

## Super-K Gadolinium

*Thursday 9 September 2021 12:50 (20 minutes)*

With the addition of 0.02% Gd sulphate to its water in summer 2020, the Super-Kamiokande experiment entered a new phase: SK-Gd. This Gd doping allows for far greater sensitivity to the detection of neutrons emitted in inverse beta decay than with just pure water. This is thanks to gadolinium's clear neutron capture signal and large neutron capture cross section. This long-awaited chapter in SK's story aims to deliver exciting new results in the realm of low energy anti electron neutrinos, especially in measuring the diffuse supernova neutrino background. The Gd loading procedure and current status of the detector will be presented.

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**Session Classification:** WG6