

# From the s-process to the i-process: A new perspective on the chemical enrichment of extrinsic stars

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Recently, there have been hints that an increasing number of extrinsic stars (barium, CH and CEMP) could be enriched in chemical elements produced by the i-process (characterised by neutron densities  $N_n \sim 10^{14-15} \text{ cm}^{-3}$ ) rather than by the s-process ( $N_n \sim 10^8 \text{ cm}^{-3}$ ).

Different isotopic mixtures are predicted for the s-process on the one hand, and for the r- or i-processes on the other. After a brief review of previous isotopic composition determinations, we report on our investigation, based on high-resolution, high signal-to-noise HERMES and UVES spectra and non-LTE line synthesis, of the barium isotopic composition of extrinsic stars enriched in heavy elements.

We also report on a sample of extrinsic stars uncovered in Gaia DR3. We discuss their properties in terms of chemical abundances and binarity, as well as the overlap with existing catalogues of extrinsic stars.

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