

RC Meeting July 14

Semileptonic asymmetry:

$$\text{Asl Btag} = -2(|q/p|-1) \quad \text{double tag}$$

$$\text{Asl Dtag} = -2(|q/p|-1)\chi_d \quad \text{single tag}$$

Different s.l. asymmetries in the two samples reflect in:

- Possibility to disentangle the physical vs detector asymmetry;
- **FDtag(k=|q/p|-1):**

$$F^{u+}(k) = F^{u+}(0)(1-2k\chi)/(1-2\kappa\chi F^{u+}(0))$$

$$F^{u-}(k) = F^{u-}(0)(1+2k\chi)/(1+2\kappa\chi F^{u-}(0))$$

$$F^{m+}(k) = F^{m+}(0)(1-2k\chi)/(1-2\kappa+2\kappa(1-\chi)F^{m+}(0))$$

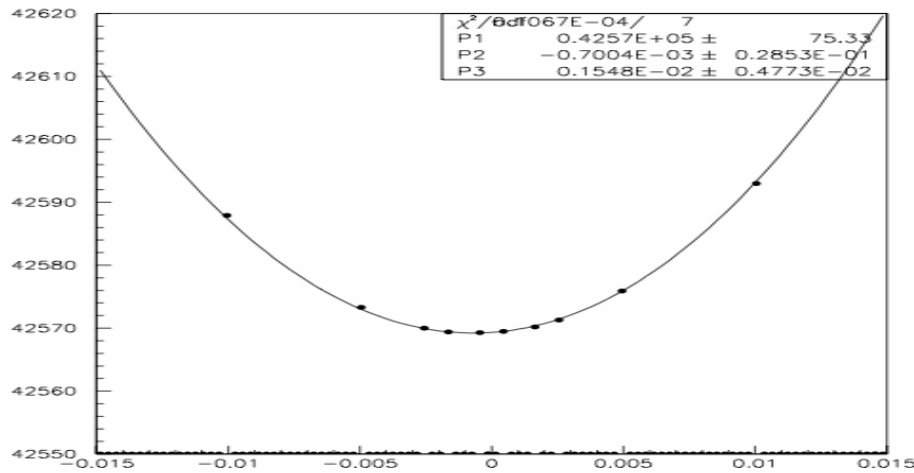
$$F^{m-}(k) = F^{m-}(0)(1+2k\chi)/(1+2\kappa-2\kappa(1-\chi)F^{m-}(0))$$

- In the standard approach $F^{um/+}(k)$ are free parameters of the global fit, determined from the distribution of the angle between the tagging K and the lepton of the P.R. B^0 decay.
- Explicit F Dtag k dependence not introduced in the fit;
- F(k) wrong determination reflects in a $|q/p|$ bias.

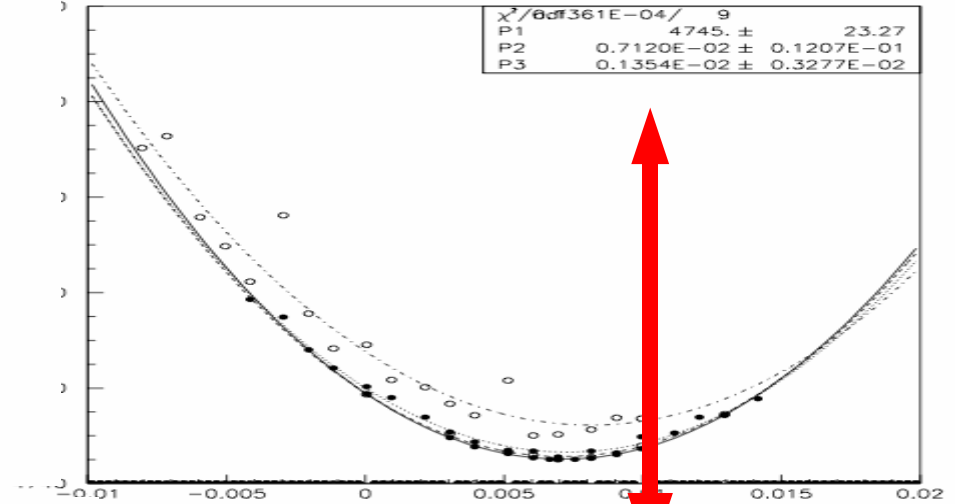
New Approach:

