there is an obvious interest in having an 2.4 fb^{-1} updated result for the summer conferences
but, one of the main problems for getting it seems to be the tagger

about the influence of the tagger on the β_s measurement

.or. / .and.

- when it is achieved the maximum scientific information than the data can provide?

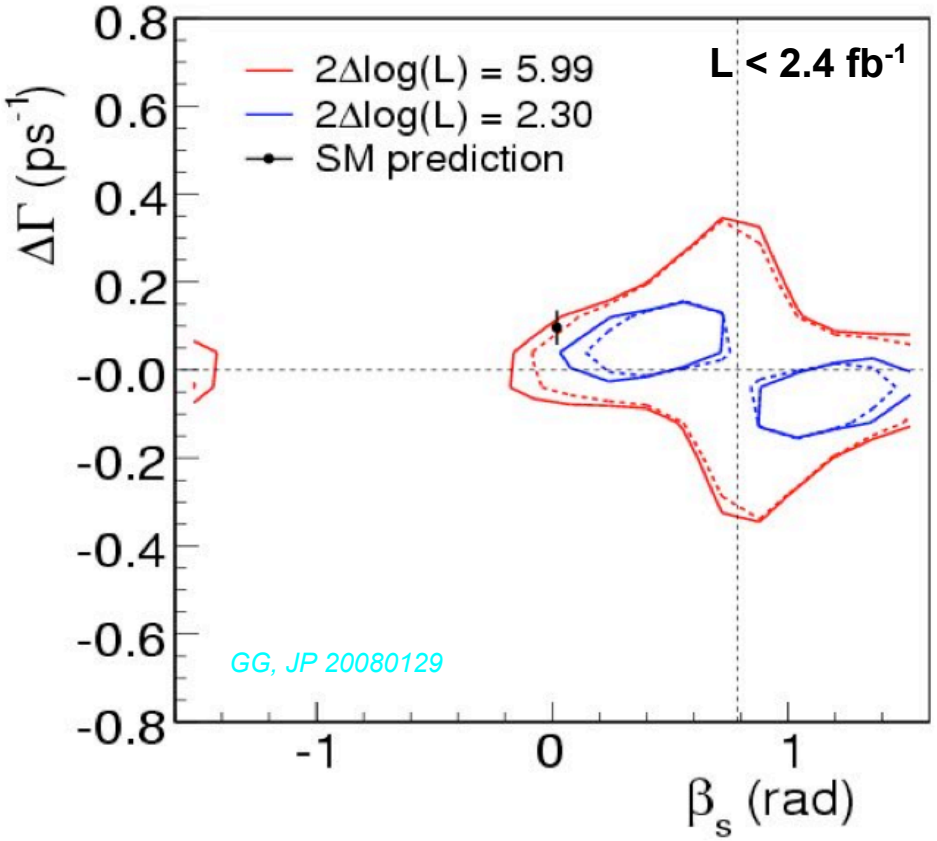
i.e.

- when can an updated result be safely made public ?

From our side all this started with this result:
(notice it was produced since it was known that the dEdx calibration in L>1.3fb^{-1} was wrong)

Influence of the SSKT tagging in the L> 1.3 fb^{-1} sub-sample on the L<2.4 fb^{-1} [$\Delta\Gamma$, β_s] contour

___ L < 1.3 fb^{-1} OST+SSKT, L >1.3 fb^{-1} OST
..... L < 2.4 fb^{-1} OST+SSKT



it apparently indicated a significant dependence of the relevant result on the tagger and therefore we did not update the result to 2.4 fb^{-1} for the winter conferences but decided to wait until a good-quality tagger was available.

keeping that in mind we thought in a quick solution for a good-quality, intermediate-power, 2.4 fb^{-1} result that could be presented in the summer conferences should the final tagger not be ready by then:

