



EINLADUNG

zum

VERA - SEMINAR

von

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**Gravity tests on the micron scale
with ultra-cold neutrons**

We present tests of Newton's gravity law and a search for hypothetical short range gravity-like forces with ultra-cold neutrons. Such new forces can be mediated from gauge bosons propagating in a higher dimensional space and this experiment can therefore test speculations on large extra dimensions of submillimetre size of space-time or the origin of the cosmological constant in the universe. Small effects are predicted and might give a signal in our setup at a length scale of one micrometre. Our experiment is sensitive to such forces by studying the dynamics of quantum mechanical wave packets, because Newtonian gravity and hypothetical fifth forces evolve with different phase information.

Donnerstag, 14. Mai 2009, 16:30 Uhr

**1090 Wien, Währinger Str. 17, "Kavalierstrakt",
1. Stock, Victor-Franz-Hess-Hörsaal**