

Towards single sodium atom in ODT

Yichao Yu

Ni Group/Harvard

November 30, 2014

- 1 **AOBD for sodium ODT**
- 2 **Further characterization of the cesium trap**
- 3 **Sodium MOT**

AOBD for Na ODT

- It works.

AOBD for Na ODT

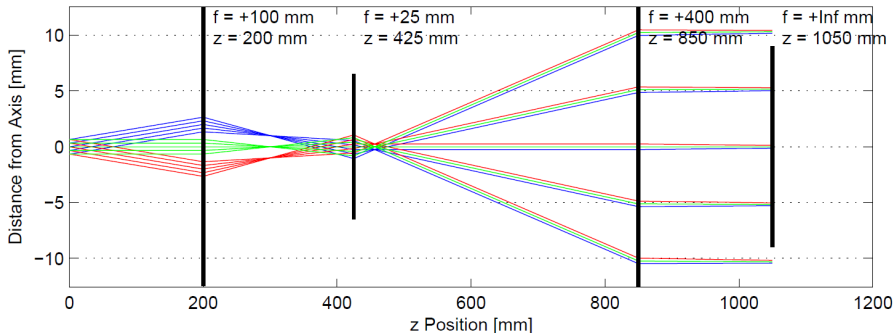
- It works.

AOBD for Na ODT

- It works.
- But it doesn't integrate into the current beam path very well.

AOBD for Na ODT

- It works.
- But it doesn't integrate into the current beam path very well.
- Solution.



Further characterization of the Cs trap

- ODT with non-magic wavelength.
- Lifetime.
- Temperature. Measured with release and recapture.

Further characterization of the Cs trap

- ODT with non-magic wavelength.
- Lifetime.
- Temperature. Measured with release and recapture.

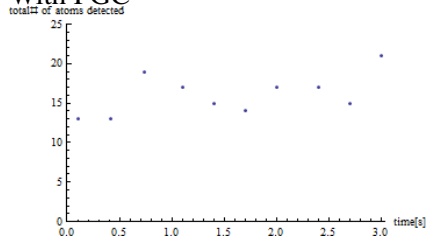
Further characterization of the Cs trap

- ODT with non-magic wavelength.
- Lifetime.
- Temperature. Measured with release and recapture.

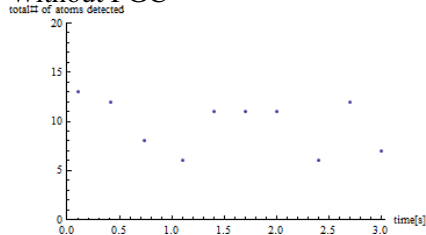
Further characterization of the Cs trap

- ODT with non-magic wavelength.
- Lifetime.
- Temperature. Measured with release and recapture.

● With PGC

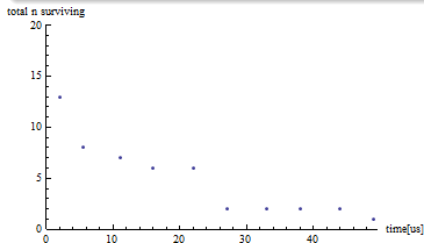


● Without PGC

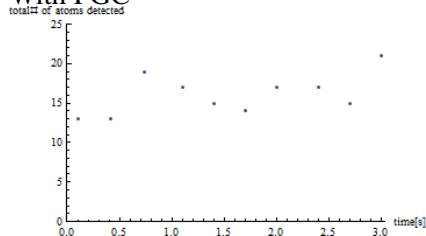


Further characterization of the Cs trap

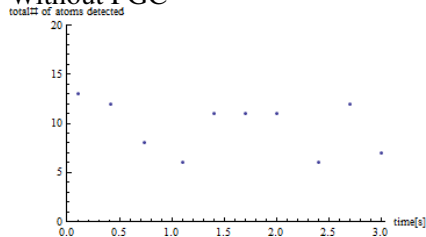
- ODT with non-magic wavelength.
- Lifetime.
- Temperature. Measured with release and recapture.



● With PGC



● Without PGC



Na MOT

- No sodium MOT.
- Laser noise.

Na MOT

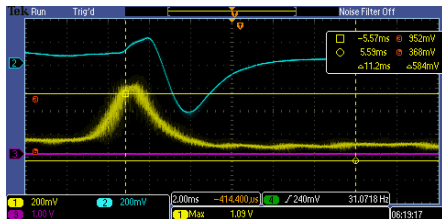
- No sodium MOT.
- Laser noise.

Na MOT

- No sodium MOT.
- Laser noise.

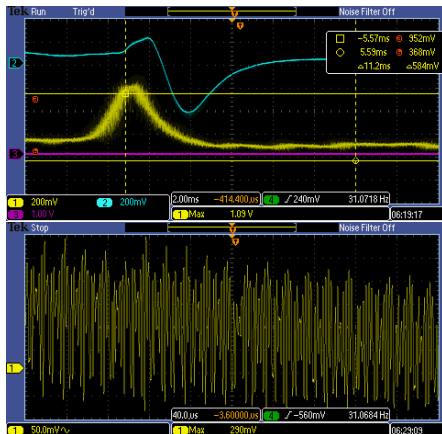
Na MOT

- No sodium MOT.
- Laser noise.



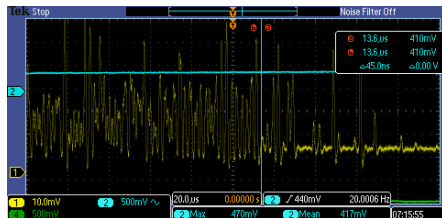
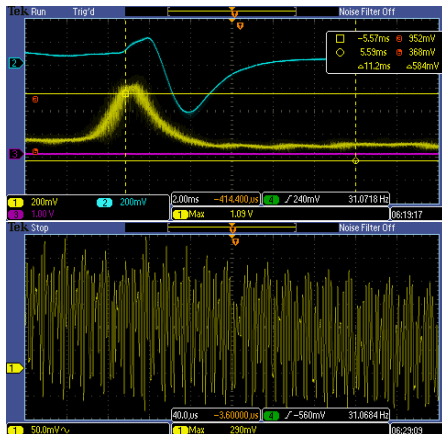
Na MOT

- No sodium MOT.
- Laser noise.



Na MOT

- No sodium MOT.
- Laser noise.



Na MOT

- No sodium MOT.
- Laser noise.

