

Progress and Plan

Mingyi Dong

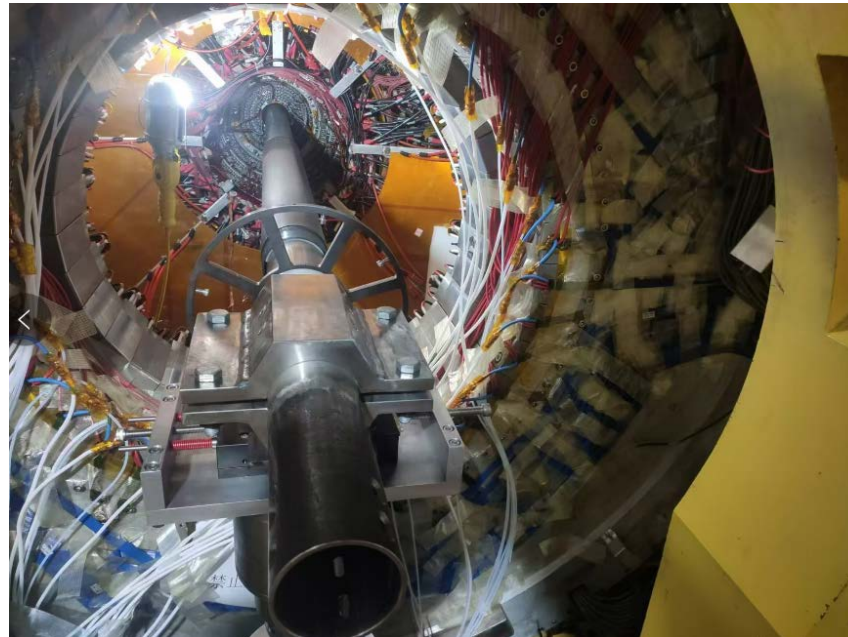
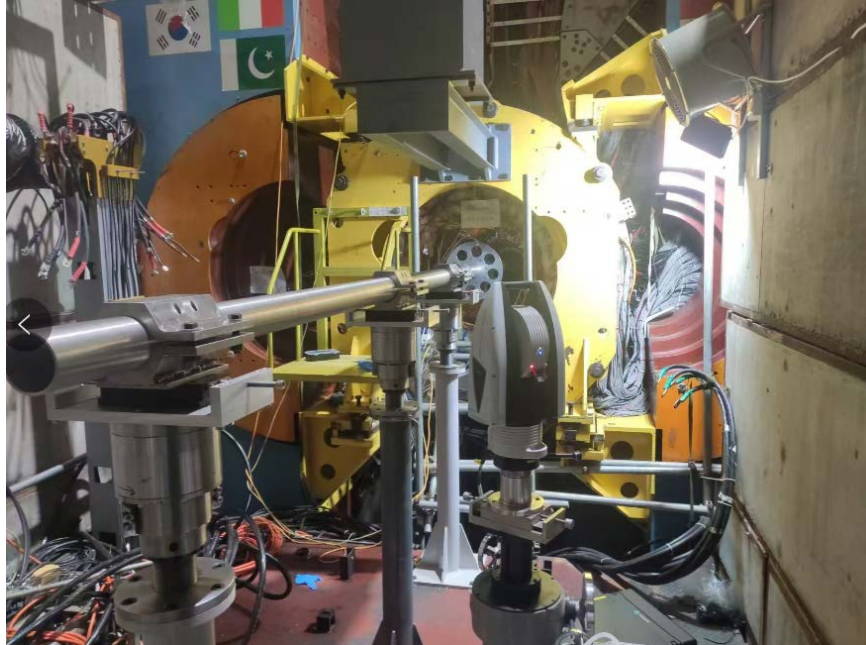
2024.9.16

Progress in the experimental hall last week

	Planned tasks last week	Time needed (day)	person in charge	Status
1	Finish the installation of the tools for inner MDC removal	3	Facilities Operation group (Jing Xiaoping)	done
3	Finish the preparation before pulling out iMDC	2	Mingyi Dong	done
4	Final check before pulling out iMDC	1	Mingyi Dong	done
4	pull out iMDC	1	Mingyi Dong, Facilities Operation group (Jing Xiaoping)	done
5	Installation of new CF cylinder and gas sealing	2	Mingyi Dong, Facilities Operation group (Jing Xiaoping)	Completed the Installation of new CF cylinder

