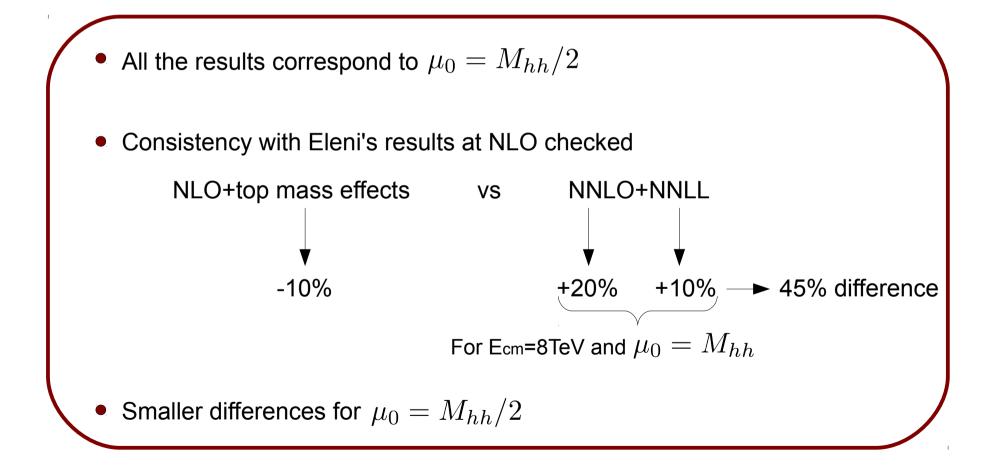
HH total XS at NNLO+NNLL

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 $PDF + \alpha_S$ unc. $m_h = 124.5 \,\,{\rm GeV}$ NNLL (fb) scale unc. (%)PDF unc. (%)(%) $7 \,\,\mathrm{TeV}$ 7.77+4.0 - 5.7 ± 3.4 ± 4.4 $8 {
m TeV}$ +4.1 - 5.711.3 ± 3.0 ± 4.0 13 TeV+4.3 - 6.038.2 ± 2.1 ± 3.1 $14 \, \mathrm{TeV}$ 45.3+4.4 - 6.0 ± 2.1 ± 3.0 100 TeV1760+5.0 - 6.7 ± 1.7 ± 2.7 PDF unc. $PDF + \alpha_S$ unc. NNLL (fb) $m_h = 125 \text{ GeV}$ scale unc. (%)(%)(%) $7 \, {\rm TeV}$ 7.72 $+4.0 - \overline{5.7}$ ± 3.4 ± 4.4 8 TeV 11.2+4.1 - 5.7 ± 3.1 ± 4.0 13 TeV38.0+4.3 - 6.0 ± 2.1 ± 3.1 $14 {
m TeV}$ 45.1+4.4 - 6.0 ± 2.1 ± 3.0 100 TeV1749+5.1 - 6.6 ± 1.7 ± 2.7 PDF unc. $\overline{PDF} + \alpha_S$ unc. NNLL (fb) (%) $m_h = 125.09 \; \text{GeV}$ scale unc. (%)(%) $7 \,\mathrm{TeV}$ 7.71+4.0 - 5.7 ± 3.4 ± 4.4 8 TeV 11.2+4.1 - 5.7 ± 3.1 ± 4.0 13 TeV+4.3 - 6.037.9 ± 2.1 ± 3.1 $14 \, \mathrm{TeV}$ ± 2.1 45.0+4.4 - 6.0 ± 3.0 100 TeV+5.0 - 6.51748 ± 1.7 ± 2.6 $m_h = 125.5 \,\,{\rm GeV}$ NNLL (fb) scale unc. (%)PDF unc. (%)PDF+ $\alpha_{\rm S}$ unc. (%) $7 \,\mathrm{TeV}$ 7.66+4.0 - 5.7 ± 3.4 ± 4.4 8 TeV 11.1+4.1 - 5.7 ± 3.1 ± 4.0 $13 \,\mathrm{TeV}$ 37.7+4.3 - 6.0 ± 2.1 ± 3.1 14 TeV44.8+4.4 - 5.9 ± 2.1 ± 3.1 100 TeV1738+5.2 - 6.4 ± 2.7 ± 1.7

Total cross section with Higgs mass variation:

Invariant mass distributions:

