

物理学談話会(2015年度)

“Magnetic-field-induced quantum criticality in a one-dimensional spin-1/2 antiferromagnet”

講演者: Prof. Yasumasa Takano (University of Florida)

日時: 6月11日(木) 16:30 ~

場所: A12棟 サイエンスホール

要旨:

Continuous phase transitions at zero temperature are governed by scaling laws that are similar to, but slightly different from, classical scaling laws. Conventionally, such a transition is between an ordered phase and a quantum-mechanically disordered phase or between two ordered phases with distinct symmetries. It is a matter of debate, however, whether these laws will also apply to a quantum transition between two disordered phases. Our recent experiment on copper pyrazine dinitrate shows that two of the scaling laws do hold for the transition at the saturation field in a one-dimensional spin-1/2 Heisenberg antiferromagnet.

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