



Year: 2016

Corrigendum to Measurement of the ZZ production cross section and $Z \rightarrow \ell\ell\ell'\ell'$ branching fraction in pp collisions at $\sqrt{s} = 13$ TeV

CMS Collaboration, ; Canelli, Florencia ; Kilminster, Benjamin ; Aarestad, Thea ; Caminada, Lea ; De Cosa, Anna Paola ; Del Burgo, Riccardo ; Donato, Silvio ; Galloni, Camilla ; Hinzmann, Andreas ; Hreus, Tomas ; Ngadiuba, Jennifer ; Pinna, Deborah ; Rauco, Giorgia ; Robmann, Peter ; Salerno, Daniel ; Schweiger, Korbinian ; Seitz, Claudia ; Takahashi, Yuta ; Zucchetta, Alberto ; et al,

Abstract: An error was found in the published version in the top plot in Fig. 1. The plot was erroneously replaced by a copy of the top plot of Fig. 4. The correct figure is shown below. The physics conclusions of the paper remain unchanged. Four-lepton production in proton–proton collisions, $pp(Z/\gamma)(Z/\gamma)^{++'}$, where $\ell, \ell' = e$ or μ , is studied at a center-of-mass energy of 13 TeV with the CMS detector at the LHC. The data sample corresponds to an integrated luminosity of 2.6 fb^{-1} . The ZZ production cross section, $(ppZZ) = 14.6_{-1.8}^{+1.9}(\text{stat})_{0.3}^{+0.5}(\text{syst}) \pm 0.2(\text{theo}) \pm 0.4(\text{lumi}) \text{ pb}$, is measured for events with two opposite-sign, same-flavor lepton pairs produced in the mass region $60 < m_{\ell\ell}, m_{\ell'\ell'} < 120 \text{ GeV}$. The Z boson branching fraction to four leptons is measured to be $\mathcal{B}(Z^{++'}) = 4.9_{0.7}^{+0.8}(\text{stat})_{0.2}^{+0.3}(\text{syst}) + 0.20.1(\text{theo}) \pm 0.1(\text{lumi}) \times 10^6$ for the four-lepton invariant mass in the range $80 < m_{\ell\ell\ell'\ell'} < 100 \text{ GeV}$ and dilepton mass $m_{\ell\ell} > 4 \text{ GeV}$ for all opposite-sign, same-flavor lepton pairs. The results are in agreement with standard model predictions.

DOI: <https://doi.org/10.1016/j.physletb.2017.09.030>

Posted at the Zurich Open Repository and Archive, University of Zurich

ZORA URL: <https://doi.org/10.5167/uzh-140785>

Journal Article

Published Version



The following work is licensed under a Creative Commons: Attribution 4.0 International (CC BY 4.0) License.

Originally published at:

CMS Collaboration,; Canelli, Florencia; Kilminster, Benjamin; Aarestad, Thea; Caminada, Lea; De Cosa, Anna Paola; Del Burgo, Riccardo; Donato, Silvio; Galloni, Camilla; Hinzmann, Andreas; Hreus, Tomas; Ngadiuba, Jennifer; Pinna, Deborah; Rauco, Giorgia; Robmann, Peter; Salerno, Daniel; Schweiger, Korbinian; Seitz, Claudia; Takahashi, Yuta; Zucchetta, Alberto; et al, (2016). Corrigendum to Measurement of the ZZ production cross section and $Z \rightarrow \ell\ell\ell'\ell'$ branching fraction in pp collisions at $\sqrt{s} = 13$ TeV. Physics Letters B, B763:280-303.

DOI: <https://doi.org/10.1016/j.physletb.2017.09.030>



Corrigendum

Corrigendum to “Measurement of the ZZ production cross section and $Z \rightarrow \ell^+ \ell^- \ell'^+ \ell'^-$ branching fraction in pp collisions at $\sqrt{s} = 13$ TeV” [Phys. Lett. B 763 (2016) 280]



The CMS Collaboration *

CERN, Switzerland

An error was found in the published version in the top plot in Fig. 1. The plot was erroneously replaced by a copy of the top plot of Fig. 4. The correct figure is shown below. The physics conclusions of the paper remain unchanged.

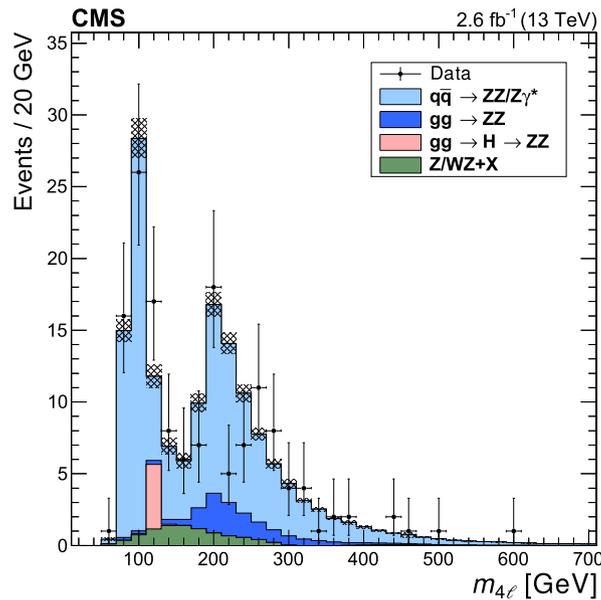


Fig. 1. Distribution of the four-lepton invariant mass $m_{\ell^+ \ell^- \ell'^+ \ell'^-}$. Points represent the data, while shaded histograms represent the SM prediction and background estimate. Hatched regions around the predicted yield represent combined statistical, systematic, theoretical, and integrated luminosity uncertainties.

DOI of original article: <http://dx.doi.org/10.1016/j.physletb.2016.10.054>.

* E-mail address: cms-publication-committee-chair@cern.ch.