

# SuperK-Gd project

The SuperK-Gd project is a new phase of the Super-Kamiokande experiment with Gadolinium sulfate dissolved in the ultra pure water in order to enhance very significantly the ability of the detector to tag neutrons. One of main physics motivations of SK-Gd is to discover supernova relic neutrinos by using neutron tagging to minimize the otherwise overwhelming background. However an even small radioactive contamination in the salt might spoil the low energy physics program of SuperK-Gd since it will induce background signals, some of them irreducible, all along the whole fiducial volume of the detector.

In this presentation, we discuss the status of SK-Gd project and the successful R&D result of ultra-high purity Gadolinium sulfate.

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