

Abstract Submitted
for the MAR07 Meeting of
The American Physical Society

Bound magnon states in the frustrated ferromagnetic 1D chain

LARS KECKE, TSUTOMU MOMOI, AKIRA FURUSAKI, Condensed Matter Theory Laboratory, RIKEN — We studied a one-dimensional Heisenberg chain with ferromagnetic nearest-neighbour J_1 and antiferromagnetic next-nearest-neighbour interactions J_2 in a magnetic field. Starting from the fully polarized high-field state, we calculated the saturation field and the dispersions of the lowest lying n-magnon excitations, and examined the possibility of a multi-magnon ground state near the ferromagnetic limit.

Lars Kecke
Condensed Matter Theory Laboratory, RIKEN

Date submitted: 20 Nov 2006

Electronic form version 1.4