HIGH-RESOLUTION LASER SPECTROSCOPY OF $^{14}$NO$_3$ RADICAL: VIBRATIONALLY EXCITED STATES OF THE $B^2E'$ STATE

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High-resolution fluorescence excitation spectra of $^{14}$NO$_3$ radical were intermittently recorded in the region 15860 cm$^{-1}$ to 16050 cm$^{-1}$ corresponding to the transitions to the vibrationally excited states of the $B^2E'$ state. Well-separated rotational lines were found to disappear as the vibrational energy increases. The 16050 cm$^{-1}$ region is almost unstructured even in the high-resolution measurement, and its rotational analysis is almost impossible. The rotational assignment of the 15870 cm$^{-1}$ region is possible and it has been undertaken by the ground state combination differences and the Zeeman effect observation.