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Supernova Neutrino Detection at the Deep Underground Neutrino Experiment

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The Deep Underground Neutrino Experiment (DUNE) is a dual-site experiment for long-baseline neutrino oscillation studies, and for neutrino astrophysics and nucleon decay searches. The Far Detector of DUNE will consist of four 10-kt liquid argon time-projection-chambers (LAr TPC) placed in the Sanford Underground Research Facility (SURF) at 1300 km distance from the neutrino beam. The underground location of the Far Detector, at 4300 m.w.e. depth, is essential to be able to study rare and low-energy processes. DUNE will have a unique sensitivity to the electron flavor component of the core collapse of a massive star. With a large mass DUNE will be able to detect core collapse events in the Milky Way and its neighborhood. The talk will cover the recent progress on detection and reconstruction of supernova burst neutrinos in DUNE, including the contribution of the light detection system.

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Presenter: GALLEGO ROS, Ana (Centro de Investigaciones Energéti cas Medioambientales y Tecno) **Session Classification:** Wine & Cheese Poster Session

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