# SO11HosotaniDummyCase Failed-Global-Constr

## May 15, 2020

Statistics for SO11HosotaniDummyCase attributes. The following is for points that Failed-Global-Constr the constraints:

The following are the statistics for **Param**:

## k(GeV):

- $\bullet$  The average value for  $k({\rm GeV})$  is : 131578.42129991786
- Standard deviation for k(GeV) is : 63317.243920534405
- Minimum value for k(GeV) is : 29745.70897245925
- Maximum value for k(GeV) is: 523128.26238726394

#### $z_L$ :

- $\bullet$  The average value for  $z_L$  is : 35.70620006971989
- $\bullet$  Standard deviation for  $z_L$  is : 3.768966744122469
- $\bullet$  Minimum value for  $z_L$  is : 17.43649508024567
- Maximum value for  $z_L$  is: 51.226730749863854

#### $c_0$ :

- The average value for  $c_0$  is : 0.2594396430297812
- Standard deviation for  $c_0$  is : 0.11087437460619713
- Minimum value for  $c_0$  is : 0.0038
- Maximum value for  $c_0$  is : 0.6486000000000001

## $c_1$ :

- $\bullet$  The average value for  $c_1$  is : 0.13092681240605342
- $\bullet$  Standard deviation for  $c_1$  is : 0.10968710143111243

- Maximum value for  $c_1$  is : 0.6766512788619184

#### $c_2$ :

- The average value for  $c_2$  is : -0.6818151985400223
- Standard deviation for  $c_2$  is: 0.17010884471456683
- Minimum value for  $c_2$  is: -1.2083085984
- Maximum value for  $c_2$  is : -0.2005626374973603

## $c'_0$ :

- The average value for  $c'_0$  is : 0.5541615722855617
- Standard deviation for  $c'_0$  is: 0.08811827633189584
- Minimum value for  $c'_0$  is : 0.12614662911599314
- Maximum value for  $c_0'$  is : 0.74672244

#### $\mu_1$ :

- The average value for  $\mu_1$  is : 15.450468379950179
- Standard deviation for  $\mu_1$  is : 4.305071310765819
- Minimum value for  $\mu_1$  is : 6.455597256463612
- $\bullet$  Maximum value for  $\mu_1$  is : 48.493708002999824

## $\mu_{11}$ :

- The average value for  $\mu_{11}$  is : 0.27463356456170795
- Standard deviation for  $\mu_{11}$  is : 0.14886039179823743
- Minimum value for  $\mu_{11}$  is : 0.058031393209039286
- Maximum value for  $\mu_{11}$  is: 1.975788793927787

## $\mu'_{11}$ :

- $\bullet$  The average value for  $\mu'_{11}$  is : 0.3309685941848252
- Standard deviation for  $\mu'_{11}$  is : 0.22155702677758765
- Minimum value for  $\mu'_{11}$  is : 0.0724
- $\bullet$  Maximum value for  $\mu'_{11}$  is : 2.2649599043224953

## $\tilde{\mu_2}$ :

- The average value for  $\tilde{\mu_2}$  is : 2.1614126132695595
- • Standard deviation for  $\tilde{\mu_2}$  is : 1.2224508711118018
- Minimum value for  $\tilde{\mu_2}$  is : 0.28205967380986124
- Maximum value for  $\tilde{\mu_2}$  is : 9.44110403644189

### The following are the statistics for **Attr**:

### $m_H(\text{GeV})$ :

- The average value for  $m_H(\text{GeV})$  is: 122.84305475244341
- Standard deviation for  $m_H(\text{GeV})$  is : 13.908945779152598
- Minimum value for  $m_H(\text{GeV})$  is : 86.79643281789266
- Maximum value for  $m_H(\text{GeV})$  is : 161.3841028130086

## $m_{\psi_D}({\rm GeV})$ :

- The average value for  $m_{\psi_D}(\text{GeV})$  is : 2734.574941233768
- Standard deviation for  $m_{\psi_D}(\text{GeV})$  is : 1152.5425238706273
- Minimum value for  $m_{\psi_D}(\text{GeV})$  is : 694.1733143694274
- Maximum value for  $m_{\psi_D}(\text{GeV})$  is: 8729.66552372864

## $m_{\tau}(\text{GeV})$ :

- The average value for  $m_{\tau}(\text{GeV})$  is : 1.7769140679072315
- Standard deviation for  $m_{\tau}(\text{GeV})$  is : 0.18247444573836716
- Minimum value for  $m_{\tau}(\text{GeV})$  is : 1.2626331172704428
- Maximum value for  $m_{\tau}(\text{GeV})$  is : 2.3080171899966304

## $m_{\tau}^{(1)}(\text{GeV})$ :

- The average value for  $m_{\tau}^{(1)}(\text{GeV})$  is : 1314.4519057039674
- Standard deviation for  $m_{\tau}^{(1)}(\text{GeV})$  is : 769.7172127942016
- Minimum value for  $m_{\tau}^{(1)}(\text{GeV})$  is : 561.3914538370027
- Maximum value for  $m_{\tau}^{(1)}(\text{GeV})$  is : 7999.4966096127