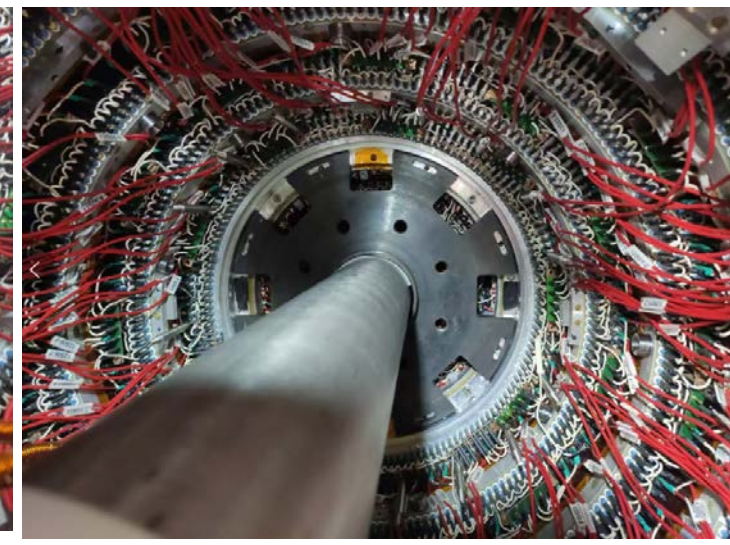
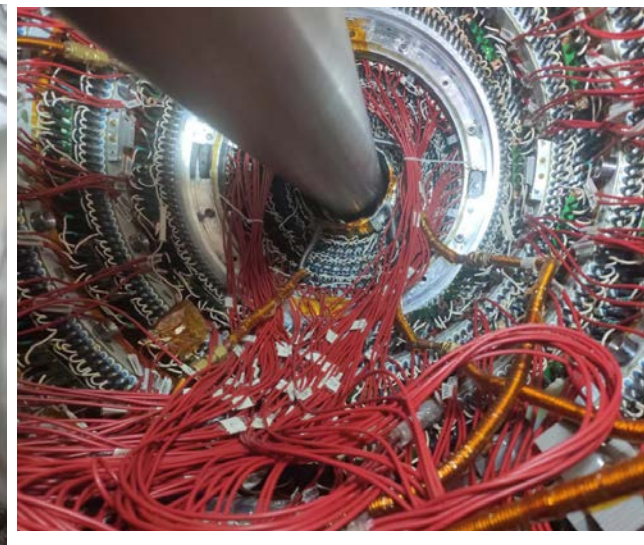
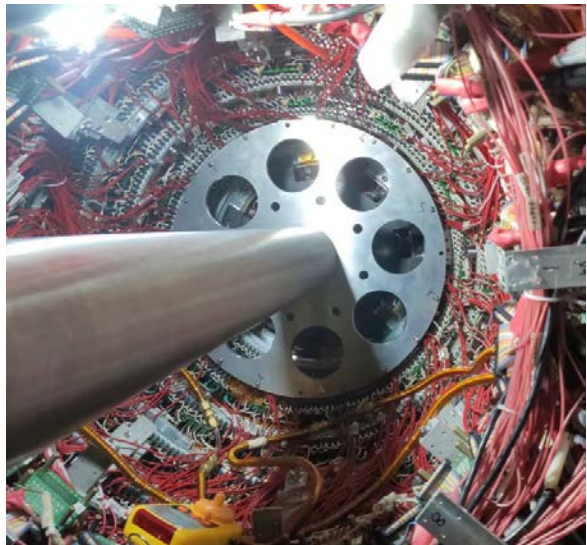
Installation of the tools for iMDC removal

- September 9-10
 - Finished the installation of the long rail from east side to west side on Sep.9.
 - Installed protecting sleeve for inner chamber from west side to east side on Sep.10
 - Laser alignment of the long rail on Sep.10



