



Contribution ID: 18

Type: **not specified**

# Effect of the overburden on the geoneutrino signal at SNO+

*Monday, 21 October 2019 17:30 (2 hours)*

The SNO+ detector is designed to achieve several fundamental physics goals as a low-background experiment, particularly measuring the Earth's geoneutrino flux. The detector is located at SNOLAB, one of the deepest underground laboratories in the world with an overburden of 2092 m. The geoneutrino signal from originated from the  $50 \times 50$  km upper crust surrounding the detector is estimated adopting a refined 3D model and a full calculation of survival probability. Specifically, the effect of the 2 km overburden on the predicted crustal geoneutrino signal at SNO+ is evaluated. A signal difference corresponding to the ~5% of the total crustal contribution, is found comparing this signal with that obtained by placing SNO+ at sea level.

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**Session Classification:** Poster session