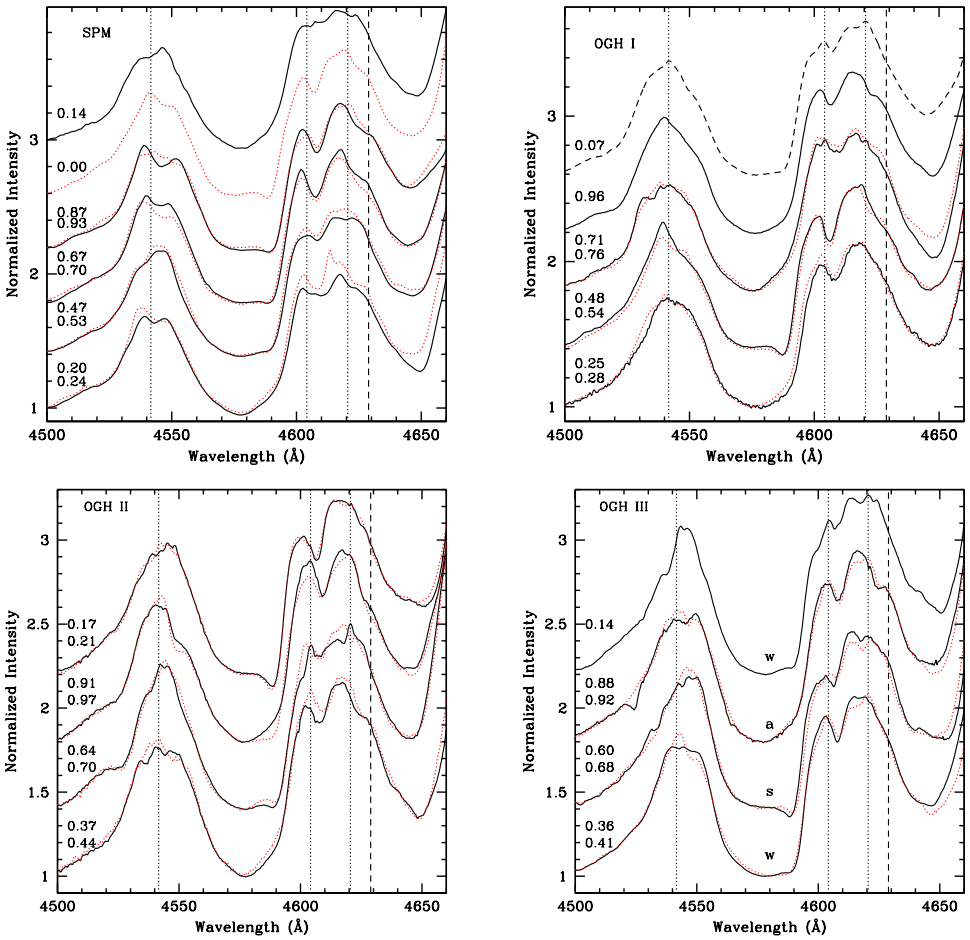

Fig. 1. Spectra from 1991 (SPM; top left), 1999 (OGH I; top right), 2005 (OGH II; bottom left) and 2009 (OGH III; bottom right). Spectra from the first 3.76 d cycle are shown with a continuous line, those from the second cycle are shown with dots, with spectra of similar orbital phases having the same vertical shift in the plot. Orbital phases with the Georgiev et al. (1999) ephemeris are listed. Vertical dotted lines indicate laboratory wavelengths of He II 4541.59, N V 4604.14 and N V 4620.50; the dashed line marks the location of O V 4628.87, a possible contributor to the blend. The letters *s*, *w* and *a* in the OGH III panel label the type of P Cygni absorption (see text). The color figure can be viewed online.

3. N V LINE-PROFILE VARIABILITY

Figure 1 shows the spectral region containing the He II 4542 and the N V 4604-21 doublet for the four epochs of observations. Spectra are displaced vertically to allow a clear view of their characteristics at different phases. Given that the observations of all four epochs were carried out over at least two 3.765 d cycles, two spectra per epoch at similar phases are generally available. The spectrum from the second cycle is plotted with dots. Phases were computed using the Georgiev et al. (1999) ephemeris and are listed.

The variations in the N V 4604-21 doublet can be described primarily in terms of the occasional presence of a prominent P Cygni absorption component which at other times is absent, and an intermediate state in which the absorption is weak. Although the same type of variability is present in all epochs, a comparison of the four panels in Figure 1 leads to the conclusion that a particular profile shape does not always appear in the same 3.76 d phase interval. For example, the P Cygni absorption component is strong at $\phi \sim 0.9 - 1.0$ in the SPM data, at $\phi \sim 0.5$ in the OGH I data; at $\phi \sim 0.2$ in the OGH II data, and $\phi \sim 0.6 - 0.7$ in the OGH III spectra. Hence, the presence of a strong P Cygni absorption does not correlate with phase for spectra separated in time by a few years, as are our data. However, on timescales of less than a couple of weeks, a phase-dependence does exist.