Astronomy & Astrophysics

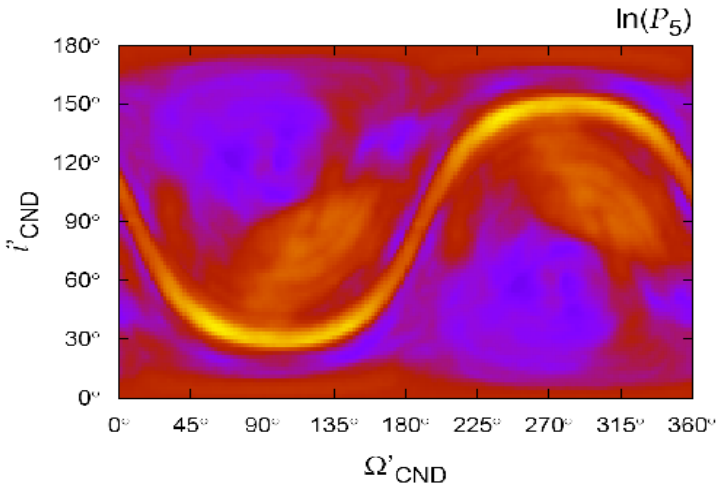
HIGHLIGHTS: this week in A&A

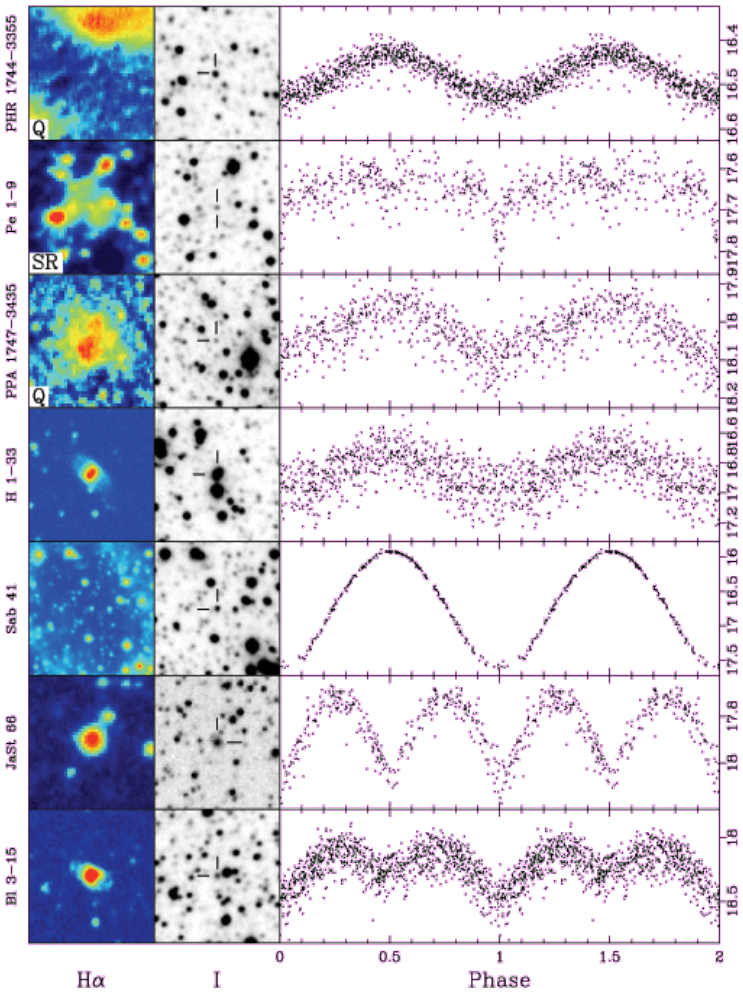
Volume 496-3 (March IV 2009)

In section 5. Galactic structure, stellar clusters and populations

"The warped young stellar disc in the Galactic centre", by L. Subr, J. Schovancova, P. Kroupa, A&A 496, p. 695

Within the central parsec of our Galaxy, several dozen stars orbit the central super-massive black hole in a coherent rotating disk. Beyond that distance, one finds a massive molecular torus. Based on a simple calculation of the Kozai effect induced by the torus, the paper proposes that the observed thickening of the stellar disk in the Galactic center is a warp induced by the gravitational field of the circumnuclear molecular cloud, and verifies that this hypothesis is consistent with currently published data.





In section 7. Stellar structure and evolution

"Binary planetary nebulae nuclei towards the Galactic bulge. I. Sample discovery, period distribution, and binary fraction", by B. Miszalski et al., A&A 496, p. 813

This paper by Miszalski et al. is long awaited. It presents the results of a survey for close binary central stars for planetary nebulae, which finally (after 20 years!) reinforces the statistics from a handful of objects detected in the past, and finalizes the conclusion that the binary fraction is 10-20% for a central star of PN that went through common envelope interaction.