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SM Higgs production cross sections at $\sqrt{s} = 8$ TeV (update in CERN Report3)

- Cross sections reported in CERN Report 3 (CERN-2013-004) [↗](#).
- All ggF and VBF numbers are based upon complex-pole-scheme (CPS), while WH/ZH and ttH numbers are with zero-width-approximation (ZWA).
- Compared to CERN Report 2 (2012 updated) numbers, for $M_H=125$ GeV,
 - ◆ ggF cross section went down by -1.3% due to inclusion of charm quark in the loop,
 - ◆ WH cross section went up by +1.1% due to top-loop induced terms (arXiv:1111.0761), also associated uncertainties by 1%,
 - ◆ ZH cross section went up by +5.3% due to $O(s^3)$ gg HZ terms (arXiv:1211.5015) and top-loop induced terms (arXiv:1111.0761), also associated uncertainties by 1-2%,
 - ◆ VBF and ttH cross sections did not change.
- Updated with full bbH cross sections (NLO 4FS + NNLO 5FS with Santander matching) (update 2014.05.31) [NEW](#)
- SM Higgs cross sections and BRs in Spread sheet is available in xlsx format or xls format. (update 2014.05.31) [NEW](#)
- You can find figures at our gallery here.
- Check here for numbers used for ICHEP 2012 (ggF in CPS, VBF in CPS for $M_H > 300$ GeV).
- Check here for numbers used until summer 2013 (All ggF and VBF numbers are based upon complex-pole-scheme (CPS), while WH/ZH and ttH numbers are with zero-width-approximation (ZWA)).

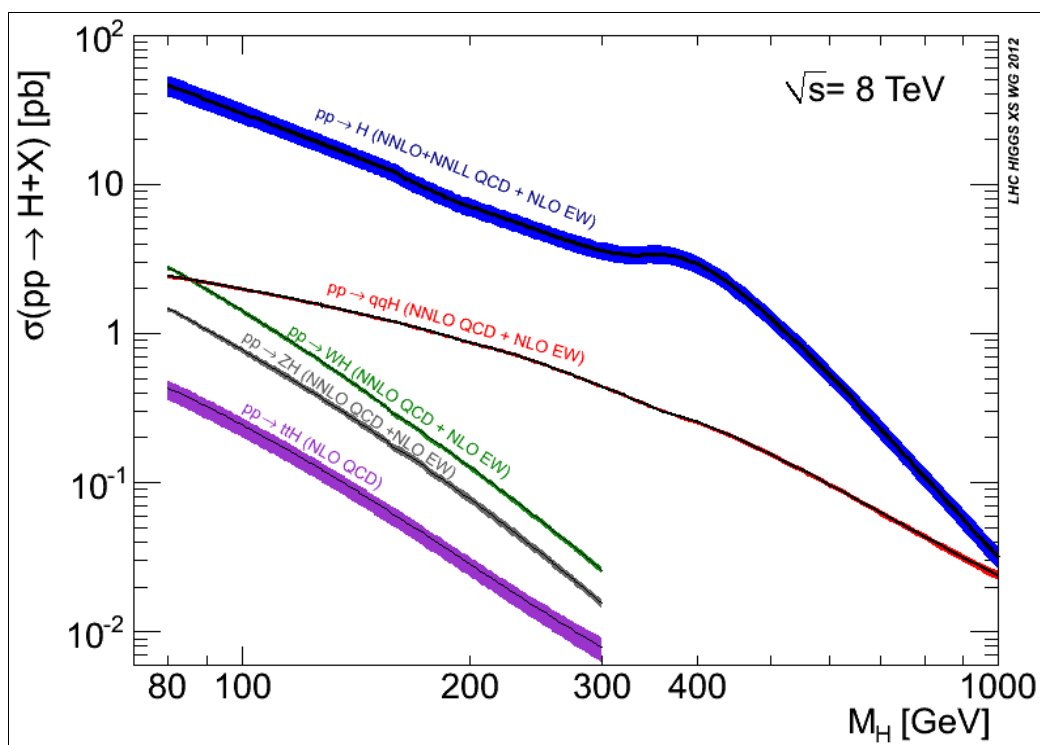


Figure 1: Standard Model Higgs boson production cross sections. The ggF and VBF processes are calculated in complex-pole-scheme (CPS), while other WH/ZH and ttH processes are calculated in zero-width-approximation (ZWA).

