



Neutrino Factory Near detector workshop: **intro & goals**





Goals

- discuss physics case and requirements;
- review design options and their physics potential;
- review current status of simulations and outline future developments;
- **define the baseline design of the Near detector;**
- work breakdown structure for construction and costing;
- motivate and strengthen the ND community.





Workshop agenda: Saturday



Contribution: Introduction and goals of the Workshop

Time and Place: 1-1-025 (10:00-10:20)

Presenter/s: TSENOV, Roumen

Contribution: Physics requirements for the Near detector

Time and Place: 1-1-025 (10:20-11:00)

Presenter/s: TSENOV, Roumen

Contribution: Extrapolation of neutrino flux measured in Near detector to the Far detector

Time and Place: 1-1-025 (11:30-12:15)

Presenter/s: SOLER, Paul; BAYES, Ryan

Contribution: Neutrino cross section measurements with the Near detector (νN quasielastic, resonance, coherent, deep inelastic scattering): available data and confrontation with theoretical predictions

Time and Place: 1-1-025 (13:45-14:30)

Presenter/s: MORFIN, Jorge

Contribution: Search for non-standard interactions with the Near detector

Time and Place: 1-1-025 (14:30-15:15)

Presenter/s: Dr. FERNANDEZ MARTINEZ, Enrique

Contribution: How to extract Neutrino Factory flux from IMD and neutrino elastic scattering?

Time and Place: 1-1-025 (15:45-16:30)

Presenter/s: SOLER JERMYN, Paul

Contribution: Statistical and systematic uncertainties of measurements with the Near detector

Time and Place: 1-1-025 (16:30-17:15)

Presenter/s: BLONDEL, Alain





Workshop agenda: Sunday



Contribution: Neutrino flux from the muon decay ring - features and beam related background at the Near Detector. ND optimal positioning

Time and Place: 1-1-025 (10:00-10:40)

Presenter/s: KARADZHOV, Yordan

Contribution: What precisions do we need in cross-section measurements with the Near detector?

Time and Place: 1-1-025 (10:40-11:10)

Presenter/s: TUNNELL, Christopher

Contribution: Charm production in neutrino interactions as background source to oscillation signal and as a physics measurement on its own

Time and Place: 1-1-025 (11:40-12:20)

Presenter/s: MIGLIOZZI, Pasquale

Contribution: Charm production in MIND-type Far detector as background to the oscillation signal

Time and Place: 1-1-025 (12:20-13:00)

Presenter/s: SOLER, Paul; BAYES, Ryan

Contribution: Neutrino flux monitoring by CC and NC scattering off electrons in a high resolution scintillating fibres tracker (design options and results from simulations)

Time and Place: 1-1-025 (14:20-15:05)

Presenter/s: MATEV, Rosen

Contribution: Neutrino flux monitoring by CC and NC scattering off electrons in a high resolution Straw Tube tracker (HiResMv) - CANCELLED!

Time and Place: 1-1-025 (15:05-15:50)

Presenter/s: MISHRA, Sanjib

Contribution: Photon transport simulations in long scintillating bars and fibres and some measurements

Time and Place: 1-1-025 (16:20-17:00)

Presenter/s: PAHLKA, Benton

Contribution: Requirements and design options for a vertex detector (Si tracker)

Time and Place: 1-1-025 (17:00-17:30)

Presenter/s: SOLER, Paul

Contribution: Near detector work breakdown structure (WBS) and costing

Time and Place: 1-1-025 (17:30-18:00)

Presenter/s: SOLER, Paul

