

## Detecting supernova neutrino bursts with SK-Gd prototype: EGADS

EGADS is the successful prototype of the Super-Kamiokande Gd project (SK-Gd). It is now converted as a standalone supernova (SN) detector. EGADS will serve as a backup for the SK detector this summer, when the SK tank will be opened for inspection and refurbishing. After SK tank work, it will provide automatic and immediate notification to the full community in case of a SN  $\nu$  burst detection.

The EGADS DAQ is able to handle high rate bursts of events in the detector (500k events in 10 sec). In addition, the Gd loading of the water reduces the background thanks to the delayed coincidence of the inverse  $\beta$  decay reaction with the clear signal from the Gd neutron capture. These features allow EGADS to detect SN  $\nu$  bursts from stars as close as Betelgeuse to stars in the whole Milky Way.

In this poster we present the up-to-date capacities of the EGADS detector in terms of SN  $\nu$  bursts detection, as well as the details and the status of its online SN alarm system.

### Authorship annotation

on behalf of the Super-Kamiokande collaboration

### Session and Location

Wednesday Session, Poster Wall #10 (Robert-Schumann-Room)

### Poster included in proceedings:

yes

**Primary author:** Dr PRONOST, Guillaume (Kamioka Observatory, ICRR, The University of Tokyo)

**Co-author:** Dr MARTI-MAGRO, Lluís (Kamioka Observatory, ICRR, The University of Tokyo)

**Presenter:** Dr PRONOST, Guillaume (Kamioka Observatory, ICRR, The University of Tokyo)

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