# HIGHLIGHTS: this week in A&A

Volume 470-3 (August II 2007)

Photometric changes in HD 377776

"The light variability of the helium strong star HD 37776 as a result of its inhomogeneous elemental surface distribution" by J. Krticka et al., A&A 470, p. 1089

This work presents a computation of the photometric changes in the spotted early-type star HD37776, starting from a known inhomogeneous distribution of helium and silicon over the stellar surface. These model calculations are able to explain the main features of the photometric curves and support the idea that the main properties of this star can be understood when assuming spots with a peculiar chemical composition.
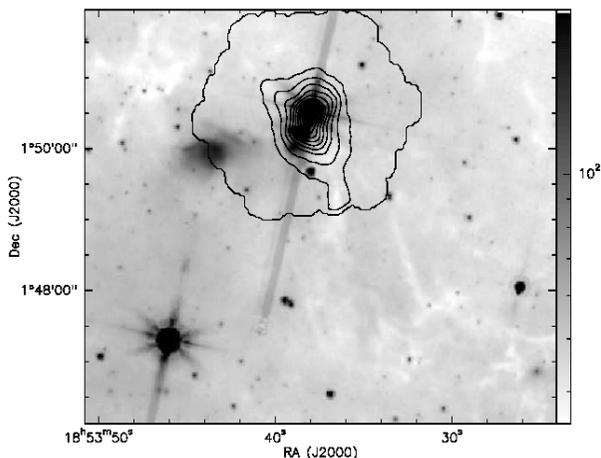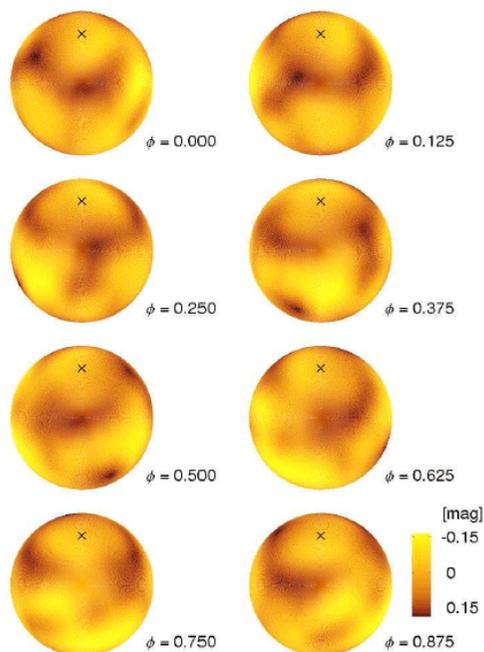
The intermediate to high-mass protocluster IRAS 18511+0146

"IRAS 18511+0146: a proto Herbig Ae/Be cluster?" by S. Vig et al., A&A 470, p. 977

This paper presents multi-instrument observations and simulations of the gas and stars surrounding the luminous, young, intermediate to high-mass protocluster IRAS 18511+0146. They find that the central, most obscured part of the protocluster coincides with the compact mm-submm SCUBA source and that it is responsible for most of the luminosity. They identify a number of mid-infrared bright cluster members that appear to be very young stellar sources and also show that IRAS 18511+0146 is probably a precursor to a Herbig type star.

In section 1. Letters

"Direct diameter measurement of a star filling its Roche lobe. The semi-detached binary SS Leporis spatially resolved with VINCI/VLTI" by T. Verhoelst, E. van Aarle, and B. Acke, A&A 470, p. L21

Stellar evolution in close binary systems is strongly influenced by mass transfer from one star to another. That complex process is usually studied in eclipsing binaries through spectroscopy and measurement of the eclipse light curve. The authors adopt an alternative and more direct approach, using optical interferometry to resolve each of the two stars, as well as a circumbinary disk. This method has considerable potential to resolve the ambiguities left by the indirect methods.