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NMR investigation of charge order in $YBa_2Cu_3O_y$ in high magnetic fields M. HIRATA, H. MAYAFFRE, S. KRAEMER, M. HORVATIC, C. BERTHIER, MH. JULIEN, CNRSGHMFL, France, P.L. KUHNS, A.P. REYES, NHFML, FL, USA, R. LIANG, W.N. HARDY, D.A. BONN, University of British Columbia, Canadian Institute for Advanced Research — Recent observation of the charge-density-wave (CDW) order or CDW fluctuations in underdoped $YBa_2Cu_3O_y$ (YBCO) marks an important step in high-T_C research because it lends support to the idea that charge ordering is a generic instability of the pseudogap state. However, the relevance of these results to the understanding of superconductivity remains unclear. An important question is how charge ordering evolves as a function of doping across the phase diagram. Here, we expand our previous work [1] and report high-field ^{17}O NMR evidence of charge order in YBCO with doping level p =0.09 and p =0.13. We discuss the evolution of the temperature and field scales characterizing the CDW transition.

[1] T. Wu *et al. Nat. Commun.***4**, 2113 (2013).

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