Abstract Submitted
for the MAR06 Meeting of
The American Physical Society

^{11}B NMR Measurements of TbB_4 MOOHEE LEE, B.J. MEAN, K.H. KANG, J.H. KIM, I.N. HYUN, Konkuk University, Seoul 143-701 Korea, B.K. CHO, GIST, Gwangjoo 500-712, Korea — ^{11}B pulsed NMR measurements have been performed to investigate local electronic structure and 4f spin dynamics for TbB_4 single crystals. ^{11}B NMR spectrum shows a broad peak due to the 4f local moment. ^{11}B NMR shift and linewidth are huge and strongly temperature-dependent. In addition, both are proportional to magnetic susceptibility, indicating that the hyperfine field at the boron site originates from the 4f spins of Tb. The shift and the spin-lattice relaxation rate show high anisotropy for field parallel and perpendicular to the c-axis. Anisotropy of the shift and the relaxation rates are analyzed with the results of magnetization to understand the microscopic details of anisotropic spin dynamics.

Moohee Lee
Konkuk University, Seoul 143-701, Korea

Date submitted: 19 Dec 2005 Electronic form version 1.4