FOURIER TRANSFORM EMISSION SPECTROSCOPY OF CoH AND CoD

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The electronic emission spectra of the $A'^3\Phi$–$X^3\Phi$ transition of the CoH and CoD molecules have been recorded in the 5000-15000 cm^{-1} region using a Fourier transform spectrometer at an instrumental resolution of 0.04 cm^{-1}. The gas-phase molecules were generated in a King furnace at approximately 2800 K. The observed spectra contain numerous bands belonging to the $\Omega = 4$ and $\Omega = 3$ spin components. These bands considerably extend the vibrational and rotational information that is already available, and will allow combined-isotopologue fitting of CoH and CoD. In addition, new electronic transitions have been observed and their analysis is currently in progress. We hope that one of these transitions belongs to the previously unseen $\Omega = 2$ component of the ground and excited electronic states.