

India-CMS Collaboration Comprises of

- BARC, Mumbai (9)
- Delhi University, Delhi (4+1)
- IIT, Mumbai (1)
- NISER, Bhubaneswar (2)
- Panjab University, Chandigarh (4)
- SINP, Kolkata (7)
- TIFR, Mumbai (8)
- VB, Santiniketan (1)

Total Faculties 37 +Students more than 40

India-CMS wants to grow across the institutes

Active Consideration: IISER, Pune, IIT, Madras, IIT, Bhubaneswar and Solani University, HP

India-CMS Involvements:

- Physics: Higgs, Exotica, QCD , B-Physics and Heavy Ion
- Software and Detector Simulation
- Detector and Hardware

Kirti: Higgs and Heavy Ion

Satyaki: Exo, QCD and B-Physics

Gobinda: Software and Detector Simulation

Lalit: RPC and GEM (Upgrade)

Shashikant: HCAL and Tracker (Upgrade)

India-CMS-BEL Collaboration:

- A small presentation will be made by Rejeena
- A Success Story Of India-CMS-BEL collaboration in developing silicon sensors from 4 inch wafers and 300 micron thickness
- BEL will now strengthen the effort and begin R&D for 6 inch wafer and thinner than 300 micron (to the extent possible) to meet the CMS requirements.

Participation in CMS upgrades

- HCAL (PU, TIFR, SINP)
- Tracker (TIFR, DU, BARC, SINP)
- GEM Based Detector (DU, BARC, PU, NISER, SINP).

Steps being taken:

- We want to produce components as much as possible in India. As per GEM project is concerned, since CMS is willing to transfer the patent, we are exploring if Indian Industry can roll the GEM foil itself like it is being done at KODEL, Korea. Looks like: there will be a synergy with ALICE-India as they also needs GEM for TPC. We are now going to approach various Indian Industries if they are ready to join us in developing GEM foils.

Tracker:

- CMS is very keen to explore the possibility of developing silicon sensors in collaboration with India-CMS and Indian Foundry. It is suggested to try it in parallel with two foundries so that the success rate is higher. In this context, Frank , Duccio and Alexander visited us in November 8th to 16th November and went to BEL, Bangalore and SCL, Chandigarh along with our colleagues.

Our Management:

- We are governed by an India-CMS constitution. It is similar in spirit to CERN-CMS constitution
- We elect our spokes-persons once in two years.
- We have a well defined entry policy for new institutes joining India-CMS. We want it to be polished further with help of Task force
- We will be introducing very soon a code of conduct for ourselves so that we do not violate discipline and scientific ethics.

Our Management

- Developing Middle-Level Leadership (Support long term stay at CERN: Proposal to Tiziano)
- Coordinators: Physics, Upgrades and Outreach.
- Involve Indian industries as our R&D partners.