

CEMP Stars as Probes of First-Star Nucleosynthesis, the IMF, and Galactic Assembly



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New light on the Sun: Updates on helioseismology and the Solar modelling problem

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The Sun holds a special place in stellar astrophysics, we use it as reference for the determination of the chemical abundances of all stars in the Milky Way. Since 1962, the field of helioseismology has provided unprecedented ways of testing the internal structure of solar models. Soon after the discovery of neutrino-oscillation and the end of the solar neutrino problem, the revision of the solar abundances by Asplund and collaborators lead to strong disagreements between solar standard models and helioseismic inferences. This now 15 year old tedious issue is called the solar modelling problem and crystallizes the strong dependencies of stellar models on fundamental physics. In this talk, I will present the current state of solar modelling, the current questions surrounding the solar abundances and how new seismic inferences can help shed new light on the limitations of solar models and possible solutions to the solar modelling problem.

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