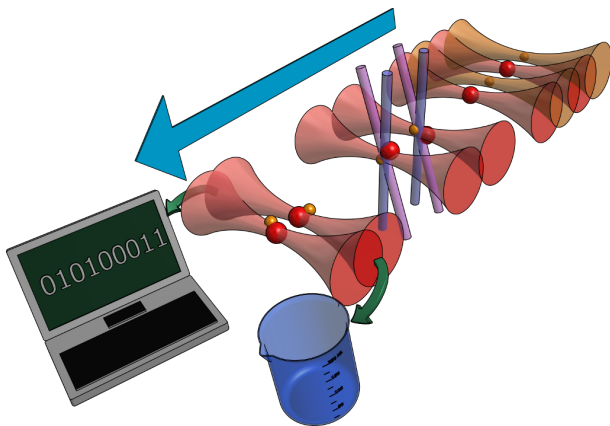
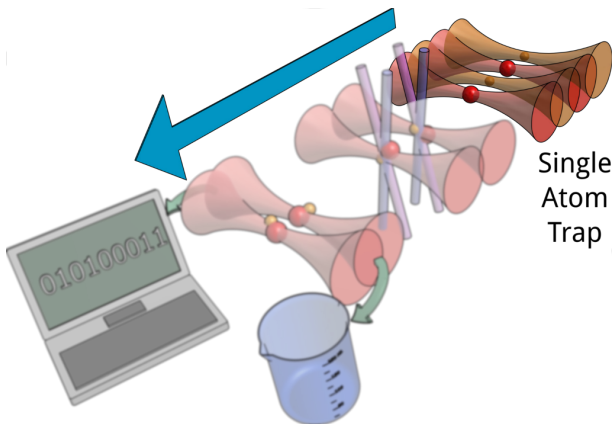


# Apparatus for making dipolar NaCs molecules



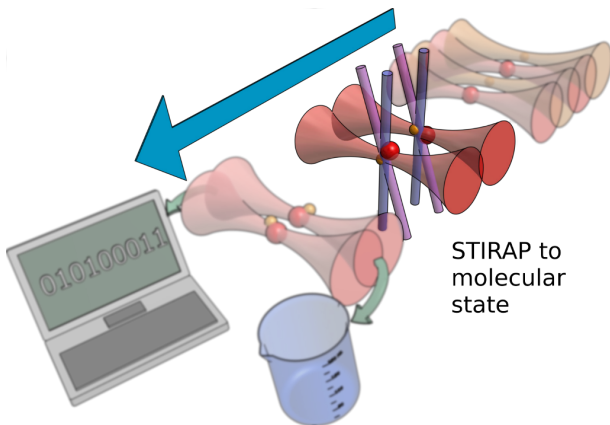
Yichao Yu  
May 3, 2015  
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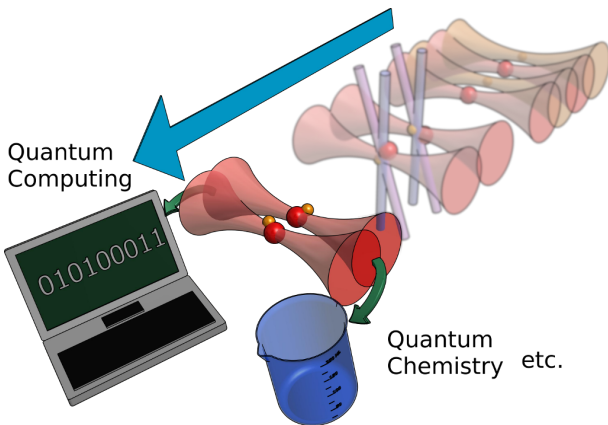
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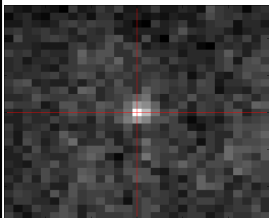
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## Current state

