WAVE NUMBERS, STRENGTHS, WIDTHS AND SHIFTS WITH PRESSURE OF LINES OF $^{16}O_2$ IN SYSTEMS $a\ ^1\Delta_g - X\ ^3\Sigma_g^-$ AND $b\ ^1\Sigma_g^+ - X\ ^3\Sigma_g^-$

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Analysis of newly measured spectral data[a] for wave number and intensities of transitions of $^{16}O_2$ in absorption in systems $a\ ^1\Delta_g\ v = 0 - X\ ^3\Sigma_g^-\ v = 0$ and $b\ ^1\Sigma_g^+\ v = 0, 1, 2 - X\ ^3\Sigma_g^-\ v = 0$ with proper statistical treatment yields band parameters for excited states, based on parameters for the ground vibrational state valid up to $J = 41$, that are the most precise ($\sigma = 0.021$, 0.038, 0.043, 0.50 m^{-1} respectively) in published form, and strengths of lines that are internally consistent and in satisfactory agreement with other published values.

[a]S.-L. Cheah, Y.-P. Lee and J. F. Ogilvie, *J. Quant. Spectrosc. Radiative Transfer*, **64**, 467–482 (2000)