

EINLADUNG ZUM
WIENER PHYSIKALISCHEN KOLLOQUIUM

**FUNDAMENTAL SYMMETRIES
OF THE EARLY UNIVERSE
AND THE PRECISION FRONTIER**

Michael RAMSEY-MUSOLF
California Institute of Technology

The Standard Model of elementary particle physics provides a remarkably successful description for three of the four known forces of nature. It is well known, however, that the Standard Model is incomplete, as it fails to address several open problems in particle physics, cosmology and astrophysics. The search of clues to a more complete theory - a "New Standard Model" - is taking place at two frontiers: the high energy collider frontier and the lower energy precision frontier. In this talk, I discuss how experiments at the precision frontier, and their theoretical interpretation, are poised to uncover key ingredients of the New Standard Model in ways that complement the high energy frontier. I will focus in particular on low energy experiments involving neutrons and what they may teach us about the origin of the visible matter of the Universe and possible new forces that may have been active during earlier eras in cosmic history.

Montag, 18. Oktober 2010, 17:30 Uhr
(ab 17:00 Uhr Kaffee)

Technische Universität Wien - Freihaus
Hörsaal 5, 2. Stock, grüner Bereich
Wiedner Hauptstraße 8, 1040 Wien

www.univie.ac.at/wpk