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Point-like event discrimination in RED-100

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Coherent elastic neutrino-nucleus scattering (CEvNS) was predicted in 1974 but this process was observed experimentally by COHERENT collaboration only in 2017. It is so difficult to detect CEvNS events because of their very low recoil energy (about 10keV).

RED-100 is two phase LXe detector which was created in ENPL NRNU MEPhI and is dedicated to first CEvNS observation on Xe nucleus. One of the most important problem for detectors of that type is separating point-like events with 2-6 emission electrons from CEvNS from background events. This work is dedicated to modelling CEvNS and background events and applying ML and other methods for separating them. Also some results from test run of the detector will be presented.

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