Radial abundance gradients of OB stars in the outer Galactic disk

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Abstract

Metallicity gradients are important constraints for models of chemical evolution. We present the present-day radial gradients oxygen and silicon abundances in the Galactic disk using a sample of main-sequence O- and B-type stars with galactocentric distances between 8.4 and 15.6 kpc. Our analysis is based on the fits of non-NLTE synthetic profiles computed with TLUSTY and SYNSPEC to high-resolution echelle spectra obtained with the MIKE spectrograph at Magellan Telescope, Las Campanas. We obtained stellar parameters, silicon and oxygen abundances from the Non-LTE synthesis, and estimated stellar distances based on GAIA DR2 results. We present the radial distributions of oxygen and silicon abundances and discuss the obtained gradients in terms of models of galactic evolution.

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