

| Class                      | Coefficients   | old    |       | new    |       |
|----------------------------|----------------|--------|-------|--------|-------|
|                            |                | Fitted | Fixed | Fitted | Fixed |
| 2FB                        | $c_{tG}^{1,8}$ | ✓      |       | ✓      |       |
| 2L2H                       | $c_{Qq}^{1,1}$ | ✓      |       | ✓      |       |
|                            | $c_{Qq}^{1,1}$ | ✓      |       | ✓      |       |
|                            | $c_{Qq}^{3,8}$ | ✓      |       | ✓      |       |
|                            | $c_{Qq}^{3,1}$ | ✓      |       | ✓      |       |
|                            | $c_{tq}^8$     | ✓      |       | ✓      |       |
|                            | $c_{tq}^1$     | ✓      |       | ✓      |       |
|                            | $c_{tu}^8$     | ✓      |       | ✓      |       |
|                            | $c_{tu}^1$     | ✓      |       | ✓      |       |
|                            | $c_{Qu}^8$     | ✓      |       | ✓      |       |
|                            | $c_{Qu}^1$     | ✓      |       | ✓      |       |
|                            | $c_{td}^8$     | ✓      |       | ✓      |       |
|                            | $c_{td}^1$     | ✓      |       | ✓      |       |
|                            | $c_{Qd}^8$     | ✓      |       | ✓      |       |
|                            | $c_{Qd}^1$     | ✓      |       | ✓      |       |
| Number fitted coefficients |                | 15     |       | 15     |       |

Table 1: Coefficient comparison

| Type | Datasets                    | old | new |
|------|-----------------------------|-----|-----|
| tt   | CMS_tt_13TeV_ljets_2015_Mtt | ✓   | ✓   |

Table 1: Dataset comparison

$\chi^2$  table. Blue color text represents a value that is lower than the SM  $\chi^2$  by more than one standard deviation of the  $\chi^2$  distribution. Similarly, red color text represents values that are higher than the SM  $\chi^2$  by more than one standard deviation. In parenthesis is the total SM  $\chi^2$  for the dataset included in the fit.

|                             |                   | SM                       | old                      | new                      |
|-----------------------------|-------------------|--------------------------|--------------------------|--------------------------|
| Process                     | $N_{\text{data}}$ | $\chi^2/N_{\text{data}}$ | $\chi^2/N_{\text{data}}$ | $\chi^2/N_{\text{data}}$ |
| CMS_tt_13TeV_ljets_2015_Mtt | 8                 | 0.939                    | 3.211                    | 3.544                    |
| Total                       |                   |                          | 3.211 (0.939)            | 3.544 (0.939)            |

Table 1:  $\chi^2$  table for tt data

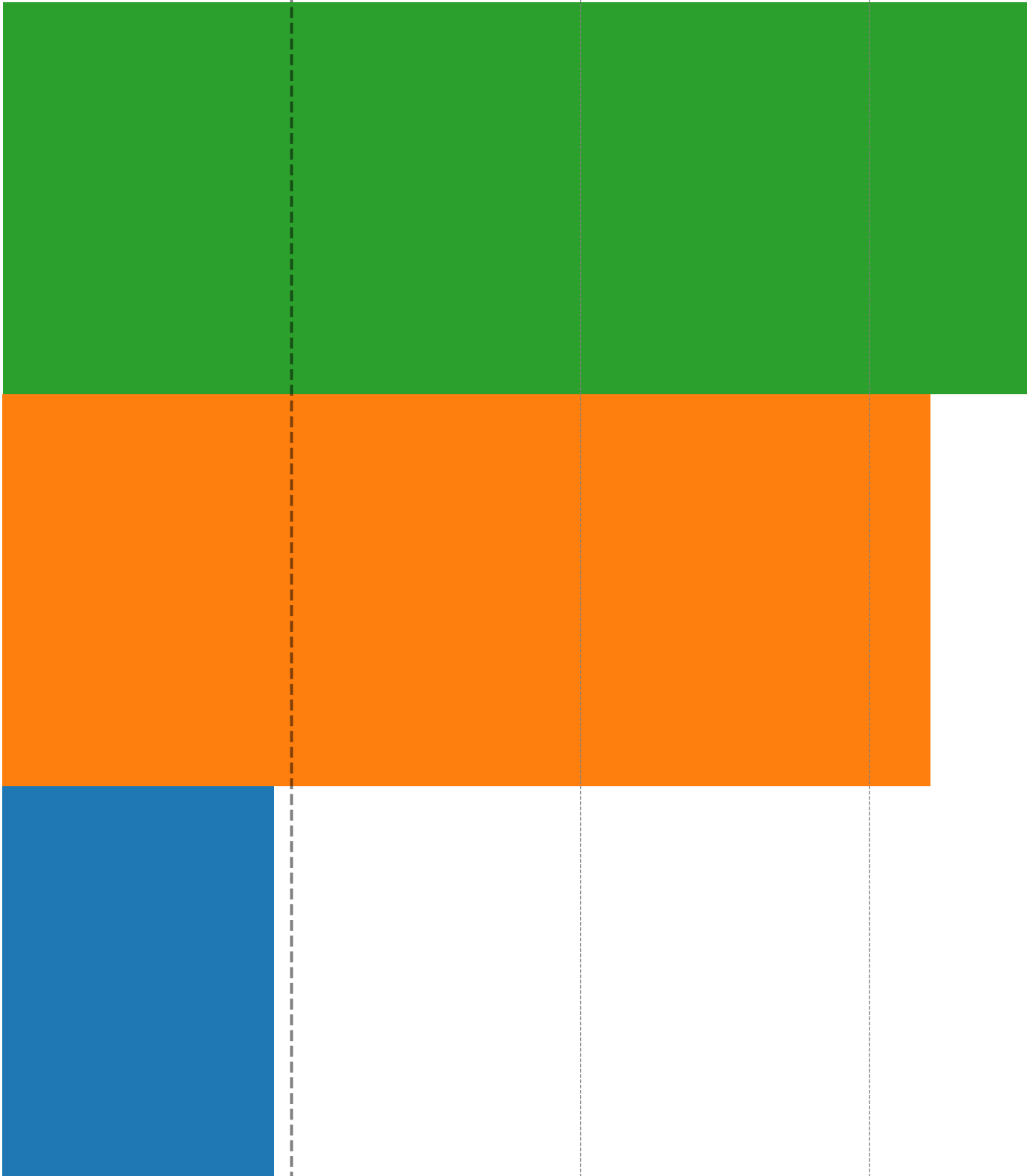
|         | old               |                          | new               |                          |
|---------|-------------------|--------------------------|-------------------|--------------------------|
| Process | $N_{\text{data}}$ | $\chi^2/N_{\text{data}}$ | $N_{\text{data}}$ | $\chi^2/N_{\text{data}}$ |
| tt      | 8.0               | 3.211 (0.939)            | 8.0               | 3.544 (0.939)            |
| Total   | 8.0               | 3.211 (0.939)            | 8.0               | 3.544 (0.939)            |

