Science Questions & Working Groups

• **Q1.** What are the reach and experimental limitations of current and future direct neutrino mass experiments?

• **Q2.** What can we learn about neutrino mass and mass hierarchy from double beta decay experiments, and what is their future reach?

• **Q3.** What can we learn from astrophysical or cosmological observations about neutrino mass and the mass hierarchy?
Working Group Room Assignments

• Q1 – direct measurements, room C521
• Q2 – double beta decay, room C441
• Q3 – astrophysics/cosmology, room C520
• **Working Group Q2.** (Wilkerson)

• What can we learn about neutrino mass and mass hierarchy from double beta decay experiments, and what is their future reach?
  – what constitutes a discovery of $0\nu\beta\beta$?
  – what information do we need to extract information about the $\nu$ mass?
  – what is required to decide on the hierarchy?
  – what makes the NME convincing? why are he QRPA and NSM matrix elements different?
• Working Group Q1. (Robertson, Weinheimer, Nucciotti, Gatti...)

• What are the reach and experimental limitations of current and future direct neutrino mass experiments?
  – how to get down to 20 meV?
  – what techniques might be feasible?
• **Working Group Q3.** (Dodelson)

• **Q3.** What can we learn from astrophysical or cosmological observations about neutrino mass and the mass hierarchy?
  
  – ???
Working group charge

- discuss and refine science question
- formulate questions and issues to be answered in your working group
- what would be a useful output from your working group?
- we will discuss any issues/questions in plenary session tomorrow