

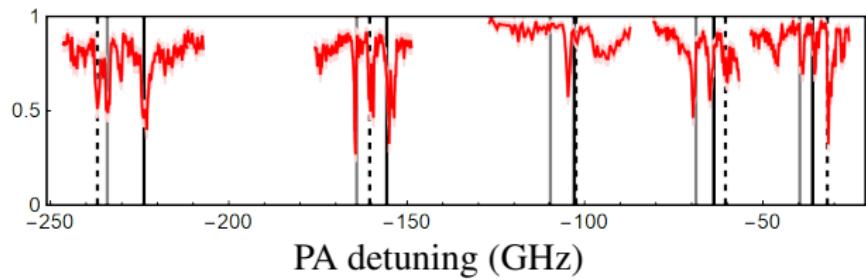
NaCs lab update

Yichao Yu

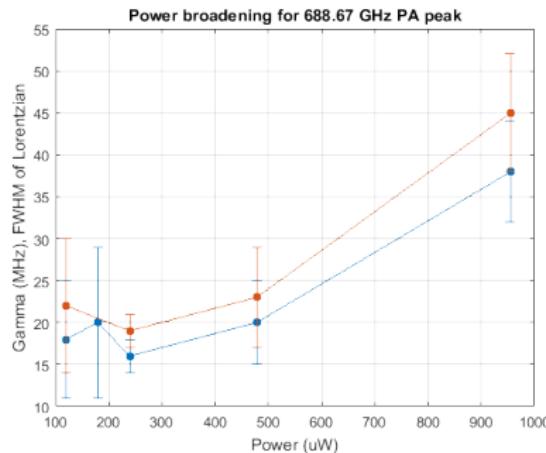
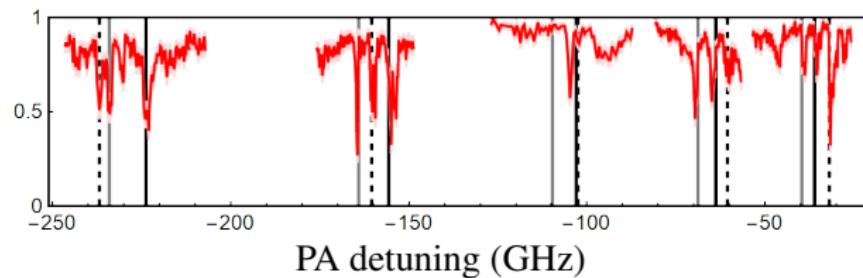
Ni Group

