Dear Torsten, Roberta, Elena,

thanks you so much for wrapping that up for us! I like in particular a lot the experimental-theory back and forth arguments. I've read "my" part, and here are my corrections. Since we are all authors, I send them to all. Note that the most important comments comes from new results (feed-down fractions) that were not available at the time we discussed, but that I think should be added.

Raphael.

IMPORTANT COMMENTS

My name is Granier de Cassagnac, not G. de Cassagnac

OK (propagated to Laure)

- 706 I don't like the ending statement. Take it out of context, and you will feel uncomfortable with it "bottomonia are much more sensitive to the recombination of two bottom quarks, originating from open bottom states, than the charm sector." Missing in the argument is the total b/c cross section. I propose removing the last sentence, adding a the b/c cross section (an information that is missing here), add an in-line boost to bottomonia, ending on a complicated situation:

" In the context of sequential dissociation, bottomonia may provide another advantage: the +approximately 20 times+ smaller bottom production cross section will lead to a much smaller contribution from regeneration that complicates the picture for charmonia. However, the closed to open heavy flavour production ratio for bottom is roughly ten times smaller than for charm, which +favours the recombination contribution to bottomonia+ and complicates the situation."

OK

- 708-10. Well, the fact that we did not know the feed-down was true at the time of the first Sapore Gravis meeting, but not anymore for the second one. Shall we update this and point to the latest LHCb results? See slide 24 here http://indico.cern.ch/event/305164/session/0/contribution/16/material/slides/0.pdf⧉ I even wonder if they are not better known than for the J/psi (slide 7) ! So I think we should rewrite this paragraph with updated information and references. (I can help)

We have added the latest LHCb results. Note, however, that LHCb measured the feed down fraction for pT>6 GeV. Hermine's plot extrapolates to pT=0 based on some assumptions/observations discussed in her QWG talk. We prefer to stick to experimental data. In either case, we have slightly updated the wording, appreciating the latest measurements at high pT: "Unfortunately, feed down contributions to the \upsa from excited state decays that are important for a quantitative understanding of a sequential dissociation are not very well understood **at low \pt**. Measurements of feed-down fractions exist only **for $\pt>6\GeVc$**, where about 30\% of \upsa result from decays of $\chi_b(nP)$ and \upsbc decays, **reaching $\approx50\%$ at higher \pt** ~\cite{Affolder:1999wm,Aaij:2012se,Aad:2011ih,Aaij:2014caa}."

- 735. chi_b(nP), since chib(2P) still makes 5% of the Y(1S), see abovementioned slides.

OK

- 756. based on the first PbPb +and pp+ runs at 2.76 TeV (pp was the limiting factor that prevented us to show the kinematical dependence of the Upsilon in the next paper, but it's coming up)

OK

- 763. so, the precise measurement of the feeddown from 2S and 3S now exist, and matters indeed less than

the chi(2P) -> "a precise consideration of the Y(1S) feeddown fraction" would be more adequate.

OK, no need indeed to limit the feed down discussion to the S states. Still emphasize that we need "measurements" (see discussion above).

- Figure 20, make it a real caption

OK

MINOR COMMENTS

- 698 yet -> and

OK

- 699 unify the way you present ratio (space or no space)

OK

- 701 add "such as B -> J/psi X" maybe?

OK

- 716 one digit is missing on the stat uncertainty, if it's 0 then add it

OK, in the abstract they just quoted 0.1 (stat), but in the conclusion they separate the two "0.49 +- 0.13(stat)+-0.07(stat pp)+- ..." Let's quote them separately.

- 724 same number of digits, hence 1.0 and 3.1 mb

OK

- 739 simultaneously appear simultaneously twice, remove one

OK

- 749 A comparison +of the CMS measurements at around mid-rapidity+ to ...

OK

- 773 cause+d+ ... or +by+ the multiplicity +being+ biased

OK

Again, many many thanks,

Raphael GdC.

This topic: ReteQuarkonii > Raphael
Topic revision: r3 - 2015-03-22 - TorstenDahms