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# Probing stellar evolution with the surface abundance patterns of stars in globular clusters

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## Abstract

The chemical composition of the stellar atmosphere is not a perfect reflection of the gas cloud in which the star was born. Already on the main sequence can subtle diffusion effects slowly alter the surface composition of elements, while the later giant phases exhibit the effects of dredge-up processes. In a metal-poor globular cluster, our best proxy for an old, single stellar population, these effects can be directly traced by comparing stars in different evolutionary phases. In addition to verifying the predictions from standard stellar evolution theory, this can give us important clues on yet unknown physical processes in the stellar interior. The light and fragile element Li is extra sensitive to internal mixing event and can shed light even on problems of cosmological nature.

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