

# Progress and Plan

Mingyi Dong

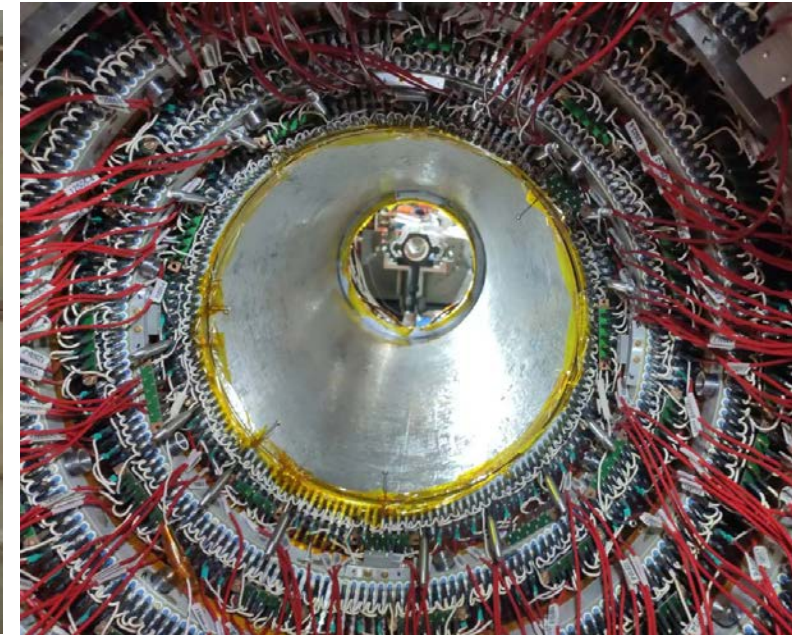
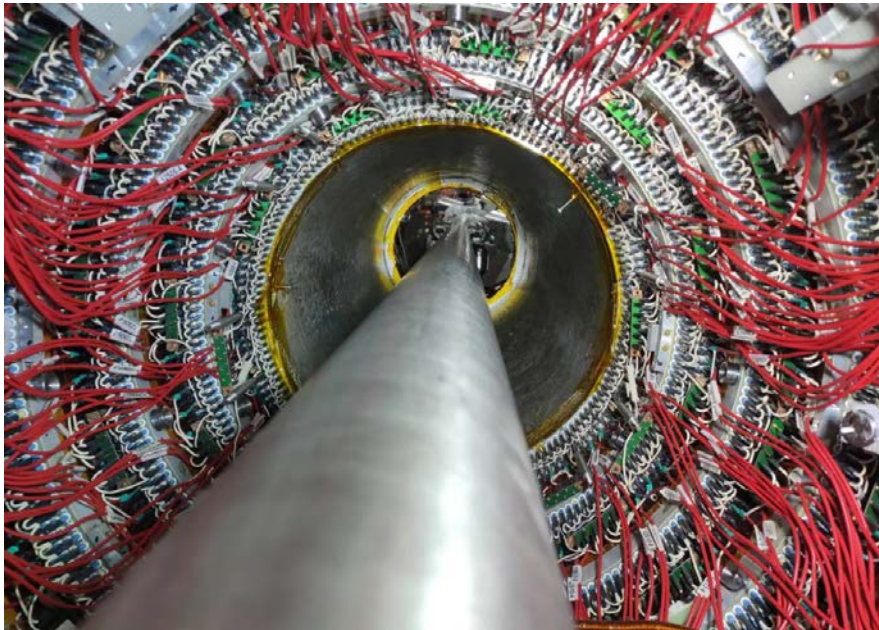
2024.9. 23

# Progress in the experimental hall last week

|   | Planned tasks last week  | Time needed (day) | person in charge                           | Status                           |
|---|--|-------------------|--|----------------------------------|
| 1 | Pull out the long rail   | 1                 | Facilities Operation group (Jing Xiaoping) | done                             |
| 2 | Gas sealing and leakage checking (before and after changing MDC working gas) | 4                 | Mingyi Dong, Jing Dong                     | done                             |
| 3 | Laser measurement of MDC position after removing the iMDC                    | 1                 | Lingling Men                               | Move to this week                |
| 4 | Check and recover the step part of MDC                                       | 2                 | Mingyi Dong                                | done                             |
| 5 | Replace the dead preamps of MDC step part                                    | 2-3               | Yunhua Sun                                 | Finished the tests of the preamp |

