

Abstract Submitted
for the MAR10 Meeting of
The American Physical Society

Magnetic ordering in RB_{66} boron-rich borides.¹ KAROL FLACHBART, SLAVOMIR GABANI, Institute of Experimental Physics, Slovak Academy of Sciences, Watsonova 47, SK-04001 Kosice, Slovak Republic, TAKAO MORI, National Institute for Materials Science, Namiki 1-1, JP-305-0044 Tsukuba, Japan, KONRAD SIEMENSMEYER, Helmholtz Zentrum Berlin, Glienicker Str. 100, D-14109 Berlin, Germany — Magnetic ordering in TbB_{66} and GdB_{66} borides which belong to extremely boron-rich borides was investigated at very low temperatures. Measurements of ac susceptibility and of heat capacity of these compounds with a very low concentration of magnetic ions have shown rather clear features of magnetic ordering. They were observed at 0.34 K for TbB_{66} and at 0.2 K for GdB_{66} . However, no direct evidence of long range magnetic order was found by neutron scattering experiments at these temperatures. Reasons leading to these observations / results will be discussed.

¹This work was supported by the Slovak Scientific Agency (VEGA-7054), by the Slovak Research and Development Agency (APVV-0346-07 and VVCE 0058), and by the Center of Excellence of the Slovak Academy of Sciences.

Karol Flachbart
Institute of Experimental Physics, Slovak Academy of Sciences,
Watsonova 47, SK-04001 Kosice, Slovak Republic

Date submitted: 03 Nov 2009

Electronic form version 1.4