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Low Energy Event Reconstruction and Selection in Super-Kamiokande-III

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Abstract content

Super-Kamiokande-I studied low energy neutrino interactions above 4.5 MeV. Photo-cathode coverage has been restored to 40% in Super-Kamiokande-III in order to observe Cherenkov events with an energy even below 4.5 MeV. This is motivated by the transition of solar neutrino oscillations between vacuum and matter-dominated oscillations near 3 MeV and delayed neutron detection from inverse-beta interactions. I will discuss the progress in event reconstruction and background suppression as well as future measurements which a lower analysis and hardware energy threshold will make possible.

If this papers is presented for a collaboration, please specify the collaboration

Super-Kamiokande

Summary

Reference

Proceedings of the 30th International Cosmic Ray Conference; Rogelio Caballero, Juan Carlos D'Olivo, Gustavo Medina-Tanco, Lukas Nellen, Federico A. Sánchez, José F. Valdés-Galicia (eds.); Universidad Nacional Autónoma de México, Mexico City, Mexico, 2008; Vol. 5 (HE part 2), pages 1279-1282

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