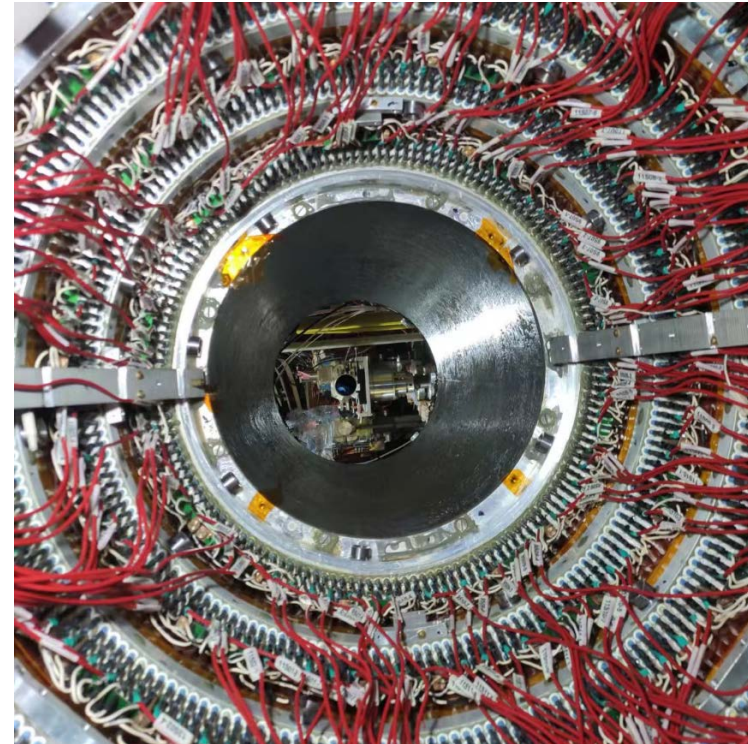
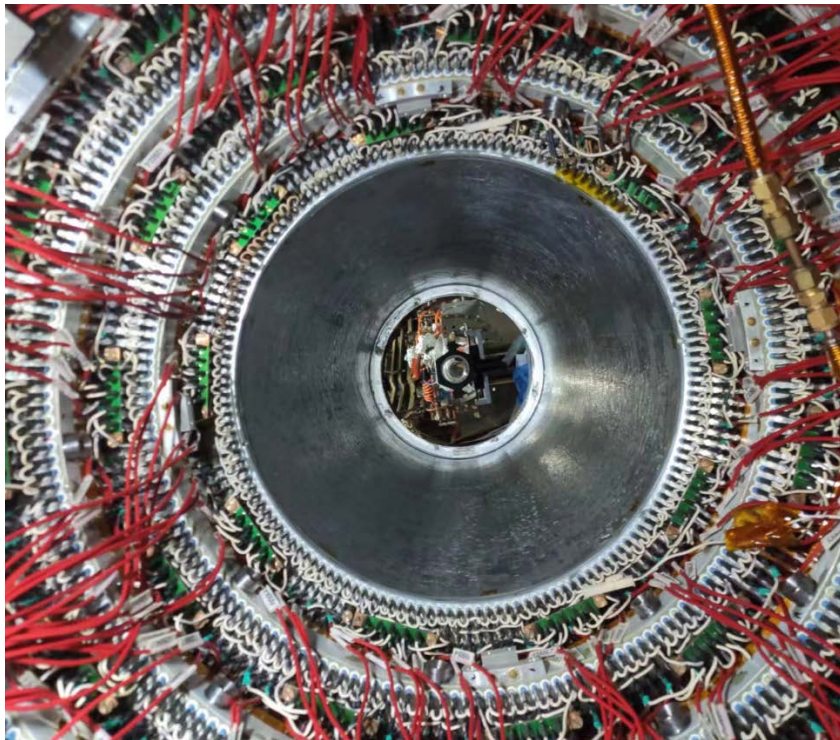
# Gas sealing

- September 18
  - For the convenience of gas sealing operation and laser measurement, pulled out the long rail, and removed the small leg on the east side
  - Removed the positioning targets on the west flange2
  - Trial installation of the new east flange2. It is ok.
  - Stopped gas flow, sealed CF cylinder and the screws/holes on the west flange2 with epoxy



