

Nick reported the progress he made with Alfredo. He fitted the strength of compensation quads as function of $B\rho$. There are constraints on the ramp to keep vertical tune high and beta function with aperture. The power of $B\rho$ are 4 or 5 for most quads, except A17 which has the power varying along the ramp. This might be associated with the horizontal tune constrained in a funny way. It is worth to look again for horizontal tune either below or above the 2/3 resonance. The P/S we have now can handle the current and voltage needed. The optimization was not done with COUPLING mode since MAD8 does not support it. However, a run with COUPLING mode only generated 0.002 tune difference as coupling is not strong and tunes are well separated. For the long run, we are still interested to have MAD-X lattice available for AGS lattice. Nick also run the lattice with $\frac{\delta p}{p} = \pm 10^{-3}$ and the matching is stable.

The discussion continued on the orbit and BPMs. Currently, AGS does not use so-called golden orbit since we don't have confidence on the accuracy of the BPMs. In addition, the BPMs are separated by a combined-function dipole from nearby quad. Vladimir suggested to add BPMs at entrances and exits of snakes. There is no space right now and removing either the snake magnet or nearby dipole would be necessary. If we reduce our goal from seventy-two BPMs to four BPMs near snakes (section 18 and 2 around A20 and E20), we may be able to determine the absolute orbits around the snakes, since these quads (total of 8) have individual P/S. Leif agreed to look after this issue. Waldo asked if there is any measurement of the effective length of AGS dipole magnets. Ernest recalled the magnets were measured in early days and magnets were shuffled around the ring according to the parameter.

Haixin