Rovibrational interaction and vibrational constants of the symmetric top molecule $^{14}NF_3$

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As we did for the symmetric top molecule PF_3 [1-3], several accurate experimental values of the α^C and α^B rotation-vibration interaction parameters and ω_i, x_{ij} and g_{ij} vibrational constants have been extracted from the most recent high-resolution Fourier transform infrared, millimeter-wave and centimeter-wave investigations in the spectra of the oblate molecule $^{14}NF_3$ [4-10]. The band-centres used are those of the four fundamental, the overtones, the combination and hot bands identified in the region between 400 cm^{-1} and 2000 cm^{-1}.

Comparison of our constants [11] with the ones measured previously, by infrared spectroscopy at low resolution, reveals orders of magnitude higher accuracy of the new values. The agreement between our values and those determined by *ab initio* calculations employing the TZ2Pf basis is excellent.

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