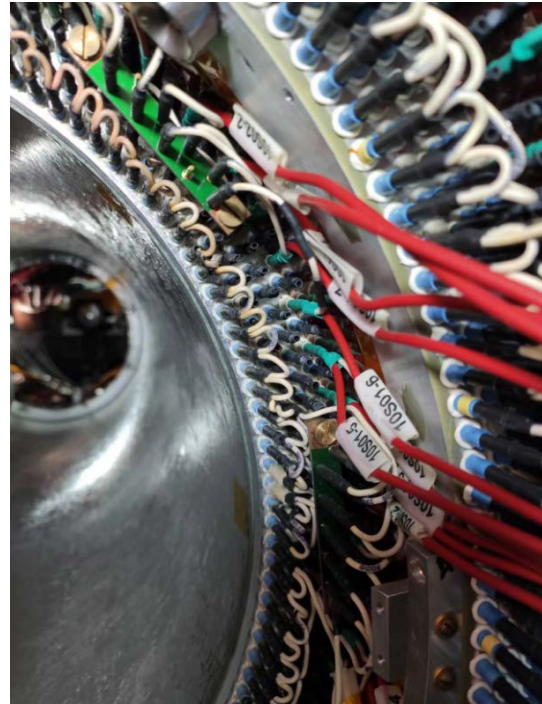
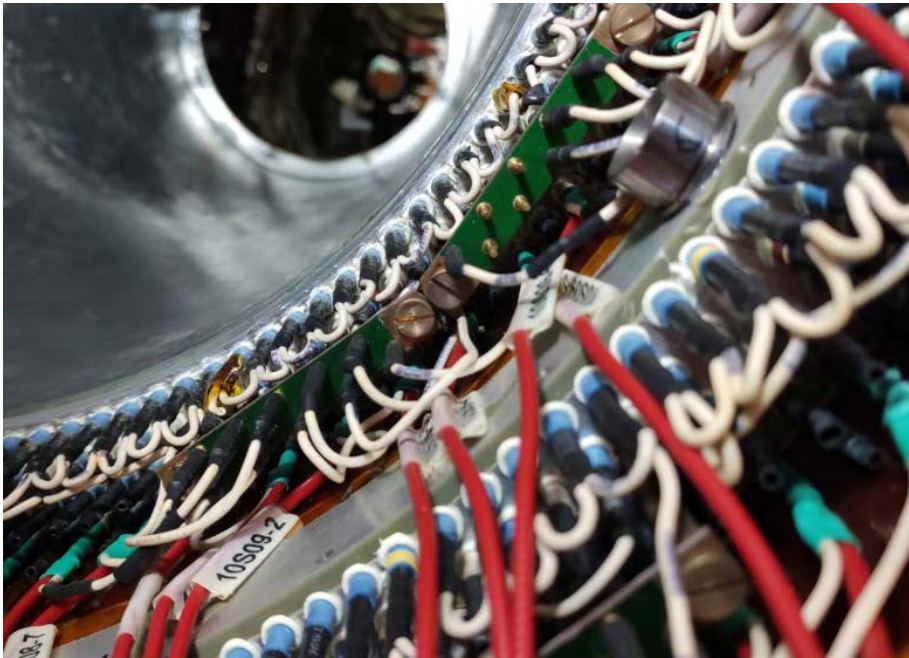
# Leakage check

- September 19
  - Check leakage with Ar in drift chamber. No big leakage was found
  - Re-sealed the screws for fixing the CF cylinder on west side
  - Trial installation of the new east flange2 . The flange can not be installed after glued the CF cylinder. Need modification.
  - Trial installation of the new shielding plates for step part
  - Changed Ar with MDC operating gas (He/C<sub>3</sub>H<sub>8</sub>)



