

**Provisional title and abstract submission for the ACME Solvay Workshop (Brussels 2015)**

**“Zeeman deceleration of nitrogen atoms in the metastable  $^2D_{5/2}$  state”**

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Zeeman deceleration is an experimental technique in which strong inhomogeneous magnetic fields inside an array of solenoid coils are used to manipulate the velocity of a supersonic beam of paramagnetic atoms or molecules [1,2].

We present experimental results that demonstrate, for the first time, the Zeeman deceleration of nitrogen atoms in the metastable  $^2D_{5/2}$  state. Using an electron impact source and a short, 12-stage Zeeman decelerator, we achieve deceleration from 460 m/s to 410 m/s.

[1] N. Vanhaecke et al., Phys. Rev. A 75, 031402 (2007). [2] E. Narevicius et al., Phys. Rev. A 77, 051401 (2008).