Higgs mass range and step (new fine scan points in CERN Report 3):

Higgs Mass range	step size	# of points	addendum
[80,110] GeV	1 GeV	31 points	
[110,120] GeV	0.5 GeV	20 points	
[120,130] GeV	0.1 GeV	100 points	
[130,150] GeV	0.5 GeV	40 points	
[150,300] GeV	2 GeV	75 points	+ 165, 175, 185, 195 GeV (4 points)
[300,350] GeV	5 GeV	10 points	
[350,400] GeV	10 GeV	5 points	
[400,1000] GeV	20 GeV	30 points	+ 450, 550, 650, 750, 850, 950 GeV (6 points).

- 321 points for ggF, VBF ($M_H=[80,1000]\text{GeV}$).
- 285 points for WH/ZH, ttH ($M_H=[80,400]\text{GeV}$).

gluon-gluon Fusion Process

- All cross sections are in complex-pole-scheme from the dFG program. They are computed at NNLL QCD and NLO EW.

m_H (GeV)	Cross Section (pb)	+QCD Scale %	-QCD Scale %	+(PDF+ α_s) %	-(PDF+ α_s) %
80.0	45.37	+8.8	-9.2	+7.9	-6.7
81.0	44.31	+8.8	-9.1	+7.9	-6.7
82.0	43.28	+8.7	-9.1	+7.9	-6.6
83.0	42.29	+8.7	-9.0	+7.9	-6.6
84.0	41.33	+8.6	-9.0	+7.9	-6.6
85.0	40.41	+8.6	-9.0	+7.9	-6.6
86.0	39.52	+8.5	-8.9	+7.9	-6.6
87.0	38.66	+8.5	-8.9	+7.9	-6.6
88.0	37.83	+8.4	-8.8	+7.9	-6.6
89.0	37.02	+8.4	-8.8	+7.8	-6.6
90.0	36.23	+8.3	-8.8	+7.8	-6.6
91.0	35.49	+8.3	-8.7	+7.8	-6.6
92.0	34.75	+8.2	-8.7	+7.8	-6.5
93.0	34.04	+8.2	-8.7	+7.8	-6.5
94.0	33.36	+8.1	-8.6	+7.8	-6.5
95.0	32.69	+8.1	-8.6	+7.8	-6.5
96.0	32.04	+8.1	-8.6	+7.8	-6.5
97.0	31.41	+8.0	-8.5	+7.8	-6.5
98.0	30.80	+8.0	-8.5	+7.8	-6.5
99.0	30.21	+8.0	-8.5	+7.8	-6.5
100.0	29.68	+7.9	-8.4	+7.8	-6.5
101.0	29.12	+7.9	-8.4	+7.8	-6.5
102.0	28.57	+7.9	-8.4	+7.8	-6.5
103.0	28.04	+7.8	-8.4	+7.8	-6.5
104.0	27.52	+7.8	-8.3	+7.8	-6.5
105.0	27.01	+7.8	-8.3	+7.7	-6.5
106.0	26.52	+7.7	-8.3	+7.7	-6.6
107.0	26.05	+7.7	-8.3	+7.7	-6.6
108.0	25.59	+7.7	-8.2	+7.7	-6.6

