NEW STATES OF FeH

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FeH, produced by reaction of $FeCO_5$ with H atoms, has been studied by selective laser-induced fluorescence following excitation of single rotational levels of individual spin-orbit components of $v = 0$ of $e^6\Pi$. As well as lines of known transitions including $e^6\Pi - a^6\Delta$, a number of transitions to a new lower state have been recognized. This state lies at about 0.5 eV above the ground state; rotational structure, recorded at high resolution, shows strong R and P branches and very weak Q lines. The apparent value of the rotational constant, B, is very small, ~ 3.5 cm^{-1}, not much more than half of the expected, unperturbed value.

References

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