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Day-night neutrino asymmetry at arbitrarily located neutrino observatories

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Abstract content

Both, Super-Kamiokande-I and SNO have reported a day night asymmetry that, after statistics and systematics are accounted for, is consistent with zero. Nevertheless, the Kamiokande values of 2.1% is sizable and, at least in sign, consistent with theoretical expectations. Taking into account in a simplified, yet realistic way the internal structure of the Earth, we present new analytical and numerical estimates of this asymmetry based on two- and three-neutrino oscillations.

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

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 1323-1326

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