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## Abstract of ICHEP 2022 for "Muon Modulation Study"

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Some mesons produced by the interaction between primary cosmic rays and the air molecules in the upper atmosphere decay into muons without further interaction. The density of the atmosphere decreases as the temperature of the atmosphere increases, reducing the chance of secondary cosmic-ray particles interacting with atmospheric molecules and hence increasing the chance of decaying into muons. Experimental results show that there is a positive correlation between the muon flux and the effective atmospheric temperature. This phenomenon has been observed in the Daya Bay experiment and the correlation coefficient under different overburdens was measured using approximately two years of data. This poster will report the status of a more precise measurement of the correlation coefficient with more data in the Daya Bay Reactor Neutrino Experiment.

### In-person participation

No

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