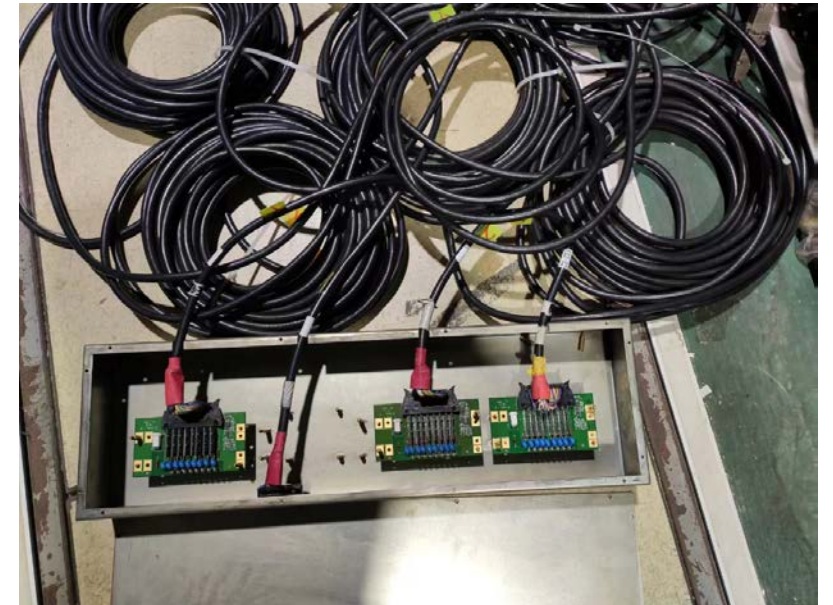
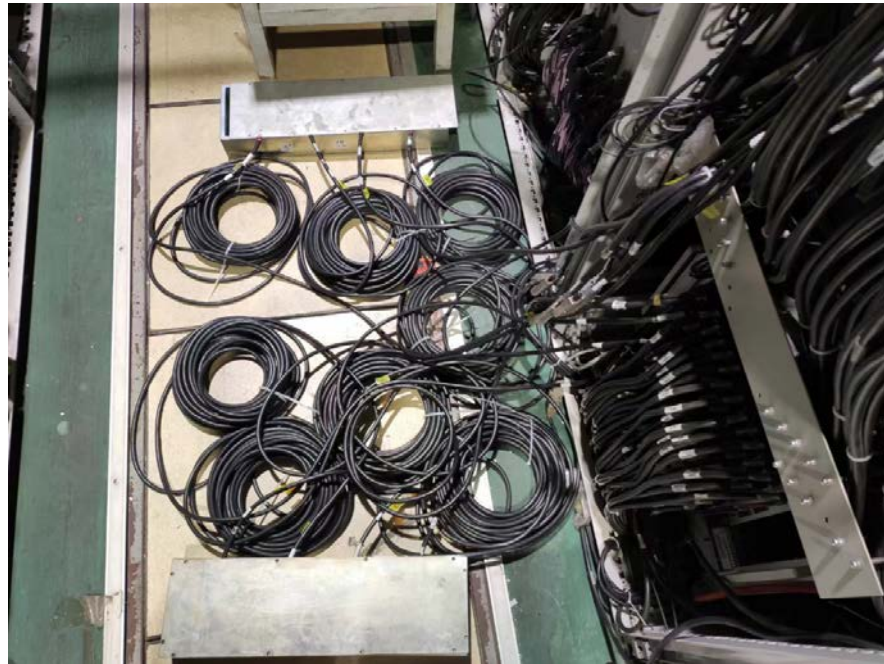
# Restoration of the step part

- September 20
  - Installed the grounding boards of the first step of MDC on east side
  - Check leakage with gas mixture of He/C<sub>3</sub>H<sub>8</sub> in drift chamber. Small leakage was found on the west fange2



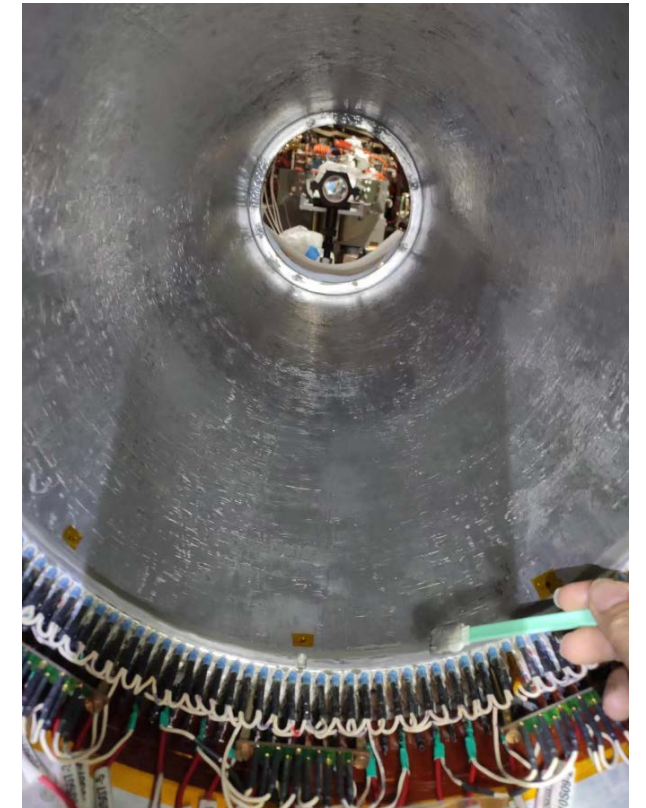
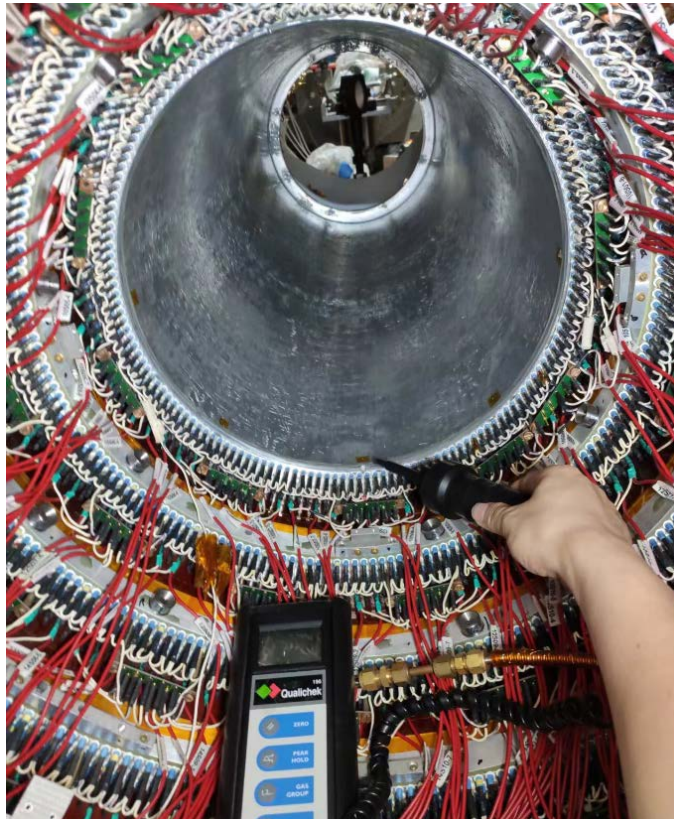
# Restoration of the step part