109.0	25.14	+7.6	-8.2	+7.7	-6.7
110.0	24.70	+7.6	-8.2	+7.7	-6.7
110.5	24.48	+7.6	-8.2	+7.7	-6.7
111.0	24.27	+7.6	-8.2	+7.6	-6.7
111.5	24.06	+7.5	-8.1	+7.6	-6.7
112.0	23.85	+7.5	-8.1	+7.6	-6.7
112.5	23.64	+7.5	-8.1	+7.6	-6.7
113.0	23.44	+7.5	-8.1	+7.6	-6.7
113.5	23.24	+7.5	-8.1	+7.6	-6.8
114.0	23.05	+7.5	-8.1	+7.6	-6.8
114.5	22.85	+7.5	-8.1	+7.6	-6.8
115.0	22.66	+7.4	-8.1	+7.6	-6.8
115.5	22.47	+7.4	-8.0	+7.6	-6.8
116.0	22.28	+7.4	-8.0	+7.5	-6.8
116.5	22.10	+7.4	-8.0	+7.5	-6.8
117.0	21.91	+7.4	-8.0	+7.5	-6.8
117.5	21.73	+7.4	-8.0	+7.5	-6.8
118.0	21.55	+7.4	-8.0	+7.5	-6.8
118.5	21.38	+7.3	-8.0	+7.5	-6.8
119.0	21.20	+7.3	-8.0	+7.5	-6.8
119.5	21.03	+7.3	-8.0	+7.5	-6.8
120.0	20.86	+7.3	-7.9	+7.5	-6.9
120.1	20.83	+7.3	-7.9	+7.5	-6.9
120.2	20.80	+7.3	-7.9	+7.5	-6.9
120.3	20.76	+7.3	-7.9	+7.5	-6.9
120.4	20.73	+7.3	-7.9	+7.5	-6.9
120.5	20.69	+7.3	-7.9	+7.5	-6.9
120.6	20.66	+7.3	-7.9	+7.5	-6.9
120.7	20.63	+7.3	-7.9	+7.5	-6.9
120.8	20.59	+7.3	-7.9	+7.5	-6.9
120.9	20.56	+7.3	-7.9	+7.5	-6.9
121.0	20.53	+7.3	-7.9	+7.5	-6.9
121.1	20.50	+7.3	-7.9	+7.5	-6.9
121.2	20.46	+7.3	-7.9	+7.5	-6.9
121.3	20.43	+7.3	-7.9	+7.5	-6.9
121.4	20.40	+7.3	-7.9	+7.5	-6.9
121.5	20.36	+7.3	-7.9	+7.5	-6.9
121.6	20.33	+7.3	-7.9	+7.5	-6.9
121.7	20.30	+7.3	-7.9	+7.5	-6.9
121.8	20.27	+7.3	-7.9	+7.5	-6.9
121.9	20.23	+7.3	-7.9	+7.5	-6.9
122.0	20.20	+7.3	-7.9	+7.5	-6.9
122.1	20.17	+7.3	-7.9	+7.5	-6.9
122.2	20.14	+7.3	-7.9	+7.5	-6.9
122.3	20.11	+7.2	-7.9	+7.5	-6.9
122.4	20.07	+7.2	-7.9	+7.5	-6.9
122.5	20.04	+7.2	-7.9	+7.5	-6.9
122.6	20.01	+7.2	-7.9	+7.5	-6.9
122.7	19.98	+7.2	-7.9	+7.5	-6.9
122.8	19.95	+7.2	-7.9	+7.5	-6.9

