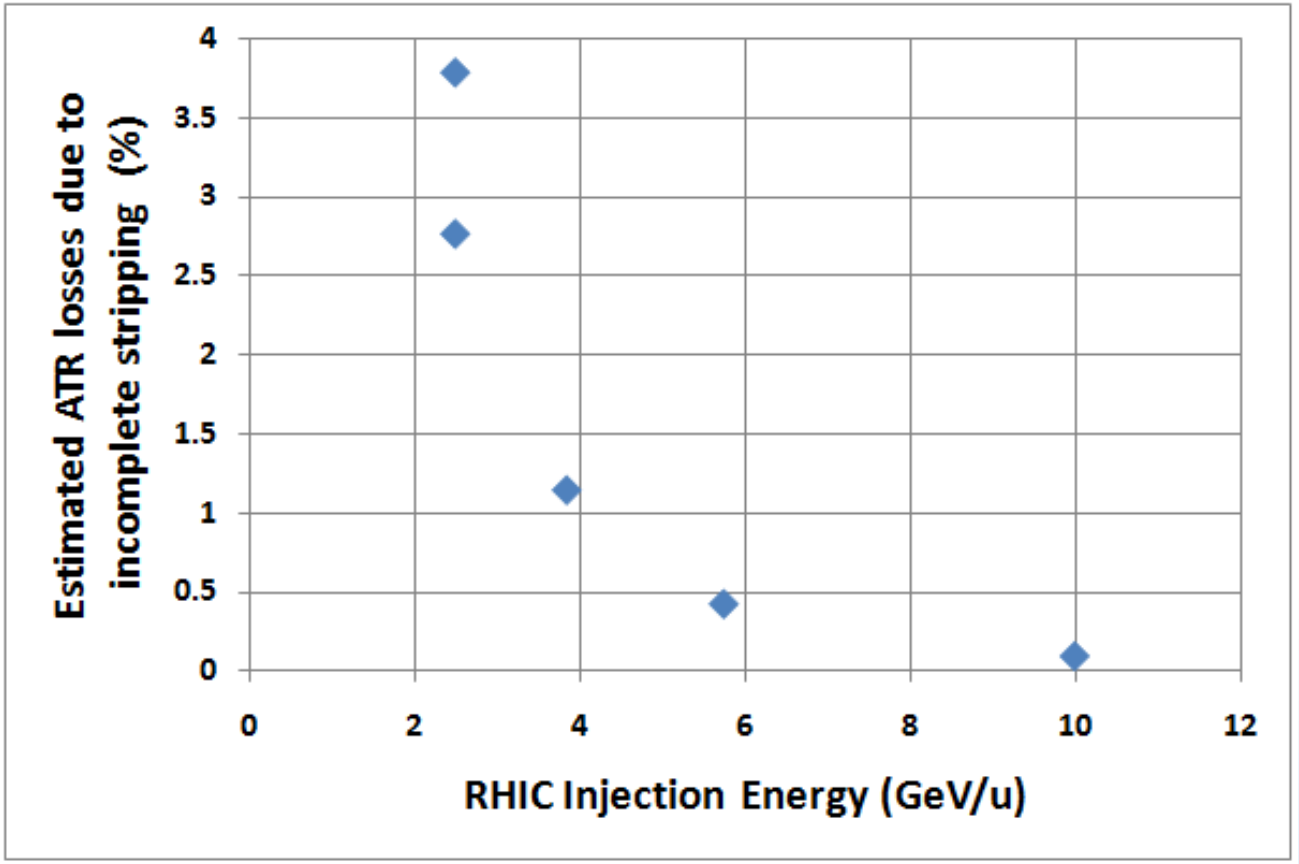
7.7 GeV Low Energy Program

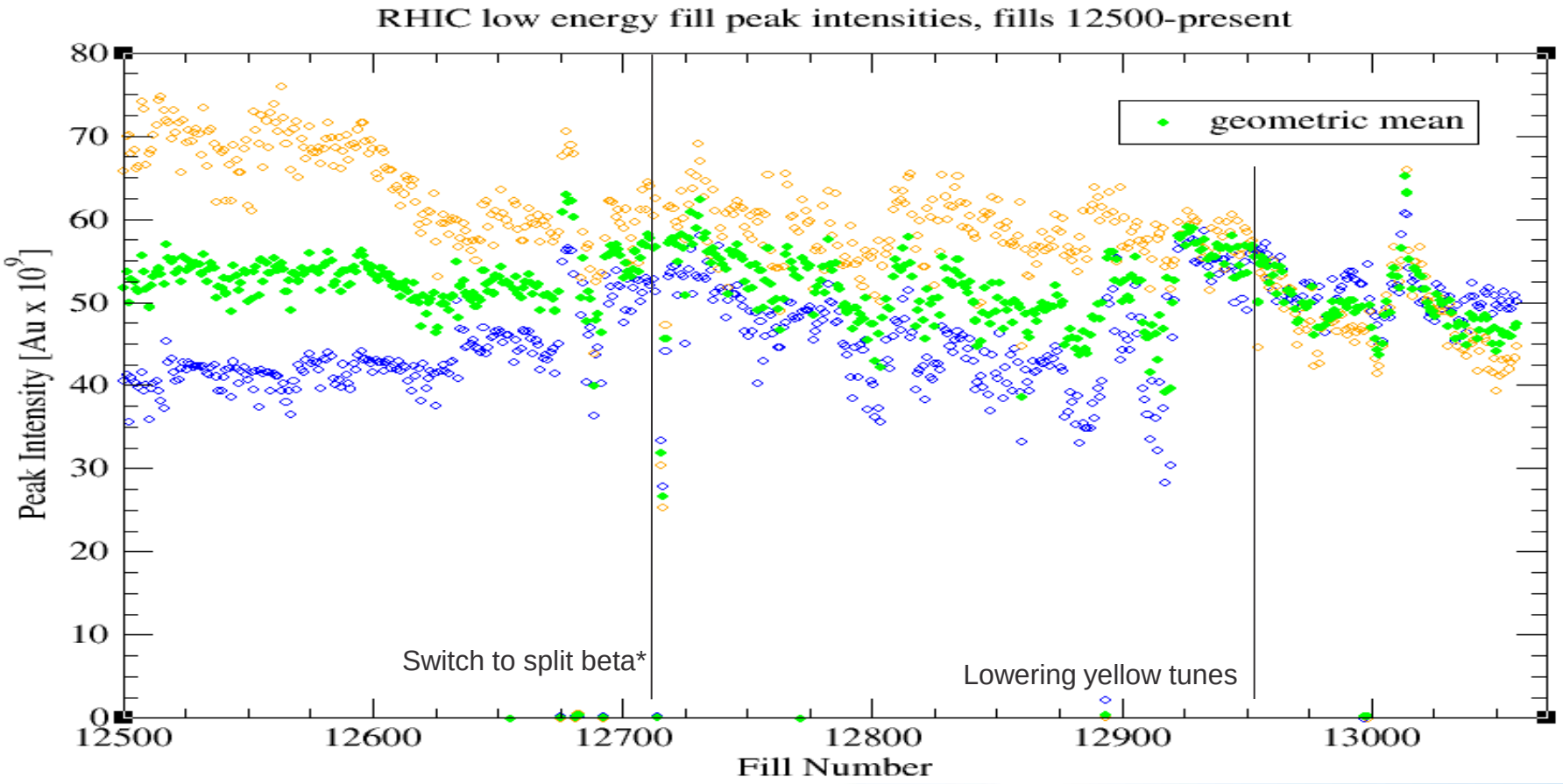
- Into third week of four-week scheduled run
  - Maintenance and APEX sessions last week
  - 15 minutes stores
  - Turnaround times less than 4 minutes to second beam
    - Still in physics 75-80% of wall clock time
    - Operations have continued to excel at turnaround
  - ATR losses localized to uq11 = flag stripping efficiency
    - ATR stability and losses are current limiting factor
    - Additional ATR chipmunks installed Fri for weekend stores
  - Scanning beam parameters during stores
    - Tunes, octupole settings have improved beam lifetimes
    - But injection efficiency continues to suffer
  - 8 hour 2.5 GeV beam test tentative for Thu May 13
    - 0800-1600, objective is circulating beam in both rings

ATR Stripping Foil Efficiency



- From Peter Thieberger, stripping inefficiency from $^{78+}$Au
  - Stripping efficiency now ~10x worse than nominal injection
  - At 2.5 GeV/u, stripping efficiency is 3x worse than present

7.7 GeV Beam Intensity



- Still room for improvement
  - Blue intensity improving but yellow is degrading
  - Reversion of yellow to fill 12940 showed no improvement

For Your Consideration…

- Beta*=6m development finally successful
  - Have been running ~1 week with these conditions
  - STAR steering, backgrounds now need to be adjusted
  - Collimation remains aggressive and primary machine loss
- Injection efficiencies need attention
  - Injection efficiences, peak luminosity have degraded ~10%
  - Continuous efforts to improve between stores
  - Beam lifetime is consistent with 2008 4.6 GeV/u run
- Moving to even shorter stores (10 min, 4 stores/hr)
  - Should give additional integrated luminosity improvement
  - Requires loss review, impact evaluation by RSC
  - Perhaps 25-30% integrated luminosity improvement