- $F^{um/\pm}(0)$ from MC (systematics to be studied);
- Explicit k dependence included in the fit:

SIGNAL

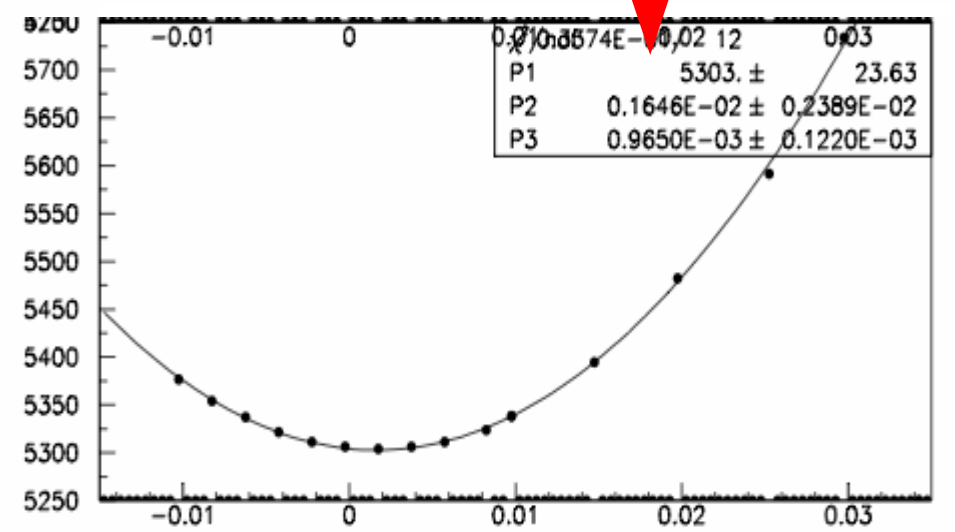
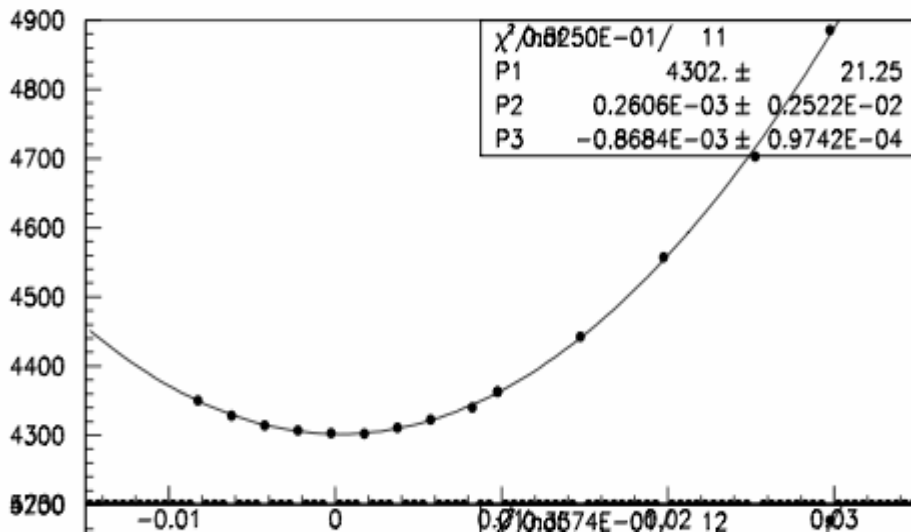