122.9	19.92	+7.2	-7.9	+7.5	-6.9
123.0	19.88	+7.2	-7.9	+7.5	-6.9
123.1	19.85	+7.2	-7.9	+7.5	-6.9
123.2	19.82	+7.2	-7.9	+7.5	-6.9
123.3	19.79	+7.2	-7.9	+7.5	-6.9
123.4	19.76	+7.2	-7.9	+7.5	-6.9
123.5	19.73	+7.2	-7.9	+7.5	-6.9
123.6	19.70	+7.2	-7.9	+7.5	-6.9
123.7	19.67	+7.2	-7.9	+7.5	-6.9
123.8	19.63	+7.2	-7.9	+7.5	-6.9
123.9	19.60	+7.2	-7.9	+7.5	-6.9
124.0	19.57	+7.2	-7.9	+7.5	-6.9
124.1	19.54	+7.2	-7.9	+7.5	-6.9
124.2	19.51	+7.2	-7.9	+7.5	-6.9
124.3	19.48	+7.2	-7.9	+7.5	-6.9
124.4	19.45	+7.2	-7.9	+7.5	-6.9
124.5	19.42	+7.2	-7.9	+7.5	-6.9
124.6	19.39	+7.2	-7.9	+7.5	-6.9
124.7	19.36	+7.2	-7.9	+7.5	-6.9
124.8	19.33	+7.2	-7.8	+7.5	-6.9
124.9	19.30	+7.2	-7.8	+7.5	-6.9
125.0	19.27	+7.2	-7.8	+7.5	-6.9
125.1	19.24	+7.2	-7.8	+7.5	-6.9
125.2	19.21	+7.2	-7.8	+7.5	-6.9
125.3	19.18	+7.2	-7.8	+7.5	-6.9
125.4	19.15	+7.2	-7.8	+7.5	-6.9
125.5	19.12	+7.2	-7.8	+7.5	-6.9
125.6	19.09	+7.2	-7.8	+7.5	-6.9
125.7	19.06	+7.2	-7.8	+7.5	-6.9
125.8	19.03	+7.2	-7.8	+7.5	-6.9
125.9	19.00	+7.2	-7.8	+7.5	-6.9
126.0	18.97	+7.2	-7.8	+7.5	-6.9
126.1	18.94	+7.2	-7.8	+7.5	-6.9
126.2	18.91	+7.2	-7.8	+7.5	-6.9
126.3	18.88	+7.2	-7.8	+7.5	-6.9
126.4	18.85	+7.2	-7.8	+7.5	-6.9
126.5	18.82	+7.2	-7.8	+7.5	-6.9
126.6	18.80	+7.2	-7.8	+7.5	-6.9
126.7	18.77	+7.2	-7.8	+7.5	-6.9
126.8	18.74	+7.1	-7.8	+7.5	-6.9
126.9	18.71	+7.1	-7.8	+7.5	-6.9
127.0	18.68	+7.1	-7.8	+7.5	-6.9
127.1	18.65	+7.1	-7.8	+7.5	-6.9
127.2	18.62	+7.1	-7.8	+7.5	-6.9
127.3	18.59	+7.1	-7.8	+7.5	-6.9
127.4	18.57	+7.1	-7.8	+7.5	-6.9
127.5	18.54	+7.1	-7.8	+7.5	-6.9
127.6	18.51	+7.1	-7.8	+7.5	-6.9
127.7	18.48	+7.1	-7.8	+7.5	-6.9
127.8	18.45	+7.1	-7.8	+7.5	-6.9

