



ID de Contribution: 57

Type: **Non spécifié**

## **Solar axion search with the CAST experiment**

*vendredi 7 mars 2008 11:10 (15 minutes)*

The CAST (CERN Axion Solar Telescope) experiment is searching for solar axions by their conversion into photons inside the magnet pipe of an LHC dipole.

The analysis of the data recorded during the first phase of the experiment with vacuum in the magnet pipes has resulted in the most restrictive experimental limit on the coupling constant of axions to photons.

In the second phase, CAST is operating with a buffer gas inside the magnet pipes in order to extend the sensitivity of the experiment to higher axion masses. We will present the first preliminary results on the 2006 He4 data taking as well as the system upgrades to come in the next months with the expected sensitivities for the He3 data taking.

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**Classification de Session:** More neutrinos –dark matter, cosmic rays