Installation of the tools for iMDC removal

- September 11-12
 - Removed the grounding boards of the first step of MDC on east side, and installed pushing rods on the first step of MDC on Sep.11
 - Disconnected the cable of the temperature sensor for the inner chamber on Sep.11
 - Trial Installation of the connection flanges to the protecting sleeve on both sides. Trial Installation of the pull-out devices (Sep.11)
 - Removed the connection flange on west side and reduced its diameter by 1.5mm, and then installed it again on Sep.12
 - Cut the signal cables of layer8 on east side on Sep.12



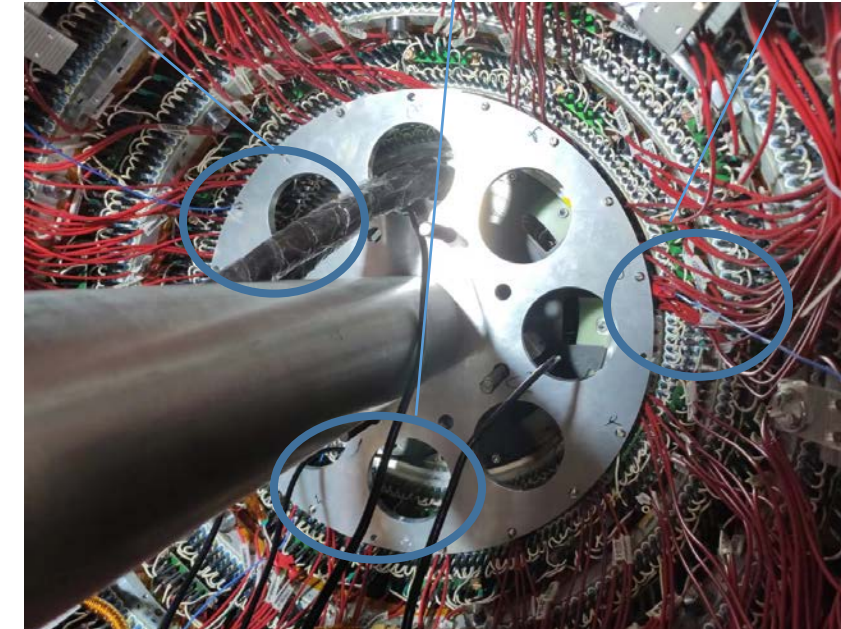
Installation of the tools for iMDC removal

- September 13
 - Installed the cooling ring on east side
 - Final laser alignment of the long rail before removing the inner chamber
 - Removed the connecting screws between east flange2 and the Al ring of the first step
 - Installed the pull-out devices on east side. Connecting screws between flange1 and flange2 on east side were also used to fix the pull-out flange
 - Installed the tension sensors and temperature sensors on east side

