

distances to their host galaxies, NGC 337 and NGC6946 respectively. Our results are comparable with other secondary distance measurement methods, 4-5 Mpc, however smaller than the result derived from the Tip of Red Giant Branch (TRGB) method, 6.7 ± 0.2 and 7.7 ± 0.3 Mpc.

[포 SA-10] Physical nature of the eclipsing δ Scuti star AO Serpentis

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We present *BV* photometric observations and high-resolution spectra of AO Ser, which were obtained at the Mt. Lemmon Optical Astronomy Observatory (LOAO) and the Bohyunsan Optical Astronomy Observatory (BOAO), respectively, in 2017. The radial velocities (RVs) for both components were measured, and the effective temperature of the primary star was found to be $T_{\text{eff},1} = 8,820 \pm 62$ K by a comparison of the observed spectra and the Kurucz models. A unique set of fundamental parameters of AO Ser were derived for the first time by a simultaneous analysis of the light and RV curves. The results indicate that our program target is a semi-detached eclipsing system with values of $M_1 = 2.06 \pm 0.11 M_{\odot}$ and $M_2 = 0.41 \pm 0.03 M_{\odot}$, $R_1 = 1.54 \pm 0.03 R_{\odot}$ and $R_2 = 1.30 \pm 0.02 R_{\odot}$, and $L_1 = 12.9 \pm 0.2 L_{\odot}$ and $L_2 = 0.9 \pm 0.3 L_{\odot}$. We applied multiple frequency analyses to the eclipse-subtracted light residuals. As a result, two frequencies of $f_1 = 21.85151 \text{ days}^{-1}$ and $f_2 = 23.48405 \text{ days}^{-1}$ were detected and their pulsation constants were calculated to $Q_1 = 0.0344$ days and $Q_2 = 0.0320$ days. The pulsational characteristics and the position in the HR diagram demonstrate that the primary star is a δ Sct pulsator.