

# ND WS Wrap-up

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# Preliminary Conclusions (I)

- ArgonCube Detector
  - Not magnetized
  - Size: **3x3x4** m<sup>3</sup>
  - Functionally coupled to MPT
- MPT ⇔ high resolution detector
  - Magnetized (dipole or solenoid?)
  - STT or HPTPC
  - Case for scintillator tracker not yet made
    - Could form (small) active CH-target in STT

# Preliminary Conclusion (II)

- Location
  - **Case for 370 m not yet made**
  - Not cheaper but M\$ 25 more expensive
  - No significantly better physics performance
    - Only high stat neutrino-electron scattering
  - But extrapolation is NOT worst either

**Stay with default distance.**

# Preliminary conclusion (III)

- Hall size
  - +50% at least to fit 2 detectors
  
- DUNE PRISM
  - Too premature
  - Can't fit current 2 detectors and/or move them
  - Would add very significant cost

# Questions (I)

- Study KLOE magnet
  - Can we fit HPTPC or STT into it
  - Can it meet scientific requirements (see Mike's talk)
  - What size access shaft is needed?
    - What are the cost implications?

# Questions (II)

- HPTPC
  - Dipole or solenoid? KLOE?
  - How to fund it?
  - Who wants to build it?
- STT
  - How to fund it?
  - Is KLOE big enough?
  - Who is building it?
  - Who does any R&D?
- ECAL
  - Which technology?
  - Who can fund it?
- MUON system
  - Nothing needed now.
  - Needs to foresee options in magnet design
- Magnet
  - How to fund it?

# Action Items

- Answer questions?
- Executive summary of low level requirements (Convenors)
- Can the STT fit into and work in the KLOE Magnet (FGT)
  - What would be lost?
- Can the HPTPC fit into and work in the KLOE Magnet (HPTPC)
  - What would be lost?
- Study small 3D-Scintillator in STT (US)
- Can ArgonCube handle 2.4 MW beam (Antonio)
  
- Neutrons
  - Can you tag them in LAr (?)
  - Can the ECAL tag/measure them (?)
  - (Rock-neutrons?)

# Next Steps

- Convenors to write workshop executive summary
- Need to home in on default option by August
  - Short document summarizing from proponents (<10 pages)
    - Key physics performance
    - R&D needs
    - Realistic Funding model
    - Addressing action items/questions
  - HPTPC, STT (& scintillator target)
- Present option to collaboration
- Next workshop in October/November at CERN