Cooling pipe

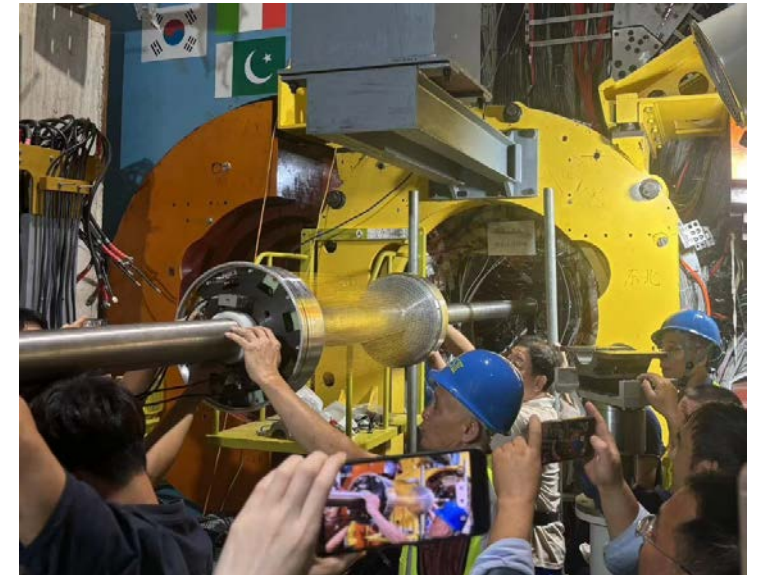
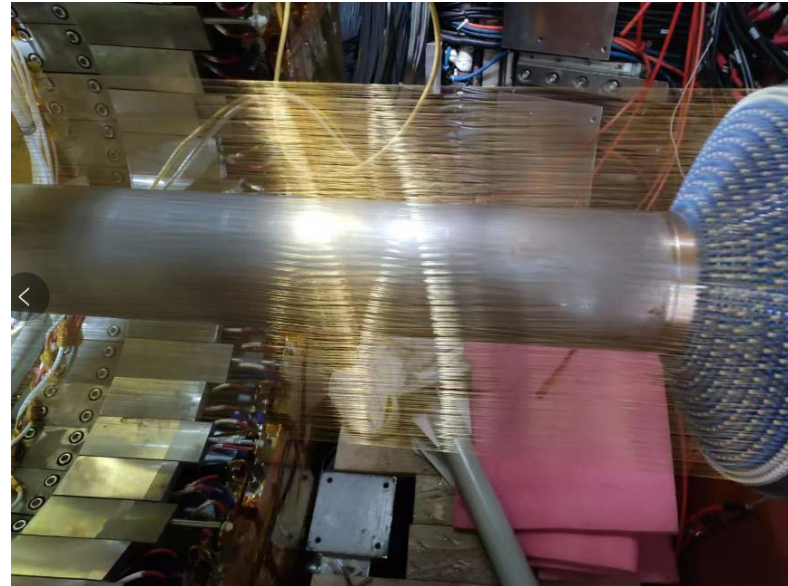
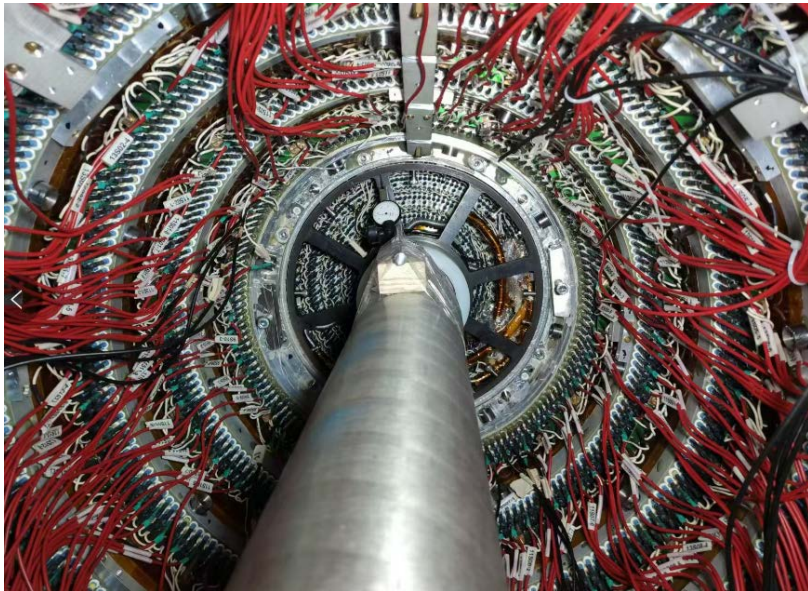
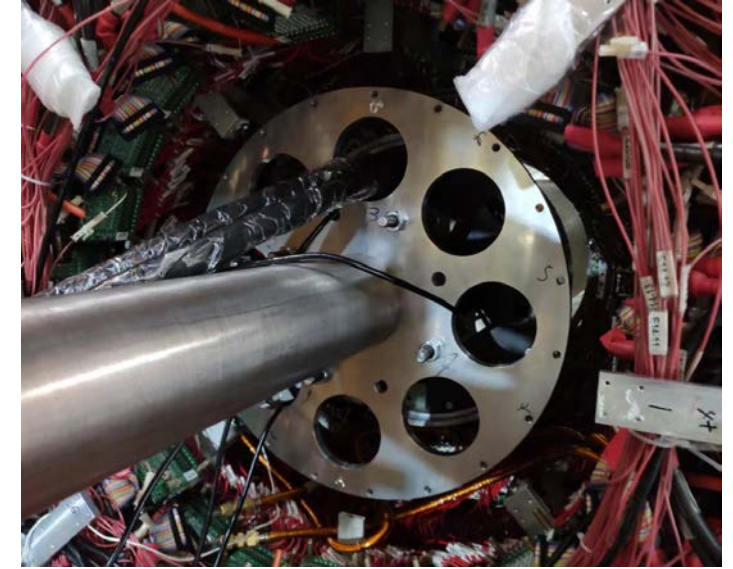
Cables of tension sensors

