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Publisher Erratum

Publisher Erratum: Long-lived particle reconstruction downstream of the LHCb magnet

LHCb collaboration[⋆]

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The original HTML-version of this article was revised. A number of typographical and editorial details were incorrectly implemented, and the Data and Code Availability Statements were wrongly given.

In the abstract, line 11, the Λ symbol was boldfaced while it should have been.

In page 1 there were two instances of the symbol "*P P*", towards the end of the left column and the beginning of the right column, which should have been "*pp*", without capitalization.

At the beginning of Section 3, end of page 2 and beginning of page 3, the paragraph starting as "First, Long tracks..." and finishing with "muon chambers" was with indentation, and should not have been. In addition, it was starting as a new paragraph while it should have been started right after "in Fig. 1.". Moreover, all sentences in this paragraph were starting with a line break while should not be. Overall, the paragraph should read as follows:

"...as illustrated in Fig. 1. Long tracks traverse the full tracking system. They include hits in both the VELO and the T1–T3 stations, and optionally in TT (UT in the upgraded detector). Upstream tracks traverse only the VELO and the TT (UT) stations. They are typically produced by low momentum particles, which are bent away by the magnetic field, thus failing to reach the T1–T3 stations. Downstream tracks traverse both the TT (UT) and T1–T3 stations, but do not leave any hit in the VELO. They typically belong to decay products of long-lived particles decaying beyond the VELO, such as Λ or K^0_S hadrons. VELO tracks have hits only in the VELO. They include large-angle or backward tracks, useful for the determination of the PV, as well as very low momentum tracks. T tracks have hits only in the T1–T3 stations. Similarly to Downstream tracks, they include the decay products of long-lived particles decaying far away from the PV, up to several metres. A significant fraction of tracks reconstructed in this category comes from secondary interactions with the material of the mechanical structures and back-scattering particles coming from the calorimeters and hadron shield behind the muon chambers."

In page 3, right column, line 13, "layer" should have been "layers".

In page 4, left column, lines 5–6, the $J/\psi \to \mu^+\mu^-$ decay descriptor was broken in two lines and should have been in a single line.

In several places in the HTML-version the Λ and Λ^0_b particles were written using incorrect fonts, with the Λ symbol boldfaced and the b subscript slanted, while they both should have not been.

The text justification in the caption of Figs. 13 and 22 was left and should have been full.

Several figure captions used incorrect fonts for denoting the particles, inconsistently with the fonts in the main text. For example, in Fig. 2: $\pi^+\pi^-$ and ψ in J/ψ were slanted and should not be; the subscripts S for K^0_S and b for Λ_b were also slanted and should not be; the Λ symbol denoting the Λ and Λ_b particles were boldfaced and should not be. Captions of Figs. 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25 and 27 are also affected.

The Data Availability Statement in page 19 was

"Data will be made available on reasonable request. [Author's comment: The datasets generated during the current study are available from the corresponding author on reasonable request.]."

and should have been

"The LHCb experiment has agreed to the CERN open data policy summarised in https://opendata.cern.ch/docs/about. In particular, Level 1 data associated with this publication are made available on the CERN document server at http://cds.cern.ch/record/2908392/files/. These data contain material related to the paper that allows a reinterpretation of the results in the context of new theoretical models."

The original article can be found online at https://doi.org/10.1140/epjc/s10052-024-13686-6.

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The Code Availability Statement in page 19 was "Code/software cannot be made available for reasons disclosed in the code availability statement. [Author's comment: The code/software generated during the current study is not publicly available but is available from the corresponding author on reasonable request.]."

and should have been

"Specific analysis software/code used to produce the results shown in the publication is preserved within the LHCb collaboration internally and can be provided on reasonable request, provided it does not contain information that can be associated with unpublished results."

The original article has been corrected and the publisher apologizes for the inconvenience caused.

LHCb collaboration

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