FURTHER STUDIES ON SHARP TRANSITIONS INDUCED IN SOLID PARAHYDROGEN BY METHANE

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Last year at this meeting we reported our serendipitous observation of ~ 80 sharp transitions observed in the $Q_1(1)$ region of hydrogen apparently induced by methane imbedded in the parahydrogen crystal. We have since recorded the FTIR and high-resolution laser spectra of several more methane doped parahydrogen crystals with varying methane and ortho-hydrogen concentrations. We are in the initial stages of analyzing this data, and it appears that there are a number of interesting phenomena occurring. In this talk we will present the new data and discuss our progress in the understanding of this fascinating problem.