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Lithium Evolution of Giant Stars Observed by LAMOST and Kepler

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Lithium is a fragile but crucial chemical element in the Universe, and exhibits interesting and complex behaviors. Based on the LAMOST medium resolution spectra, we determined the lithium abundances for more than 450,000 stars. We use a sample of giants with known evolutionary phases and lithium abundances from the LAMOST-Kepler and LAMOST-K2 fields, we construct mass–radius diagrams to characterize the evolutionary features of lithium. The stars at red giant branch phase show natural depletion along with their stellar evolution, however, there are an obvious crowd stars with anomalously slightly higher Li abundances near the bump. Also, we found there obvious Li-rich giants near the RGB tip.

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