Berliner Physikalisches Kolloquium

Eine Veranstaltung der Physikalischen Gesellschaft zu Berlin e.V.
gemeinsam mit der Freien Universität Berlin, Humboldt-Universität zu Berlin,
Technischen Universität Berlin und der Universität Potsdam

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Am Donnerstag, dem **12. Mai 2005, um 18.30 Uhr**

spricht

Prof. Dr. Patrick Bruno

Max-Planck-Institut für Mikrostrukturphysik, Halle,

über das Thema

„Effects of the Berry Phase in Magnetic Nanostructures“

im Magnus-Haus
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Abstract:

Spin-carrying particles (e.g., electrons) subject to a spacially non-uniform exchange (or Zeeman) field acquire a phase (know as the Berry phase) depending on the topology of the non-uniform exchange field. This effect is analogous to the Aharonov-Bohm phase acquired by a charged particle via its orbital motion in a magnetic vector potential. The Berry phase therefore leads to effects similar to those produced by a real magnetic field or vector potential. Such effects are currently the topic of intense research activeties in the field of magnetic nanostructures. In particular, I shall discuss the topological Hall effect due to the Berry phase, as well as spin-analogues of the Aharonov-Bohm interferences.

Auch zu lesen im Internet: http://www.pgzb.tu-berlin.de/