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⁵¹V NMR Study of a quasi-1D XXZ spin chain system BaCo₂V₂O₈ K.-Y. CHOI, NHMFL, FSU, Tallahassee, FL32306-4390, USA, N.S. DALAL COL-LABORATION, A.P. REYES COLLABORATION, P.L. KUHNS COLLABORA-TION, H.D. ZHOU COLLABORATION, C.R. WIEBE COLLABORATION — We present ⁵¹V NMR measurements on the quasi-one-dimensional S=1/2 XXZ antiferromagnet BaCo₂V₂O₈ along the chain. The ⁵¹V NMR spectrum shows that the quantum phase transition takes place from the Néel ordered phase to the incommensurately ordered phase around Tc₁ \approx 4 T. In addition, we studied a spin-lattice relaxation rate, $1/T_1$, as a function of temperature and field. Our results are compared to a theoretical prediction and are discussed in terms of a softening of spinons in an external field.

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