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Published for SISSA by Springer
Received: September 24, 2020
Accepted: September 25, 2020
Published: October 28, 2020

Erratum: Measurement of differential cross sections for single diffractive dissociation in $\sqrt{s} = 8$ TeV pp collisions using the ATLAS ALFA spectrometer

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Erratum to: JHEP02(2020)042

ArXiv ePrint: 1911.00453

Figure 5b of the paper [1] contained a misinterpretation in the comparison between the reported new ATLAS measurement of the process $pp \to Xp$ and previously published CMS data [2]. The ATLAS measurement corresponds to cases where either proton dissociates. In the comparison, the CMS measurement was assumed to be defined similarly, whereas in fact it includes the dissociation of only one of the protons.

On further investigation, the comparison between the ATLAS and CMS measurements is far from straightforward. The double dissociation ($pp \to XY$) contribution in the CMS data is not well constrained and indications from the CMS analysis suggest it may be significantly larger than was thought originally. Fuerthermore, the potentially sizeable central diffraction ($pp \to pXp$) contribution was subtracted in the ATLAS measurement, but included by CMS. There is also a small effect associated with the different centre of mass energies (7 TeV for CMS and 8 TeV for ATLAS).

In view of these complications, the figure has now been withdrawn from the publication [1].

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References

[1] ATLAS collaboration, *Measurement of differential cross sections for single diffractive dissociation in $\sqrt{s} = 8$ TeV pp collisions using the ATLAS ALFA spectrometer*, *JHEP* **02** (2020) 042 [arXiv:1911.00453] [INSPIRE].

[2] CMS collaboration, *Measurement of diffraction dissociation cross sections in pp collisions at $\sqrt{s} = 7$ TeV*, *Phys. Rev. D* **92** (2015) 012003 [arXiv:1503.08689] [INSPIRE].

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Article funded by SCOAP[3].