127.9	18.42	+7.1	-7.8	+7.5	-6.9
128.0	18.40	+7.1	-7.8	+7.5	-6.9
128.1	18.37	+7.1	-7.8	+7.5	-6.9
128.2	18.34	+7.1	-7.8	+7.5	-6.9
128.3	18.31	+7.1	-7.8	+7.5	-6.9
128.4	18.28	+7.1	-7.8	+7.5	-6.9
128.5	18.26	+7.1	-7.8	+7.5	-6.9
128.6	18.23	+7.1	-7.8	+7.5	-6.9
128.7	18.20	+7.1	-7.8	+7.5	-6.9
128.8	18.17	+7.1	-7.8	+7.5	-6.9
128.9	18.15	+7.1	-7.8	+7.5	-6.9
129.0	18.12	+7.1	-7.8	+7.5	-6.9
129.1	18.09	+7.1	-7.8	+7.5	-6.9
129.2	18.06	+7.1	-7.8	+7.5	-6.9
129.3	18.04	+7.1	-7.8	+7.5	-6.9
129.4	18.01	+7.1	-7.8	+7.5	-6.9
129.5	17.98	+7.1	-7.8	+7.5	-6.9
129.6	17.95	+7.1	-7.8	+7.5	-6.9
129.7	17.93	+7.1	-7.8	+7.5	-6.9
129.8	17.90	+7.1	-7.7	+7.5	-6.9
129.9	17.87	+7.1	-7.7	+7.5	-6.9
130.0	17.85	+7.1	-7.7	+7.5	-6.9
130.5	17.71	+7.1	-7.7	+7.5	-6.9
131.0	17.58	+7.1	-7.7	+7.5	-7.0
131.5	17.45	+7.0	-7.7	+7.5	-7.0
132.0	17.32	+7.0	-7.7	+7.5	-7.0
132.5	17.19	+7.0	-7.7	+7.5	-7.0
133.0	17.07	+7.0	-7.7	+7.4	-7.0
133.5	16.94	+7.0	-7.7	+7.4	-7.0
134.0	16.82	+7.0	-7.7	+7.4	-7.0
134.5	16.69	+7.0	-7.7	+7.4	-7.0
135.0	16.57	+7.0	-7.7	+7.4	-7.0
135.5	16.45	+7.0	-7.6	+7.4	-7.0
136.0	16.33	+6.9	-7.6	+7.4	-7.0
136.5	16.22	+6.9	-7.6	+7.4	-7.0
137.0	16.10	+6.9	-7.6	+7.4	-7.0
137.5	15.98	+6.9	-7.6	+7.4	-7.0
138.0	15.87	+6.9	-7.6	+7.4	-6.9
138.5	15.76	+6.9	-7.6	+7.4	-6.9
139.0	15.64	+6.9	-7.6	+7.4	-6.9
139.5	15.53	+6.9	-7.6	+7.4	-6.9
140.0	15.42	+6.9	-7.6	+7.4	-6.9
140.5	15.32	+6.9	-7.6	+7.4	-6.9
141.0	15.27	+6.8	-7.6	+7.3	-6.9
141.5	15.16	+6.8	-7.5	+7.3	-6.9
142.0	15.06	+6.8	-7.5	+7.3	-6.9
142.5	14.96	+6.8	-7.5	+7.3	-6.9
143.0	14.86	+6.8	-7.5	+7.3	-6.9
143.5	14.76	+6.8	-7.5	+7.3	-6.9
144.0	14.66	+6.8	-7.5	+7.3	-6.9

