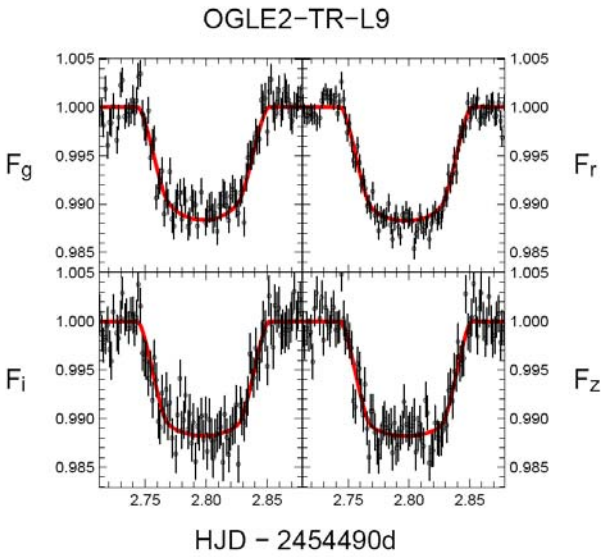
Astronomy & Astrophysics

HIGHLIGHTS: this week in A&A

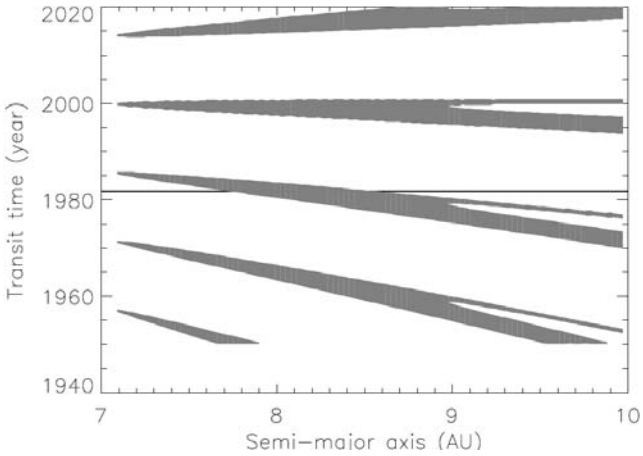
Volume 497-2 (April II 2009)



In section 10. Planets and planetary systems

"OGLE2-TR-L9: an exoplanet transiting a rapidly rotating F3 star", by I.A.G. Snellen, J. Koppenhoefer, R. van der Burg, S. Dreizler, J. Greiner, M. de Hoon, T. Husser, T. Kruehler, R. Saglia and F. Vuijsje, A&A 497, p. 545

This is the first detection of a planet transiting a rapidly rotating F star. The star is the hottest one (Teff=6930K) detected thus far that hosts a planet. The planet itself is larger than theoretical models predict.



In section 10. Planets and planetary systems

"Is Beta Pictoris b the transiting planet of November 1981?", by A. Lecavelier des Etangs and A. Vidal-Madjar, A&A 497, p. 557

Beta Pic b is an extremely interesting planet. Discovered at the end of 2008 by adaptive optics (Lagrange et al. A&A 2009), this planet of ~3 times the mass of Jupiter orbits Beta Pic, a young star with an extremely large debris disk, at a projected distance of 8 AU. The presence of a massive planet on a slightly eccentric orbit had been conjectured to explain sudden photometric variations attributed to comet-like objects falling onto the central star (Beust et al. A&A 236, 1990). A photometric variation measured in 1981 had also been attributed to a possible transit of a long-period planet (Lecavelier des Etangs et al., A&A 299, 1995). In this issue, Lecavelier des Etangs and Vidal-Madjar reexamine the problem in the light of the new detection to show that all these events may be caused by the same planet! If true, they predict that, in 2013, the planet should be observed between 200 and 500 milliarcseconds from its parent star Beta Pic in the southwest branch of the disk.