April 06, 2018

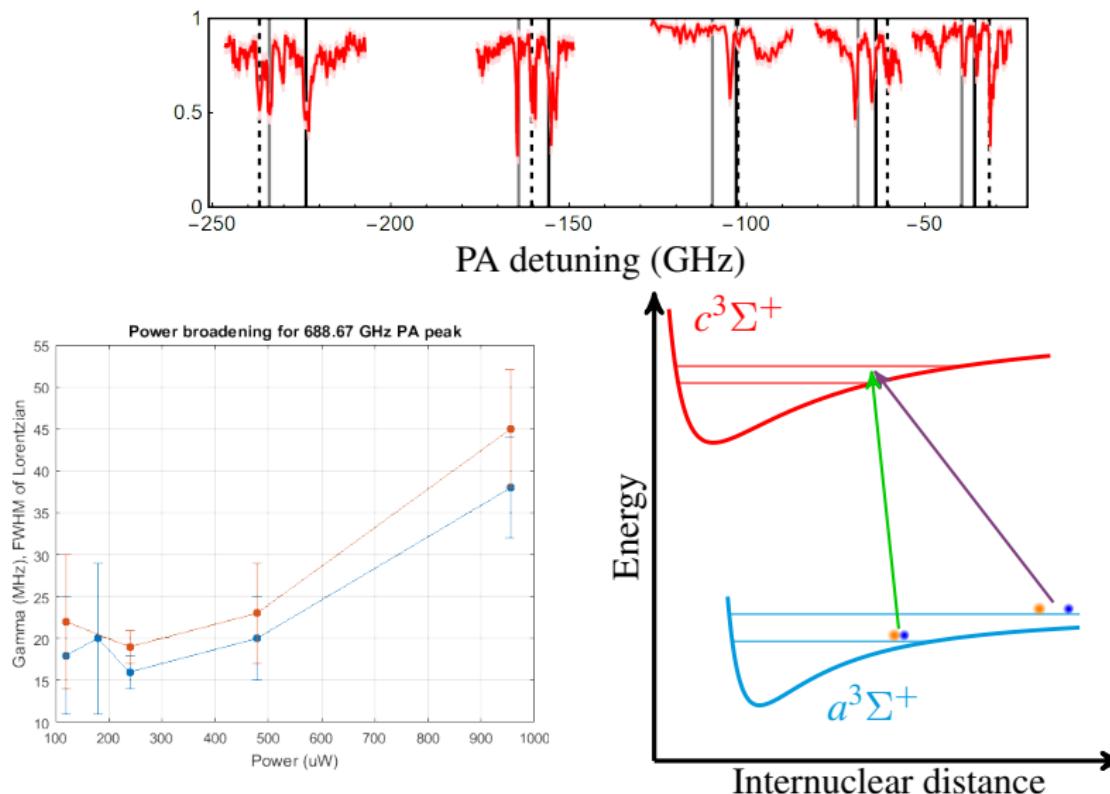
Photoassociation/EIT



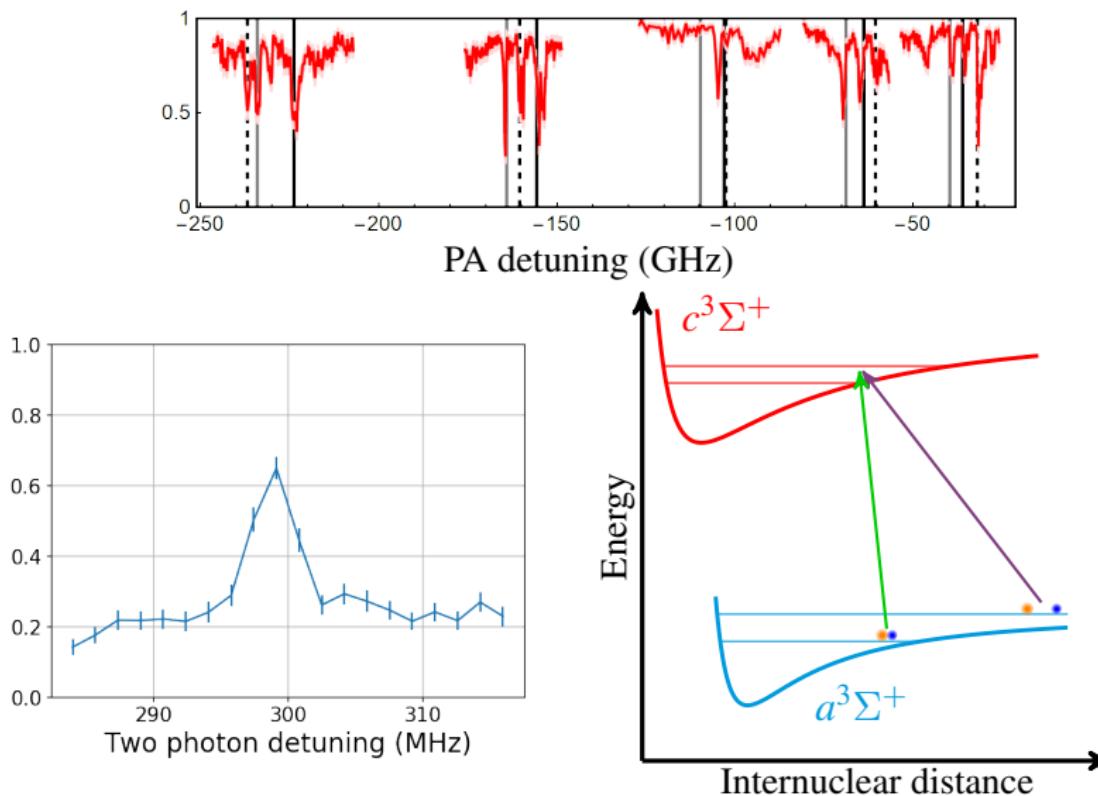
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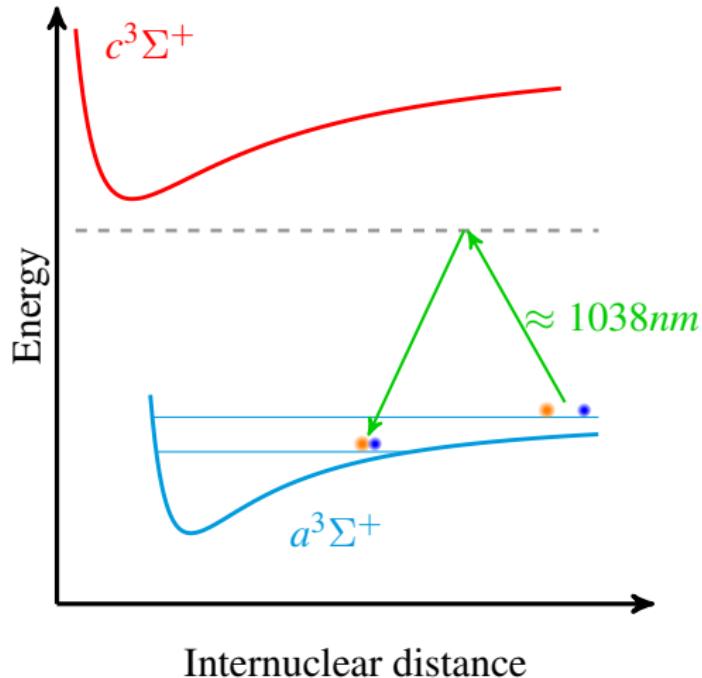
Photoassociation/EIT