144.5	14.56	+6.8	-7.5	+7.3	-6.9
145.0	14.46	+6.8	-7.5	+7.3	-6.9
145.5	14.37	+6.8	-7.5	+7.3	-6.9
146.0	14.27	+6.7	-7.5	+7.3	-6.9
146.5	14.18	+6.7	-7.5	+7.3	-6.9
147.0	14.09	+6.7	-7.5	+7.3	-6.9
147.5	14.00	+6.7	-7.5	+7.3	-7.0
148.0	13.91	+6.7	-7.4	+7.3	-7.0
148.5	13.82	+6.7	-7.4	+7.3	-7.0
149.0	13.73	+6.7	-7.4	+7.4	-7.0
149.5	13.64	+6.7	-7.4	+7.4	-7.0
150.0	13.55	+6.7	-7.4	+7.4	-7.0
152.0	13.22	+6.6	-7.4	+7.4	-7.1
154.0	12.89	+6.6	-7.3	+7.5	-7.1
156.0	12.58	+6.6	-7.3	+7.5	-7.1
158.0	12.27	+6.5	-7.3	+7.5	-7.1
160.0	11.96	+6.5	-7.3	+7.5	-7.1
162.0	11.60	+6.5	-7.2	+7.5	-7.2
164.0	11.17	+6.4	-7.2	+7.5	-7.2
165.0	10.97	+6.4	-7.2	+7.5	-7.2
166.0	10.79	+6.4	-7.2	+7.5	-7.3
168.0	10.46	+6.4	-7.2	+7.5	-7.3
170.0	10.17	+6.4	-7.1	+7.5	-7.4
172.0	9.897	+6.3	-7.1	+7.5	-7.4
174.0	9.645	+6.3	-7.1	+7.4	-7.4
175.0	9.526	+6.3	-7.1	+7.4	-7.4
176.0	9.410	+6.3	-7.1	+7.4	-7.4
178.0	9.194	+6.3	-7.0	+7.4	-7.5
180.0	8.980	+6.2	-7.0	+7.4	-7.5
182.0	8.755	+6.2	-7.0	+7.4	-7.5
184.0	8.501	+6.2	-7.0	+7.4	-7.5
185.0	8.383	+6.2	-7.0	+7.4	-7.5
186.0	8.266	+6.1	-6.9	+7.4	-7.5
188.0	8.053	+6.1	-6.9	+7.4	-7.5
190.0	7.858	+6.1	-6.9	+7.4	-7.5
192.0	7.671	+6.1	-6.9	+7.4	-7.6
194.0	7.494	+6.1	-6.9	+7.4	-7.6
195.0	7.405	+6.0	-6.8	+7.4	-7.6
196.0	7.320	+6.0	-6.8	+7.4	-7.6
198.0	7.187	+6.0	-6.8	+7.4	-7.7
200.0	7.081	+6.0	-6.8	+7.4	-7.7
202.0	6.937	+6.0	-6.8	+7.4	-7.7
204.0	6.846	+6.0	-6.8	+7.4	-7.7
206.0	6.731	+6.0	-6.7	+7.4	-7.7
208.0	6.609	+6.0	-6.7	+7.4	-7.8
210.0	6.500	+6.0	-6.7	+7.4	-7.8
212.0	6.387	+6.0	-6.7	+7.4	-7.7
214.0	6.293	+6.0	-6.7	+7.4	-7.7
216.0	6.214	+5.9	-6.6	+7.4	-7.7
218.0	6.104	+5.9	-6.6	+7.4	-7.6

