# SO11HosotaniDummyCase Failed-Global-Constr

## February 24, 2020

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

The following are the statistics for  ${\bf Param}$  :

#### k(GeV):

- The average value for k(GeV) is : 129005.43871070193
- Standard deviation for k(GeV) is : 63192.211056847395
- Minimum value for k(GeV) is : 23684.801448552284
- Maximum value for k(GeV) is : 516137.0118230985

#### $z_L$ :

- $\bullet$  The average value for  $z_L$  is : 35.68719791018386
- Standard deviation for  $z_L$  is : 3.539360342878731
- $\bullet$  Minimum value for  $z_L$  is : 17.43649508024567
- Maximum value for  $z_L$  is : 51.20359494476422

#### $c_0$ :

- The average value for  $c_0$  is : 0.26728656367752396
- $\bullet$  Standard deviation for  $c_0$  is : 0.16460630530900208
- Minimum value for  $c_0$  is : 0.0024
- Maximum value for  $c_0$  is : 1.313746039493909

### $c_1$ :

- $\bullet$  The average value for  $c_1$  is : 0.13328287082728346
- Standard deviation for  $c_1$  is: 0.10782430256669821

- Minimum value for  $c_1$  is : 1.9287109375015765e-05
- Maximum value for  $c_1$  is: 0.6766512788619184

 $c_2$ :

- The average value for  $c_2$  is : -0.7192109930058841
- Standard deviation for  $c_2$  is : 0.1896417090945794
- Minimum value for  $c_2$  is: -1.2083085984
- Maximum value for  $c_2$  is : -0.1545541855833397

 $c'_0$ :

- The average value for  $c'_0$  is : 0.5641582935584702
- Standard deviation for  $c'_0$  is : 0.18441283222194332
- Minimum value for  $c_0'$  is : 0.062000923215999953
- $\bullet$  Maximum value for  $c_0'$  is : 3.4910387209040272

 $\mu_1$ :

- The average value for  $\mu_1$  is : 14.49496169438743
- Standard deviation for  $\mu_1$  is : 4.134241760181286
- Minimum value for  $\mu_1$  is : 6.144251796106855
- Maximum value for  $\mu_1$  is : 64.49975233857032

 $\mu_{11}$  :

- The average value for  $\mu_{11}$  is : 0.3004203525638625
- Standard deviation for  $\mu_{11}$  is : 0.23604066029493412
- Minimum value for  $\mu_{11}$  is : 0.00016414231999992146
- Maximum value for  $\mu_{11}$  is : 2.23977

 $\mu'_{11}$ :

- $\bullet$  The average value for  $\mu'_{11}$  is : 0.35899946062257204
- Standard deviation for  $\mu'_{11}$  is : 0.2922333331932605
- $\bullet$  Minimum value for  $\mu'_{11}$  is : 0.0005893571040000156
- Maximum value for  $\mu'_{11}$  is : 2.2649599043224953

 $\tilde{\mu_2}$ :

- The average value for  $\tilde{\mu_2}$  is : 1.6277168986527066
- Standard deviation for  $\tilde{\mu_2}$  is : 1.0457664975235765
- Minimum value for  $\tilde{\mu_2}$  is : 0.004511999999998495
- $\bullet$  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: 158.6014662372495
- Standard deviation for  $m_H(\text{GeV})$  is : 206.3713895910285
- Minimum value for  $m_H(\text{GeV})$  is : 6.035070957702646
- Maximum value for  $m_H(\text{GeV})$  is : 3569.183086071825

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

- The average value for  $m_{\psi_D}(\text{GeV})$  is : 2779.489829647192
- Standard deviation for  $m_{\psi_D}(\text{GeV})$  is: 1322.4708368707059
- Minimum value for  $m_{\psi_D}(\text{GeV})$  is : 539.2456808043827
- Maximum value for  $m_{\psi_D}(\text{GeV})$  is : 30817.778632083326

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

- The average value for  $m_{\tau}(\text{GeV})$  is : 14.656197240758637
- Standard deviation for  $m_{\tau}(\text{GeV})$  is : 168.790299273006
- Minimum value for  $m_{\tau}(\text{GeV})$  is : 2.7271938653701917e-07
- Maximum value for  $m_{\tau}(\text{GeV})$  is : 4419.930454068088

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

- The average value for  $m_{\tau}^{(1)}(\text{GeV})$  is : 1242.185455209309
- Standard deviation for  $m_{\tau}^{(1)}({\rm GeV})$  is : 1696.9209460932343
- Minimum value for  $m_{\tau}^{(1)}(\text{GeV})$  is: 0.39981220509084303
- Maximum value for  $m_{\tau}^{(1)}(\text{GeV})$  is : 26727.41983603022  $m_{\nu}(eV)$  :
  - The average value for  $m_{\nu}(eV)$  is : 6.482069271872906

