

# Physikalisches Kolloquium

**Gregor Weihs, Universität Innsbruck**

**»A Tale of Three Slits - Born's Rule vs. Super-Quantum Computing«**

*Einführung: K. Busch*

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Born's rule states that probabilities are the absolute squares of wavefunctions. This also means that all interference terms originate from pairs of paths. It has been shown that a deviation from Born's rule would have dramatic consequences, such as the perfect discrimination of non-orthogonal states and super-quantum computing. And yet it seems that until recently we had no dedicated tests of this postulate of quantum theory. In our experiment, we use diffraction at three slits to demonstrate that Born's rule holds and that there are no higher order interference terms.

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**Freitag, 28.01.2011, 17 Uhr c.t.,**

**KIT, Campus Süd,**

**Otto-Lehmann-Hörsaal, Physik-Flachbau (Geb. 30.22).**

**Anschließend Nachsitzung im Gastdozentenhaus „Heinrich Hertz“**