

# DESY Seminar

26 October 2004, 17:00, DESY Hörsaal

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## *Cosmological Dark Energy: What Can it Be?*

Most surprisingly, the baryonic matter of which we are constituted comprises only a minor part of the Universe. Instead, observations show that the Universe is dominated by dark matter, and that its expansion has recently begun accelerating. This implies either a recent breakdown of Einstein-Friedmann gravitation at very low densities or energies, or a 71% Dark Energy component of exotic, negative energy matter.

If Dark Energy exists, it may be either static ("Cosmological Constant") or dynamic. If dynamic, the Dark Energy may be a cosmological fluid or a canonical or non-canonical scalar field. We will discuss proposed observations of the Dark Energy equation of state and of cosmological temperature and matter fluctuations that may, with difficulty, distinguish these theoretical possibilities.

- Tea and cookies will be served at 16:45 in the lobby.
- After the seminar there is a chance for private discussions with the speaker over wine and pretzels also in the lobby.