



Bernhard Huber

(Kirchhoff-Institut für Physik, Heidelberg)

Towards the Realization of a Polaron Experiment

A system of an impurity immersed in a BEC can be mapped onto the Polaron Hamiltonian known from solid state physics. The system is therefore expected to exhibit Polaronic behavior in observable quantities like the effective mass of the impurity.

The talk will present the current state of the NaLi-experiment on its way to examine polaron physics by using a ^{23}Na -BEC and ^6Li as an impurity.

An overview of the experimental apparatus will be given including the creation of our first BEC.

Special focus will be put on the setup of a 1D-standing wave trap, that will later allow for confining Li exclusively. Dimensioning of the associated trap parameters will be done including an estimation of the expected heating rates.



5. Oktober 2009, 10:00 Uhr

Universität Stuttgart, NWZII, Raum 3.123
Pfaffenwaldring 57, 70569 Stuttgart