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Atmospheric neutrinos and the Borexino's geoneutrino and DSNB results

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In the diffuse supernova neutrinos search and comprehensive geoneutrino analysis Borexino collaboration for the first time considered atmospheric neutrinos as a background source. Atmospheric neutrinos interact in many ways with the nuclei constituting the Borexino scintillator. Some of interactions can mimic the inverse beta-decay event signature used in these analyses, with expected yield of upto 1 event per year. Here we show the keypoints of complicated estimation of this background, together with its effect on the analyses results.

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