



UVES measurements of Saturn's winds with the Absolute Accelerometry technique

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We have observed Saturn with the VLT at Paranal with the aim of characterizing the equatorial jet at cloud level and the latitudinal variation of the zonal winds. The UVES instrument, mounted on the Kueyen telescope, has been used, which simultaneously achieves high spectral resolving power and high spatial resolution. The field has been derotated in order to have the aperture aligned perpendicularly to Saturn's rotation axis. In this configuration, spatial information in the East-West direction is preserved in a set of spectra in the direction perpendicular to dispersion. The technique of absolute accelerometry (Connes, 1985, ApSS 110, 211) has been applied to the backscattered solar spectrum in order to determine the Doppler shift associated with the zonal circulation. Our measurements have been made in the wavelength range 4800-6800 Å. Preliminary results are promising but the determination of the wind velocity will, however, require an accurate determination of the probed pressure levels.

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