Stellar Spectral Classification Using Artificial Neural Networks

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The automated classification of stellar spectra data set is of growing importance as the size of survey data set increases. Classification of a large number of stellar spectra into various closely related classes, which requires extensive human efforts, but by using Artificial Neural Network(ANN) techniques, it has become possible to classify large databases in considerably short time. The supervised ANN with Back-propagation algorithm is used to classify a complete set of 158 test spectra into 55 spectral type of a reference library using SNNS sode and improved upon the classification accuracy as reported by early works on this data set.