Cables of T sensors

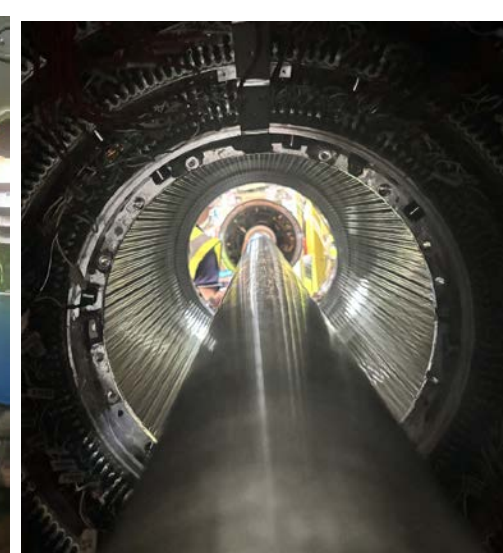
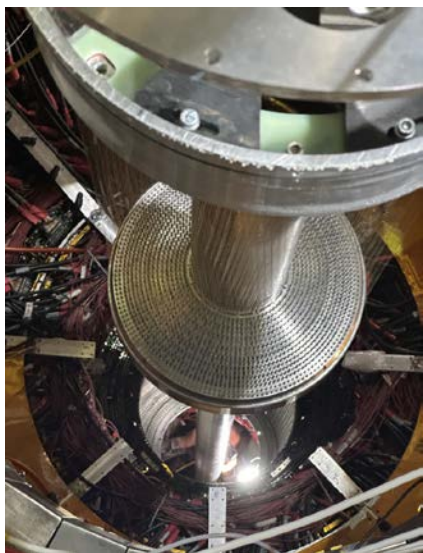
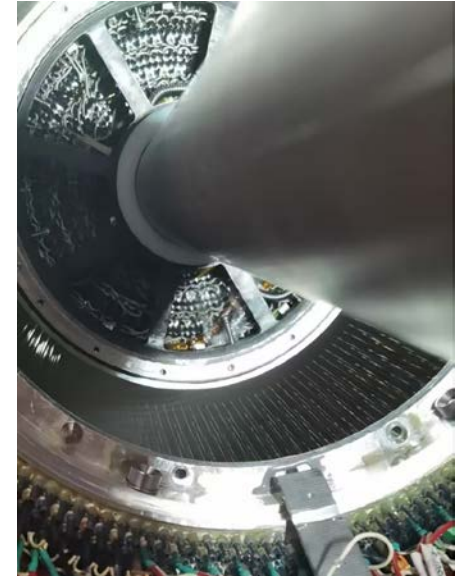
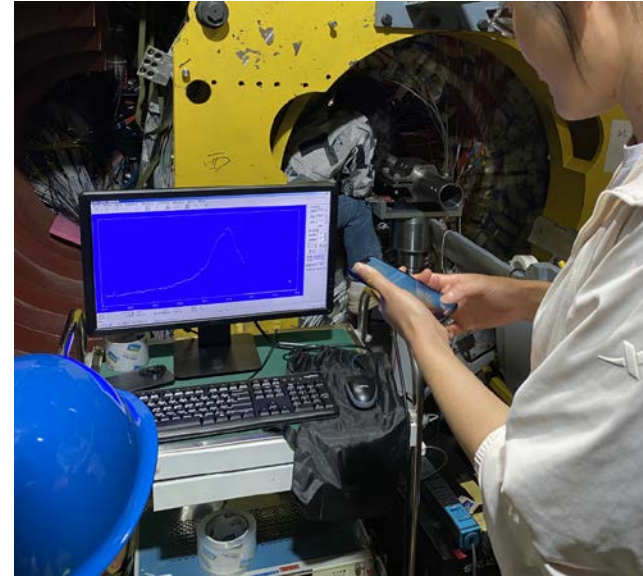
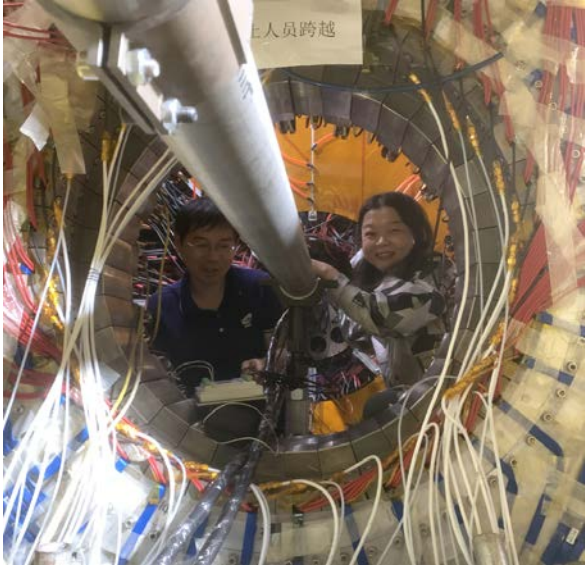


