

SUPERNOVA NEUTRINO-BURST SEARCH WITH THE AMANDA DETECTOR

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The neutrino telescope AMANDA located deep in the South Pole ice has been used to search for bursts of low energy neutrinos originating from supernova collapses. In the data sets taken during 1997 and 1998 (215 days of live time) with 302 of the detector's optical modules no candidate events were found. With this detector configuration 70% of the Galaxy is covered with 90% efficiency allowing for one background fake per year. An upper limit at the 90% c.l. on the rate of star collapses in the Milky Way is derived, yielding 4.3 events per year. A trigger algorithm for the real time detection of supernova events and the prospects following improvements in the detector hardware in 2000 and 2001 are discussed.