220.0	6.003	+5.9	-6.6	+7.3	-7.6
222.0	5.905	+5.9	-6.6	+7.3	-7.6
224.0	5.821	+5.9	-6.6	+7.4	-7.6
226.0	5.748	+5.9	-6.6	+7.4	-7.6
228.0	5.653	+5.9	-6.5	+7.4	-7.7
230.0	5.567	+5.9	-6.5	+7.4	-7.7
232.0	5.487	+5.9	-6.5	+7.4	-7.7
234.0	5.413	+5.9	-6.5	+7.3	-7.7
236.0	5.327	+5.9	-6.5	+7.3	-7.7
238.0	5.247	+5.9	-6.5	+7.3	-7.7
240.0	5.159	+5.9	-6.4	+7.3	-7.7
242.0	5.078	+5.9	-6.4	+7.3	-7.7
244.0	4.999	+5.9	-6.4	+7.3	-7.7
246.0	4.924	+5.8	-6.4	+7.4	-7.7
248.0	4.854	+5.8	-6.4	+7.4	-7.7
250.0	4.783	+5.8	-6.4	+7.4	-7.7
252.0	4.714	+5.8	-6.4	+7.4	-7.7
254.0	4.647	+5.8	-6.3	+7.5	-7.6
256.0	4.582	+5.8	-6.3	+7.5	-7.5
258.0	4.521	+5.8	-6.3	+7.5	-7.4
260.0	4.461	+5.8	-6.3	+7.6	-7.4
262.0	4.405	+5.8	-6.3	+7.6	-7.5
264.0	4.350	+5.8	-6.3	+7.6	-7.6
266.0	4.292	+5.8	-6.3	+7.6	-7.7
268.0	4.237	+5.8	-6.2	+7.6	-7.8
270.0	4.184	+5.8	-6.2	+7.6	-7.9
272.0	4.134	+5.8	-6.2	+7.6	-7.9
274.0	4.086	+5.8	-6.2	+7.6	-7.9
276.0	4.040	+5.8	-6.2	+7.6	-8.0
278.0	3.994	+5.7	-6.2	+7.6	-8.0
280.0	3.950	+5.7	-6.2	+7.6	-8.0
282.0	3.908	+5.7	-6.2	+7.6	-8.0
284.0	3.867	+5.7	-6.1	+7.6	-8.0
286.0	3.829	+5.7	-6.1	+7.6	-8.0
288.0	3.792	+5.7	-6.1	+7.6	-8.0
290.0	3.755	+5.7	-6.1	+7.6	-8.0
292.0	3.720	+5.7	-6.1	+7.6	-8.0
294.0	3.687	+5.7	-6.1	+7.6	-8.0
296.0	3.654	+5.7	-6.1	+7.6	-8.0
298.0	3.624	+5.7	-6.1	+7.7	-7.9
300.0	3.594	+5.7	-6.1	+7.7	-7.9
305.0	3.529	+5.7	-6.0	+7.7	-7.9
310.0	3.472	+5.7	-6.0	+7.7	-8.0
315.0	3.425	+5.7	-6.0	+7.7	-8.0
320.0	3.383	+5.7	-6.0	+7.7	-8.0
325.0	3.355	+5.7	-6.0	+7.7	-8.1
330.0	3.341	+5.7	-6.0	+7.8	-8.1
335.0	3.341	+5.7	-5.9	+7.9	-8.1
340.0	3.359	+5.7	-5.9	+7.9	-8.1
345.0	3.399	+5.7	-5.9	+7.9	-8.2

350.0	3.401	+5.7	-5.9	+8.0	-8.2
360.0	3.385	+5.8	-5.9	+8.0	-8.2
370.0	3.332	+5.8	-5.8	+8.1	-8.2
380.0	3.231	+5.8	-5.6	+8.1	-8.2
390.0	3.089	+5.8	-5.5	+8.2	-8.2
400.0	2.921	+5.8	-5.4	+8.2	-8.2
420.0	2.550	+5.8	-5.3	+8.3	-8.3
440.0	2.178	+5.8	-5.3	+8.5	-8.4
450.0	2.002	+5.8	-5.2	+8.6	-8.4
460.0	1.837	+5.8	-5.2	+8.7	-8.4
480.0	1.538	+5.8	-5.2	+8.9	-8.5
500.0	1.283	+5.8	-5.1	+9.1	-8.5
520.0	1.069	+5.8	-5.1	+9.2	-8.6
540.0	0.8913	+5.8	-5.1	+9.4	-8.6
550.0	0.8144	+5.8	-5.1	+9.4	-8.7
560.0	0.7442	+5.9	-5.1	+9.4	-8.7
580.0	0.6228	+5.9	-5.1	+9.5	-8.7
600.0	0.5230	+5.9	-5.0	+9.5	-8.8
620.0	0.4403	+5.9	-5.0	+9.6	-8.9
640.0	0.3719	+5.9	-5.0	+9.7	-9.0
650.0	0.3424	+5.9	-5.0	+9.7	-9.0
660.0	0.3153	+5.9	-5.1	+9.8	-9.1
680.0	0.2682	+6.0	-5.1	+9.9	-9.2
700.0	0.2290	+6.0	-5.1	+10.1	-9.3
720.0	0.1964	+6.0	-5.1	+10.2	-9.5
740.0	0.1689	+6.1	-5.1	+10.4	-9.6
750.0	0.1568	+6.1	-5.1	+10.4	-9.7
760.0	0.1457	+6.1	-5.2	+10.5	-9.7
780.0	0.1262	+6.1	-5.2	+10.5	-9.8
800.0	0.1097	+6.1	-5.2	+10.6	-9.8
820.0	0.0957	+6.2	-5.2	+10.7	-9.8
840.0	0.0837	+6.2	-5.2	+10.8	-9.9
850.0	0.0784	+6.2	-5.3	+10.9	-9.9
860.0	0.0735	+6.2	-5.3	+10.9	-10.0
880.0	0.0647	+6.3	-5.3	+11.0	-10.1
900.0	0.0571	+6.3	-5.3	+11.1	-10.2
920.0	0.0506	+6.3	-5.3	+11.2	-10.4
940.0	0.0450	+6.4	-5.4	+11.4	-10.6
950.0	0.0424	+6.4	-5.4	+11.5	-10.7
960.0	0.0400	+6.4	-5.4	+11.6	-10.8
980.0	0.0357	+6.5	-5.4	+11.8	-11.0
1000.0	0.0320	+6.9	-5.4	+12.0	-11.2

