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# The impact of red-giant asteroseismology on Galactic Archaeology

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## Abstract

I will review the advances of Galactic archaeology in the last 10 years, with a particular focus on studies that have become possible thanks to ensemble asteroseismology with CoRoT, Kepler, K2, and TESS - in combination with large ground-based spectroscopic surveys. Red-giant stars are particularly interesting for Galactic archaeology studies, since they are numerous, bright, and cover a wide range of stellar ages. Even in the PLATO era, red-giant ages derived from joint asteroseismic and spectroscopic constraints are only available for select samples in certain fields. Therefore, Galactic archaeologists typically use the much larger coverage of spectroscopic surveys like APOGEE, GALAH, LAMOST, or Gaia RVS to make inferences about the Galactic past. However, whenever age becomes a crucial parameter, asteroseismology is needed to obtain meaningful results. Finally, I will try to convince the audience that the future for Galactic archaeology studies with PLATO (combined with the next Gaia data releases) is even brighter.

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