

# The diffuse supernova neutrino background in Super-Kamiokande

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Neutrinos have played a key role in astrophysics, from the characterization of nuclear fusion processes in the Sun to the observation of supernova SN1987A and multiple extragalactic events. The Super-Kamiokande experiment has played a major part in past in these astrophysical studies by investigating low energy  $O(10)\text{-MeV}$  neutrinos and currently exhibits the best sensitivity to the diffuse neutrino background from distant supernovae. Here, I present an overview of the search for the diffuse supernova background in Super-Kamiokande, and discuss how the current strategies will evolve after the SuperK-Gd upgrade.

## Keywords

Neutrinos, Supernovae, Super-Kamiokande

## Collaboration

other (fill field below)

## other Collaboration

Super-Kamiokande

## Subcategory

Experimental Results

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