

第6回 RESCEU コロキウム



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On the distribution of neutron capture elements across the Galactic thin disk using Cepheids

We present new results concerning the distribution of neutron capture (s-, r-) elements across the Galactic thin disk. We use young (classical Cepheids) stellar tracers for which we collected high spectral resolution, high signal to noise optical spectra with UVES at VLT (ESO). We found that the five (s: Y, La, Ce, Nd; r: Eu) investigated elements show well defined negative gradients when moving from the innermost to the outermost regions. Moreover, we also found that the gradients of the above elements are positive as a function of age/pulsation period. Thus suggesting a trend with age similar to alpha-elements. On the other hand, the slopes of [element/Fe] vs Galactocentric distance are more positive than for alpha-elements. We introduce plausible working hypothesis to take account of the difference, and perform a detailed comparison with similar abundances for dwarf and giant stars available in the literature. Finally, we discuss the abundance ratio between s- and r- elements (La/Eu) and between heavy and light s- elements (La/Y) and outline their impact on the chemical enrichment history of the Galactic thin disk.

興味をお持ちの方の聴講を歓迎致します。お茶とお菓子を用意しております。