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Characterization of charged pions in neutrino events

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The latest results of neutrino experiments have shown a difficulty in the modeling and reconstruction of the final states, especially those produced by charged pions, where there are strong differences between what is predicted by the models and what is obtained. A better understanding and more accurate characterization of these interactions and decays can contribute significantly to improve the theoretical models and the techniques of particle identification. This talk will present the importance and problems in the identification of charged pions for neutrino events in the Nova experiment at Fermilab, as well as the discussion of possible strategies that can be implemented to contribute with improvements in such analysis.

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