Energy and radiation properties of the electronic transition $B^1\Pi_u - X^1\Sigma_g^+$ of the cesium and rubidium dimers

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Energy molecular constants (vibrational, rotational, centrifugal) and radiation parameters (the Einstein coefficients, oscillator strengths and Franck-Condon factors), the wave numbers of rotational lines of electronic-vibrational-rotational transition $B^1\Pi_u - X^1\Sigma_g^+$ and radiation lifetimes for the vibrational-rotational energy levels of excited state of the cesium and rubidium dimers are calculated. Calculations are carried out on the basis of semiempirical potential curves constructed in this work.

Keywords: *potential energy curve, radial wave equation, Einstein coefficient, oscillator strength, excited state radiation lifetime.*

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