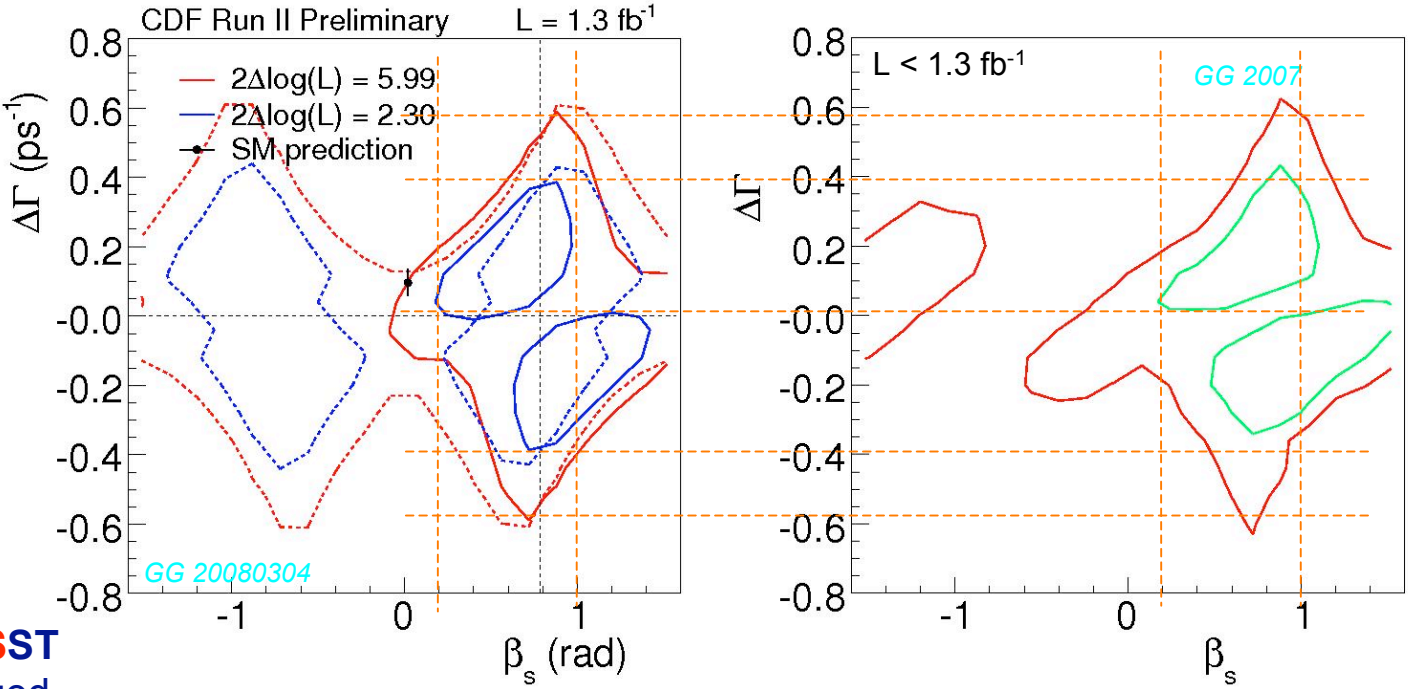
---> Use the SSKT but with ToF as the only source of PID info

For studying the validity of the approach we proposed to check the stability of the final and relevant result, the [$\Delta\Gamma$,β_s] contour for the published L<1.3 fb^{-1} sub-sample, with the change

It was argued that this stability check was not a proper check of the quality of the proposed interim SSKT-tagger, since the [$\Delta\Gamma$,β_s] contour is almost insensitive to the tagger performance (except in the case of very large Dilution values)

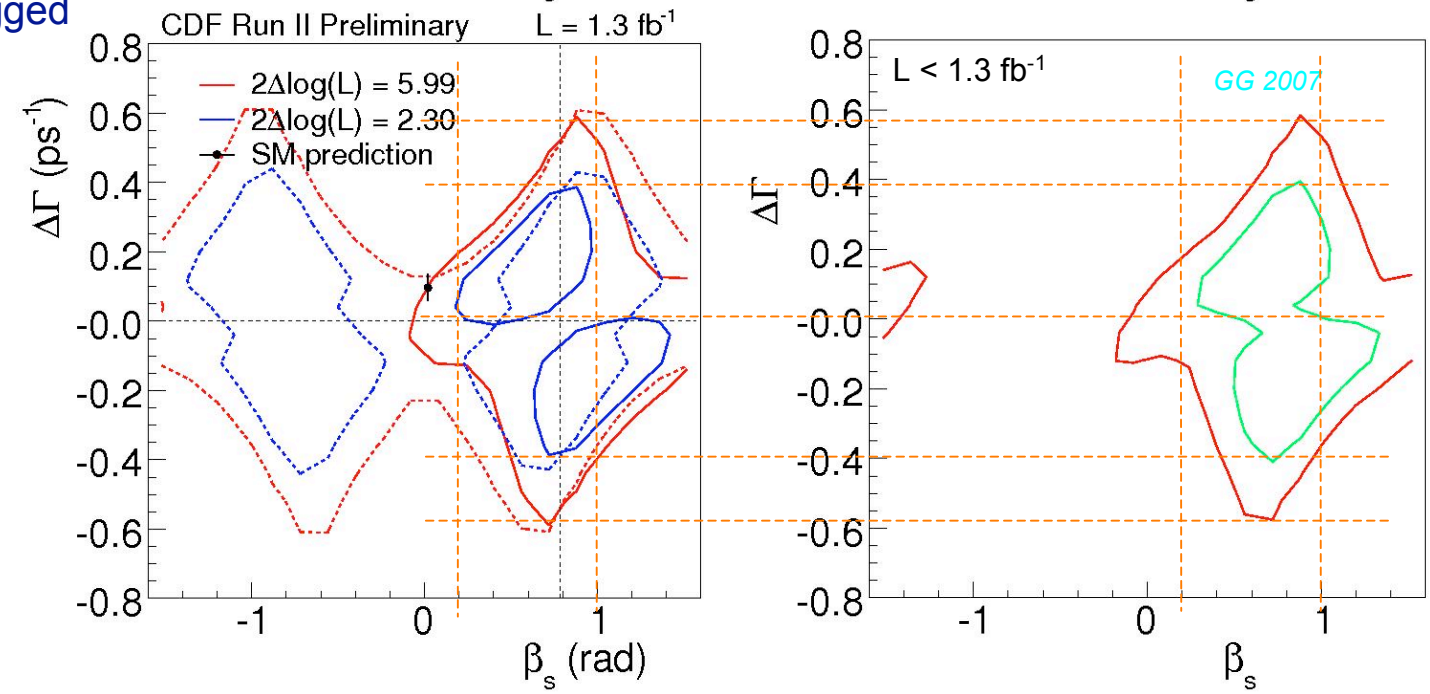
… and it seems to be the case, see next slide,
… though it contradicts the result on the previous slide

