Goals of lithium pellet injector are to test lithium handling and study lithium transport

- Main purpose of lithium pellet injector is to investigate impurity transport
  - 400 chambers permit injection of carbon, boron, lithium, and their compounds without frequent reloading during plasma operations
- Lithium transport is key issue to be investigated in support of lithium experiments in NSTX
  - Transport of lithium to divertor can be studied with lithium pellets
- Divertor coatings with lithium pellet injection are not expected to have significant effect on particle control
  - Maximum pellet size ≈2 mg
  - Translates into ≈2 nm coating per pellet assuming entire lithium inventory uniformly covers divertor surface
  - NSTX plasmas can absorb at most two 2 mg pellets per shot
    - » Need for ≈50 discharges to equal 100 nm evaporative coating implies *no* anticipated effect of pellet injection on recycling

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