Photoassociation/EIT

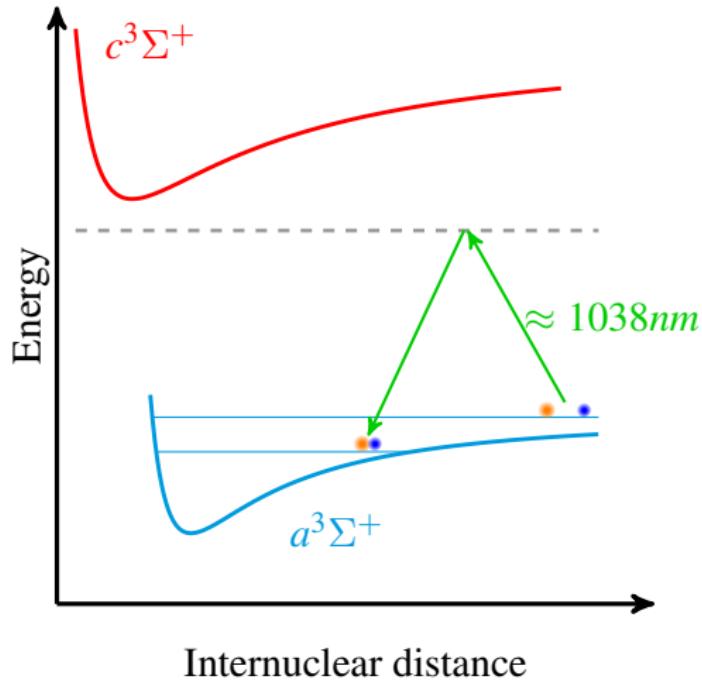


Getting to ground electronic state



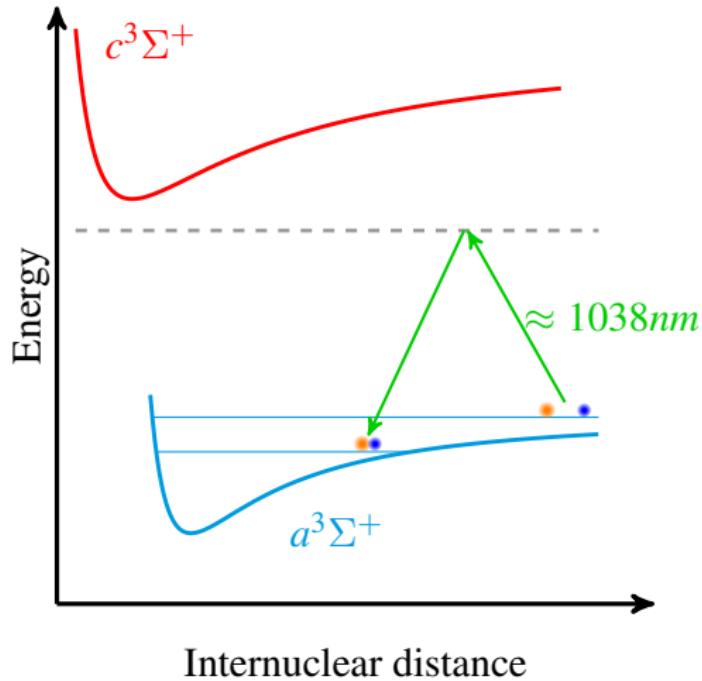
- New laser
- New beam path
- PA on deeply bound state
- Lesson about mirror mount

