How to Run the ROOT Macros

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Check out example packages

- *git clone git@github.com:syuvivida/ExamplesForStudents.git*
- In the directory ExamplesForStudents, you will find various macros (codes)
- Run the marcos after you set up ROOT
- The github link is
  - *https://github.com/syuvivida/ExamplesForStudents*

Macro: eta.C

- Under **ExamplesForStudents/physics** directory
- This macro generates a flat θ distributions and from that the η is computed
- To run this macro, type:
  - *root -q -b eta.C*
- After you run the macro, you will find a root file “eta_theta.root”.
- In this root file, two histograms are saved, one is the distributions of η and the other is the distribution of θ
- To check the distributions inside this root file:
  - *root -l eta_theta.root*
  - *h_theta->Draw()*
  - *h_eta->Draw()*
- **Exercise: Now you need to generate a flat η distribution and check the distribution of θ**

Macro: fillTree.C

- Under **ExamplesForStudents/rootBasics** directory
- This macro reads an input text file and fill the data into a tee. Then, the tree is saved in a root file
- To run the macro, type:
  - *root -q -b fillTree.C\(\"test.dat\"\)*
- Then a root file “Event.root” is created. Inside this root file, there is a tree called “tree”
- You could draw the variables inside tree or do other more complicated calculations
  - *root -l Event.root*
  - *tree->Draw(“eta”)*
  - *tree->Draw(“pt”)*
- **Exercise: Fit the pt and eta distributions**