

APEX Report

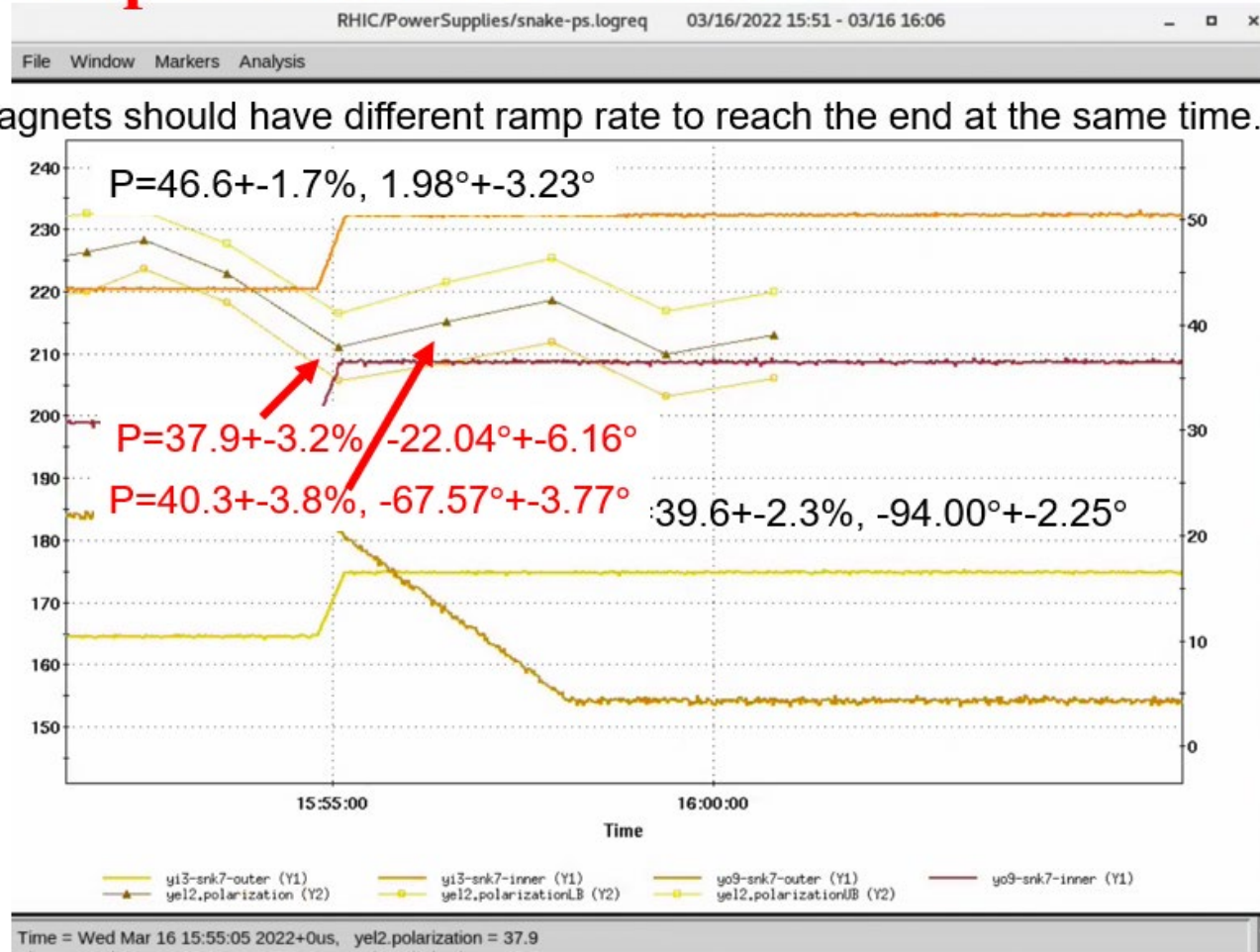
Time Meeting, March 29, 2022

Proposed Experimental Studies

Spokesperson: Haixin

1. Injection
 - Stable vertical polarization with a spin tune of about 0.05 is set in RHIC by adjusting the angle between the snake axes to 10°
 - Beam is injected vertically polarized
2. Snake calibration
 - Ramp snake parameters to rotation polarization from vertical to longitudinal using available calibration of the snake strengths and axes in terms of helix currents
 - Fit the data with calibration errors and zero-integer resonance strength as fitting parameters
3. Adjustment of longitudinal polarization
 - Repeat Item 2 using refined snake calibration and verify improvement
4. Adiabatic spin flip
 - Ramp snake parameters in a pattern reversing the vertical polarization
5. Acceleration
 - Ramp the beam energy from 25 to 100 GeV while continuously monitoring polarization

The Ramp from Initial to Final States



The two measurements during current ramp showed continue rotation of the spin from vertical to radial.

- The initial test showed that the spin manipulation (rotating from vertical to radial) with changing snake currents works.

APEX Plan for March 30, Wednesday
(8:00pm - 23:00 pm)

08:00am	Radial Shift Orbit with Proton Guillaume, Kevin M.,..., MCR crew	
12:00pm	Spin Transparency Mode Study Haixin, Vincent, Francois, Vasiliy,... MCR crew	
18:00pm	Radial Shift Orbit with Proton Guillaume, Kevin M.,...,MCR crew	
22:00pm	Back to physics MCR crew	
23:00pm		