Getting to ground electronic state



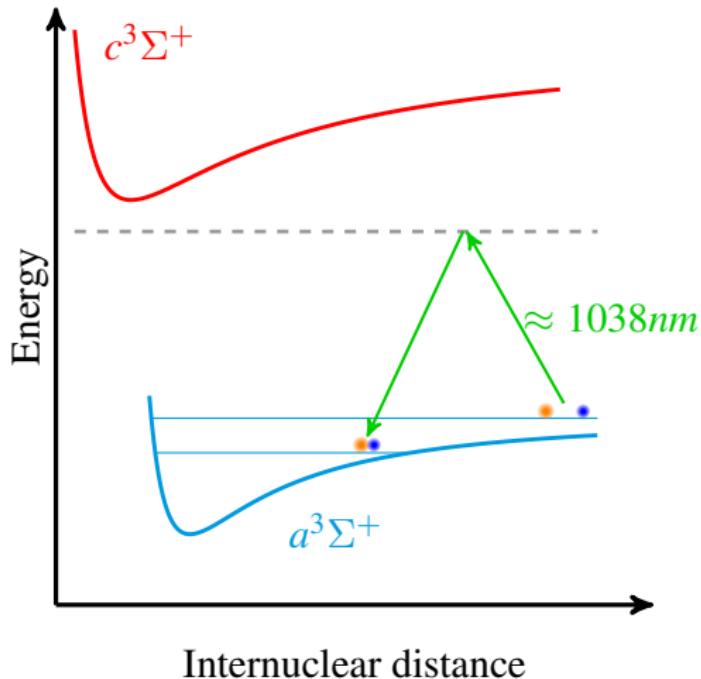
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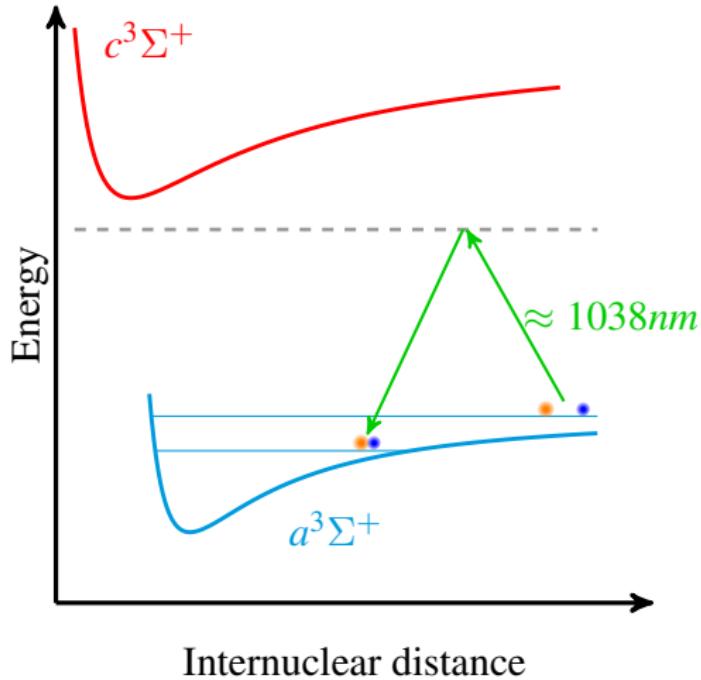
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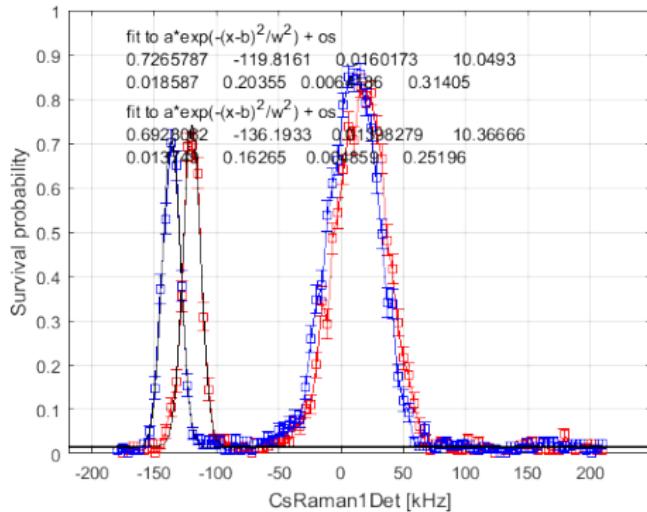
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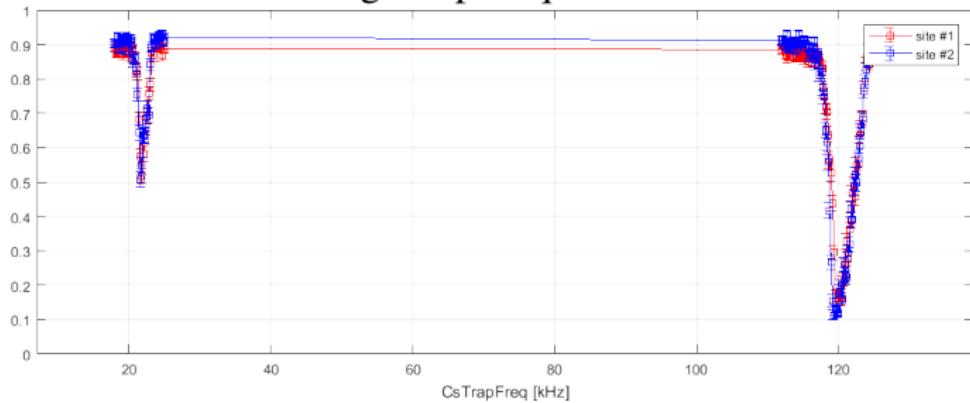
Cooling multiple atoms



