



SPEAKER: Prof. Harald FRITZSCH (Munich University)
TITLE: **Fundamental Constants in Physics and their Time Dependence**
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ABSTRACT

In the Standard Model of Particle Physics we are dealing with 28 fundamental constants. In the experiments these constants can be measured, but theoretically they are not understood. I will discuss these constants, which are mostly mass parameters. Astrophysical measurements indicate that the finestructure constant is not a real constant, but depends on time. Grand unification then implies also a time variation of the QCD scale. Thus the masses of the atomic nuclei and the magnetic moments of the nuclei will depend on time. I proposed an experiment, which is currently done by Prof. Haensch in Munich and his group. The first results indicate a time dependence of the QCD scale. I will discuss the theoretical implications.