

NEW Mg_2 INDICES FROM NEW MODEL ATMOSPHERES

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A new set of spectral indices computed for the Mg feature at 5175 Å is presented. The spectral indices were computed using the most recent grid of model atmospheres and programs to produce synthetic spectra (Kurucz 1993; CD-Rom 18) for the temperature range 4000-6000 K, and gravity interval $\log g = 1.5-4.5$. The indices reported here refer to solar chemical abundance.

We have compared our results with previous empirical (Worthey et al. 1993) and theoretical indices (Gulati et al. 1993) for the same atmospheric parameters. The results indicate that our Mg_2 indices are higher than those calculated previously, with the differences more pronounced at the lowest gravities and temperatures.

The dependence of the strength of this feature on effective temperature is similar for all gravities. When compared to empirical calibrations, the new indices are generally higher than the observed ones at low temperatures and gravities, while for $T_{\text{eff}} \geq 5000$ K there is a good match of our results with both previous theoretical calibrations and empirical ones.