

QED CORRECTION FOR H_3^+

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A quantum electrodynamics (QED) correction surface for the simplest polyatomic and polyelectronic system H_3^+ is computed using an approximate procedure. This surface is used to calculate the shifts to vibration-rotation energy levels due to QED; such shifts have a magnitude of up to 0.25 cm^{-1} for vibrational levels up to $15\,000 \text{ cm}^{-1}$ and are expected to have an accuracy of about 0.02 cm^{-1} . Combining the new H_3^+ QED correction surface with existing highly accurate Born-Oppenheimer (BO), relativistic and adiabatic components suggests that deviations of the resulting *ab initio* energy levels from observed ones are largely due to non-adiabatic effects.