



Contribution ID: 136

Type: **Contributed talk**

## Probing the third r-process peak with high-resolution spectra

*Friday 20 September 2024 12:30 (15 minutes)*

With the recent large-scale surveys such as APOGEE, GALAH, LAMOST, among others, our knowledge about stellar nucleosynthesis, as well as the chemical evolution and composition of the Milky Way, has been growing quickly. However, surveys have a trade-off between data volume and data quality, to allow probing the chemistry of the Galaxy as a whole. That results in some potentially interesting species being overlooked, a gap that can be filled by boutique spectroscopic studies relying on very high-quality data. In order to contribute with the understanding of how some of the heaviest elements of the periodic table behave both in terms of stellar nucleosynthesis and Galactic Chemical Evolution, we will present a study on Hf, Os, and Ir abundances using high resolution ( $R \sim 40,000$ ), high signal-to-noise ratio stellar spectra observed with UVES at VLT. Our sample consists of 52 metal-poor ( $-3.5 < [\text{Fe}/\text{H}] < -1.7$ ), C-normal red giants, presenting a large range of Eu abundances. We will discuss how our results impact the understanding of the r-process, in particular the third peak, as well as the their relationship (or absence of) with stellar kinematics.

**Primary author:** ALENCASTRO PULS, Arthur (Goethe University Frankfurt)

**Presenter:** ALENCASTRO PULS, Arthur (Goethe University Frankfurt)

**Session Classification:** Plenary Session