https://doi.org/10.1007/JHEP10(2020)182

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A. Bethani[100], S. Bethke[114], A. Betti[24], A.J. Bevan[92], J. Beyer[114], R. Bi[139], R.M. Bianchi[139], O. Biebel[113], D. Biedermann[19], R. Bielski[36], K. Bierwagen[99], N.V. Biesuz[71a,71b], M. Biglietti[74a], T.R.V. Billoud[109], M. Bindi[53], A. Bingul[12d], C. Bini[72a,72b], S. Biondi[23b,23a], M. Birman[180], T. Bisanz[53], J.P. Biswal[161], A. Bitadze[100], C. Bittrich[48], K. Bjørke[134], K.M. Black[25], T. Blazek[28a], I. Bloch[46], C. Blocker[26], A. Blue[57], U. Blumenschein[92], G.J. Bobbink[119], V.S. Bobrovnikov[121b,121a], S.S. Bocchetta[96], A. Bocci[49], D. Boerner[46], D. Bogavac[14], A.G. Bogdanchikov[121b,121a], C. Bohm[45a], V. Boisvert[93], P. Bokan[53,172], T. Bold[83a], A.S. Boldyrev[112], A.E. Bolz[61b], M. Bomben[136], M. Bona[92], J.S. Bonilla[131], M. Boonekamp[145], H.M. Borecka-Bielska[90], A. Borisov[122], G. Borissov[89], J. Bortfeldt[36], D. Bortoletto[135], V. Bortolotto[73a,73b], D. Boscherini[23b], M. Bosman[14], J.D. Bossio Sola[103], K. Bouaouda[35a], J. Boudreau[139], E.V. Bouhova-Thacker[89], D. Boumediene[38], S.K. Boutle[57], A. Boveia[126], J. Boyd[36], D. Boye[33b,au], I.R. Boyko[79], A.J. Bozson[93], J. Bracinik[21], N. Brahimi[101], G. Brandt[182], O. Brandt[61a], F. Braren[46], B. Brau[102], J.E. Brau[131], W.D. Breaden Madden[57], K. Brendlinger[46], L. Brenner[46], R. Brenner[172], S. Bressler[180], B. Brickwedde[99], D.L. Briglin[21], D. Britton[57], D. Britzger[114], I. Brock[24], R. Brock[106], G. Brooijmans[39], W.K. Brooks[147c], E. Brost[120], J.H Broughton[21], P.A. Bruckman de Renstrom[84], D. Bruncko[28b], A. Bruni[23b], G. Bruni[23b], L.S. Bruni[119], S. Bruno[73a,73b], B.H. Brunt[32], M. Bruschi[23b], N. Bruscino[139], P. Bryant[37], L. Bryngemark[96], T. Buanes[17], Q. Buat[36], P. Buchholz[151], A.G. Buckley[57], I.A. Budagov[79], M.K. Bugge[134], F. Bührer[52], O. Bulekov[111], T.J. Burch[120], S. Burdin[90], C.D. Burgard[119], A.M. Burger[129], B. Burghgrave[8], J.T.P. Burr[46], J.C. Burzynski[102], V. Büscher[99], E. Buschmann[53], P.J. Bussey[57], J.M. Butler[25], C.M. Buttar[57], J.M. Butterworth[94], P. Butti[36], W. Buttinger[36], A. Buzatu[158], A.R. Buzykaev[121b,121a], G. Cabras[23b,23a], S. Cabrera Urbán[174], D. Caforio[56], H. Cai[173], V.M.M. Cairo[153], O. Cakir[4a], N. Calace[36], P. Calafiura[18], A. Calandri[101], G. Calderini[136], P. Calfayan[65], G. Callea[57], L.P. Caloba[80b], S. Calvente Lopez[98], D. Calvet[38], S. Calvet[38], T.P. Calvet[155], M. Calvetti[71a,71b], R. Camacho Toro[136], S. Camarda[36], D. Camarero Munoz[98], P. Camarri[73a,73b], D. Cameron[134], R. Caminal Armadans[102], C. Camincher[36], S. Campana[36], M. Campanelli[94], A. Camplani[40], A. Campoverde[151], V. Canale[69a,69b], A. Canesse[103], M. Cano Bret[60c], J. Cantero[129], T. Cao[161], Y. Cao[173], M.D.M. Capeans Garrido[36], M. Capua[41b,41a], R. Cardarelli[73a], F. Cardillo[149], G. Carducci[41b,41a], I. Carli[143], T. Carli[36], G. Carlino[69a], B.T. Carlson[139], L. Carminati[68a,68b], R.M.D. Carney[45a,45b], S. Caron[118], E. Carquin[147c], S. Carrá[46], J.W.S. Carter[167], M.P. Casado[14,e], A.F. Casha[167], D.W. Casper[171], R. Castelijn[119], F.L. Castillo[174], V. Castillo Gimenez[174], N.F. Castro[140a,140e], A. Catinaccio[36], J.R. Catmore[134], A. Cattai[36], J. Caudron[24], V. Cavaliere[29], E. Cavallaro[14], M. Cavalli-Sforza[14], V. Cavasinni[71a,71b], E. Celebi[12b], F. Ceradini[74a,74b], L. Cerda Alberich[174], K. Cerny[130], A.S. Cerqueira[80a], A. Cerri[156], L. Cerrito[73a,73b], F. Cerutti[18], A. Cervelli[23b,23a], S.A. Cetin[12b], Z. Chadi[35a], D. Chakraborty[120], S.K. Chan[59], W.S. Chan[119], W.Y. Chan[90], J.D. Chapman[32], B. Chargeishvili[159b], D.G. Charlton[21], T.P. Charman[92], C.C. Chau[34], S. Che[126], A. Chegwidden[106], S. Chekanov[6], S.V. Chekulaev[168a], G.A. Chelkov[79,az], M.A. Chelstowska[36], B. Chen[78], C. Chen[60a], C.H. Chen[78], H. Chen[29], J. Chen[60a], J. Chen[39], S. Chen[137], S.J. Chen[15c], X. Chen[15b,ay], Y. Chen[82], Y-H. Chen[46], H.C. Cheng[63a], H.J. Cheng[15a], A. Cheplakov[79], E. Cheremushkina[122], R. Cherkaoui El Moursli[35e], E. Cheu[7], K. Cheung[64], T.J.A. Chevalérias[145], L. Chevalier[145], V. Chiarella[51], G. Chiarelli[71a], G. Chiodini[67a], A.S. Chisholm[36,21], A. Chitan[27b], I. Chiu[163], Y.H. Chiu[176], M.V. Chizhov[79], K. Choi[65], A.R. Chomont[72a,72b], S. Chouridou[162], Y.S. Chow[119], M.C. Chu[63a], X. Chu[15a,15d], J. Chudoba[141], A.J. Chuinard[103], J.J. Chwastowski[84], L. Chytka[130], K.M. Ciesla[84], D. Cinca[47], V. Cindro[91], I.A. Cioară[27b], A. Ciocio[18], F. Cirotto[69a,69b], Z.H. Citron[180,l], M. Citterio[68a], D.A. Ciubotaru[27b], B.M. Ciungu[167], A. Clark[54], M.R. Clark[39], P.J. Clark[50], C. Clement[45a,45b], Y. Coadou[101],

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