Study of the effect of tagging on the published [$\Delta\Gamma$, β_s] contour



SST only

— OST+SST
… un-tagged

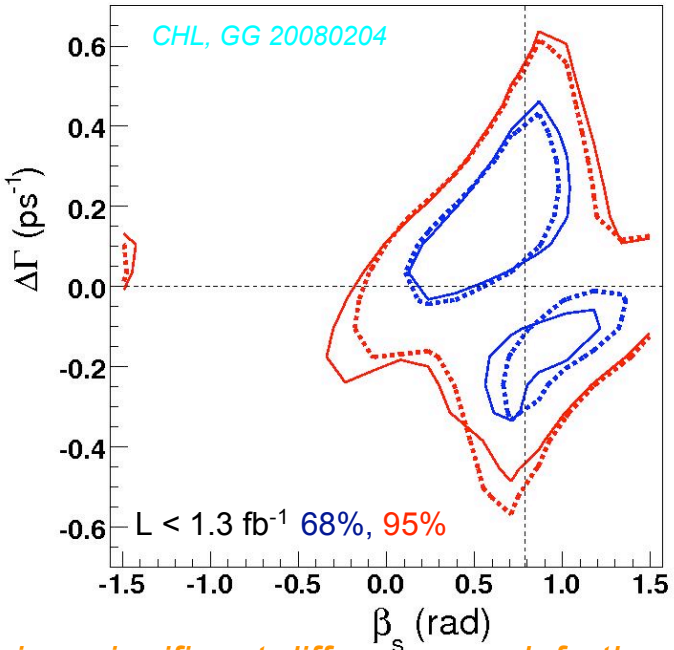


OST only

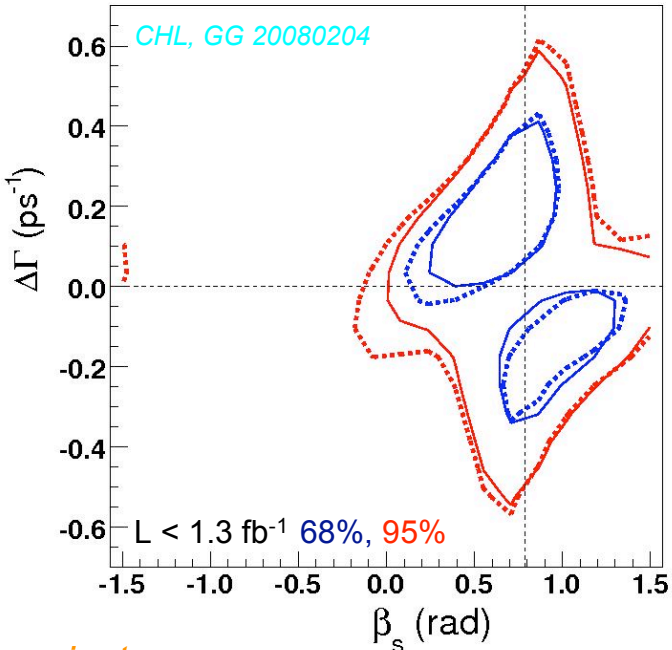
Nevertheless, we did the proposed validation study and got a puzzling result (as always):

