

Technical conveners meeting

TPC

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Costing

- **Kick-off July 12.** Not for ESU, targeted for ILD-DR (early 2019). Preliminary version for LCWS Arlington.
 - Guidelines: R&D cost not included, overheads and contingency applied at the end, manpower included (including management, assembly,...), evolution from DBD scrutinized.
 - Include tooling, base the procurement costs on experience from R&D.
- **Meeting with Henri Videau July 26.** Discussed how to implement above requests.
- **Contacted Uwe Schneekloth and Christophe Berriaud for the magnet.** Plan to update F. Kircher's magnet costing from 2012, especially with SC cable orders from recent projects.
- **Plan to contact Volker Prah (and who?) for the field cage.** Also T2K upgrade, as Barcelona inspires from LCTPC for the field cage
- Will get information from ALICE and T2K
- Next general costing meeting soon

Data Volume

- Dominated by backgrounds (plus $\gamma\gamma$ physics evts)
 - Horizontal muons : ionizing particle perpendicular to the enplate, usually occupying one pad or a few during a drift time along the whole TPC
 - Electrons from pairs created in beamstrahlung : one low-momentum track with some PT
 - X-ray photons from various sources, which ionize the gas, giving rise to a 'snow' of single hits
 - Gammas from various sources, which convert into the gas, giving O(MeV) e+e- pairs which spiral along the B-field line
 - Neutrons (mainly 1 to 100 MeV) which hit a nucleus in the gas producing a highly ionizing track
- What we need from BG estimates is number of each of these sources in the TPC (between R_{in} and R_{out} for muons, $|\cos \theta| < 0.95$ for e+- from beamstrahlung), and during a bunch train crossing (0.73 ms design, 0.96 ms lumi upgrade)
- Daniel Jeans started to compare estimates to previous, but not clear yet.