The close PG1159 binary system SDSS J212531.92-010745.9
New light curves and spectra

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Methods to measure masses of PG 1159 stars in order to test evolutionary scenarios are currently based on spectroscopic masses or asteroseismological mass determinations. SDSS J212531.92-010745.9, a recently discovered PG 1159 star in a close binary system, may finally allow the first dynamical mass determination, and has so far been analysed on the basis of one SDSS spectrum and photometric monitoring (Nagel, Schuh, Kusterer, et al., 2006, A&A 448, 25L).

In order to be able to phase radial velocity measurements of the system SDSS J212531.92$-$010745.9, we have followed up the photometric monitoring of this system. New white-light time series of the brightness variation of SDSS J212531.92$-$010745.9 with the Tübingen 80 cm and Göttingen 50 cm telescopes extend the monitoring into a second season (2006), and provide the observational basis for an improved orbital ephemeris determination.

A series of phase-resolved medium-resolution spectra have been obtained with the TWIN spectrograph at the 3.5 m telescope at Calar Alto, which will allow us to derive the radial velocity curves for the system, and to perform spectral analyses of the irradiating and irradiated components at different phases.

We give the improved ephemeris for the orbital motion of the system, based on a sine fit which now results in a period of 6.95573(5) h, and discuss the associated new amplitude determination in the context of the phased light curve variation profile. Furthermore, we present a first look at the newly obtained spectra. The light curve and radial velocities combined will allow us to carry out a mass determination.