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Castilla-La Mancha Neutron Monitor (CaLMa) GEANT4 simulations

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The Castilla-La Mancha neutron monitor (CaLMa) is going to be performed with a set of six BP28 tubes and twelve LND SK01479 tubes. Both kinds of tubes are filled with Boron Trifluoride (BF3 with 96% of 10B). As for their geometry and dimensions, slight differences can be found between. The aim of this work is to compare the response of the BP28 model with SK01479 model by mean GEANT4 simulations. The results of these simulations will help us to know how well they can work together into a neutron monitor integrated with these two models of proportional counters. Additionally, the results also will be compared with those obtained using tubes filled of 3He like the LND 25373 (gas filled: 97% 3He + 3% CO2).