Scintillation Output of CF$_4$ for Dark Matter Detection

ASHER KABOTH, Massachusetts Institute of Technology — Directional detection of dark matter is a powerful way to look for the galactic dark matter halo. The DMTPC collaboration has developed optical readout of time projection chambers, which allow for the direction reconstruction of dark matter nuclear recoils. However, to make this method feasible, the gas in the TPC must have a high scintillation rate. This talk presents a measurement of $N_{\gamma}/N_{e^-}$ for a potential gas, CF$_4$. 

Asher Kaboth  
Massachusetts Institute of Technology  

Date submitted: 14 Dec 2007