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lecture cource on

Astroparticle physics

15.09.2009 – 15.12.2009

Some information for the essays

Astroparticle physics, autumn 2009

- The base text 12 pt font $\approx$5 pages
- Figures and Tables (if any) 1–5 pages
- Total length 5–10 pages

- Can be written in finnish or in english

- Can be returned to the lecturer any time
  - in electronic form (preferably pdf) by email to: timo.enqvist@oulu.fi
  - the strict dead line is end of April, 2010

Some topics for the essay

Astroparticle physics, autumn 2009

- Possibilities for the observation of proton decay in the next-generation detectors
- The solar neutrino problem and its solution (experimental point of view)
- Cosmic rays at the highest energies
- What can be learned from the next SN explosion (assuming there are large neutrino detectors world wide)
- The interior of the Earth and geoneutrinos
- Liquid scintillation detector purification process/system
- SN1987A and its neutrinos
- (Near-)Future double β-decay experiments and their predictions (and/or limitations) on neutrino mass
- What is dark matter?
- Challenges in dark matter detection