

Your mission

should you choose to accept it

On the indico server for the session there is a file which lists the masses and weights for many events. Copy this and analyse it

With R you can input the data by

```
stuff <- read.table('the file name', head=TRUE)
```

and then refer to `stuff$mass` and `stuff$weight`.

It should be easily readable by any other sensible analysis system

There are 3 mass peaks in the data. Each is described by a Gaussian of unit σ . There are also background events, for which the mass distribution is flat. Find the values of the masses and the numbers of events, and the errors on them, for as many of the peaks as you can. Use of both simple histogram fits and maximum likelihood is recommended.

The weight is an indicator of the signal-like nature of the event. Its distribution is flat, between 0 and 1, for the true signal events that make the peaks. For the background events it is unknown. See how adding this information can improve your analysis.