- Standard deviation for  $m_{\nu}(eV)$  is : 209.14214936886827
- Minimum value for  $m_{\nu}(eV)$  is : 6.905872012793404e-17
- $\bullet$  Maximum value for  $m_{\nu}(eV)$  is : 20070.359124082406  $m_b({\rm GeV}):$ 
  - The average value for  $m_b(\text{GeV})$  is : 19.821352172459736
  - Standard deviation for  $m_b(\text{GeV})$  is : 274.4141889572091
  - Minimum value for  $m_b(\text{GeV})$  is: 3.644996621464028e-07
- $\bullet$  Maximum value for  $m_b({\rm GeV})$  is : 8986.845743286196  $m_b^{(1)}({\rm GeV}):$ 
  - The average value for  $m_h^{(1)}(\text{GeV})$  is : 3963.0225183684647
  - Standard deviation for  $m_b^{(1)}(\text{GeV})$  is : 2143.2522050250845
  - Minimum value for  $m_h^{(1)}(\text{GeV})$  is : 92.65515215519748
- • Maximum value for  $m_b^{(1)}({\rm GeV})$  is : 19678.59531163743  $m_t({\rm GeV}):$ 
  - The average value for  $m_t(\text{GeV})$  is : 244.83684919355548
  - Standard deviation for  $m_t(\text{GeV})$  is: 801.7681420604007
  - Minimum value for  $m_t(\text{GeV})$  is: 1.1140066853307358e-05
- Maximum value for  $m_t(\text{GeV})$  is : 27948.000246701922  $\langle \theta_H \rangle (\text{rad})$  :
  - The average value for  $\langle \theta_H \rangle$  (rad) is: 0.18077377228276514
  - Standard deviation for  $\langle \theta_H \rangle$  (rad) is : 0.367468842691238
  - Minimum value for  $\langle \theta_H \rangle$  (rad) is : 5.924162493897711e-09
- Maximum value for  $\langle \theta_H \rangle$  (rad) is : 3.141592653524363  $m_Z({\rm GeV})$  :
  - The average value for  $m_Z(\text{GeV})$  is : 108.54336734703641
  - Standard deviation for  $m_Z(\text{GeV})$  is: 328.9419358241167
  - Minimum value for  $m_Z(\text{GeV})$  is : 1.2121014312745615e-07
  - Maximum value for  $m_Z(\text{GeV})$  is : 29797.464985761995

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

- The average value for  $m_{W^{\pm}}(\text{GeV})$  is : 95.17217136885078
- Standard deviation for  $m_{W^{\pm}}(\text{GeV})$  is : 288.4203710629502
- Minimum value for  $m_{W^{\pm}}(\text{GeV})$  is : 1.0627855755098015e-07
- $\bullet$  Maximum value for  $m_{W^\pm}({\rm GeV})$  is : 26126.787046465266  $m_{Z'}({\rm GeV})$  :
  - The average value for  $m_{Z'}(\text{GeV})$  is : 13418.494393296389
  - Standard deviation for  $m_{Z'}(\text{GeV})$  is : 6597.127441375112
  - Minimum value for  $m_{Z'}(\text{GeV})$  is : 2406.1721144785306
  - Maximum value for  $m_{Z'}(\text{GeV})$  is : 61616.383955444464

#### 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

#### $y_t$ :

- The average value for  $y_t$  is: 0.8648786725507704
- Standard deviation for  $y_t$  is : 0.4515553393258978
- Minimum value for  $y_t$  is : -0.9913292142098233
- $\bullet$  Maximum value for  $y_t$  is : 0.9913292142098233

#### $\tau_H$ :

- The average value for  $\tau_H$  is : 32.46222736134907
- Standard deviation for  $\tau_H$  is : 40.48070837958475
- Minimum value for  $\tau_H$  is : 1.3514550664823795e-09
- Maximum value for  $\tau_H$  is : 656.4358702272674

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

- The average value for  $\sigma(hh)(fb)$  is : 1012.3759477720895
- Standard deviation for  $\sigma(hh)(fb)$  is : 25029.005222339856

- Minimum value for  $\sigma(hh)(fb)$  is: 8.398056069054864e-17
- Maximum value for  $\sigma(hh)(fb)$  is : 2108484.05431032

