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R&D of the EM Calorimeter Energy Calibration with Machine Learning based on the low-level features of the Cluster

Monday 8 July 2024 17:40 (20 minutes)

We have developed the energy calibration method by using the machine learning for the ILC EM calorimeter (ECAL), a sampling calorimeter consisting with Silicon-Tungsten layers.
In this method, we use deep neural network (DNN) to get the energy of the incident particle (energy calibration), as a regression problem,
to improve the energy calibration resolution of ECAL.
We have developed the DNN architecture where cluster hit data are input as low-level features of the cluster.
We'll report the status of the R&D.

Apply for poster award

Yes

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