



PHYSIKALISCHES KOLLOQUIUM

des Fachbereichs Physik
der Johann Wolfgang Goethe-Universität Frankfurt

Mittwoch, den 04.11.2015, 16 Uhr c.t.
Großer Hörsaal, Raum _0.111,
Max-von-Laue-Str. 1



Prof. Dr. Reinhard Dörner

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Johann Wolfgang Goethe-Universität Frankfurt

*"Imaging wave function
of few body systems:
He dimers, trimers and the Efimov state of
He³"*

Two and three Helium atoms form very unusual and extreme quantum systems. Their typical extend is ten to hundred times bigger than radius of the atoms, the wavefunction lives almost completely in the classically forbidden tunneling region and the binding energy of these systems is about 8 orders of magnitude smaller than that of a normal molecule.

We will show how coincidence detection of charged fragments and super strong laser fields can be used to image the wave functions of these Helium quantum giants and will show the first experimental images of an Efimov state.

Die Dozenten der Physik