

Abstract Submitted  
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**Lithium destruction in metal-poor halo stars and the cosmological lithium problem**<sup>1</sup> CHARLES MARRDER, GRANT MATHEWS, LUCA BOC-  
CIOLI, IN-SAENG SUH, University of Notre Dame — The cosmological lithium  
problem refers to a shortcoming in the otherwise-successful theory of Big Bang  
nucleosynthesis (BBN); specifically, while BBN accurately predicts the primordial  
abundance of light elements such as H and He, the theory predicts there to be about  
three times more primordial  ${}^7\text{Li}$  than is actually observed. A possible explanation  
of this deficit is an insufficient understanding of stellar convective mechanisms in  
which  ${}^7\text{Li}$  could be destroyed via thermonuclear processes. We are specifically ex-  
ploring convective overshoot and microturbulence in simulations of metal-poor halo  
stars as possible means of reproducing the predicted uniform factor of 3 reduction  
in primordial  ${}^7\text{Li}$  abundance.

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