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Sensitivities to neutrino non-standard interactions at the NOvA experiment[1] LUIZ RICARDO PRAIS, Universidade Federal de Goias (Brazil); University of Mississippi (USA), NOVA COLLABORATION — Investigations of the existence of the so called Physics Beyond the Standard Model is a subject of growing interest and effort in the field of particle physics. Interactions of neutrinos with matter are well described by the Standard Model, however in the presence of new physics, additional phenomena regarding neutrino properties would be possible, including non-standard interactions (NSI) of neutrinos with matter. The NOvA experiment, at Fermilab, has been investigating neutrino oscillations through studies of ν_μ and $\bar{\nu}_\mu$ produced at the Fermilab accelerator facilities, and we present the status of the sensitivities to Neutral Current-like NSI (NC-NSI) through analysis of the disappearance of muon (anti)neutrinos during their evolution in the NOvA 810 km baseline. We assess the effects of the NC-NSI flavor-changing parameters $|\varepsilon_{\mu\tau}|$ and $\delta_{\mu\tau}$ on the determination of the standard oscillation parameters $\sin^2(\theta_{23})$ and Δm^2_{32}, as well as the relation between each parameter, for both neutrino mass hierarchies, using a combined exposure of 9.48×10^{20} POT for a simulated neutrino beam, and 12.33×10^{20} POT for a simulated antineutrino beam.

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