GLOBAL FIT OF THE HIGH RESOLUTION INFRARED SPECTRUM OF D_2S

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High resolution Fourier transform spectra of the D_2S molecule in the regions of polyads of interacting vibrational states $v = 3/2, 2, 5/2, 3$ and 7/2 ($v = v_1 + v_2/2 + v_3$) were recorded for the first time with a Bruker IFS 120 Fourier transform interferometer and analysed. A global fit of all currently available rotation-vibration energies has been made for 22 vibrational states of the D_2S molecule. The resulting set of 231 parameters reproduces all the initial experimental data (about 3670 vibration-rotation energies which correspond to more than 9700 ro-vibrational transitions with $J^{max.}$ = 25) with accuracies close to the experimental uncertainties.