FOURIER TRANSFORM EMISSION SPECTROSCOPY OF EuH AND EuD

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The electronic emission spectra of the previously unknown EuH and EuD molecules have been recorded in the 9000-18000 cm^{-1} region using a Fourier transform spectrometer at an instrumental resolution of 0.04 cm^{-1}. The gas-phase molecules were generated in an emission source that combines a high temperature tube furnace with an electrical discharge. One of the observed transitions is tentatively assigned as the $^9\Sigma^-$–$X\,^9\Sigma^-$ transition, where the lower state is the ground state arising from (Eu^+(f^7 s))electronic configuration of the europium ion. We hope to present an analysis of the observed bands.