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Matter Effects for Ultrahigh Energy Neutrinos Detection in a Mediterranean Telescope

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Abstract content

We perform a study of the ultra high energy neutrino detection performances of a km^3 Neutrino Telescope sitting at the three proposed sites for ANTARES, NEMO and NESTOR in the Mediterranean sea. We focus on the effect of the underwater surface profile on the total amount of yearly expected tau and mu crossing the fiducial volume in the limit of full detection efficiency and energy resolution. We also emphasize the possible enhancement of matter effect by a suitable choice of the geometry of the Telescope.

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 1333-1336

Primary author(s) : Prof. MIELE, Gennaro (University of Naples)

Presenter(s) : Dr. PISANTI, Ofelia (Dipartimento di Scienze Fisiche - Università di Napoli "Federico II")

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