

DIESE WOCHE

PHYSIKALISCHES KOLLOQUIUM

des Fachbereichs Physik
der Johann Wolfgang Goethe-Universität Frankfurt

Mittwoch, den 19.06.2013, 16 Uhr c.t.
Großer Hörsaal, Raum _0.111,
Max-von-Laue-Str. 1

Prof. Dr. Ulf-G. Meißner
Institut für Kernphysik, Universität Bonn
& Forschungszentrum Jülich

*„The Hoyle state and the fate of carbon-based
life“*

Life on earth is based on carbon and oxygen. To have a sufficient production of these elements in stars requires an excited state in carbon-12 that is located very close to the triple-alpha threshold. This so-called Hoyle state has been an enigma to nuclear theory for half a century.

I present the first ab initio calculation of this elusive excited state in the spectrum of carbon-12 and discuss its structure. Simulated worlds with different quark masses and fine structure constants are also considered and the role of the Hoyle state in our anthropic view of the universe is elucidated.

Die Dozenten der Physik

Kolloquium

<http://www.uni-frankfurt.de/fb/fb13/Termine/index.html>