[ST06] Photometric and spectroscopic observations of the oEA-type variable IV Cas

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We had discovered δ Scuti-type pulsating phenomena for the Algol-type semi-detached eclipsing binary IV Cas and had classified it as a member of the oEA star (Kim et al. 2005, IBVS no.5669). The oEA (oscillating EA) star is a new group of variable stars to be defined as "the mass-accreting pulsating components of spectral type (B)A-F main-sequence in Algol-type semi-detached eclipsing binary systems" (Mkrtichian et al. 2004, A&Ap, 419, 1015).
We carried out further CCD photometric observations for 13 nights in two autumn seasons of 2005 and 2006, at dual sites of Sobaeksan Optical Astronomy Observatory (61cm telescope) in Korea and Mt. Lemmon Optical Astronomy Observatory (1m telescope) in USA. We have also obtained a high-resolution spectrum to find out spectral type of each binary component, using a high-resolution echelle spectroscopy attached to 1.8m telescope at Bohyunsan Optical Astronomy Observatory in Korea.
Using these photometric and spectroscopic data, in addition to our previous photometric data obtained in 2004, we investigated physical properties of the oEA star IV Cas in detail. We will present these observational results.

[ST07] Radial velocity curve of the oEA-type variable AB Per

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The Algol-type semi-detached eclipsing binary AB Per had been classified as an oEA (oscillating EA) star by Kim et al. (2003, IBVS no. 5325) to have a δ Scuti-type pulsating component with a pulsation period of about 0.20 day. It is considered that the binary system consists of an A-type pulsating primary component and an evolved G-type secondary one. Kim et al. (2006, MmSAI, 77, 184) deduced the existence of accretion disk around the pulsating primary from the H α emission lines.
In order to derive the mass ratio of the system more precisely, we performed spectroscopic observations and obtained 48 spectra from March 2005 to March 2006 using the Bohyunsan Observatory Echelle Spectrograph (BOES) attached to the 1.8m telescope at Bohyunsan Optical Astronomy Observatory in Korea. While we derived the photometric mass ratio of 0.31 by applying photometric data to the W-D binary model, the spectroscopic mass ratio was determined to be 0.17 from the radial velocity curve analysis. With the simultaneous analysis of these photometric and spectroscopic data, we present the physical properties of AB Per.