
Subject: [FIXED] Produce ROOT file with FairRoot Structure

Posted by [wesmail](#) on Mon, 19 Mar 2018 12:24:35 GMT

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Dear experts,

I have a ROOT file that contains probability distributions of different particles (e, mu, pi, k, p) stored in TClonesArray "branch named PidAlgoMI" (image 1), but I want it to be of the same structure of image 2, that is the branch "PidAlgoMI" inside folder "Pid" which is inside folder "cbmout". How to do this using PANDARoot or FairROOT classes.

Thank you very much in advance,

File Attachments

1) [1.png](#), downloaded 1271 times

 Esmail, Waleed Ahmed - Out...  matching.C - /home/wesmail...  ROOT Object Browser  Terminal - we

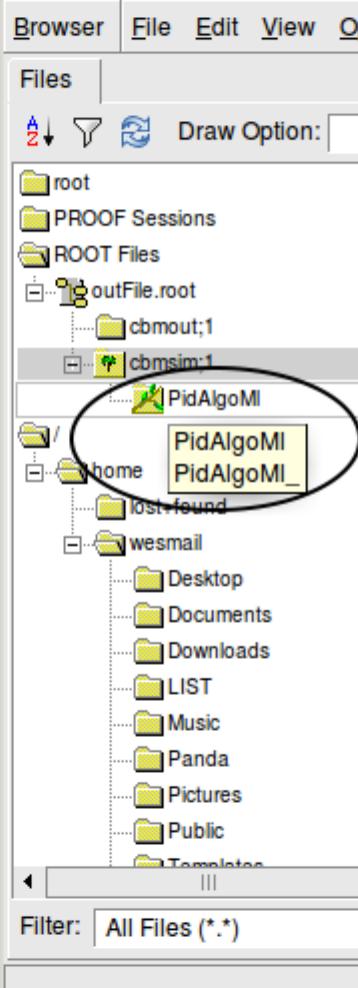
 File Edit View Terminal Tabs Help

wesmail@wesmail-X580VD: ~/findspark-1.1.0

```
wesmail@wesmail-X580VD:~/findspark-1.1.0$ root -l outFile.root
root [0]
Attaching file outFile.root as _file0...
IncrementalExecutor::executeFunction: symbol '_ZN5cling10printValue'
You are probably missing the definition of cling::printValue(void c
Maybe you need to load the corresponding shared library?
(TFile *) Error in ValuePrinter: missing output string.
root [1] new TBrowser
IncrementalExecutor::executeFunction: symbol '_ZN5cling10printValue'
You are probably missing the definition of cling::printValue(void c
Maybe you need to load the corresponding shared library?
(TBrowser *) Error in ValuePrinter: missing output
root [2] 
```

 Browser File Edit View Options

Files



Filter: All Files (*.*)

```

root
  PROOF Sessions
  ROOT Files
    outFile.root
      cbmout;
        cbmsim:1
          PidAlgoMI
          PidAlgoMI_
        PidAlgoMI
        PidAlgoMI_
      lost+found
    wesmail
      Desktop
      Documents
      Downloads
      LIST
      Music
      Panda
      Pictures
      Public
      Templates
  
```

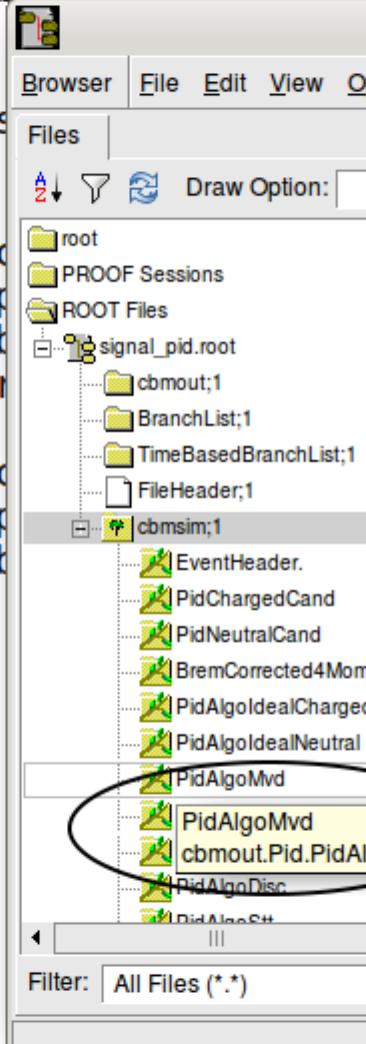
2) [2.png](#), downloaded 1127 times

 Esmail, Waleed Ahmed - Out...  matching.C - /home/wesmail...  ROOT Object Browser  Terminal - we

