

KIDS TALK

CHANGED TO ...

“Magnon gases and condensates”

Speaker: Dmytro A. Bozhko, AG Hillebrands

Abstract:

Bose-Einstein magnon condensation (BEC), the spontaneous appearance of a coherent state at the global energy minima of the spin-wave spectrum, was experimentally observed in 2006 by Demokritov et al. Nowadays, the time dependent behavior of the magnon gas in the phase-energy space is under active theoretical and experimental investigation. A special challenge is the use of magnon BEC for information transfer and processing.

As the magnon BEC is localized in the global energy minimum, its group velocity is exactly zero and, thus, no energy transfer is associated with the condensed magnon state. However, such a transfer is still possible due to the excitation of a magnon supercurrent, which can be driven by a phase gradient in the magnon-condensate wave function.

The presented evolution of a magnon BEC in a thermal gradient gives the first evidence of the formation of a magnon supercurrent at room temperature. The magnon dynamics was investigated by means of time- and wavevector-resolved Brillouin light scattering spectroscopy.

When: Friday, December 18th 2015, **10:00 am**

Where: Room 46-387/388

All undergraduate and graduate students as well as postdocs are welcome and encouraged to join our discussion!

******* COFFEE, TEA AND COOKIES WILL BE SERVED *******

For questions, comments or suggestions: schmidt@physik.uni-kl.de

