Contribution ID: **46** Type: **Oral Presentation**

The intermediate neutron capture process in AGB stars

Despite considerable progresses over the past decades, the origin of trans-iron elements is not yet fully understood. In addition to the slow (s) and rapid (r) neutron capture processes, an intermediate neutron capture process (i-process) is thought to exist at neutron densities intermediate between the s- and r-processes. The isotopic signature of some pre-solar grains and the chemical composition of the so-called r/s-stars support the existence of this process but the astrophysical site(s) hosting the i-process is (are) actively debated. The early AGB phase of low-mass stars is a promising site. In this presentation, I will focus on the development of the i-process in state-of-the-art AGB stellar models computed with the STAREVOL code. I will pay special attention to the chemical fingerprint of these stars, and show that they can produce some short-lived radionuclides.

Length of presentation requested

Oral presentation: 8 min + 2 min questions (Poster-type talk)

Please select between one and three keywords related to your abstract

Nucleosynthesis

2nd keyword (optional)

Stellar evolution

3rd keyword (optional)

Primary author: CHOPLIN, Arthur (Université Libre de Bruxelles)

Co-authors: SIESS, Lionel (Free University of Brussels); GORIELY, Stephane (Free University of Brussels)

Presenter: CHOPLIN, Arthur (Université Libre de Bruxelles)