Eclipse maps of spiral shocks in the accretion disc of IP Pegasi in outburst [R. Baptista et al.] Raymundo Baptista¹, E. Harlaftis² and D. Steeghs³, ⁴

Eclipse lightcurves of the dwarf nova IP Peg during the November 1996 outburst are analysed with eclipse mapping techniques to constrain the location and investigate the spatial structure of the spiral shocks observed in the Doppler tomograms (Harlaftis et al. 1999). Eclipse maps in the blue continuum and in the \textit{CIII}⁺\textit{NIII}λ4650 emission line show two asymmetric arcs of ∼90 degrees in azimuth and extending from intermediate to the outer disc regions (\(R \approx 0.2 - 0.6 \, R_L\), where \(R_L\) is the distance from disc centre to the inner Lagrangian point) which are interpreted as being the spiral shocks seen in the Doppler tomograms. The \textit{HeII}λ4686 eclipse map also shows two asymmetric arcs diluted by a central brightness source. The central source probably corresponds to the low-velocity component seen in the Doppler tomogram and is understood in terms of gas outflow in a wind emanating from the inner parts of the disc. We estimate that the spirals contribute about 16 and 30 per cent of the total line flux, respectively, for the \textit{HeII} and \textit{CIII}⁺\textit{NIII} lines. Comparison between the Doppler and eclipse maps reveals that the Keplerian velocities derived from the radial position of the Keplerian velocities. We undertake simulations with the aim to investigate the effect of artifacts on the image reconstruction of the...