Influence of the ToF and dE/dx on the SSKT tagging on the published [$\Delta\Gamma$, β_s] contour

ToF_only SSKT
default SSKT



dEdx_only SSKT
default SSKT



there is a significant difference and, further, in a direction against common sense

- dEdx_only SSKT seems to work better than ToF_only SSKT: difficult to understand !
- dEdx_only SSKT seems to work better than nominal SSKT: this can/should not be !
- What could the reason of the above behavior ?
  - should we treat the unknowns (40% in ToF 9% in dEdx) in a different manner? see JP
  - the treatment of the pions by the dEdx part of the SSKT ? see JP

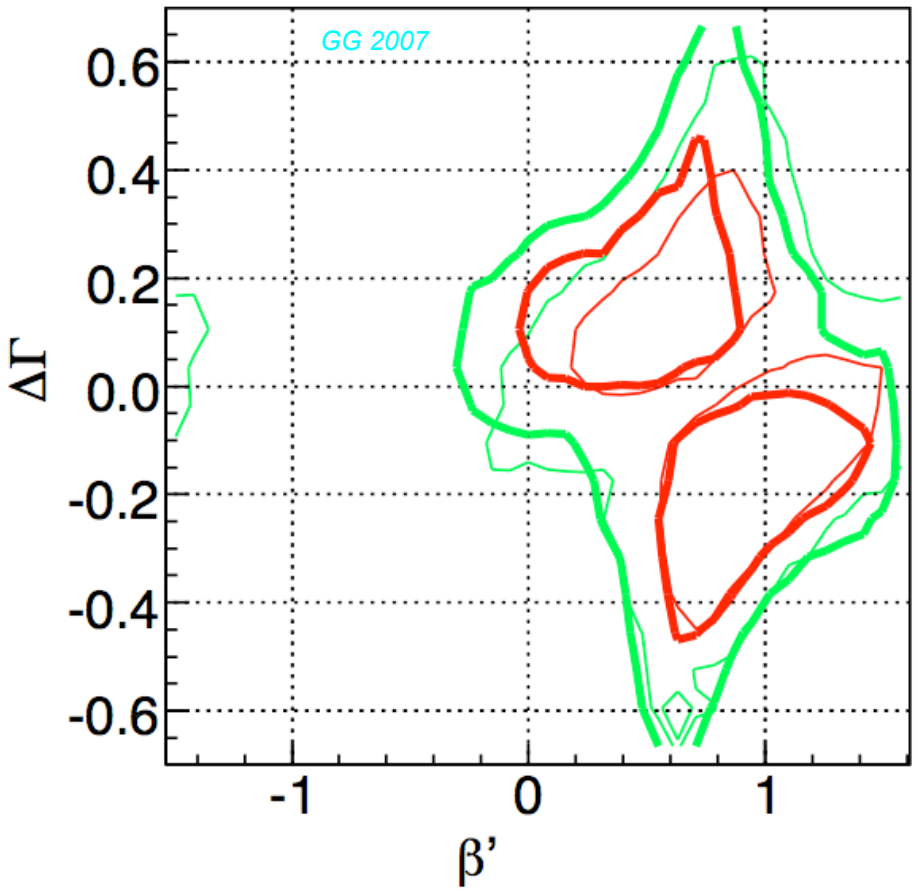
IN ANY CASE:

QUIZ: if the contour is insensitive to the performance of the tagger, the contour should be also insensitive to its (possible) ***imperfections … or not ???***

However, we should keep in mind, as a guideline, the amount of difference between independent results that the Collaboration is willing to accept for a PRL:

Comparison of PJMC and MPF [$\Delta\Gamma$, β_s] FC contours

$L < 1.3\ fb^{-1}$
thick: PJMC 68%, 95%
thin: MPF 68%. 95%



Summary / Thoughts

there is an obvious interest in having an 2.4 fb^{-1} updated result for the summer conferences

1- apparently the relevant result is almost insensitive to the use of taggers of different performance (within reasonable limits of course)

2- apparently the relevant result is sensitive to variations in a given tagger

3- which is right 1- or 2- ? or both ? … or it is just systematics in the fitting procedure ?

4- in any case all the variations seen are smaller than those between the two independent analyses of the just accepted PRL result

5- because of the above:

The quality of the result seems to be good/safe enough even if we use the current OST or/and our proposed NN SSKT ToF_only (both after the thorough check program just started), for the summer conferences should the final tagger be not ready by then !