# 3x1x1 DP internal meeting

https://indico.cern.ch/event/664977/

M.Nessi

# Scope

- Define the program from now on for the activities of the 3x1x1 demonstrator

- Make the status of the present knowledge of the performance of the 3x1x1 detector

- List and propose actions for the various technical problems (if any) present in term of accessing the problems and/or solving the problems

- Define the impact the activities and the learning from the 3x1x1 will have on the 6x6x6 prototype

# Today's presentations

- Please let try to be factual and avoid polemics, if any

- Lets stay within the allocated time

- Lets promote constructive discussions with the unique goal to solve problems

- Deliverable of this meeting: list of actions

# Naive set of questions

1- Do we understand the LAr level ? What has been learned about the operation of the level meters and the LAr level assessment w.r.t. the LEM and grid geometry? What should we do better in the 6x6x6?

2- What do we know about the LAr purity. Do we have some analysis of data taken. Is the purity achieved compatible with the requirements of the 6x6x6? Are the purity monitors ready for the 6x6x6 and tested?

3- Is the operation of the PMT behind the HV cathode safe and stable? Is there a different performance between the positive and negative biasing? What is the foreseen baseline for the 6x6x6?

4- Has the operation of the field cage, cathode and the HV feedthrough reached the nominal performance and stability. How much beyond nominal voltage did you operate?

5- Did the DAQ, trigger and DCS reveal some unexpected problems or performance issues?

# Naive set of questions

6- Operation and performance of the CRP:

    - Which problems of the extraction grid were experienced? Which tests were done to assess the problems? Findings?

    - How the planarity of the grid with respect to the liquid level and field cage is known and controlled? Does this have an impact on the electron extraction?

    - LEM performance. Maximum gain reached and why? How much is the active area and what is the response uniformity (border effect) Results of the dedicated test on LEM (also) stand alone performance?

    - Performance of the 2d projective anode (charge sharing, total input capacitance, signal shape, uniformity, …)

    - CRP observed planarity and positioning system performance

7- Performance of the front end electronics

8- Did we learn something on the ion space charge effect?