

Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

Observation of field-induced magnetic disorder state in one-dimensional antiferromagnet $\text{BaCo}_2\text{V}_2\text{O}_8$ from NMR¹ C.S. LUE, C.N. KUO, T.H. SU, ZHANGZHEN HE, MITSURU ITOH, DEPARTMENT OF PHYSICS, NATIONAL CHENG KUNG UNIVERSITY, TAINAN 70101, TAIWAN TEAM, INSTITUTE FOR SOLID STATE PHYSICS, UNIVERSITY OF TOKYO, KASHIWA 277-8581, JAPAN COLLABORATION, MATERIALS AND STRUCTURES LABORATORY, TOKYO INSTITUTE OF TECHNOLOGY, 4259 NAGATSUTA, MIDORI, YOKOHAMA COLLABORATION — We report the results of a ^{51}V nuclear magnetic resonance (NMR) study on the single crystal $\text{BaCo}_2\text{V}_2\text{O}_8$ at temperatures between 3k and 300k. This material has been a subject of current interest due to indications of the field-driven magnetic order-disorder transition above 4T. For the present NMR study, we found no abrupt changes in the NMR shift and line width at low temperature as a constant field 7.06T was applied along the c -axis, indicative of the absence of magnetic long-range ordering under this field. Hence, the NMR results establish unequivocally the field-induced magnetic disorder state in $\text{BaCo}_2\text{V}_2\text{O}_8$.

¹We are grateful for the support from the National Science Council of Taiwan. The work done in Japan is support by the Rotary Yoneyama Memorial Foundation.

C.N. Kuo

Date submitted: 26 Nov 2007

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