## $m_{\nu}(eV)$ :

• The average value for  $m_{\nu}(eV)$  is: 0.08466320694690924

- Standard deviation for  $m_{\nu}(eV)$  is: 0.05824352936517575
- Minimum value for  $m_{\nu}(eV)$  is: 0.010304181831299724
- $\bullet$  Maximum value for  $m_{\nu}(eV)$  is : 0.5395087140150365  $m_b({\rm GeV})$  :
  - The average value for  $m_b(\text{GeV})$  is : 4.154620086446668
  - Standard deviation for  $m_b(\text{GeV})$  is : 0.32841299321266565
  - Minimum value for  $m_b(\text{GeV})$  is : 2.546837301042742
- $\bullet$  Maximum value for  $m_b({\rm GeV})$  is : 5.766921175956056  $m_b^{(1)}({\rm GeV})$  :
- The average value for  $m_h^{(1)}(\text{GeV})$  is : 4064.5677770533375
  - Standard deviation for  $m_b^{(1)}(\text{GeV})$  is : 2013.1124820856567
  - Minimum value for  $m_h^{(1)}(\text{GeV})$  is : 713.1222160799807
- $\bullet$  Maximum value for  $m_b^{(1)}({\rm GeV})$  is : 15695.89257173306  $m_t({\rm GeV})$  :
  - The average value for  $m_t(\text{GeV})$  is : 175.51617266257458
  - Standard deviation for  $m_t(\text{GeV})$  is: 15.376791636387408
  - Minimum value for  $m_t(\text{GeV})$  is : 116.2851872676181
- Maximum value for  $m_t(\text{GeV})$  is : 221.34674119746327  $\langle \theta_H \rangle (\text{rad})$  :
  - The average value for  $\langle \theta_H \rangle$  (rad) is: 0.12697540754755748
  - Standard deviation for  $\langle \theta_H \rangle$  (rad) is: 0.06867992436284016
  - Minimum value for  $\langle \theta_H \rangle$  (rad) is : 0.026101363074784726
- Maximum value for  $\langle \theta_H \rangle ({\rm rad})$  is : 0.43033189033086183  $m_Z ({\rm GeV})$  :
  - The average value for  $m_Z(\text{GeV})$  is : 89.27350639451191
  - Standard deviation for  $m_Z(\text{GeV})$  is : 6.874347593975904
  - Minimum value for  $m_Z(\text{GeV})$  is : 66.47008184588033
  - Maximum value for  $m_Z(\text{GeV})$  is : 111.28154325481512

## $m_{W^{\pm}}(\mathrm{GeV})$ :

- The average value for  $m_{W^{\pm}}(\text{GeV})$  is : 78.27611817230638
- Standard deviation for  $m_{W^{\pm}}(\text{GeV})$  is : 6.027513271917899
- Minimum value for  $m_{W^{\pm}}(\text{GeV})$  is : 58.28179256786604
- $\bullet$  Maximum value for  $m_{W^\pm}({\rm GeV})$  is : 97.57303798191603  $m_{Z'}({\rm GeV})$  :
  - The average value for  $m_{Z'}(\text{GeV})$  is : 13664.293600690915
  - Standard deviation for  $m_{Z'}(\text{GeV})$  is : 6532.468539299777
  - Minimum value for  $m_{Z'}(\text{GeV})$  is : 3140.2627514624337
  - Maximum value for  $m_{Z'}(\text{GeV})$  is : 52363.544933920304

#### T:

- $\bullet$  The average value for T is : 0.0
- Standard deviation for T is: 0.0
- Minimum value for T is : 0
- Maximum value for T is : 0

### $y_t$ :

- $\bullet$  The average value for  $y_t$  is : 0.9810482112362959
- Standard deviation for  $y_t$  is: 0.013373492752483429
- Minimum value for  $y_t$  is : 0.9009470970050025
- $\bullet$  Maximum value for  $y_t$  is : 0.9909915464253298

## $\tau_H$ :

- The average value for  $\tau_H$  is : 28.570658174713376
- Standard deviation for  $\tau_H$  is : 8.262779198087452
- Minimum value for  $\tau_H$  is : 11.672665243464348
- Maximum value for  $\tau_H$  is : 55.155977856324014

## $\sigma(hh)(fb)$ :

- The average value for  $\sigma(hh)(fb)$  is : 17.914329147320533
- Standard deviation for  $\sigma(hh)(fb)$  is: 6.348018422792772

- Minimum value for  $\sigma(hh)(fb)$  is : 4.647728334312532
- Maximum value for  $\sigma(hh)(fb)$  is: 55.652538431163144