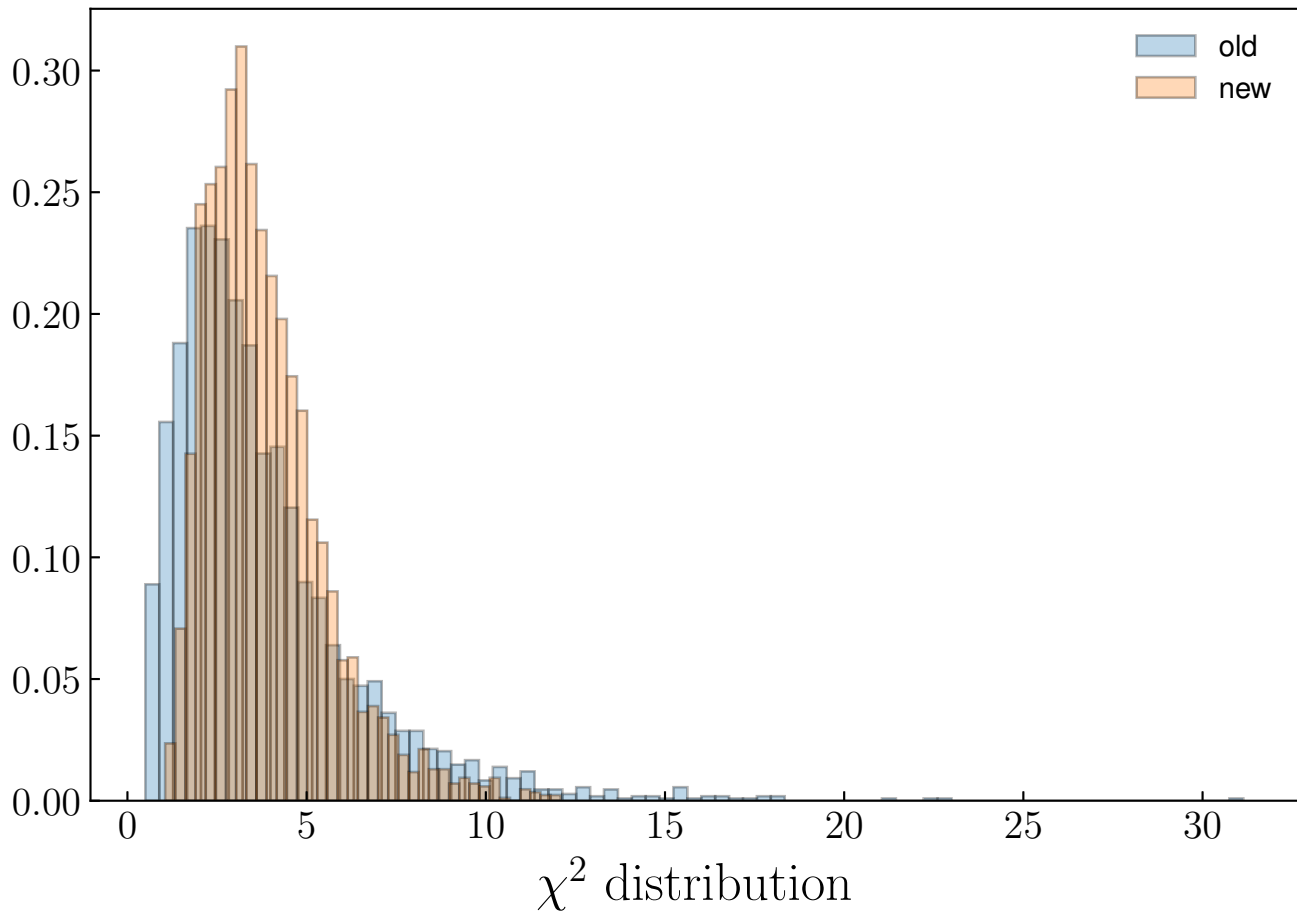
Table 2:  $\chi^2$  table for grouped data. In parenthesis is the total SM  $\chi^2$  for the dataset included in the fit. The SM column refers to all the datasets available in the group

CMS\_tt\_13TeV\_ljets\_2015\_Mtt

SM  
old  
new

0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5  
 $\chi^2$





old new

