

Nick presented his progress on injection lattice with high vertical tune ( $\nu_y > 8.95$ ), which is within the spin tune gap for 2T cold snake (Ernest commented that we should use the field instead of percentage when referring partial snake in the AGS). The vertical chromaticity is small but positive from the MAD model (with sextupoles off), which ensures that the vertical tune does not touch the spin tune gap even taking into account the tune spread. Leif reminded us that the measured chromaticity was positive in the real machine but probably with sextupoles on. Haixin asked Nick to find a tune path for 2.1T cold snake and maintain the horizontal tune as a constant. However, it may not be feasible to maintain horizontal tune as low as 8.6 near injection, which implies that we have to cope with the uneven tune jump intervals in the jump timing system.

Woody presented his analysis on the recent survey of AGS main magnets D1 to D5. Frank Karl has done survey for the whole super period D, but the data of other fifteen magnets have not been deduced yet. These data showed that these AGS main magnets have systematic rolling. If assuming all AGS magnets have similar rolling, it would be about 20 degrees, quite significant. The main effect would be on coupling. Thomas asked if the effect can be corrected. Woody recalled that we did use skew quads to reduce coupling based on tune meter kick coherences and about 40A was used for extraction energy. In addition, ORM data analysis also showed some coupling. Woody worried that the rolling may enhance the imperfection resonances. Since the two partial snake scheme already generates a spin tune gap, it should not be a problem. As this is only 2% of the total AGS main magnets, it is worthwhile to see if it is a systematic effect for all AGS main magnets. Thomas suggested to survey another superperiod or at least some magnets in a different super period. Woody has talked to Frank about it after the meeting and the additional survey is pending on his job load. In answering question of what have caused the rolling, the answer is probably during moving, or pulsing force's chromatic effects.

Thomas also asked about the progress on tune jump quads. C.J. has been assigned to do the design work (on ceramic pipe, shim and coil). Since Wuzheng is not convinced that 3D transient field simulation is useful, Woody argued that we should build a prototype magnet with 8Q32 to measure the field quality. Concerning of the ID of the ceramic chamber (should avoid it to be beam limiting aperture, it is at  $\beta_x$  maximum), Woody will check the design. Currently, it is shy of six inches.

Haixin