#### $\Delta_{HH}$ :

- The average value for  $\Delta_{HH}$  is : 0.12242119934844437
- Standard deviation for  $\Delta_{HH}$  is : 0.040461698414371104
- Minimum value for  $\Delta_{HH}$  is : 0.033834985074388126
- Maximum value for  $\Delta_{HH}$  is : 0.37471161486103505

## The following are the statistics for **Calc**:

## $\chi_G^2$ :

- $\bullet$  The average value for  $\chi^2_G$  is : 391.3325572836604
- • Standard deviation for  $\chi^2_G$  is : 258.853816629113
- $\bullet$  Minimum value for  $\chi^2_G$  is : 20.758817868524343
- $\bullet$  Maximum value for  $\chi^2_G$  is : 999.9465022756867

## $\Lambda_{\rm Max}({\rm GeV})$ :

- The average value for  $\Lambda_{\rm Max}({\rm GeV})$  is : 3003529.19677763
- $\bullet$  Standard deviation for  $\Lambda_{\rm Max}({\rm GeV})$  is : 1533273.0566604766
- Minimum value for  $\Lambda_{\rm Max}({\rm GeV})$  is : 621116.7055788347
- Maximum value for  $\Lambda_{\rm Max}({\rm GeV})$  is : 12703128.397101697

## $\sin^2 \theta_W(\Lambda_{\mathrm{Max}})$ :

- The average value for  $\sin^2 \theta_W(\Lambda_{\text{Max}})$  is : 0.2734561596015291
- Standard deviation for  $\sin^2 \theta_W(\Lambda_{\text{Max}})$  is : 0.003606327447477997
- Minimum value for  $\sin^2 \theta_W(\Lambda_{\text{Max}})$  is : 0.2633130663554056
- Maximum value for  $\sin^2 \theta_W(\Lambda_{\text{Max}})$  is: 0.28418793088484634

## $\sin^2\theta_W(M_{\rm KK_5}):$

- $\bullet$  The average value for  $\sin^2\theta_W(M_{\rm KK_5})$  is : 0.25415026900658927
- Standard deviation for  $\sin^2 \theta_W(M_{\text{KK}_5})$  is : 0.002805189528835513
- Minimum value for  $\sin^2 \theta_W(M_{\text{KK}_5})$  is : 0.2461411009869891

- $\bullet$  Maximum value for  $\sin^2\theta_W(M_{\rm KK_5})$  is : 0.26277882124202095  $(\alpha)_{1Y}^{-1}$  :
  - The average value for  $(\alpha)_{1Y}^{-1}$  is : 54.85575810511871
  - Standard deviation for  $(\alpha)_{1Y}^{-1}$  is: 0.4007551132258798
  - Minimum value for  $(\alpha)_{1Y}^{-1}$  is: 53.68906787969083
- • Maximum value for  $(\alpha)_{1Y}^{-1}$  is : 55.905853316046795  $(\alpha)_{2L}^{-1}$  :
  - The average value for  $(\alpha)_{2L}^{-1}$  is: 31.135654679545166
  - Standard deviation for  $(\alpha)_{2L}^{-1}$  is : 0.2918553950882679
  - Minimum value for  $(\alpha)_{2L}^{-1}$  is: 30.347257879307648
- Maximum value for  $(\alpha)_{2L}^{-1}$  is : 32.24156221462389  $(\alpha)_{3C}^{-1}$  :
  - The average value for  $(\alpha)_{3C}^{-1}$  is: 13.550644366371547
  - Standard deviation for  $(\alpha)_{3C}^{-1}$  is: 0.5712820949715708
  - $\bullet$  Minimum value for  $(\alpha)_{3C}^{-1}$  is : 11.910631394380694
- Maximum value for  $(\alpha)_{3C}^{-1}$  is : 15.301563636734688  $(\alpha)_{4C}^{-1}$  :
  - The average value for  $(\alpha)_{4C}^{-1}$  is: 5.616696734405177
  - Standard deviation for  $(\alpha)_{4C}^{-1}$  is : 0.32593031281998064
  - Minimum value for  $(\alpha)_{4C}^{-1}$  is: 4.173203197110485
- • Maximum value for  $(\alpha)_{4C}^{-1}$  is : 6.79213347223117  $(\alpha)_{2L}^{-1}$  :
  - The average value for  $(\alpha)_{2L}^{-1}$  is : 30.208557042939702
  - Standard deviation for  $(\alpha)_{2L}^{-1}$  is : 0.27551064551480636
  - Minimum value for  $(\alpha)_{2L}^{-1}$  is : 29.14269994725436
- Maximum value for  $(\alpha)_{2L}^{-1}$  is : 31.25244747640796  $(\alpha)_{3C}^{-1}$  :
  - The average value for  $(\alpha)_{3C}^{-1}$  is: 76.64844250984315
  - Standard deviation for  $(\alpha)_{3C}^{-1}$  is: 1.0860393731945313
  - Minimum value for  $(\alpha)_{3C}^{-1}$  is : 73.51421612335126
  - Maximum value for  $(\alpha)_{3C}^{-1}$  is : 79.57992653359497