

SPECTROSCOPIC GRAVITY ESTIMATES FOR LATE-TYPE GIANTS: ARCTURUS AS AN EXAMPLE

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The surface gravity of Arcturus is estimated from the strength of the MgH features (the Mg abundance being derived from MgI lines), from strong metal lines and from the FeI/FeII ionization equilibrium. The MgH lines give  $\log g = 1.7$  (cgs units) and 4375 K for the effective temperature. This value of  $\log g$  is consistent with the gravity derived from the sample of strong pressure-broadened lines from FeI, CaI and NaI which gives  $\log g = 1.6$ , and what we obtain from the ionization equilibrium of Fe,  $\log g = 1.4$ . The corresponding estimates of the maximum error are 0.3, 0.2 and 0.5 dex, respectively. The mass of Arcturus is found to be in the interval 0.6 - 1.0 solar masses. It is concluded that the MgH features offer good possibilities for determining gravities of late-type stars, when good estimates of effective temperatures are available.