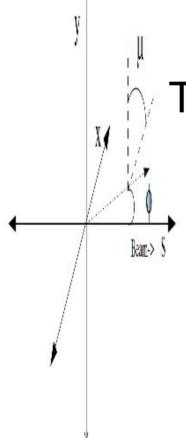$$\frac{d\vec{S}}{dt} = \frac{e}{\gamma m}\vec{S} \times \left((1+G\gamma)\vec{B}_\perp + (1+G)\vec{B}_\parallel + (G\gamma + \frac{\gamma}{\gamma+1})\frac{\vec{E}\times\vec{\beta}}{c} \right) = \heartsuit$$

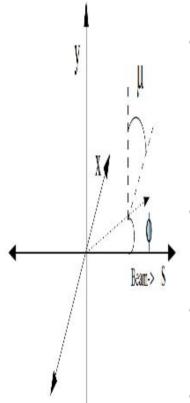Time Meeting RHIC FY13 PP RUN

$$\frac{d\vec{S}}{dt} = \frac{e}{\gamma m}\vec{S} \times \left((1+G\gamma)\vec{B}_\perp + (1+G)\vec{B}_\parallel + (G\gamma + \frac{\gamma}{\gamma+1})\frac{\vec{E} \times \vec{\beta}}{c} \right) = \heartsuit$$

- RHIC Start Up Status:

  - We have take 12x12 bunches up the new e-lens Ramps and had Collisions!.

    – Re-bucketing, tune, coupling and orbit feedback and forward

  - Doing Store ramp w/o rotators

    – Hopefully overnight Collisions coming soon.

  - Now need to push intensity, fix blue bunch length growth.

  - So Far we are still pretty much on Schedule, however we have had to put out many fires
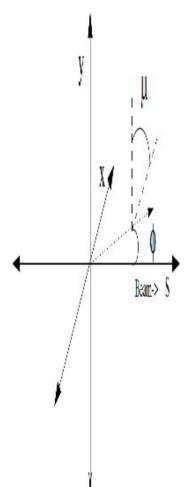
Polarization Is Magic.

$$\frac{d\vec{S}}{dt} = \frac{e}{\gamma m}\vec{S} \times \left((1+G\gamma)\vec{B}_{\perp} + (1+G)\vec{B}_{\parallel} + (G\gamma + \frac{\gamma}{\gamma+1})\frac{\vec{E} \times \vec{\beta}}{c} \right) = \heartsuit$$

- Challenges :
    - Current glitches of the main dipole ramp
    - STAR beam pipe aperture/position
    - Issues with phase shifter PS not ramping due to faulty database
    - Abort Kicker pre-fires
    - Q7 magnet PS issue
    - Issues decoupling feedback and feedforward from including phase shifter PS. At store we like them coupled to maintain phase, on ramp decoupled to help break lattice symmetry for good polarization.

$$\frac{d\vec{S}}{dt} = \frac{e}{\gamma m}\vec{S} \times \left((1+G\gamma)\vec{B}_\perp + (1+G)\vec{B}_\parallel + (G\gamma + \frac{\gamma}{\gamma+1})\frac{\vec{E}\times\vec{\beta}}{c} \right) = \heartsuit$$
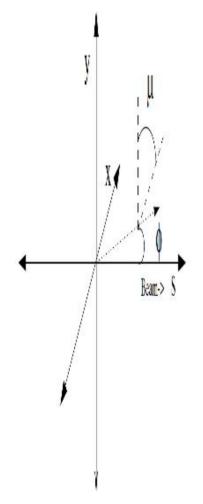
- Future Issues:
  - Improve Ramp Transmission efficiency control bunch length.
  - Get bunch-by-bunch dampers on-line
  - Finnish Col. Work
  - Implement 2/3 tune swing on ramp.
  - Get good Polarization Transmission efficiency measurements for Ramp
  - Monitor Injection lifetime and Store lifetime
  - Control and measure Chromaticity on Ramp

$$\frac{d\vec{S}}{dt} = \frac{e}{\gamma m}\vec{S} \times \left((1 + G\gamma)\vec{B}_\perp + (1 + G)\vec{B}_\parallel + (G\gamma + \frac{\gamma}{\gamma + 1})\frac{\vec{E} \times \vec{\beta}}{c} \right) = \heartsuit$$

Most Importantly Watch out for Discord! He will Sabotage our Elements of Harmony. We need magical friendship to battle him.