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# Supernova detection and triggering with the DUNE Far Detector

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Core-Collapse Supernovae are violent astrophysical events that are an abundant source of neutrinos of all flavours. The study of neutrinos from this source can give us insights into the nature of the core-collapse mechanism and into neutrino physics topics.

The Deep Underground Neutrino Experiment (DUNE) is a future multi-purpose neutrino experiment under construction in the US. One of its main objectives is the detection and study of neutrinos from astrophysical sources, including the next galactic Core-Collapse Supernovae. DUNE will be especially sensitive to the  $\nu_e$  component of the neutrino flux among present and future neutrino experiments.

A key component to reach this objective is an efficient trigger system. In this work we present the supernova trigger algorithm designed for the Photon Detection System (PDS) of the DUNE Far Detector, and the resulting sensitivity efficiency.

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