

MEASURED AND CALCULATED ABSORPTION-LINE SHAPE PARAMETERS OF
THE H₂O–CO₂ SYSTEM IN THE 8600-9000 CM⁻¹ SPECTRAL REGION

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The CO₂-broadening and shift coefficients of H₂O lines are necessary to study the planets atmospheres with the carbon dioxide as the main gas. Water-vapor absorption lines broadened by the carbon-dioxide pressure were recorded using the IFS 125 HR Fourier spectrometer in the range of 8600–9000 cm⁻¹. It was applied the quadratic Voigt profile which takes into account the dependence of the broadening and shift on the colliding molecules velocities. Calculations were performed using a semi-empirical method, the rotational quantum numbers J vary from 0 to 20.

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