

KIDS TALK

“Deterministic Ion Source”

Speaker: Cihan Sahin, AG Ott

Abstract:

Minimal energy spread and good control of the ion trajectories in combination with high repetition rates are desirable properties for ion sources in experiments and technical applications like precise ion implantation or ion interferometry/spectrometry.

We use ultra-cold atoms to produce ions with low temperatures and minimal excess energy. Rubidium atoms from a magneto optical trap are photoionized and the ionization fragments are detected by two opposing detectors. The light electron is detected before the Rb^+ ion and serves as trigger for the ion, which can be deterministically used or discarded.

After an overview of the technique, the current status of the experiment and preliminary results will be presented. Currently, repetition rates from a few ions to 10^4 ions per second are possible.

Also planned modifications concerning the ionization scheme and a detector upgrade will be discussed.

When: Friday, July 22th 2016, **15:30 am**

Where: **Room 46-260**

All undergraduate and graduate students as well as postdocs are welcome and encouraged to join our discussion!

***** COFFEE AND COOKIES WILL BE SERVED *****

For questions, comments or suggestions: othomas@physik.uni-kl.de

