

ASCL Code Record

[**ascl:2503.025**] LESSPayne: Labeling Echelle Spectra with SMHR and Payne

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LESSPayne performs semi-automatic analysis for echelle spectra of stars. It uses a neural network emulator to do a full spectrum fit to estimate stellar parameters and performs automatic continuum and equivalent width fits normalization with theoretical masks. The code uses MOOG ([ascl:1202.009](#)) for spectrum synthesis fitting, ATLAS model atmosphere interpolation, and equivalent width abundance determination. LESSPayne can also perform automatic abundance uncertainty analysis with error propagation and summary tables, and should be viewed as providing a high-quality initialization for an smhr file that reduces the time for a standard analysis.

Code site: <https://github.com/alexji/LESSPayne>

Used in: <https://ui.adsabs.harvard.edu/abs/2024MNRAS.530.2512L>
<https://ui.adsabs.harvard.edu/abs/2024arXiv241017312A>

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