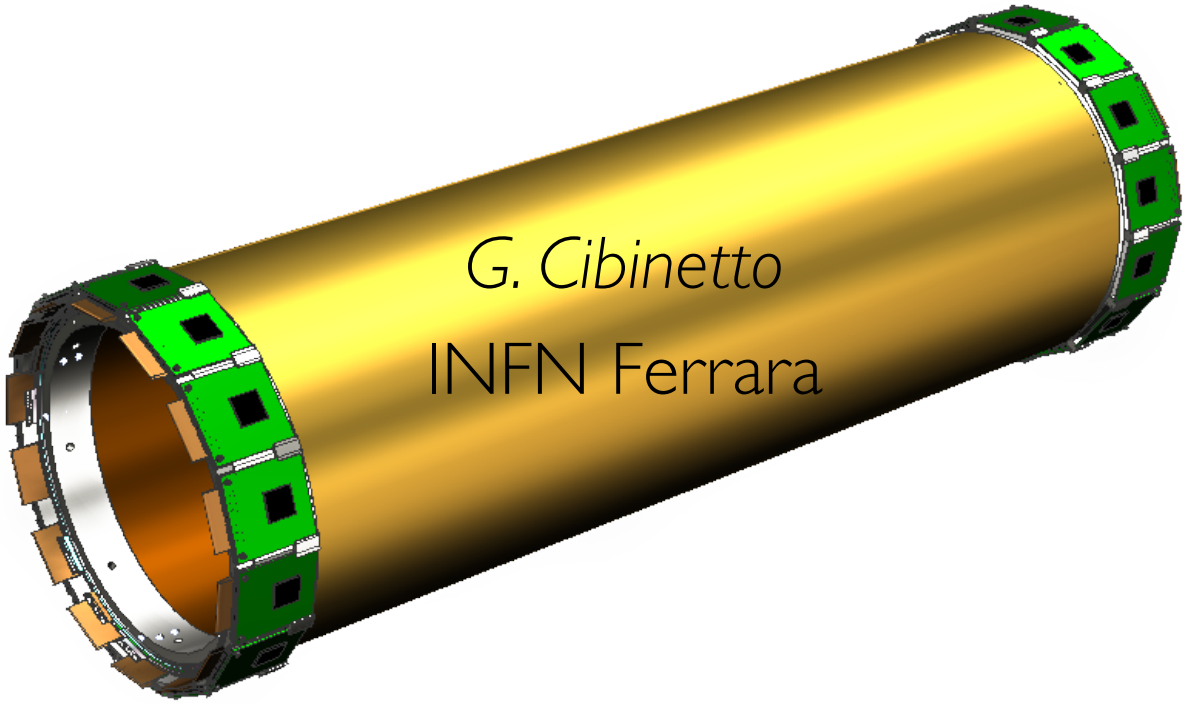
Introduction to the meeting



G. Cibinetto

INFN Ferrara

The framework of this meeting

- The BESIII executive board in the CGEM-IT endorsement letter specifically required:

> In addition to these milestones, the Collaboration will participate in and monitor the ongoing development of tracking and simulation software for the new detector system. Detailed simulations will be required to prove that the installation of the CGEM-IT in the BESIII Spectrometer will result in improved Physics performance relative to the Inner Drift Chamber averaged over the expected detector lifetime. Specifically, it must provide comparable resolution in the transverse plane and better resolution in the longitudinal coordinate and in the reconstruction of secondary vertices in addition to improved radiation tolerance.

- On the other hand the European Community funded the CGEM-RISE project (proposed by INFN together with JGU-Mainz, Uppsala and IHEP). One of the working package of the project is:
  - WP4: Data simulation and analysis

  and it's intended to promote the sharing of the knowledge and of the efforts towards the finalization of the CGEM-IT software.

Goal for the meeting

- This is not intended to be an official CGEM-IT software meeting, therefore it is not intended to review progresses on CGEM-IT software activities.

- The main purpose of this meeting is to improve the coordination of the Italian group working on software in order to enhance the cooperation with the Chinese colleagues working on similar issues.

- This is expected to improve
  - the task sharing between different groups;
  - double checking of the results;
  - and the connection between hardware and software people.

- We take advantage of the visit of Prof. Linghui Wu to Ferrara to gather important information about the current CGEM-IT software situation and to start planning the future activities.

CGEM-IT software: open issues

- Garfield simulation
  - gain measurement
  - computing time
- Validation/tuning of the simulation with test beam and cosmic run results.
- Status and plan for the tracking software.
- Vertexing algorithm.
- Real CGEM material and geometry into GEANT4 simulation.
- Accessibility of beta-version software.
- Software validation.
- Monte Carlo study of CGEM-IT performance

Agenda

- Monday, Oct 20 – Introduction (room C200)

  Morning
  - *Arrival of the participants*

  Afternoon
  - *Goal for the workshop (Gigi)*
  - *Study of MDC noise and aging effect (Linghui)*

- Tuesday, Oct 21 – Digitization (room C300)

  Morning
  - *Garfield simulation Ferrara and IHEP (Riccardo&Linghui)*
  - *Computing resources in Turin (Marco)*
  - *Planar prototype test: plan and prospects (Gigi)*

  Afternoon
  - *Working session*

- Wednesday, Oct 22 – Tracking and other sw issues (room C200)

  Morning
  - *Tracking software of the BESIII drift chamber (Linghui)*
  - *Overall Status of CGEM software (Linghui)*
  - *CGEM software in Turin (Marco)*

  Afternoon
  - *Working session*

- Thursday, Oct 23 – Planning (room C200)

  Morning
  - *Discussion on CGEM software schedule and task sharing (All)*