MOLECULAR EMISSION STRUCTURE IN THE RED RECTANGLE - SEQUENCE BANDS?

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We report high resolution ($R \approx 37000$) Integral Field spectroscopy of the central region ($r < 14$ arcsec) of the Red Rectangle nebula surrounding HD 44179. The observations focus on the 5800 Å emission feature, the bluest of the Red Rectangle Bands. We propose that the emission feature, widely believed to be a molecular emission band, is sequence structure emission from a molecule with an extended chromophore. We present model spectra for a range of PAH cations with elevated vibrational temperatures.