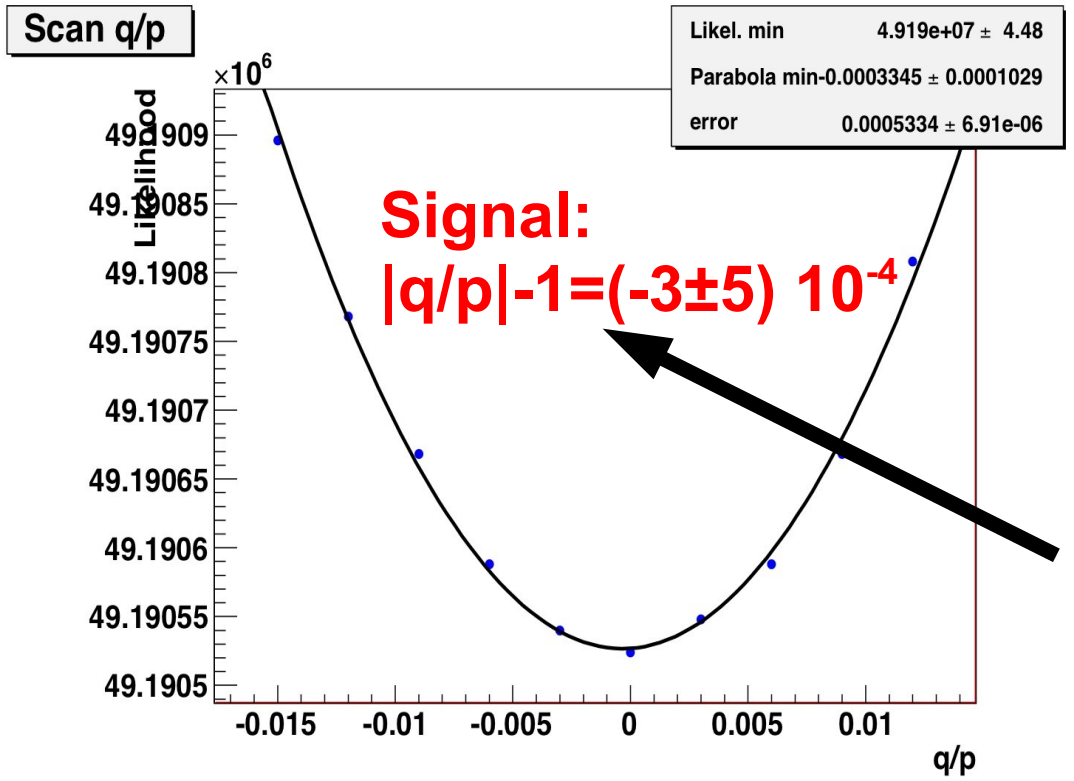
Status of the D*lv q/p Analysis

Martino, 4/22/2010

News since last presentation:

- |q/p|-1 Likelihood scan on B^0 MC (Signal & BKG) completed
- B^0 Full Signal+BKG scans going on
- Move to Release 24 Analysis 51 (underway)

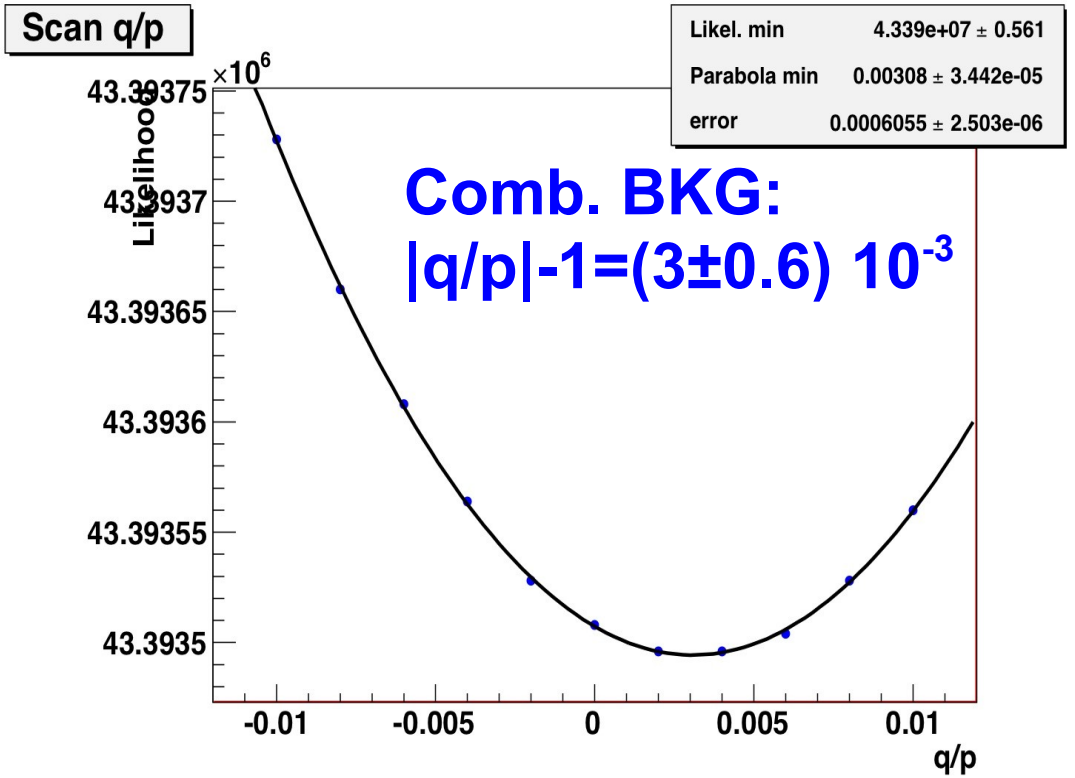


See last AWG presentation:

- New Resolution Model & Mistag treatment;
- New Dtag Treatment :
  new PDFs(Δt, θ(K-Lepton)),
  Fractions fitted in P_K bins.

