

## CEPC Physics and Detector Plenary Meeting

Time: Wednesday, December 11, 2019 from 15:00 to 17:00 (Asia/Shanghai)

Location: IHEP ( A419 )

Attendance: Cen Zhang, Joao Guimaraes da Costa, Zhaoru, Jianchun Wang, Gang Li, Qun Ouyang, Zhijun Liang, Huirong Qi, Zian Zhu, Yong Liu

Vidyo: Yaquan Fang, Haijun Yang, Jianbei Liu, Meng Wang, Paolo Giacomelli, Xin Shi, Yiming Li, Zhen-An Liu

### 1. Short introduction from Joao

The nomination of physics and Detector Subgroup Conveners: Joao said that we need to re-appoint several conveners and expand to include international participation. Joao asked people to send the nominations and we should discuss further at steering group meeting on Dec. 30.

Then people discussed the reschedule of subgroup structure.

- 1) For the current ECAL and HCAL group, one option is to merge two group into Calorimeter group and also include DR calorimeter. The other option is expand to 3 groups, including DR, and set 1 convener for each calorimeter.
- 2) For Physics Analysis and Detector Optimization, we can split the current group to two.

### 2. Report on Global EFT fit for top couplings at future lepton colliders, by Cen Zhang

Global EFT fit to assess the sensitivity to top-couplings. Individually, 2-fermion Ops are best constrained at lower energy, while 4- fermion Ops are constrained at larger energy. Globally, some correlations between the two types of Ops can be resolved only by using different energies. GDP parameter can be used to measure the overall constraining strength and optimize the running parameters.

We should keep in mind that a combination of two different energies is useful. We have assumed there is no interference between threshold scan and coupling measurement. Apart from coupling strength, it is also important to maximize the number of top quarks, e.g. for studying rare top decays etc. There is also some interplay between Higgs and top measurements.

Yaquan will summarize the top physics and present it at CEPC DAY

### 3. Detector R&D Tasks

IDRC required to assemble a coherent list of R&D activities for detector, and each current R&D project should provide the following information:

1. the objectives of the project, the anticipated schedule
2. the funding available to the project
3. the leadership arrangements within it
4. the extent to which the project is a CEPC-specific development
5. the manpower resources available for the project

Deadline:

1. Preliminary list by Friday
2. Preliminary documents by Monday
3. Discussion: December 18

People briefly discussed the possible projects for each sub-groups and everyone agree with the deadline for documentation.