

**HIGH-RESOLUTION FT-UV EMISSION SPECTROSCOPY OF THE $1-\nu''$
BANDS OF $B^2\Sigma^+ - X^2\Sigma^+$ SYSTEM OF $^{12}C^{16}O^+$.**

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The $B^2\Sigma^+$ ($\nu = 1$) level of $^{12}C^{16}O^+$ was investigated using the high-resolution, emission spectra obtained via Fourier-transform spectroscopy of the strongest (1 – 2) and (1 – 3) bands of the First Negative ($B^2\Sigma^+ - X^2\Sigma^+$) system^{1,2}.

The B-X, CO^+ bands were recorded with an instrumental resolution of 0.04 cm^{-1} and the best signal-to-noise ratio ca. 50:1. For obtaining spectra of the $^{12}C^{16}O^+$ isotopologue an air-cooled hollow-cathode (HC) lamp, filled with $^{12}C^{16}O_2$ and trace amount of Ne, was used. The spectrum was calibrated using measurements of the atomic lines of Fe³ impurity present in the spectra. The absolute accuracy of the calibration is estimated to be better than 0.0050 cm^{-1} .

The present data were elaborated with the PGOPHER program⁴ and wide set of molecular constants for the $B^2\Sigma^+$, $\nu = 1$ and $X^2\Sigma^+$, $\nu = 2, 3$ and levels was obtained. This work results were compared with the recent ones presented by Ventura et al.⁵, and the discussed by the authors band origin values were carefully checked and verified. Moreover, a very weak irregularities with the positions of the lines connected with $B^2\Sigma^+$, $\nu = 1$, $N = 21$ levels were discovered.

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