

Contribution Title: RADIATIVE CORRECTIONS TO THE MASSES OF
COMPOUND PARTICLES IN THE ISING FIELD THE-
ORY

Authors: S. B. Rutkevich
Presenting author: Rutkevich S. B.
Affiliation: Institute of Solid State and Semiconductor Physics, Minsk,
Belarus
E-mail: rut@ifttp.bas-net.by
Invited speaker:
YRS seminar: NO

The mass spectrum $M_n(h)$ of elementary excitations in the two-dimensional ferromagnetic Ising field theory in a weak external magnetic field h is studied. In the leading order in h , these excitations can be viewed as bound states of two confined fermions, which attract one another with a long-range linear potential. Multi-fermion fluctuations with four, six, ... fermions also contribute to the elementary excitation wave function leading to the corrections to the bound-state masses $M_n(h)$ in the higher orders in h . We calculate such multi-fermion contributions to the masses $M_n(h)$, which arise from the regular radiative correction to the kernel of the Bethe-Salpeter equation in the third order in the magnetic field h .