- September 21
  - Tested the wire tension again. After the wire tension test, restored the connection of the signal cables for the sense wires
  - Re-sealed the positioning target holes on west flange2
  - Completed the testing of the preamp boards to replace the dead preamps of the MDC



# Gas sealing and leakage check

- September 22
  - Re-sealed the positioning target holes on west flange2
  - Re-sealed the CF cylinder on east side



# Plan for next week

|   | Tasks   | Time needed (day) | person in charge       |
|---|---|-------------------|------------------------|
| 1 | Replace the dead preamps of MDC step part                 | 4                 | Sun Yunhua             |
| 2 | leakage checking and sealing                              | 2                 | Mingyi Dong, Jing Dong |
| 3 | Laser measurement of MDC position after removing the iMDC | 1                 | Lingling Men           |
| 4 | High voltage training and cosmic-ray tests                | 3                 | Mingyi Dong            |
| 5 | Recover the shielding plate                               | 2                 | Mingyi Dong            |



Backup

# Schedule (may be updated each week)

| No.   | tasks  | Duration (day) | Start time and stop time        | Sub-system involved   |
|-------|--|----------------|---------------------------------|---|
| 1     | Removal of equipment of machine                                  |                | July 1- Aug. 6                  | Utility, Small angle lum. Detector and ZDD, Beam pipe, slow control                                 |
| 2     | Pull-out of EEMC   |                |                                 | Utility, EMC, TOF, MDC, MUC   |
| 3     | Removal of inner chamber (Operate simultaneously on both sides ) | 51             | Aug. 7- Sep.7<br>Sep.8- Sep. 28 | MDC, MDC electronics, Gas, Mechanics, Laser Alignment group, Trigger, DAQ, Slow control             |
| 4     | Installation of CGEM   | 44             | Sep.29- Nov. 11                 | CGEM group, MDC, MDC electronics, Gas, Mechanics, Laser Alignment group, Trigger, DAQ, Slow control |
| 5     | Recover EEMC   |                | Nov. 12-Dec.30                  | Utility, EMC, TOF, MDC, MUC   |
| 6     | Recover equipment of machine                                     |                |                                 | Utility, Small angle lum. Detector, ZDD, Beam pipe, slow control,                                   |
| total |  | 180 days       | July 1- Dec.30                  |   |

# Key tasks before extraction of iMDC and installation of CGEM

- CGEM Mock-up insertion test ( Done, successful )
- Laser alignment preparation (Done)
- Extraction of the inner MDC is considered to be the most critical point. Continue inner chamber extraction test (Done, passed the review)
- Continue CGEM cosmic-ray test to gain more experience with the full detector
- CGEM integrated and tested with BESIII DAQ, trigger, and slow control