Extraction of the iMDC

- September 14
 - Final preparation
 - Preparation of the wire tension test during removing the iMDC
 - Two blocks were glued on the west flange2, which can apply pushing force to help extraction of the inner chamber
 - Installed an small meter to monitor the movement of the inner chamber flange on west side
 - Final checks before removing the iMDC
 - Pulled out iMDC successfully. Started from 1:00pm and finished at about 7:00pm
 - During the extraction, wire tension almost no change, maximum pull strength is about 400kg

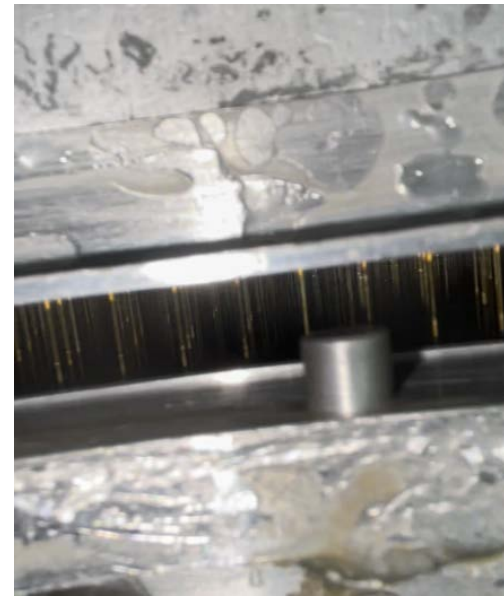
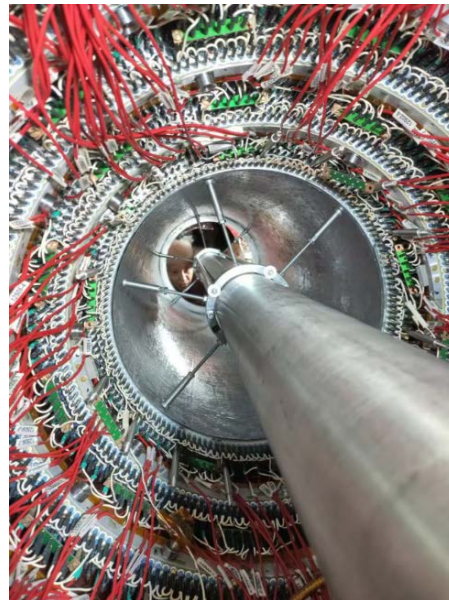
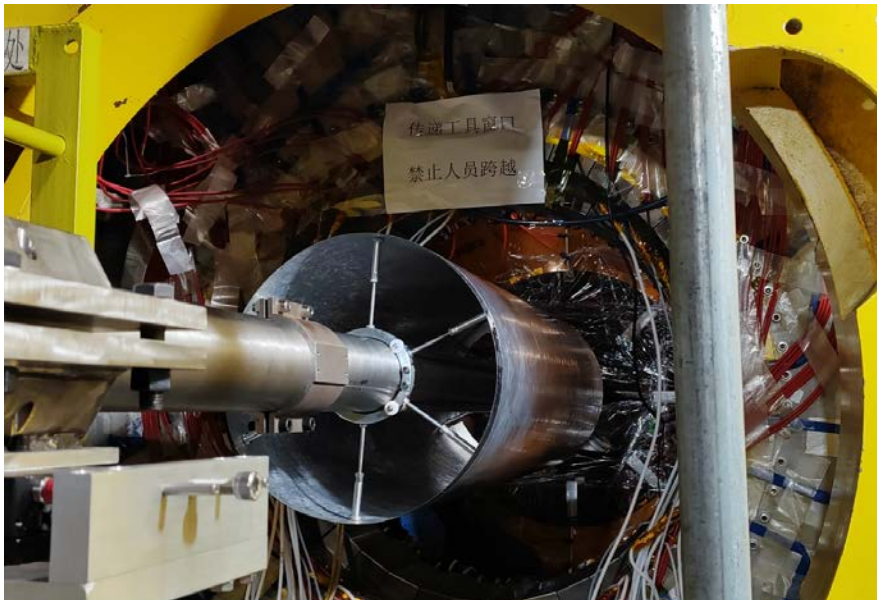


