

Vulcano Workshop 2014 - Frontier Objects in Astrophysics and Particle Physics



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New DAMA/LIBRA results

Tuesday, 20 May 2014 11:00 (25 minutes)

The final model independent results from the DAMA/LIBRA-phase1 experiment, recently released, will be discussed. Implications and comparisons will be addressed. Other results as well as DAMA/LIBRA-phase2 will be introduced.

Summary

The former DAMA/NaI set-up (about 100 kg fully sensitive highly radiopure NaI(Tl)) and the second generation DAMA/LIBRA-phase1 one (about 250 kg fully sensitive highly radiopure NaI(Tl)) have cumulatively obtained a 9.3 sigma C.L. positive result of the presence of Dark Matter (DM) particles in the galactic halo by exploiting the model independent DM annual modulation signature. The data satisfy all the many requirements of this signature. No systematics or side reactions able to mimic such a signature have been found or suggested by anyone over more than a decade. Several kinds of analyses will be discussed and information about the new configuration DAMA/LIBRA-phase2 (where PMTs with higher quantum efficiency are used) will be given. Implications, comparisons and experimental perspectives will be addressed.

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