## 2018 JINA-CEE Frontiers in Nuclear Astrophysics



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## How was the universe enriched with the first heavy chemical elements?

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The emergence of the first stars fundamentally transformed the early universe, as sources for high-energy radiation and the first heavy chemical elements. I will review our current understanding of how the first supernovae enriched the pristine intergalactic gas, how the metals were transported into the surrounding medium, and how they eventually enabled the formation of long-lived, metal-poor stars. I will conclude with a discussion of stellar archaeology, the increasingly high-precision endeavor to constrain the properties of the first stars with large surveys of metal-poor stars in the Milky Way and in dwarf galaxies within the Local Group.

**Primary author:** Prof. BROMM, Volker (University of Texas at Austin)

**Presenter:** Prof. BROMM, Volker (University of Texas at Austin)

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