

Phenomenology of neutrino oscillations

Dra. Maria Amparo Tórtola

Instituto de Física Corpuscular, Universidad de Valencia, España

Program

- Introduction to neutrino physics.
- Neutrino mass models.
- Two-neutrino oscillations in vacuum. Example: reactor neutrino experiments.
- Two-neutrino oscillations in matter: the MSW effect. Example: solar neutrino oscillations .
- Three-neutrino mixing: global analysis of three flavour oscillations.
- Neutrino oscillations beyond three flavours: evidences for a fourth sterile neutrino.
- Neutrino properties beyond the SM: neutrino magnetic moment, non-standard interactions with matter...
- Constraints on the absolute neutrino mass from laboratory and cosmological measurements.
- Prospects for the future neutrino experiments
- Outlook

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