Status Report

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Action Item

- Paper Review
  - Flow of Measurement of Inclusive W and Z Boson Production Cross Sections in pp Collisions at $\sqrt{s}$ = 8 TeV
- ROOT
  - 2D Histogram

Paper Review

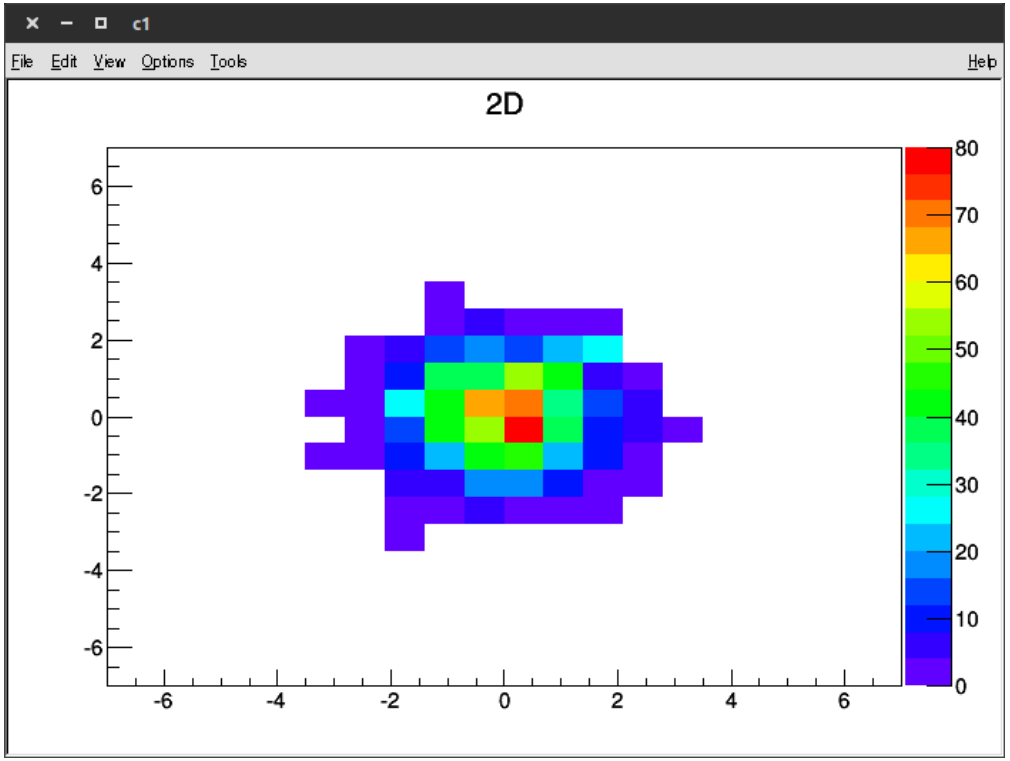
Flow of this paper

1. Introduction : explain this experiment and theoritical predictions.
2. Describe detectors and variables.
3. Quantities to measure. (W-> E_T^{miss} , Z-> 2 leptons)
4. Muons and electrons conditions to satisfy the purpose.
5. Explain background contribution and uncertainties.
6. Show results.
7. Summary.

ROOT 2D Histogram

- 2D Histogram

```
TH2F *h1 = new TH2F("h1", "2D", 20, -7, 7, 20, -7, 7);

Float_t px, py;
for (Int_t i = 0; i < 1000; i++) {
    gRandom->Rannor(px, py);
    h1->Fill(px, py);
}

h1->Fill(1, 1, 10);
h1->Fill(2, 2, 20);
h1->Draw("colorz");
```

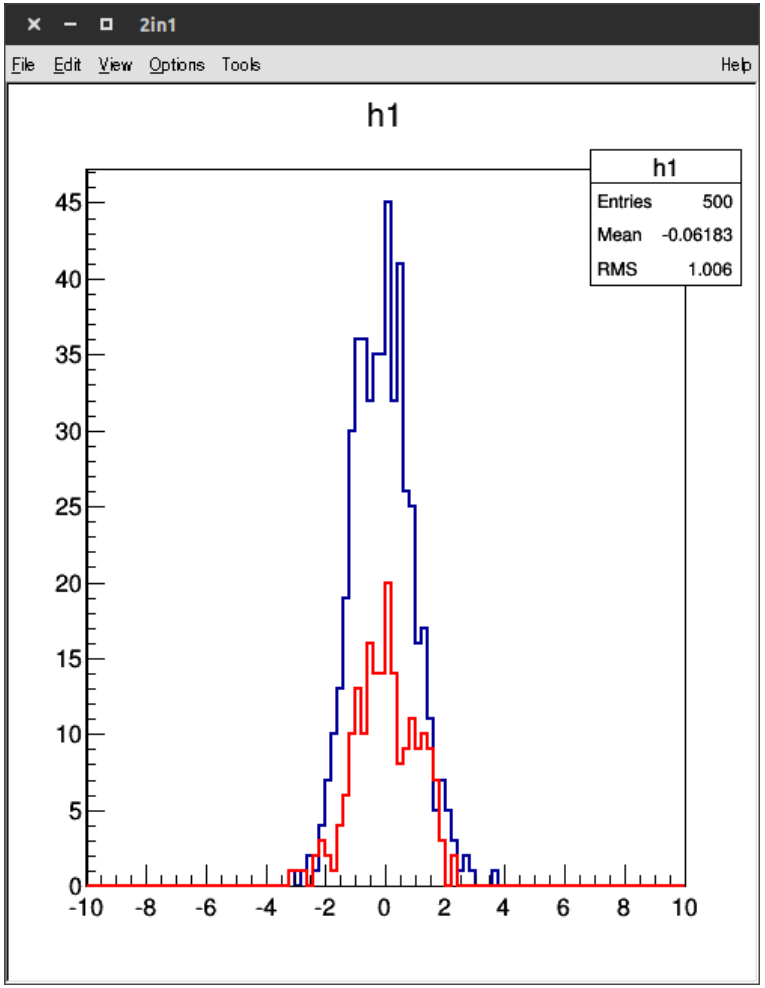


- TH2F(“name”, “title”, # x bins, x_min, x_max, # y bins, y_min, y_max);
- Draw(“colorz”)

Two Graphs in One

```
TCanvas *c = new TCanvas("c", "2in1", 0, 40, 500, 2000);

TH1F *h1 = new TH1F ("h1", "h1", 100, -10, 10);

h1->FillRandom("gaus", 500);
h1->Draw();

TH1F *h2 = new TH1F ("h2", "h2", 100, -10, 10);


h2->FillRandom("gaus", 200);
h2->Draw("same");
```

- Draw option “same”



gaus : mean=0, sigma=1