

# A New Approach to the Cosmic Lithium Problem

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The predictions of light element abundances in standard Big Bang Nucleosynthesis agree very well with astrophysical probes of primordial material, with the exception of lithium. Most of the observational constraints we have on the primordial abundance and cosmic evolution of Li comes by way of the Li abundance in stellar atmospheres, which are four times lower than BBN predictions in the WMAP-era. A broad range of potential solutions to this “lithium problem” have been suggested, from stellar astrophysics solutions (depletion of the surface Li abundances in stars) to physics beyond the Standard Model (annihilating or decaying dark matter in the epoch of BBN). We have adopted a new approach to this problem, using observations of Li in interstellar gas of low-metallicity galaxies to probe the cosmic evolution of Li. I will summarize our recent results using this approach, which leave the door open for new physics in the early Universe.