Contribution ID: **11** Type: **Physics Analysis**

An Analysis of C14 for SNO+

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SNO+ is a liquid organic scintillator detector aiming to study neutrinos, which is now completely full of scintillator with the addition of wavelength shifter addition ongoing.
C14 is a background within the SNO+ detector that has been measured to yield a beta decay rate of 0.8 Hz/mˆ3 and 1.3 Hz/mˆ3 from simulation. This makes it a uniform, high rate and dependable source within the acrylic vessel (AV). The analysis of C14 can be used to determine global detector efficiency as well as give an understand of how PPO (wavelength shifter) loading can affect light yield with respect to time. Loading more PPO into the detector will cause an increase in the light yield from the C14. If C14 can be tracked within the AV, then you can also track the rate of PPO being added.

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