BKG



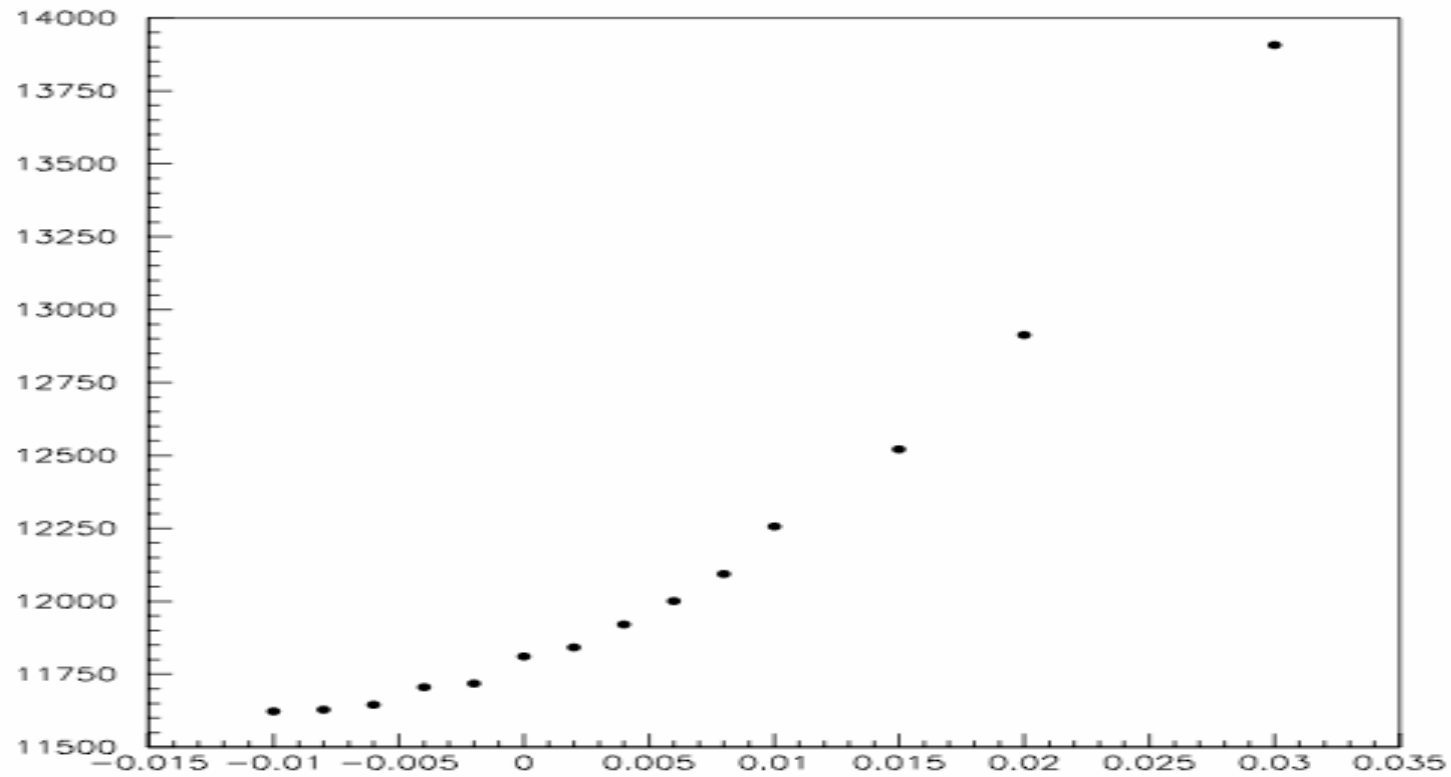
OLD

NEW



q/p bias disappeared on B^0 combinatorial BKG!

...BUT another problem arises in the SIG+BKG combination...



Problem due (?) to a bug in the combinatorial BKG fraction, already found, but not solved yet...