



SHiP

Search for Hidden Particles

Detector agenda and Imperial objectives

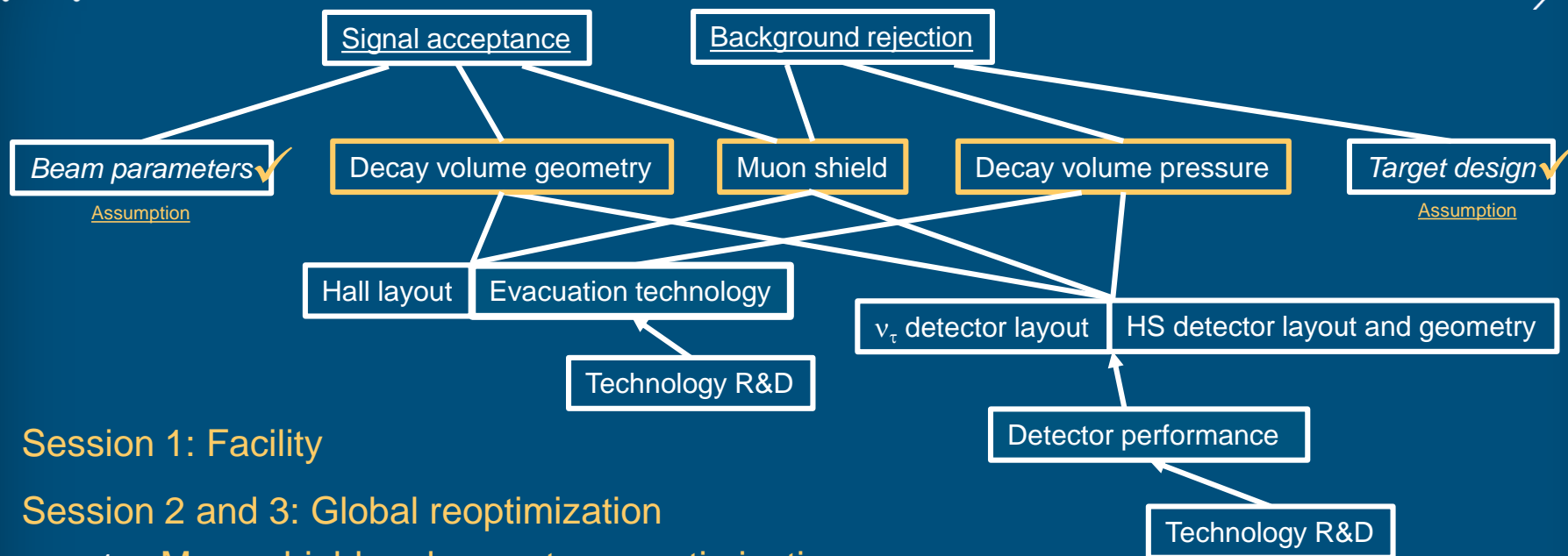
Agree on a first full set of parameters for the simulation of the reoptimization

→ Needed urgently for the signal/background studies *as function of* subdetector choices and configurations

→ *Session 8: Open discussion session*



Detector agenda strategy



Session 1: Facility

Session 2 and 3: Global reoptimization

1. Muon shield and acceptance optimization

- Distance/dimensions of decay volume and input for background studies
- Envelope for emulsion/muon spectrometer (tau neutrino detector)
- Cost/performance driver

2. Decay volume: Update on neutrino background and decay volume options

1. Steel vessel
 2. Helium balloon
 3. Concrete container → Strong interest from engineering university (Università di Napoli Federico II)
- Requirements on decay volume/flexibility ⇔ definition of «background free»
 - ...and cost driven...



Detector agenda strategy

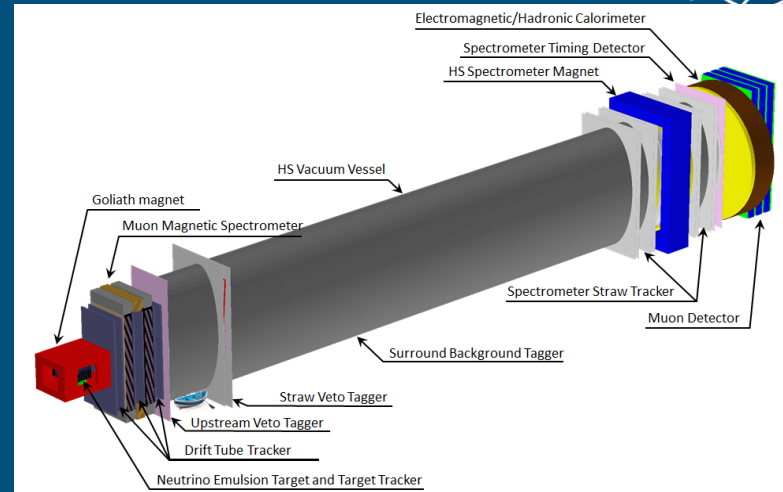


Session 3 cont'd: Global reoptimization

1. Surrounding background tagger (merge of SBT and UVT project)

1. Plastic scintillator
 2. Liquid scintillator
- ➔ Requirements driven by experimental configuration, background, and performance of HS spectrometer

2. (Straw Veto Tagger)



Session 4,5 and 6: Subdetector reports and options/new ideas

- PID options, performance, extensions
- ECAL / PRS very much open – photon reconstruction, RICH?
- MUON report
- HCAL + MUON optimization
- Straw tracker report
- Timing detector options (plastic scintillator, MRPC)
- Configuration of tau neutrino detector
- Status and ideas around emulsion detector and muon spectrometer
- DAQ system

Session 7: Physics session

Session 8: Open discussion session