 File Edit View Terminal Tabs Help

```
wesmail@wesmail-X580VD:~/findspark-1.1.0
```

```
wesmail@wesmail-X580VD:~/findspark-1.1.0$ root -l outFile.root
root [0]
Attaching file outFile.root as _file0...
IncrementalExecutor::executeFunction: symbol '_ZN5cling10printValue'
You are probably missing the definition of cling::printValue(void c
Maybe you need to load the corresponding shared library?
(TFile *) Error in ValuePrinter: missing output string.
root [1] new TBrowser
IncrementalExecutor::executeFunction: symbol '_ZN5cling10printValue'
You are probably missing the definition of cling::printValue(void c
Maybe you need to load the corresponding shared library?
(TBrowser *) Error in ValuePrinter: missing output
root [2] .q
wesmail@wesmail-X580VD:~/findspark-1.1.0$ root -l signal_pid.root
root [0]
Attaching file signal_pid.root as _file0...
IncrementalExecutor::executeFunction: symbol '_ZN5cling10printValue'
You are probably missing the definition of cling::printValue(void c
Maybe you need to load the corresponding shared library?
(TFile *) Error in ValuePrinter: missing output string.
root [1] new TBrowser
IncrementalExecutor::executeFunction: symbol '_ZN5cling10printValue'
You are probably missing the definition of cling::printValue(void c
Maybe you need to load the corresponding shared library?
(TBrowser *) Error in ValuePrinter: missing output
root [2] 
```



Browser File Edit View Options

Files

Draw Option:

- root
- PROOF Sessions
- ROOT Files
- signal_pid.root
 - cbmout;1
 - BranchList;1
 - TimeBasedBranchList;1
 - FileHeader;1
 - cbmsim;1
 - EventHeader.
 - PidChargedCand
 - PidNeutralCand
 - BremCorrected4Mom
 - PidAlgoidealCharged
 - PidAlgoidealNeutral
 - PidAlgoMvd
 - PidAlgoMvd
 - cbmout.Pid.PidAlgoMvd
 - cbmout.Pid.PidAlgoDisc
 - cbmout.Pid.PidAlgoSht

Filter: All Files (*.*)

Subject: Re: Produce ROOT file with FairRoot Structure
Posted by [StefanoSpataro](#) on Mon, 19 Mar 2018 12:42:33 GMT

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How have you created your container? The proper way is using a Task which fills for each event and each PidCandidate the proper probabilities.

The correct way is shown, as example, in pid/PidClassifier/PndPidDrcAssociatorTask class, which is quite simple. You have to follow such structure, just change the name of the classes and the numbers you put inside.

cbmout.pid.XXX is not business of the developer if you use the suggested structure. Anyway, the line which write your container inside pid is:

```
FairRootManager::Instance()->Register("PidAlgoDrc","Pid", fPidChargedProb, kTRUE);
```

Subject: Re: Produce ROOT file with FairRoot Structure
Posted by [wesmail](#) on Mon, 19 Mar 2018 13:20:46 GMT

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Dear Stefano,

thank you very much for your instant reply. I am aware of the associator task, but I don't know how to use it because at Init() method it tries to get the TClonesArray from the input file and I face the same problem ("PidAlgoMI is not in cbmout folder" because my file is not in the same RootFair structure) and crashes.

N.B I fill the TClonesArray in a python program independent of FairRoot package, but I can access FairRoot from python. How to use Register method independent from associator Task?!

Thank you again,

Subject: Re: Produce ROOT file with FairRoot Structure
Posted by [StefanoSpataro](#) on Mon, 19 Mar 2018 13:26:27 GMT

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The starting point is a TClonesArray filled with PidCandidate objects, event by event. For each event, for each PidCandidate, the Associator produces a PidProbability object, and registers it. Without the input PidCandidate you cannot fill the probabilities.

Other ways to fill TCAs, such us using python, are not using the fairroot tree and are not compatible. Register is a function of fairroot, then you cannot use it in python.

Subject: Re: Produce ROOT file with FairRoot Structure
Posted by [Waleed Esmail](#) on Wed, 21 Mar 2018 09:13:38 GMT

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thank you very much, I solved the problem by reading the output python file explicitly in the Init() method of the associator task, and register the output to have the same branch structure of FairRoot.

Thanks again for your help
