

Nick presented the final solution for the AGS lattice with two snakes at injection and along early energy ramp. Except a few sharp edges on some quad currents, the solution meets all requirements. The sharp edges are around $\gamma = 6$, where there is not much constraint on the current. We can actually have all compensation quads current zero. The plan is to smooth these edges and transform the solution to an implementable solution for all power supplies. Thomas pointed out that spin tracking should use this lattice.

Mei showed a progress report on analyzing the polarization transmission efficiency along the 200GeV ramp in RHIC. The goal is to quantify the effect of orbit on polarization. She defined the figure of merit as function of emittances, betatron tunes (distance from 0.7 resonance) and rms orbit. The results shows that if using the orbit associated with the highest polarization as the golden orbit, there is a correlation of polarization transmission efficiency and the figure of merit (mainly vertical rms orbit). This is new, since we did not see vertical orbit affecting polarization in the past (with 100GeV top energy). People suggested to look at the difference orbit relative to the “golden orbit” as a better measure of orbit.

Haixin reported the analysis on AGS injection measurements with E880 polarimeter. After searching logview and elogs, he confirmed that warm snake was off for a few polarization measurements meant to have warm snake on. Then the data more or less make sense: partial snake(s) tilt spin away from vertical to the expected levels. Some polarization fluctuation (a few percent) can be attributed to the source polarization variation. We only had one run with both snakes on, the rest were with only single snake on (cold or warm).

Haixin