

## Background noise characterization and simulation on the LABM

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### Content

We present and discuss the results from the experiment “Large Angle Beamstrahlung Monitor” (LABM). We installed the detector in the “High Energy Accelerator Research Organization” (KEK) lab, this helped us to understand how each component of the detector works. Also, we did a simulation on Geant4 to understand the behavior of the background noise in the measurements of the LABM. Lastly, we did the data analysis using the 2019 and 2020 data, where we used the 2019 data as control to observe the behavior of the data on top conditions. The final result allowed us to find a way to differentiate between background noise and the signal that we are looking for.

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