#### **Detector Matrix from the Exclusive Reaction Working Group**



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# General

# We will highlight here only the aspects where we have requests

- All the rest is considered satisfying for us

# Few areas remain a bit unclear

- We need more input from the detector groups
- Sometimes we will also need further analysis on the physics side

# Tracker

## Extension of the acceptance at low $\boldsymbol{\eta}$

- Would significantly improve DVMP studies (J/ $\psi$  and Y)
- Mostly important in highest energy configuration
- Any gain would help, going to -4.5 like Ecal would be ideal

# What is the minimum momentum detectable?

- This value might impact DVMP for lighter mesons

## **Other aspects like resolution and X0 appear sufficient**

# Separation between $\pi^0$ and $\gamma$ need to be clarified

- The detector must strongly depends on angle and energy
- We have only partial information on this question
- On our side we need to clarify our needs as well

# **Resolution of ECal in the forward region appear low**

- Some studies suggest we might have a lot of activity even in the forward detector
- We are concerned by the low resolution there, more detailed studies are needed on our side as well

# HCal / Muon detection

#### We need larger HCal coverage for Jet studies

- Exclusive di-jet production is promising but would necessitate a much larger coverage in pseudo-rapidity
  - Ideally we would like from -4 to 4
- We understand that the resolution numbers should be refined we would need these refined numbers to progress as well

### Muon detectors would very useful

- Mainly in the barrel and backward region
  - Barrel only would not help much
- Important to improve resolution of DVMP measurements

# **Forward Auxiliary Detectors**

# We need neutral particle detection at 0 degree

- Not just neutrons, but also the photons
- This is necessary to suppress incoherent events
- High granularity and resolution are very important there

# **Proton spectrometer**

- We would appreciate a clearer view of the acceptance in this area
  - What is covered by B0 sensors, Roman pots, etc.
  - We need to translate this in term of t coverage
  - It remains unclear for us how the acceptance changes for light nuclei
- The present values appear manageable
  - However, they do cut some of our distributions significantly
  - Any improvement will help, any degradation can have significant impact
  - Light nuclei DVCS appear the most demanding process in this area