The mechanics progress this year mainly includes that in MDI mechanics, collimators and machine protect mechanism.

The MDI layout has been updated with the design of detectors, IP chamber, accelerator physics and other relative systems. Now all the accelerator devices are within the detector angle of acos0.99. Four remote vacuum connectors have been designed and now we are focusing on the improved inflatable design. The leak rate has been preliminary estimated which is possible to meet the requirement. The supports inside the cryostat have been preliminary designed and optimized, from which the uneven deformation of QD0 and QF1 can be decreased within 30 um. Besides, auxiliary support inside the yoke can decrease the total displacement and enhance the natural frequency largely.

The collimators for background decreasing have been preliminary designed. The jaws are made from copper which structure has been optimized through thermal-mechanical analyses. The beam loss failure has been considered and preliminary protection scheme with aborting system, collimators and reverse switching solenoids are considered. For the transient failure within 3 turns, the machine will be protected by collimators and reverse switching solenoids, and the preliminary simulation has been made. For the failure longer than 3 turns, the machine will be protected by aborting system, delivering the beam to the dump.

Preliminary design for typical regular magnet supports are undergoing, more detailed work will be done.