

THE $E^2\Pi - X^2\Sigma^+$ STATE OF CaH/D

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Our group has recently investigated the $E^2\Pi-X^2\Sigma^+$ band system of CaH/D , while searching for the elusive double minima electronic states of the $D^2\Sigma^+-X^2\Sigma^+$ system. Emission spectra of CaH and CaD , in the visible region, have been obtained by means of a new discharge-furnace source. Calcium metal was placed into an evacuated, alumina tube and heated to a temperature of 600 °C in a tube furnace. A mixture of argon and hydrogen gas was allowed to flow through the tube and was then excited by a DC electrical discharge. The spectra were recorded using a photomultiplier tube with our Bruker IFS 120 HR spectrometer. We will report improved values for the vibrational and rotational constants of CaH/D .