

# Run 18 – Run Coordinator's notes

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**70** YEARS OF  
**DISCOVERY**

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# Run 18: a unique run

From the accelerator perspective, this run involves a number of new issues for us.

- Two new species in RHIC
- Rare isotopes for the sources
- More species and energy changes than ever (even without daily switching)
- More concurrent electron beam installations and operations
  - Read: more accesses and interruptions
- Daily changes to RHIC configuration

# Frequent mode switching: impacts

- Additional setup time is required at the beginning of the run, to develop 2 separate setups to a point that can deliver physics.
- Switches to and from gold beam also need to be established.
- The mode switch itself requires time to develop.
- Note that mode switching itself is an unavoidable drain on integrated luminosity, beyond that of a normal refill of the Collider. Our effort will go toward minimizing these effects.

# Commissioning and setup

- Au, Zr, Ru will all be established in the injectors prior to RHIC cooldown. Naturally-abundant Ru source can be used for all but the highest intensity setup, thus avoiding over-usage of enriched Ru.
- Start-up begins with Au beam and previously established CeC medium energy (26.5 GeV) ramp.
- Continue with Zr and Ru setup, medium energy (13.5 GeV) Au setup
- Develop mode switching sequences concurrently
- Ramp up to operating intensities, set up stochastic cooling