density at the Z site and its dependence on the distance from the Mn atom. Although we can't describe quantitatively the H_n results with the well-known models for induced H_n in sp elements, our results show that the H_n systematic in $Rh_2MnZ_{0.98}Sn_{0.02}$ are more similar to that for Co_2MnZ alloys, in which Co carries a magnetic moment, than to the X_2MnZ alloys with X = Ni, Cu, Pd which carry no magnetic moment.

*Physics Department, University of Cincinnati, Cincinnati, Ohio, 45221, USA.
**Physics Department, Miami University, Oxford, Ohio 45056, USA.
+Physics Department, Dalhousie University, Halifax, Nova Scotia B3H 3J5, Can.

Magnetic Properties of the Hydride $Pd_3FeH_{0.7}$*+

M.H. Preis Corrêa, W.H. Schreiner, J.E. Schmidt, P.J. Viccaro and A. Vasquez

Results of magnetization and ^{57}Fe Mössbauer measurements show that the strong ferromagnetic coupling in Pd_3Fe is markedly altered in the hydride $Pd_3FeH_{0.7}$. The magnetic moment of $(4.59 \pm 0.03)\mu_B$ is reduced by the presence of hydrogen to $(0.83 \pm 0.03)\mu_B$. This reduction is accompanied by a decrease of approximately 46% in the magnetic transition temperature of the hydride compared to that of Pd_3Fe (499 K). In addition Mössbauer spectra at 4.2 K in external magnetic fields indicate that anisotropic antiferromagnetic coupling dominates in the hydride. Results are compared to those for Pd_2AuFe where similar effects are observed.

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Hyperfine Magnetic Fields in $(Pd,Au)_3Fe$*+

Rejane M. Ribeiro-Teixeira, M.H. Preis Corrêa, A. Vasquez and C.E.T. Gonçalves da Silva§

We present here a self-consistent model calculation of the magnetic moment and average electron occupation of the d-band in the Fe sites in $(Pd_{1-x}Au_x)_3Fe$ alloys. These are compared with Mössbuaer results for the

hyperfine fields measured at the iron atoms in the ternary alloys. There is a reasonable agreement of the theoretical results with the experimental ones. A decrease was observed for the field at the Fe nucleus in $(Pd_{1-x}Au_x)_3Fe$ with increasing Au concentration. The results obtained confirm the idea that at least part of the reduction of the hyperfine field in hydrogenated ordered Pd_3Fe is due to the loss of Pd momentum upon H uptake.

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§Instituto de Física Gleb Wathagin, UNICAMP, 13100 Campinas, SP, Brazil.