MOT

Trapping  
single  
atom

Single  
atom  
cooling

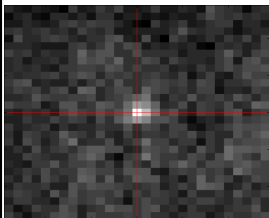


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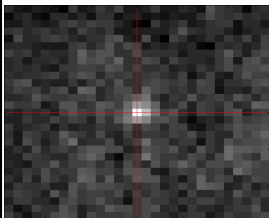


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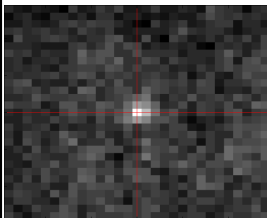


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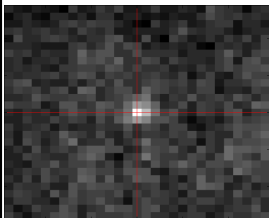


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# Laser system for Sodium

## Sodium wavelengths

- D lines  $\approx 589\text{nm}$
- D2 line (Cooling, Imaging)
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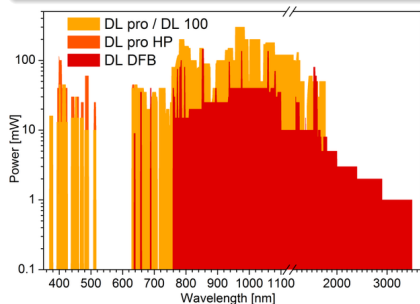
## Using diode laser

- Diode laser spectrum
- Power requirement for frequency doubling
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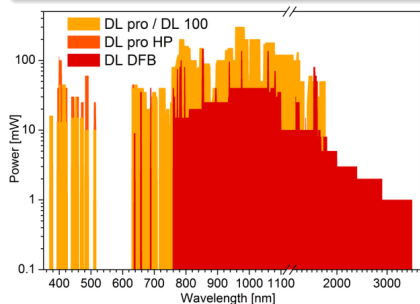
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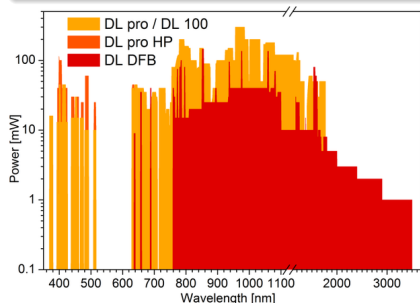
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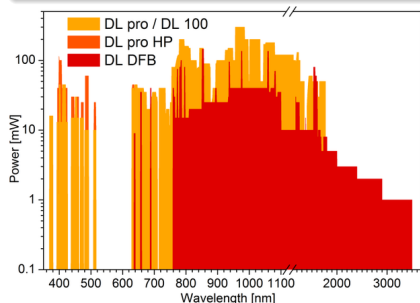
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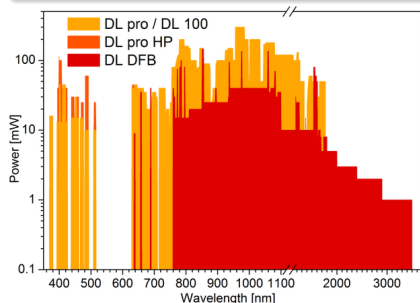
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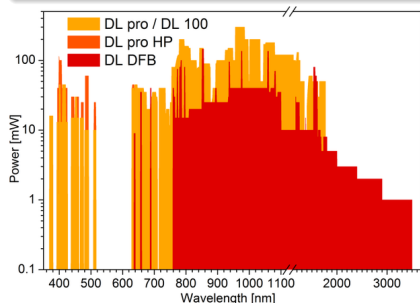
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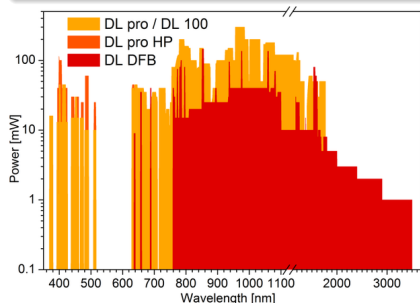
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# MOT stability

- Interference and stability issue with a small MOT
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