



Photon efficiency study for ECL on Belle II

Yu Hu(DES Y)
DES Y FH Fellow Meeting

About Me

Background, past activities

Born and grow up in central China

2008-2012: B.S. from Huazhong University of Science & Technology, Wuhan

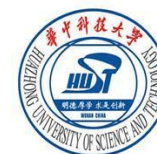
Major: Applied Physics, some experience on Biophysics

2012-2018: Graduated (PhD) from Institute of High Energy Physics, CAS, Beijing

Work on data analysis of BESIII, focus on charmonium physics

Develop four momenta constraint kinematic fit on Belle II

Began Postdoc fellowship of IHEP&DESY in July 2017



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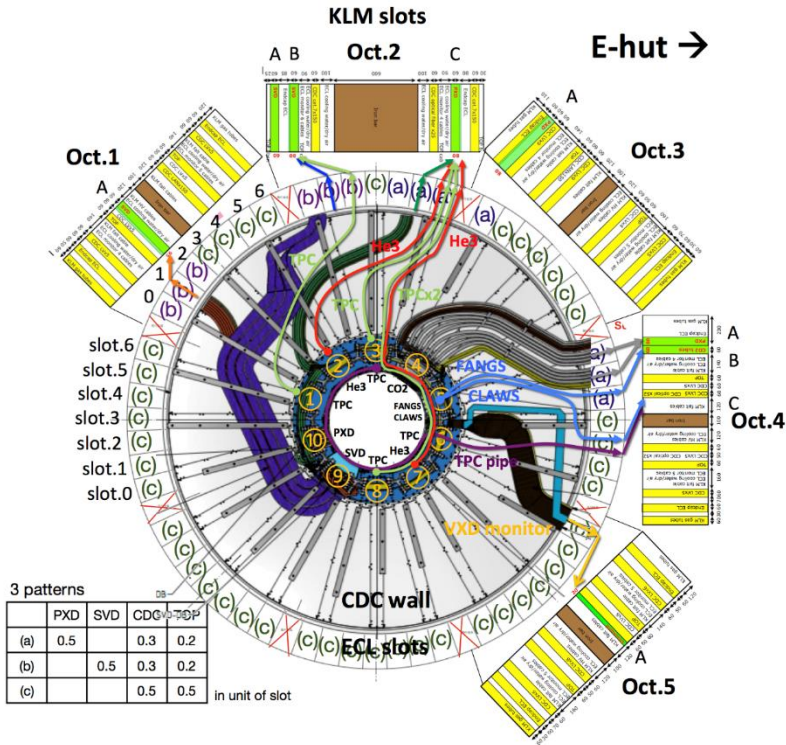
中國科學院高能物理研究所
Institute of High Energy Physics
Chinese Academy of Sciences



