**BESIII Inner Tracker Upgrade Group Meeting**

**(July8, 2024) 14:00 - 16:00pm (Beijing Time)**

**Meeting agenda and minutes**

* indico page: https://indico.ihep.ac.cn/event/22493/
* Participants:
  1. Present in the meeting room

Yifang Wang, Zheng Wang, Haibo Li, Qun Ouyang, Mingyi Dong, Stefano Gramigna, Jinyu Fu, (Colleagues need to be added)

* 1. Online at ZOOM

Michela Greco, Gianliugi Cibinetto, Mali Chen, Boxiang Li, Jing Dong, Chenglong Jinlian, Yinghong Zhang, Yunhua Sun, Jinfang Chang, Hongliang Dai, Wenxuan Gong, Giulio Mezzadri, Huirong Qi, Jingzhou Zhao, KejunZhu, Liangliang Wang, Sheng Dong, Shuangshi Fang, Zhi Wu, Jian Zhang

**Introduction: Zheng Wang, Haibo Li**

* + Haibo Li: In the Collaboration Meeting of last week, based on the recommendation of the CGEM review committee, EB agrees the installation of the CGEM during the coming machine shutdown and has sent the official decision to IHEP management. The director agreed and suggested to have a weekly technical meeting.
  + Zheng Wang: This meeting we called is not dedicated for the CGEM, but for the whole facility during the long ‘summer shutdown’ which would last the future half year. I recommend all the subsystems have to join this weekly meeting.

**Schedule and Progress last week: Mingyi Dong**

* + **Summary of the report:** (Slides by Mingyi Dong: [Slides](https://indico.ihep.ac.cn/event/22954/contributions/160849/attachments/79623/99395/Schedule,%20progress%20and%20plan_20240708%20(2).pdf) )

1. **Schedule of inner chamber upgrade:**

(1) July 1- Aug. 6: Removal of equipment of machine and pull out of EEMC;

(2) Aug. 7- Sep. 28: Removal of inner chamber

(3) Sep.29- Nov. 11: Installation of CGEM;

(4) Nov. 12-Dec.30: To recover EEMC and Recover equipment of machine.

1. **Key tasks before extraction of iMDC and installation of CGEM:**

(1) CGEM Mock-up insertion test (finished last week, successful)

(2) Laser alignment preparation (discussed with machine people last week)

(3) Extraction of the inner MDC is considered to be the most critical point. Will continue inner chamber extraction test.

(4) Continue CGEM cosmic-ray test to gain more experience with the full detector

(5) CGEM integrated and tested with BESIII DAQ, trigger and slow control

**3. Progress last week**

(1) Removed the shielding brick walls on east and west sides of IP area

(2) Finished laser measurement of BESIII detector and IP area

(3) Had a discussion on laser measurement during the upgrade of iMDC with machine people, and made detailed plan

(4) Had a Discussion on CGEM Fast Control Signal and DAQ with Michela, gg. and Angelo. It is possible to use ZDD (MTI&MCC modules) ‘fast control signal for CGEM, but level conversion is needed.

* + **Questions during the slides or planning:**
    1. The feasibility of using the ZDD (MTI&MCC modules) ‘fast control signal for CGEM which located inside a 6-u VME crate on the first floor of BESIII hall .(LVDS~LVPECL)
    2. The way to decrease the data rate.
    3. ZDD will be removed on this Wednesday and will be recovered.
    4. The preparation & the test of the ‘cooling’ flange for the extraction of the old inner chamber will be performed in the following two or three weeks. The calculation has been done and to be presented by Jinyu Fu.

**Insertion test of CGEM**

* + **Summary of the report:** ( Slides by Stefano Gramigna: [Slides](https://indico.ihep.ac.cn/event/22954/contributions/160850/attachments/79624/99368/2024-07-08_CGEM_insertion_test_rev1.pdf) )
    1. The second insertion test of the CGEM-IT was SUCCESSFUL
    2. All the upgrades to the tooling have been tested and will be reviewed in the light of updated information
    3. Feasibility of the insertion with realistic conditions has been confirmed
    4. Few non-critical improvements can still be considered before installation
  + **Questions during the slides or planning:**
    1. The clearance for the installation sensors which placed around the mock-up of CGEM is 1mm on the radius (1.8mm before the sensors).
    2. The test is quite successful and more test is not planned for this moment. Yifang do not think it is necessary to do the on-side test of the insertion of mock-up to the MDC. The risk of the damaging the MDC( since the CF is adhesived ) has to be considered and the onsite test should be replaced by a better scenario.

**Other discussion**

* 1. A dehumidifier has been provided and the humidity of 55% at room temperature in Beijing could be guaranteed.