

Double Chooz experiment

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Double Chooz will use two identical detectors at different distances from the Chooz nuclear power station to search for a non-vanishing value of θ_{13} , and, hopefully, to open the way to experiments aspiring to discover CP violation in the leptonic sector. The far detector is expected to be operative by the end of 2009. Installation of the near detector will occur in 2010.

Double Chooz has the capacity to exclude $\sin^2(2\theta_{13}) < 0.03$ at 90% C.L. for $\Delta m_{31}^2 = 2.5 \times 10^{-3} eV^2$ with three years of data running both near and far detectors.

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