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Robust antiferromagnetism in the $R_{1-x}La_xCu_2Ge_2$ series: comparison of $Ce_{1-x}La_xCu_2Ge_2$ and $Nd_{1-x}La_xCu_2Ge_2$[1] SERGEY L. BUD'KO, SCOTT M. SAUNDERS, HALYNA HODOVANETS, PAUL C. CANFIELD, Ames Laboratory/Iowa State University — Recently, remarkably robust and correlated coherence and antiferromagnetism were found in the $Ce_{1-x}La_xCu_2Ge_2$ series [H. Hodovanets et al., *PRL* **114**, 236601 (2015)]. Whereas Ce is known to hybridize and its compounds often show a strongly correlated behavior, Nd magnetism is associated with a local moment nature. In this talk, we report new measurements on the $Ce_{1-x}La_xCu_2Ge_2$ series that extend the antiferromagnetic and coherence lines even further and then compare the data for $Ce_{1-x}La_xCu_2Ge_2$ and the data for a local moment based $Nd_{1-x}La_xCu_2Ge_2$ series to separate effects of Ce - hybridization from the behavior that might be common in the $R_{1-x}La_xCu_2Ge_2$ (R=magnetic rare earth) family.

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