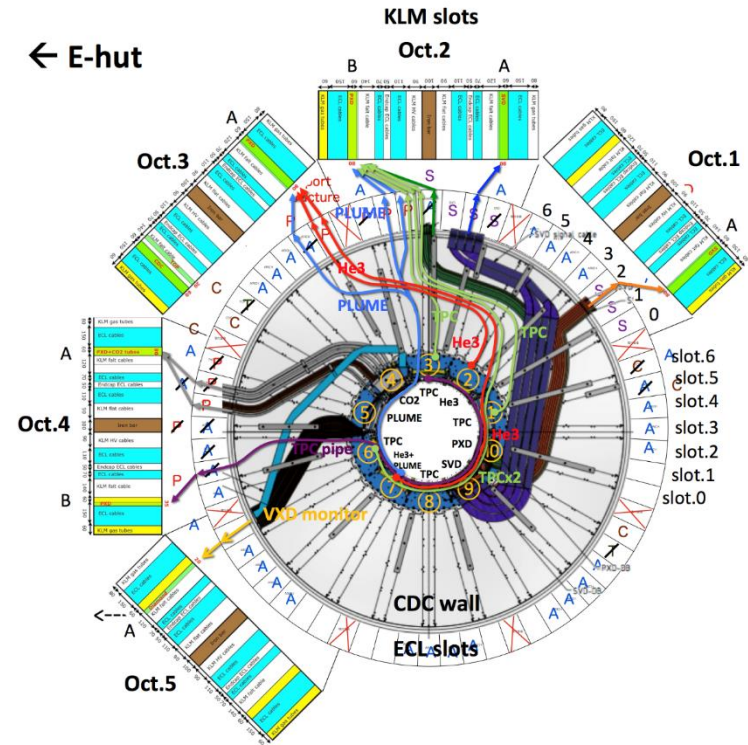
My Current Work

Photon efficiency study for ECL on Belle II

BWD



← E-hut

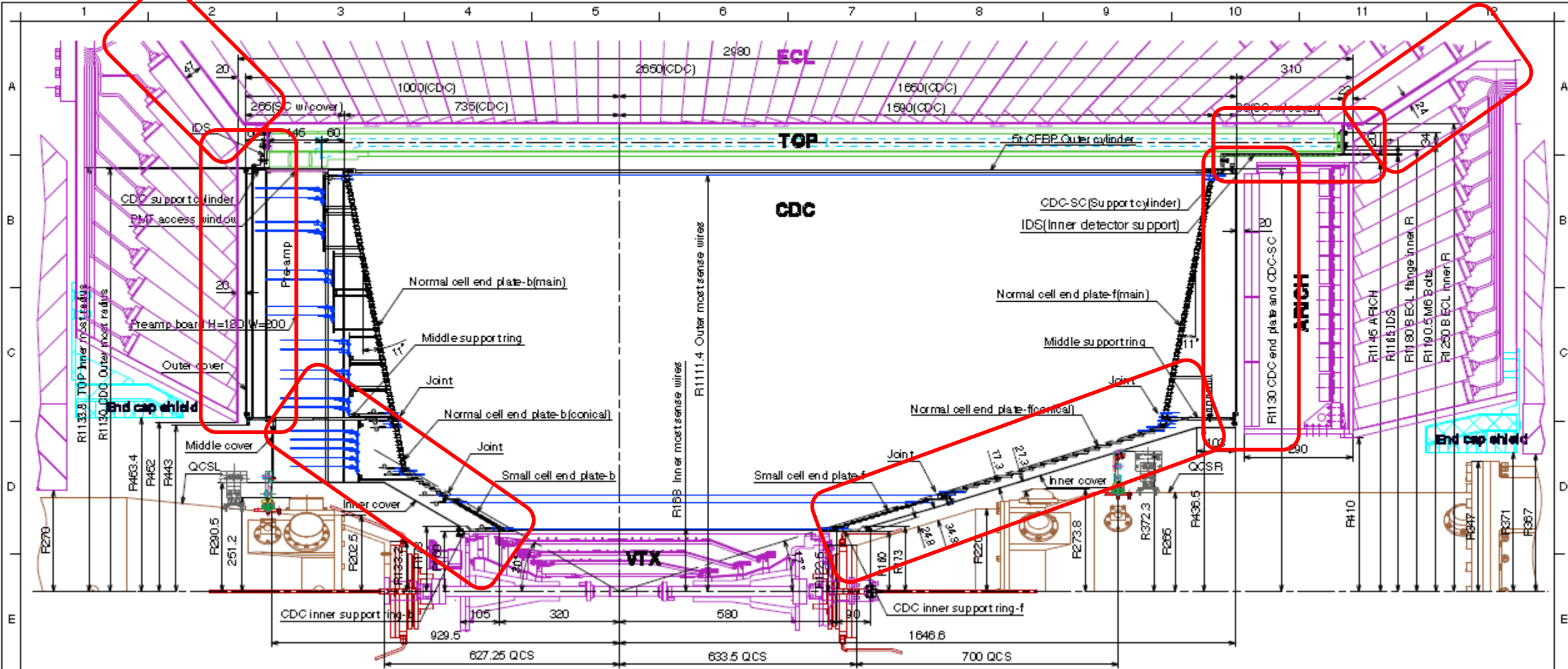


FWD

- Many materials from Belle II phase II haven't been described in the full detector simulation.
- Photons coming from the IP will (sometimes) convert into an $e^+ e^-$ pair in material and hence not be reconstructed as a single photon but as two tracks.
- The impact on the photons efficiency of the material budget should be investigated.

My Current Work

Photon efficiency study for ECL on Belle II



My Favourite Plot

R in Light-Flavor, Charm, and Beauty Threshold Regions

Figure 52.3: R in the light-flavor, charm, and beauty threshold regions. Data errors are total below 2 GeV and statistical above 2 GeV. The curves are the same as in Fig. 52.2. Note: CLEO data above $\Upsilon(4S)$ were not fully corrected for radiative effects, and we retain them on the plot only for illustrative purposes with a normalization factor of 0.8. The full list of references to the original data and the details of the R ratio extraction from them can be found in [arXiv:hep-ph/0312114]. The computer-readable data are available at <http://pdg.lbl.gov/current/xsect/>. (Courtesy of the COMPAS (Protvino) and HEPDATA (Durham) Groups, August 2015.)