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

- The average value for  $\Delta_{HH}$  is : 10.305859797820393
- Standard deviation for  $\Delta_{HH}$  is : 282.3321776093463
- Minimum value for  $\Delta_{HH}$  is : 2.098690138866986e-18
- Maximum value for  $\Delta_{HH}$  is : 24842.93813309167

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

## $\chi_G^2$ :

- The average value for  $\chi_G^2$  is : 113788966.54636192
- Standard deviation for  $\chi_G^2$  is : 1770433766.8232453
- Minimum value for  $\chi_G^2$  is : 18.644696044894935

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

- The average value for  $\Lambda_{\rm Max}({\rm GeV})$  is : 1055633.2336116997
- Standard deviation for  $\Lambda_{\rm Max}({\rm GeV})$  is : 737104.1162775971
- Minimum value for  $\Lambda_{\rm Max}({\rm GeV})$  is : 433860.4721865347
- Maximum value for  $\Lambda_{Max}(GeV)$  is : 2753774.5690759397

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

- The average value for  $\sin^2 \theta_W(\Lambda_{\text{Max}})$  is : 0.04243850223185698
- Standard deviation for  $\sin^2 \theta_W(\Lambda_{\text{Max}})$  is : 0.012726849549564274
- Minimum value for  $\sin^2 \theta_W(\Lambda_{\text{Max}})$  is : 0.029321836931655264
- Maximum value for  $\sin^2 \theta_W(\Lambda_{\text{Max}})$  is : 0.0672290640658904

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

- $\bullet$  The average value for  $\sin^2\theta_W(M_{\text{KK}_5})$  is : 0.03390953370571145
- Standard deviation for  $\sin^2\theta_W(M_{\text{KK}_5})$  is : 0.013396241927709444
- Minimum value for  $\sin^2 \theta_W(M_{\text{KK}_5})$  is : 0.020113772348552446

- $\bullet$  Maximum value for  $\sin^2\theta_W(M_{\rm KK_5})$  is : 0.05998553898918482  $(\alpha)_{1Y}^{-1}$  :
  - The average value for  $(\alpha)_{1Y}^{-1}$  is : 74.20168469433155
  - Standard deviation for  $(\alpha)_{1Y}^{-1}$  is: 1.2662508295166603
  - Minimum value for  $(\alpha)_{1Y}^{-1}$  is: 71.98885747661801
- Maximum value for  $(\alpha)_{1Y}^{-1}$  is : 75.62434621187636  $(\alpha)_{2L}^{-1}$  :
  - The average value for  $(\alpha)_{2L}^{-1}$  is: 4.333653083763989
  - Standard deviation for  $(\alpha)_{2L}^{-1}$  is : 1.701892908503516
  - Minimum value for  $(\alpha)_{2L}^{-1}$  is: 2.5861083048276208
- Maximum value for  $(\alpha)_{2L}^{-1}$  is : 7.653243263929254  $(\alpha)_{3C}^{-1}$  :
  - The average value for  $(\alpha)_{3C}^{-1}$  is: 12.648536264159404
  - Standard deviation for  $(\alpha)_{3C}^{-1}$  is: 0.4680015565981991
  - Minimum value for  $(\alpha)_{3C}^{-1}$  is: 12.13786007020721
- Maximum value for  $(\alpha)_{3C}^{-1}$  is : 13.498164861956129  $(\alpha)_{4C}^{-1}$  :
  - The average value for  $(\alpha)_{4C}^{-1}$  is: 10.308875029728252
  - Standard deviation for  $(\alpha)_{4C}^{-1}$  is : 0.3520393498941914
  - Minimum value for  $(\alpha)_{4C}^{-1}$  is: 9.522318254414696
- • Maximum value for  $(\alpha)_{4C}^{-1}$  is : 10.556171747324495  $(\alpha)_{2L}^{-1}$  :
  - The average value for  $(\alpha)_{2L}^{-1}$  is : 5.239939052810236
  - Standard deviation for  $(\alpha)_{2L}^{-1}$  is : 1.5082014747311834
  - Minimum value for  $(\alpha)_{2L}^{-1}$  is : 3.678697420856124
- Maximum value for  $(\alpha)_{2L}^{-1}$  is : 8.159075073865814  $(\alpha)_{3C}^{-1}$  :
  - The average value for  $(\alpha)_{3C}^{-1}$  is: 111.90417165450425
  - Standard deviation for  $(\alpha)_{3C}^{-1}$  is: 2.7573910022098462
  - Minimum value for  $(\alpha)_{3C}^{-1}$  is: 106.97881825962466
  - Maximum value for  $(\alpha)_{3C}^{-1}$  is : 114.95783759043304