



## Matthew Wright

(Harvard University, Cambridge, USA)

### Towards magnetic trapping of CaH

We propose a general technique to load molecules from a cryogenic buffer-gas cooled beam into a magnetic trap. The technique uses one or two optical pumping stages (one photon absorbed per stage per molecule) to continuously and irreversibly load the trap from a slow beam. The method is general and does not rely on unusual level structures or closed transitions. As a step toward this goal, we have demonstrated an intense, cold molecular beam source of CaH. The beam consists of approximately  $10^9$  molecules moving in a nearly effusive source under 3K. We will discuss progress towards magnetically guiding the molecules to provide a clean, state-selected beam source. The technique is expected to allow the observation of collisions, and consequent cooling in an extremely high vacuum environment.

7. Februar 2011, 17:00 Uhr

Universität Ulm, Raum 45.2.304 (Uni West)  
Albert-Einstein-Allee 11, 89081 Ulm

