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# The influence of chemical composition on the evolution of metal-poor stars

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The early formation history of the Milky Way is preserved in its old, metal-poor stellar populations. The detailed chemical compositions of these stars differ considerably from the solar abundance pattern and, indeed, vary depending on the environment in which the stars formed. I will describe our efforts to understand which chemical elements are most important from the point of view of stellar evolution. In some cases this differs considerably from what can be readily measured from spectroscopy, leading to significant uncertainties. Building on this, I will discuss the importance of being able to match the abundance patterns observed in stars with stellar models in order to facilitate accurate age determinations. Finally, I will highlight the importance of distinguishing between the initial chemical composition of a star and that which is observed at the surface in estimating its age.

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