
Subject: Re: Multiple input files / trees

Posted by [Mohammad Al-Turany](#) on Thu, 22 Mar 2012 11:44:01 GMT

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Dear Volker,

First of all there are many features in FairRoot which were not communicated to CBM, even though they could be and they are needed by CBM. This has many reasons, the major one of them that in CBM there is not even a computing session (as in Panda or R3B) where we could go and report about our activities. Also the communication between us (FairRoot core) and CBM developers is not ideal and mostly based on personal mails, but this we do not need to discuss here, and I think this Forum is a first step to correct that.

Now back to your original mail.

The merging we have in FairRoot for now was implemented on the level between Digi and MC and not directly on the digi level. i.e: after simulation of different generator output, the FairRunAna has following methods:

```
/**Set the input signal file
*@param name :    signal file name
*@param identifier : Unsigned integer which identify the signal file
**/
void    SetSignalFile(TString name, UInt_t identifier );

/**Set the input background file by name*/
void    SetBackgroundFile(TString name);

/**Add input background file by name*/[/COLOR]
void    AddBackgroundFile(TString name);

/**Add signal file to input
*@param name :    signal file name
*@param identifier : Unsigned integer which identify the signal file to which this signal
should be added
*/
void    AddSignalFile(TString name, UInt_t identifier );
```

With this you can add several signals to a background file or chain, also signals can be chained, the mixing is controlled by:

Quote:

```
/**Set the signal to background ratio in event units
*@param background : Number of background Events for one signal
*@param Signalid :   Signal file Id, used when adding (setting) the signal file
* here we just forward the call to the FairRootManager
*/
void BGWindowWidthNo(UInt_t background, UInt_t Signalid);
/**Set the signal to background rate in time units
*@param background : Time of background Events before one signal
```

```
*@param Signalid : Signal file Id, used when adding (setting) the signal file
* here we just forward the call to the FairRootManager
*/
void BGWindowWidthTime(Double_t background, UInt_t Signalid);
```

With these methods you can mix the signals and background but there is no direct pileup here.
So do you need to pile up the events on MC level?

if yes then we have to add a merge after we read the signals and background depending on
the ratio which one set for there mixing.

best regards,

Mohammad