

| Source                                       | Effect on yield | Applicable for ( $q^*/b^*$ ) |
|--|-----------------|------------------------------|
| Luminosity                                   | 2.5%            | Both                         |
| Jet energy scale                             | $\sim 1.0\%$    | Both                         |
| Jet energy resolution                        | 0.2-0.4%        | Both                         |
| Photon energy scale                          | $\sim 0.6\%$    | Both                         |
| Photon energy resolution                     | 0.2-0.4%        | Both                         |
| Pileup                                       | 1.0-2.0%        | Both                         |
| Photon ID efficiency                         | $\sim 2.0\%$    | Both                         |
| HLT Trigger efficiency                       | 5.0%            | Both                         |
| Signal shape interpolation                   | 0.5-1.0%        | Both                         |
| b-tag SF uncertainty on signal shape         | 1.0%            | Only $b^*$                   |
| b-tag SF uncertainty on signal normalization | 2.0%            | Only $b^*$                   |