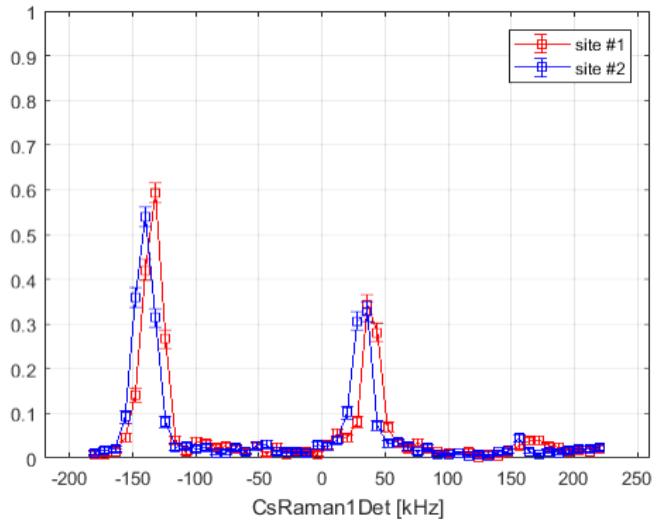
Very different sideband frequencies

Cooling multiple atoms

Align trap frequencies

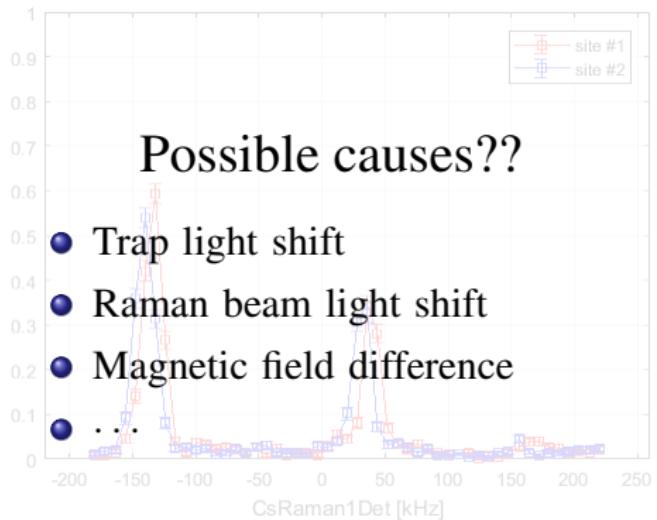


Cooling multiple atoms



Overall shift on both carrier and sideband.

Cooling multiple atoms

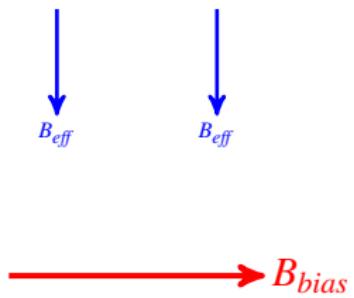


Alignment between tweezer polarization and B field

 B_{bias}

Alignment between tweezer polarization and B field

Circular polarization



Alignment between tweezer polarization and B field

Tweezer rotation

