THE $B\,^3\Sigma_u^- \leftarrow b\,^1\Sigma_g^+$ TRANSITION OF MOLECULAR OXYGEN

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The origin of the intensity of the $B\,^3\Sigma_u^- \leftarrow b\,^1\Sigma_g^+$ transition of molecular oxygen, first observed recently by Eppink *et al.* [J. Chem. Phys. **108**, 1305 (1998).], is discussed. It is shown that the $B \leftarrow b$ transition borrows its intensity principally from the dipole-allowed $B \leftarrow X$ transition, through spin-orbit mixing between the $X\,^3\Sigma_g^-$ and $b\,^1\Sigma_g^+$ states. Estimated continuum photoabsorption cross sections and discrete oscillator strengths for the $B \leftarrow b$ system are presented.