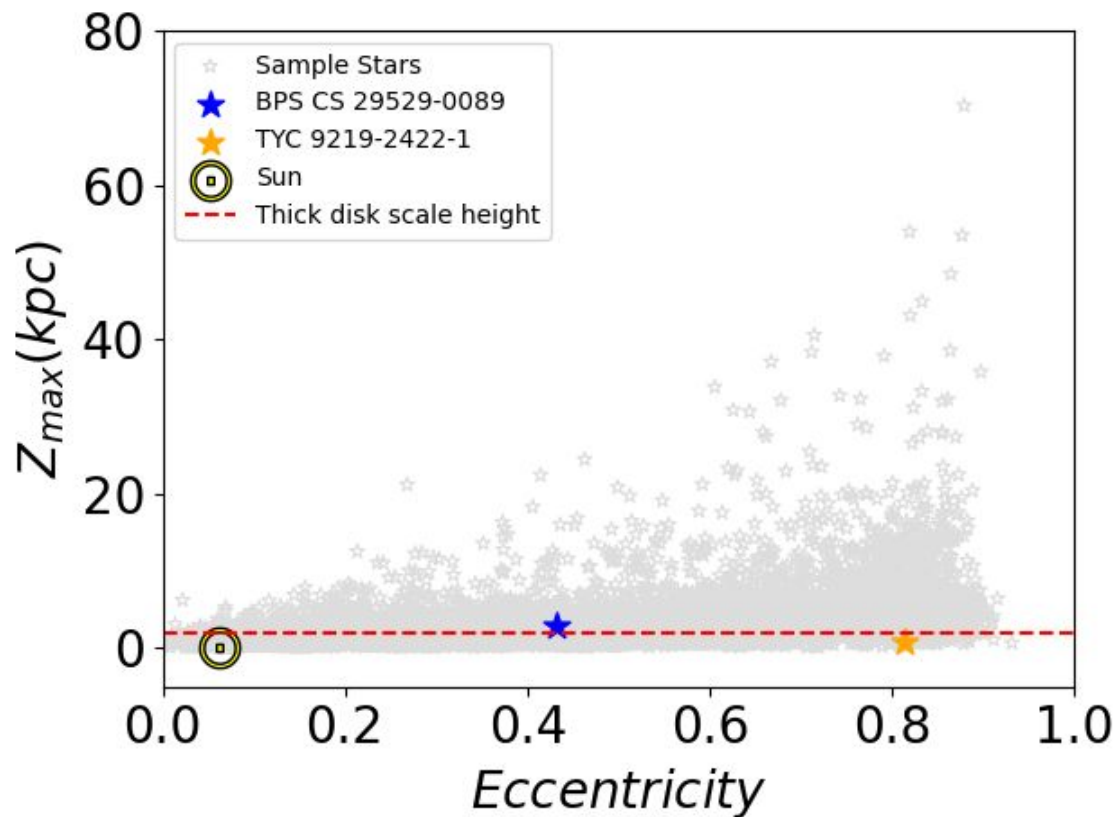
red: TYC 9219-2422-1

blue: BPS CS 29529-0089

DYNAMICAL RESULTS



DYNAMICAL RESULTS



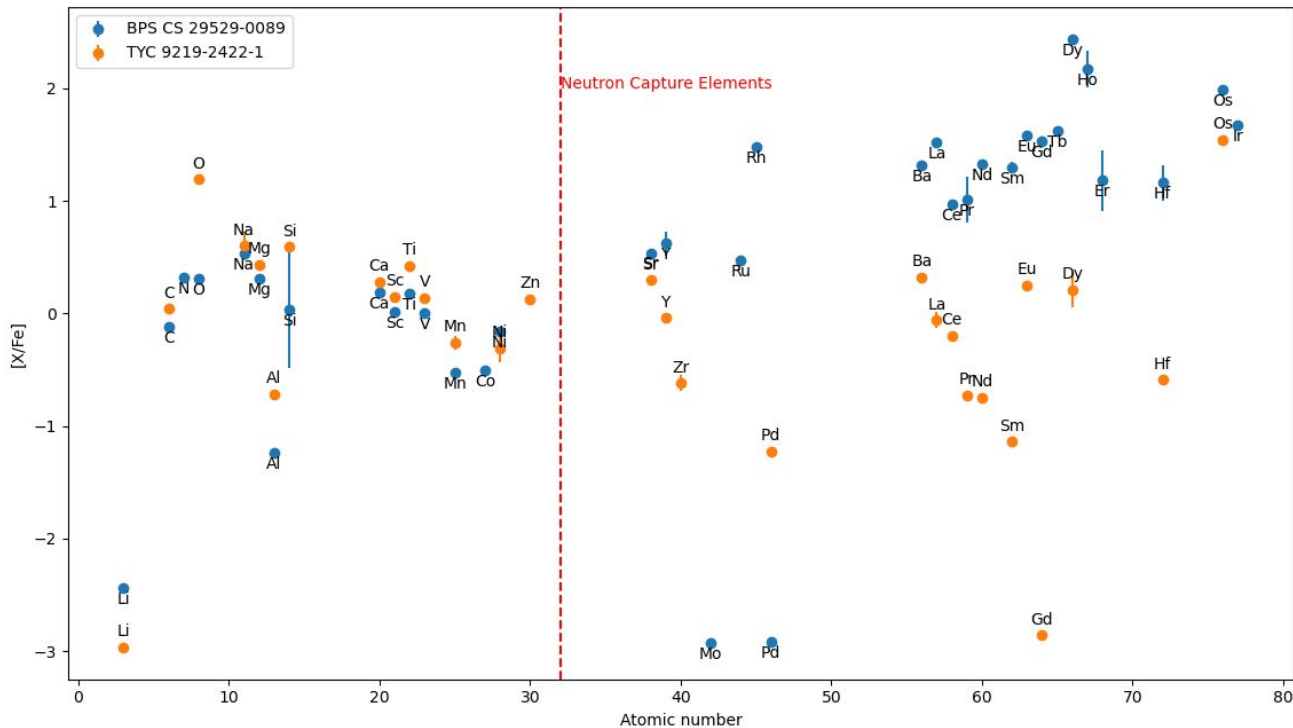
ABUNDANCE DISTRIBUTION

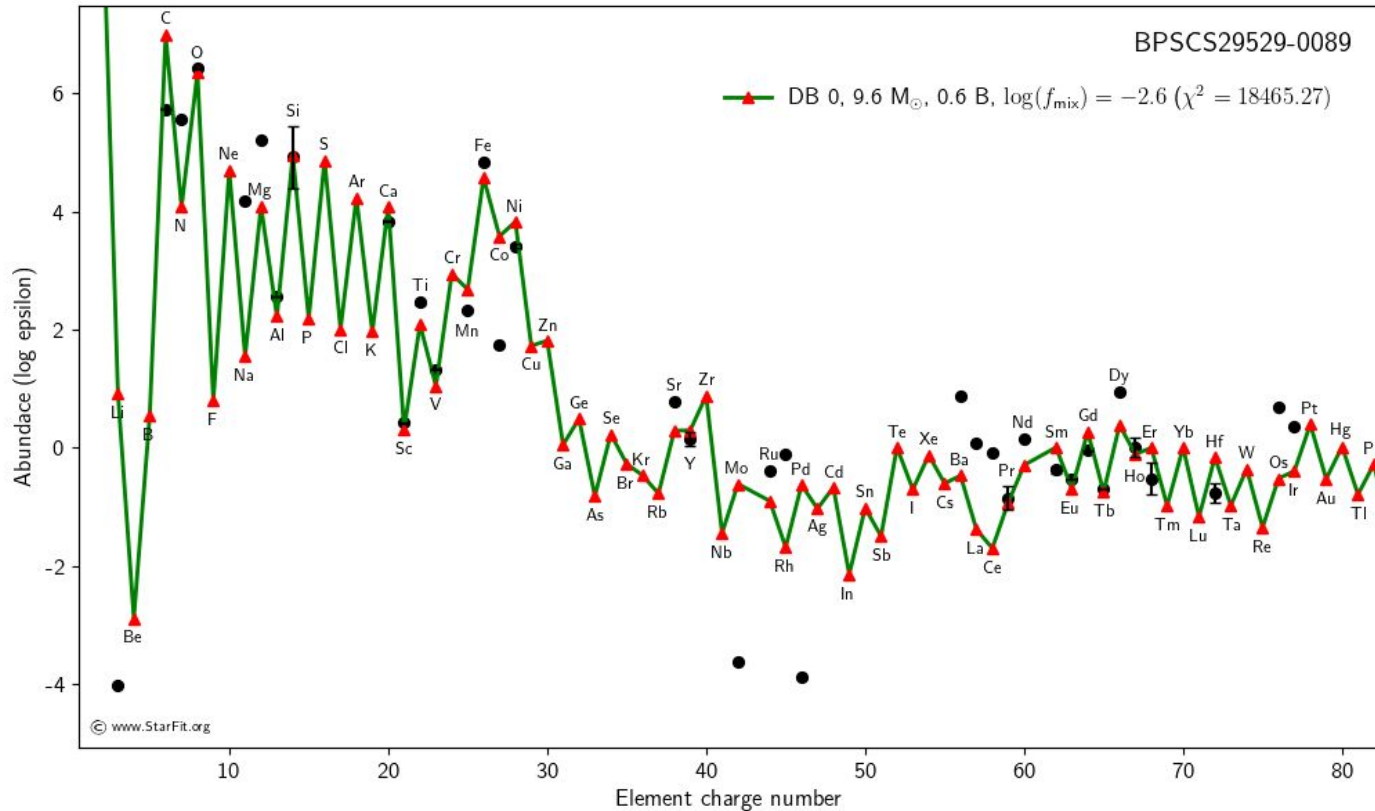
BPS CS 29529-0089

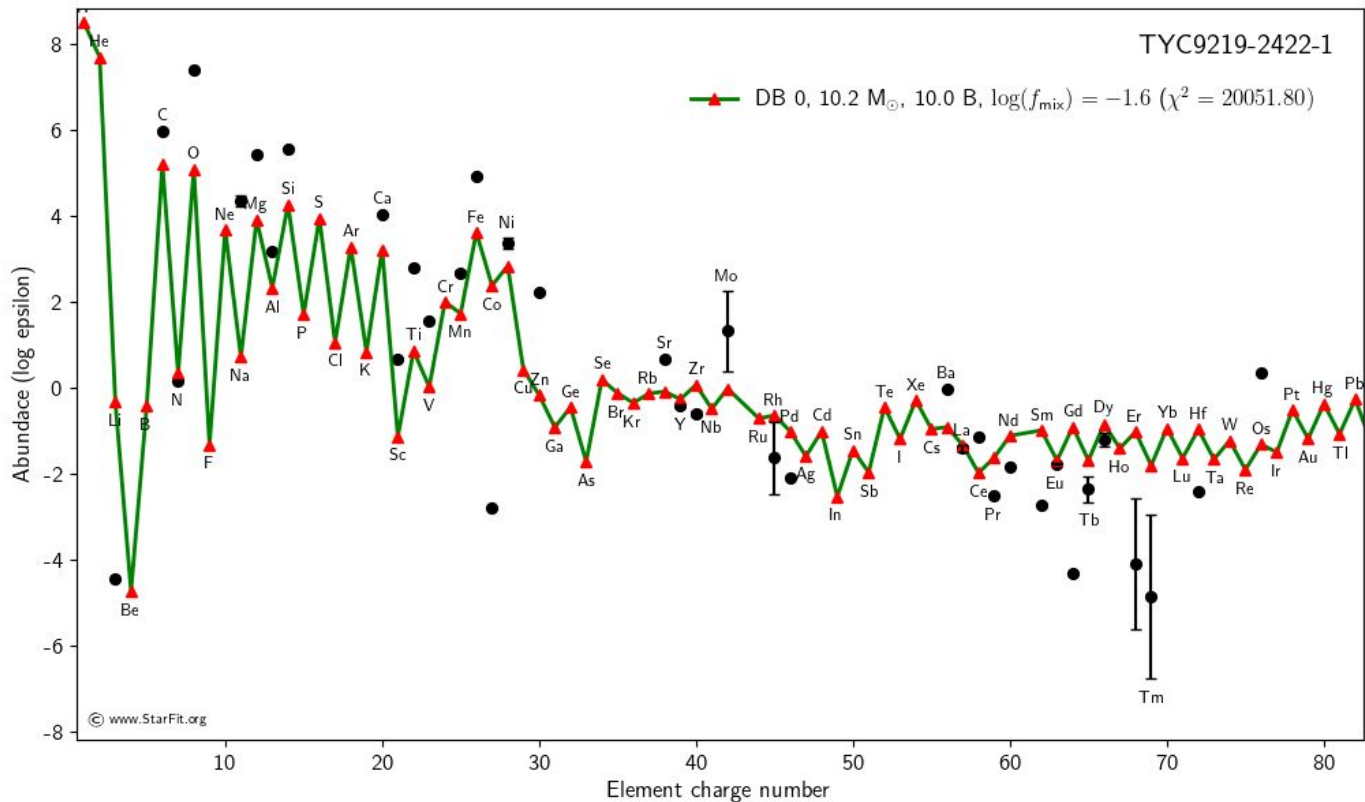
- Teff: 5014(59) K
- $\log g$: 2.16(1)
- $[\text{Fe}/\text{H}]$: -2.37(1)
- 37 elements (21 n.c.)

TYC 9219-2422-1

- Teff: 5366(66) K
- $\log g$: 3.01(1)
- $[\text{Fe}/\text{H}] = -2.27(4)$
- 37 elements (20 n.c.)







LAST YEAR ACTIVITIES

Meetings:

- i-process Nucleosynthesis Workshop & School, Limassol - Cyprus 2023 (talk)
- 2023 CeNAM Frontiers in Nuclear Astrophysics Meeting, East Lansing - USA (poster)
- European Astronomical Society Meeting 2023, Kraków - Poland (poster)

Popularization of Science:

- History of formation of the Milky Way and the heaviest elements of the periodic table. UNIFESP, Diadema - Brasil (online)

Paper:

- *Exploring the chemodynamics of metal-poor stellar populations*
da Silva, A. R.; Smiljanic, R.
2023, A&A, 677, A74