HIGH RESOLUTION FTIR SPECTROSCOPY OF THE $\nu_4$ BAND OF BENZENE 1,3,5 – $\delta \mathbf{3}$

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We have recorded the $\nu_4$ band (Herzberg numbering) of benzene 1,3,5 – $\delta \mathbf{3}$ using high resolution (0.0015 cm$^{-1}$) Fourier transform infrared spectroscopy. The spectrum was taken with the benzene sample in a temperature stabilized cell (4°C), 20 cm in length. The interferometer used a mylar beamsplitter and the spectrum was recorded with a liquid helium-cooled silicon bolometer. For the band we have fit the following preliminary spectroscopic constants: $v_0 = 531.06401(1)$ cm$^{-1}$. $B' = 0.171542(2)$ cm$^{-1}$. $(C' - B') - (C'' - B'') = 3.48(2) \times 10^{-4}$ cm$^{-1}$. $B'' = 0.171842(3)$ cm$^{-1}$. Band centers of the observed sequences of hot bands will be reported.