

## Neutrino oscillations: progress and prospects

*Tuesday 18 December 2012 17:30 (40 minutes)*

The talk will provide a snapshot today, after 14 years of discoveries:

- a) The evidence, from 1998 on, of a first “atmospheric” transition wavelenght with essentially maximal mixing, dominated by muon to tau neutrino transitions.
- b) The evidence, soon after, of a second larger “solar” wavelenght again with large, thou not maximal, mixing.
- c) The rapid progress of accurate measurements of both wavelenghts (mass splittings) and mixings.
- d) The recent detection in 2011-2 of the subdominant atmospheric muon to electron neutrino transition, supporting the  $3 \times 3$  nature of the phenomenon.

including reach and implications for particle physics (new energy scales and Higgs, leptonic CP violation, sterile neutrinos) and the prospects of on going and future experiments in Europe and in the world.

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