LHCb-Paper-2011-033:
Search for the $X(4140)$ in $B^+ \to J/\psi\ \phi K^+$

- Lines 8, 134-135 (top page 6 and the three following equations) and 138.
  - Define in line 8 the relative branching ratio $\mathcal{B}_r$ in an equation with a number that can be used for reference.
  "The relative branching ratio defined as

$$\mathcal{B}_r(4140) = \frac{\mathcal{B}(B^+ \to X(4140)K^+) \times \mathcal{B}(X(4140) \to J/\psi\ \phi)}{\mathcal{B}(B^+ \to J/\psi\ \phi K^+)}, \qquad (1)$$

  was measured to be $\mathcal{B}_r(4140) = 0.149 \pm 0.039 \pm 0.024$."
  - And use $\mathcal{B}_r(4140)$ or $\mathcal{B}_r(4274)$ at the 5 other locations in stead of using the long right side of Eq. (1).

- Line 24.
  Change "long-lived" into "short-lived".
  - The long-lived particles will not decay inside the LHCb detector.

- Lines 37 and 42.
  Change "The most efficient level-i HLT triggers ... ." to
  "The HLT-i triggers ... are most effective for our event sample."
  - "most efficient" is a strange name for a trigger, certainly to an outsider, but also to insiders.

- Line 52. Change "These B^+ candidates are required ..." to
  "This B^+ candidate is required ...".

- Lines 134-135.
  Replace the unnumbered equations by a table that includes the CDF results.
  - All relevant information is then in one place and not scattered over the text.

- Line 137-140. (Patrick's remark)
  Remove the two sentences: "If we ... events."

- Line 145. Change "... an upper limit on ... which is well below the CDF result."
  to "... a 90% CL upper limit of $\mathcal{B}_r(4140) < 0.07$."
  - "well below the CDF result" is not a quantitative statement.

Tjeerd Ketel , 5 December 2011