show that the dynamical age of the association obtained via the traceback technique and the average age derived from theoretical evolutionary models are in good agreement.

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DIFFERENTIAL CHEMICAL ABUNDANCES OF HEAVY ELEMENTS IN SOLAR TWINS

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In this work we present differential chemical abundances of neutron-capture elements (Z >30) in solar twins. We have obtained high resolution (R = 60,000) and high S/N (>100) spectra of solar twins in the ultraviolet region (310-400nm) with the UVES spectrograph at the VLT/ESO. In the same configuration we also observed that the Sun, that is our reference for the differential analysis, thus obtaining results with high accuracy and precision. In the ultraviolet there is a large number of atomic transitions of heavy elements, which allows the detailed study of the r and s processes. Our sample of solar twins covers a wide range of ages, so it will be possible to study the temporal evolution of the neutron capture elements.

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ON THE SENSITIVITY OF EXTRASOLAR MASS-LOSS RATE RANGES: HD 209458B A CASE STUDY

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We present a 3D hydrodynamic study of the effect that different stellar wind conditions and planetary wind structures have on the calculated Lyα absorptions during the transit of HD209458b. We approach the problem using 3D hydrodynamic simulations. Considering a range of stellar wind speeds $\sim[350-800]$ km s^{-1}, coronal temperature $\sim [3-7]\times10^6$ K and two values of the polytropic index $\Gamma \sim [1.01-1.13]$, while keeping fixed the stellar mass loss rate, we found a that a $\dot{M}_p$ range between $\sim [3-5]\times10^{10}$g s^{-1} give account for the observational absorption in Lyα measured for the planetary system. Also, several models with anisotropic evaporation profiles for the planetary escaping atmosphere were carried out, showing that both, the escape through polar regions, resembling the emission associated with reconnection processes, and through the night side, produced by a strong stellar wind that compresses the planetary atmosphere and inhibits its escape from the day hemisphere yields larger absorptions than an isotropic planetary wind.

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INFRARED ACCRETION DISC MAPPING OF THE DWARF NOVA V2051 OPHIUCHI IN OUTBURST AND IN QUIESCENCE

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Dwarf novae are compact binaries where a late-type star (the secondary) fills its Roche lobe and transfers matter to a companion white dwarf (the primary) via an accretion disc. They show outbursts which recur on timescales of weeks to years, where the accretion disc brightens by factors 20 to 100 either due to a thermal-viscous instability in the disc (DI model) or to a burst of enhanced mass-transfer from the secondary (MTI model). We report time-series of fast photometry of the dwarf nova V2051 Oph in the J and H bands, obtained with the CAMIV at the 1.6 m telescope of Observatório Pico dos Dias/Brazil, during the decline of an outburst in 2005 June, and in 2008 when the object was in quiescence. We modeled the ellipsoidal variations caused by the secondary to infer its contribution to the J and H fluxes, and fitted stellar atmosphere models to find a photometric parallatic distance of $d = (111 \pm 14)pc$. Front-back brightness asymmetries in J and H-band eclipse maps along the decline from the 2005 outburst suggest that the accretion disc had a non-negligible opening angle which decreased as the disc cooled down. The time evolution of the disc radial temperature distribution along the outburst decline shows a cooling wave which *accelerates* as is travels inwards – in contradiction to a basic prediction from the DI model.