Perfectly unbiased result on B^0 Signal MC!

Combinatorial BKG Likelihood Scan

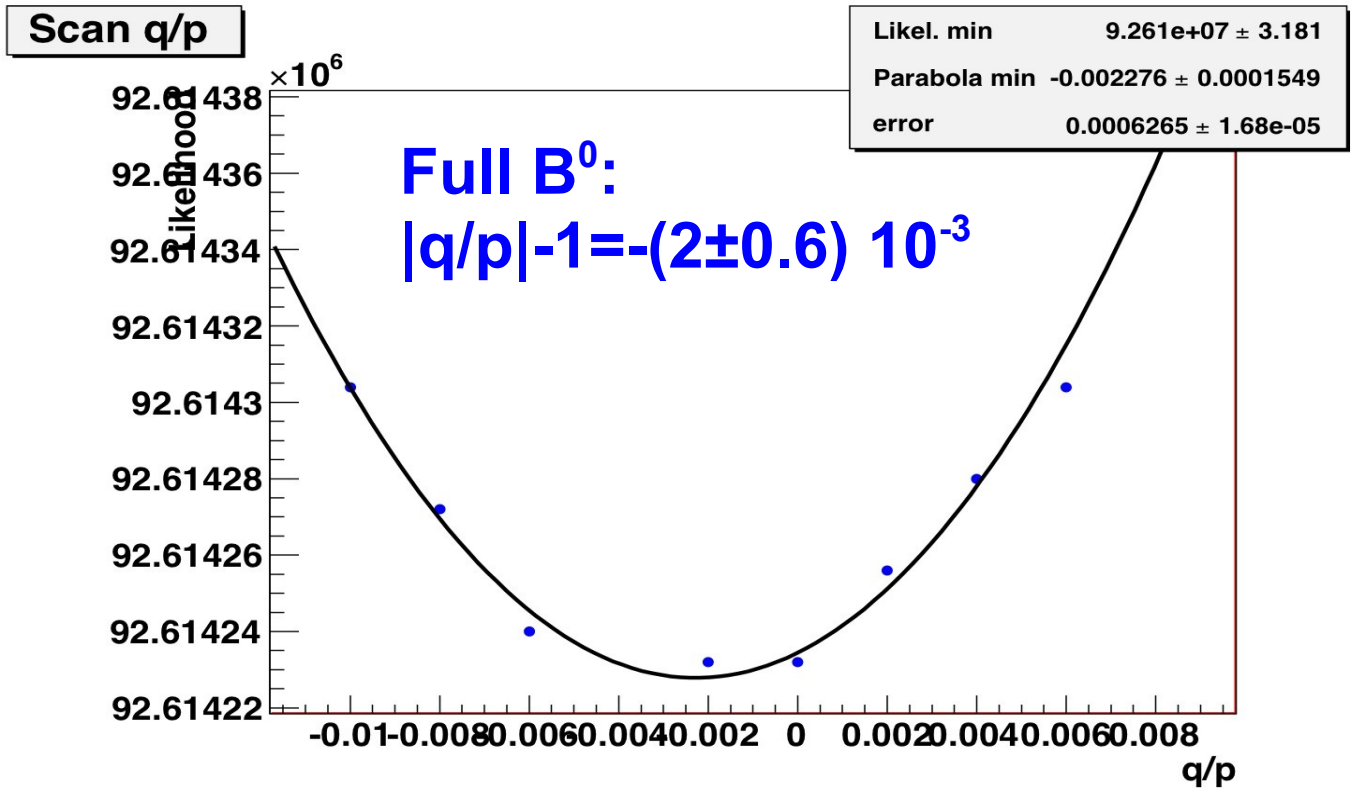


- |q/p| determination on B^0 BKG sample shows some bias.
- Result obtained using different sets of detector asymmetries Signal wrt BKG

Alternative strategies to be chosen depending on the Full B^0 result:

- Same |q/p| parameter for Signal & BKG in case of acceptable bias<0.15%
- Use an effective |q/p| parameter for the Combinatorial BKG in case of higher bias [increase of statistical error to be investigated].

Preliminary Full B^0 Likelihood Scan



Some more iterations required.

Hint of bias of opposite sign wrt BKG one (?)

Convergence minimum not reached yet.

Wait for a good fit convergence before deciding the strategy

Effort underway to move the analysis to Run1-Run6 full statistics with Release 24, Analysis 51:

- Rootples ready and ~ validated;

- A few days work needed to compute sample fractions and Dtag Δt-shapes

Conclusions & Next Steps:

- B^0 SIGNAL+BKG scans are going on: add an effective q/p parameter for the B^0 combinatorial BKG?

- MC Full Fit (B^0+B^++Continuum) ready in a few weeks, then move to Release 24;

- Real Data Analysis.