

The s-process in low and intermediate-mass stars

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The chemical evolution of the Universe is governed by the nucleosynthesis contribution from stars, which in turn is determined primarily by the initial stellar mass. I will review models of the slow neutron capture process (the s-process) and stellar yields from single metal-poor stars up to about 8 solar mass. Stars in this mass range evolve to become cool red giants after the main sequence.

It is during the giant branches that these stars experience mixing events that change the surface composition, with significant enrichments in carbon and heavy elements synthesized by the s-process. While the qualitative picture of the s-process is well known, there are major uncertainties that affect stellar yields. These problems are particularly problematic for metal-poor stars owing to a lack of observational constraints. I will discuss some of these uncertainties and also highlight areas where progress has been made.

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Talk/Poster

Talk

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