

## Nuclear Lunch Seminar Questions Discussion week

- How was the positron beam produced in the experiment? (**Alina**)
- Why did they choose 9 GeV electrons colliding with 3.1 GeV positrons? Why not the same? Why not switched? (**Andrea**)
- How can the time dependent decay rate of Eq (1) be interpreted? What is their basis of setting  $\Delta\Gamma = 0$  in deriving this equation? (**Sushil**)
- How can we interpret the signal PDF of Eq. (2)? (**Bijaya**)
- What is time dependent asymmetry of Eq(3)? (**Nowo**)
- What is the difference between the time dependent asymmetry and the time reversal asymmetry? (**Anthony**)
- What are the different parameters in Table I ? Did they also measure CP and CPT asymmetry in this same experiment? (**Cody**)
- How did they come to the conclusion that they actually measured the T violating parameters in this experiment? Is the amount of time reversal asymmetry that they observed consistent with the SM (0.1%) or is it more? (**Harsha**)
- How did they estimate the background? What does Figure 1 tell us? What is the shaded region? (**Dilu**)
- What does Figure 3 indicate? What are log likelihoods and confidence limits? Isn't  $14\sigma$  too big? (**Young Shin**)
- How do they measure  $\Delta t$  in this experiment? (**Shamim**)
- Why is the neutral K system results for time reversal symmetry controversial and the neutral B not ? (**Linda**)
- Why did they decide to do this experiment with B mesons and how were the B meson eigenstates constructed? (**Brian**)