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Double Chooz Experiment Status

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The Double Chooz (DC) multi-detector experiment is one of the reactor experiment measuring the ultimate θ_{13} mixing parameter exploiting one of the most powerful Nuclear Reactor in Europe, the EDF Chooz NPP located within the the LNCA underground laboratory facility in France. Due to the delay of the near detector and the shallow overburden, DC was forced to develop several novel techniques for active background reduction as well as one of the highest single detector precision so far, which combined with the multi-detector data period, provide a set of key measurements beyond the θ_{13} neutrino oscillations such as the world most precise reactor neutrino flux, often called the “mean-cross-section per fission”. In this talk, the DC collaboration will report the latest results of the experiment, include a forecast of its ultimate precision potential.

Collaboration name

Double Chooz

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Session Classification: Oscillations