

# EtaC analysis: update

What has been done since previous meeting:

- finalized optimization for cut&count method  
we are now happy with  $S/\sqrt{S+B} \sim 7$  ( $S/B \sim 10$ )  
for charged B mode
- At the Collaboration Meeting the 4K mode was judged to be mature for unblinding
- Before unblinding date (16 May) we want to see if using a Fisher could further improve the selection.
- Neutral mode will be unblinded later, after checking on the charged our assumptions ( $\eta_c$  width, BR and so on)  
The advantage is that we can still tune cuts on that mode on the basis of what we learn from charged B.
- Aiming to provide  $\sim 30$ -50 (all  $\eta_c$  modes) additional candidates for the summer measurement of  $\sin 2\beta$ .

## What's next?

- BR measurement - can be done after CP violation studies (uh!?)
- Other 4-prongs worth to study? We have to check them now that we know the PID can make miracles in background rejection (ntuples for these studies copied to RHUL)

On the technical side:

We are performing analysis in PAW/Fortran

Need to upgrade the code to C++ /ROOT as the rest of the Charmonium group is moving to it.

Anybody else interested in joining Eta\_c studies?