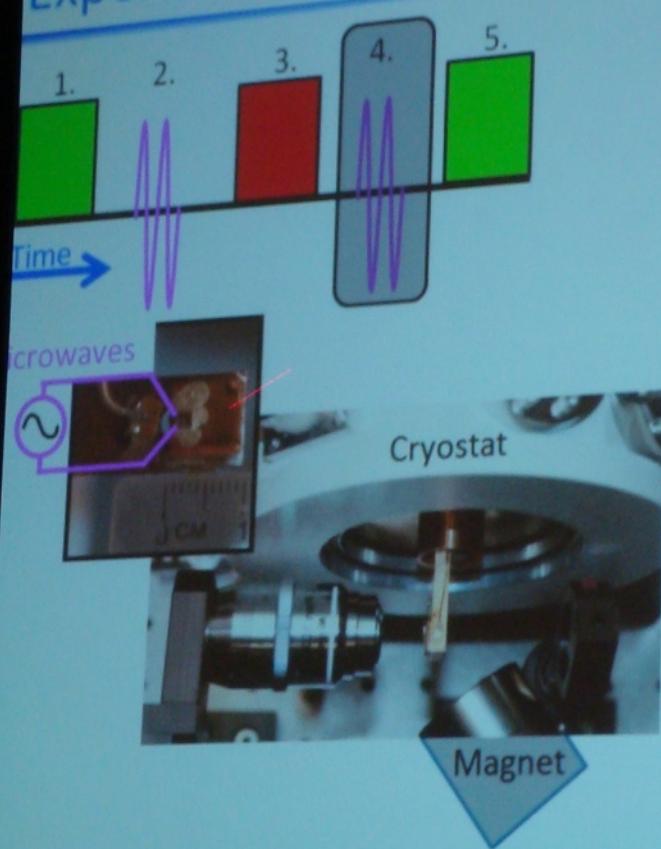


## Experimental timing



1. Initialize spin into  $m_s=0$
2. Prepare spin with  $\mu$ waves
3. Interact with tunable red light  
Measure
  - a. Photoluminescence excitation
  - b. Transmitted light polarization
4. Rotate spin with  $\mu$ waves
5. Measure final spin projection
  - a. Back-action spin flips
  - b. Coherent spin rotations
6. Repeat

Faraday effect:

