

# New neutrino oscillation results from NOvA with 10 years of data

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NOvA is a two-detector accelerator neutrino oscillation experiment. Using Fermilab's newly Megawatt-capable NuMI neutrino beam, NOvA measures the disappearance of muon (anti)neutrinos and the appearance of electron (anti)neutrinos at the far detector, 810 km from the source. These oscillations are observed relative to the unoscillated beam composition measured at the functionally equivalent near detector, also located at Fermilab, which enables significant cancellation of systematic uncertainties. From these, we obtain precision measurements of the larger neutrino mass splitting and the largest neutrino mixing angle, as well as constraints on the octant of that angle, the neutrino mass ordering, and neutrino CP violation. In this talk I will present new measurements of these parameters using 10 years of NOvA data collected between 2013 and 2023, which includes twice the neutrino-mode exposure of our previous results.

## Poster prize

## Given name

## Surname

## First affiliation

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## Collaboration (if any)

**Relatore:** WOLCOTT, Jeremy (Tufts University)

**Classifica Sessioni:** S1: 3 flavour neutrino oscillations 1