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Cleaning Data with the Neck Cut in SNO+

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SNO+ is a liquid organic scintillator detector aiming to study neutrinos. It is now completely full of scintillator with the addition of wavelength shifter having been completed. Within SNO+, there are events that have been dubbed "neck events". These events have been named as such because they occur around the neck of the detector and have a characteristic appearance. The neck and bottom areas of the detector are lit up with events, while the middle is not. As of today, it is still unknown what these events are caused by. They are not considered to be candidates for physics events, which would make a method for identifying them useful. It is hoped that applying a neck cut to the data will allow for these neck events to be reliably identified and removed. However, the neck cut was only applied when there was still water in the detector. Studying it now will give an insight on how the neck cut works for scintillator and if fine tuning of the cut is necessary for future use.

Topics - Please choose one:

Particle

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