Extraction of the iMDC



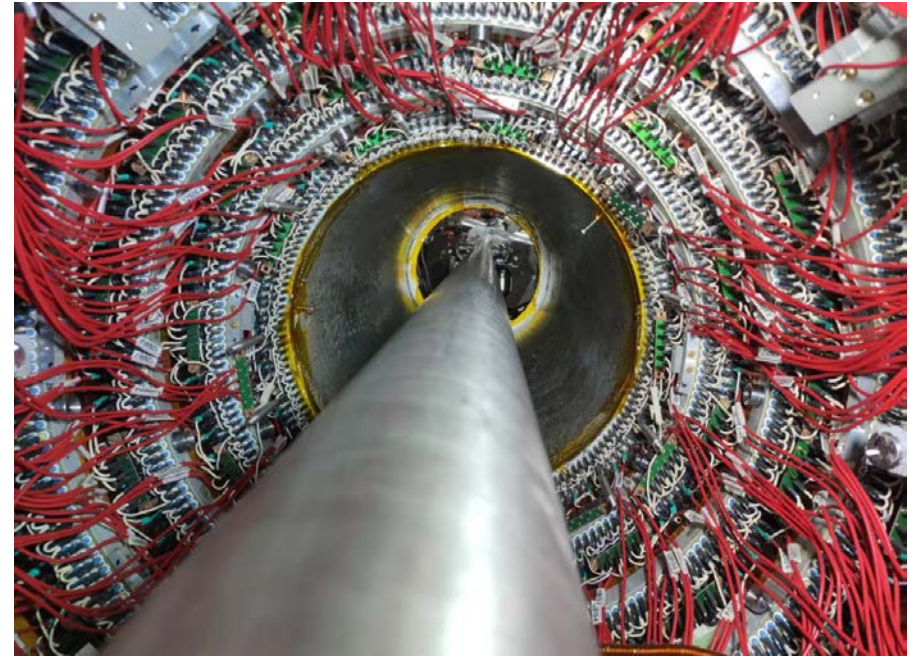
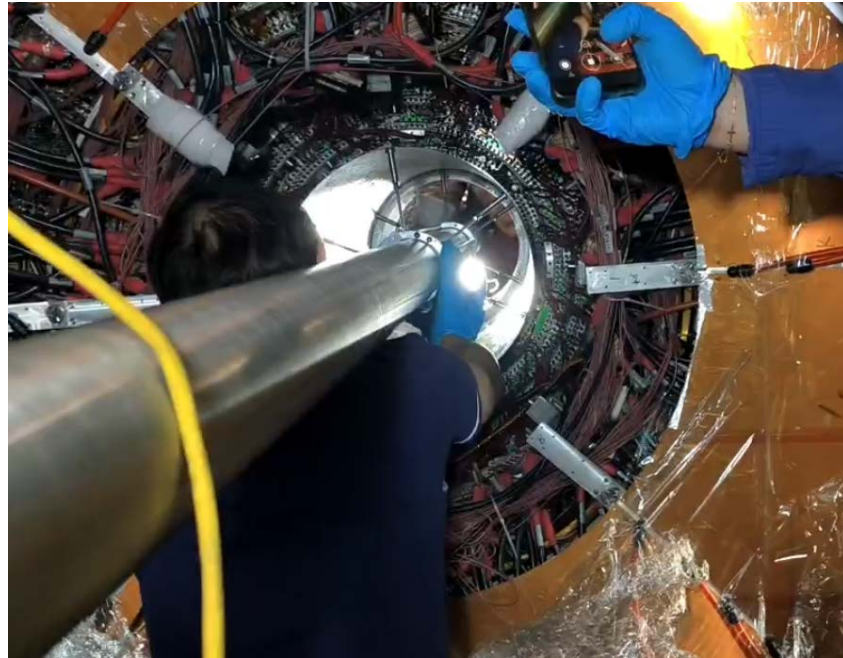
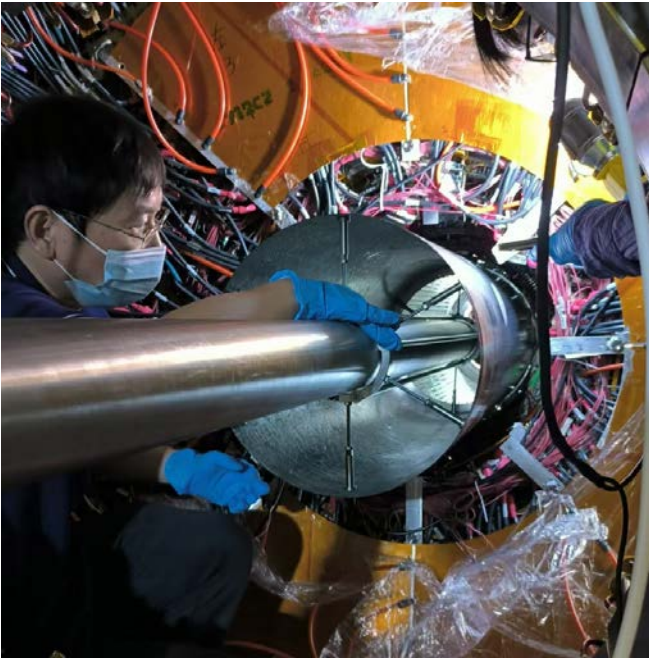
Installation of the new CF cylinder

- September 14
 - Trial Installation of the new CF cylinder
 - The CF cylinder can be pushed into the flange2, but the positioning targets on the west flange 2 interferes with the installation of CF cylinder



Installation of the new CF cylinder

- September 15
 - Modified the Al ring on the CF cylinder. Drilled two holes ($\Phi 9$) on it
 - Installed the new CF cylinder successfully
 - Preliminary sealing of the outer chamber



Plan for next week

	Tasks	Time needed (day)	person in charge
1	Pull out the long rail	1	Facilities Operation group (Jing Xiaoping)
3	Gas sealing and leakage checking (before and after changing MDC working gas)	4	Mingyi Dong, Jing Dong
4	Laser measurement of MDC position after removing the iMDC	1	Lingling Men
4	Check and Recover the step part of MDC	2	Mingyi Dong
5	Replace the dead preamps of MDC step part	2-3	Yunhua Sun

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 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