VBF Process

• At NNLO QCD and NLO EW. All cross sections are in complex-pole-scheme.

m_H (GeV)	Cross Section (pb)	+QCD Scale %	-QCD Scale %	+(PDF+ α_s) %	-(PDF+ α_s) %
80.0	2.424	+0.2	-0.3	+2.7	-3.0
81.0	2.399	+0.4	-0.3	+2.6	-3.0
82.0	2.364	+0.3	-0.3	+2.6	-2.8

83.0	2.346	+0.4	-0.2	+2.6	-2.8
84.0	2.326	+0.3	-0.2	+2.6	-2.8
85.0	2.300	+0.3	-0.2	+2.6	-2.8
86.0	2.283	+0.3	-0.2	+2.6	-2.8
87.0	2.258	+0.3	-0.3	+2.6	-2.9
88.0	2.240	+0.2	-0.3	+2.6	-2.9
89.0	2.209	+0.3	-0.3	+2.6	-2.9
90.0	2.191	+0.3	-0.2	+2.6	-2.7
91.0	2.170	+0.3	-0.2	+2.6	-2.7
92.0	2.153	+0.2	-0.3	+2.6	-2.9
93.0	2.129	+0.3	-0.2	+2.6	-2.7
94.0	2.108	+0.3	-0.2	+2.6	-2.7
95.0	2.084	+0.2	-0.2	+2.6	-2.9
96.0	2.068	+0.3	-0.2	+2.6	-2.9
97.0	2.046	+0.3	-0.3	+2.6	-2.7
98.0	2.027	+0.3	-0.2	+2.6	-2.9
99.0	2.004	+0.2	-0.2	+2.6	-2.9
100.0	1.988	+0.2	-0.2	+2.6	-2.9
101.0	1.967	+0.3	-0.2	+2.6	-2.9
102.0	1.945	+0.2	-0.2	+2.5	-2.8
103.0	1.933	+0.2	-0.2	+2.6	-2.8
104.0	1.914	+0.2	-0.2	+2.6	-2.9
105.0	1.897	+0.3	-0.2	+2.5	-2.8
106.0	1.877	+0.3	-0.2	+2.5	-2.8
107.0	1.862	+0.2	-0.2	+2.5	-2.8
108.0	1.841	+0.2	-0.2	+2.5	-2.8
109.0	1.826	+0.3	-0.2	+2.5	-2.8
110.0	1.809	+0.2	-0.2	+2.5	-2.8
110.5	1.799	+0.2	-0.2	+2.5	-2.6
111.0	1.791	+0.2	-0.2	+2.5	-2.8
111.5	1.784	+0.2	-0.2	+2.5	-2.8
112.0	1.780	+0.2	-0.2	+2.5	-2.8
112.5	1.771	+0.2	-0.2	+2.6	-2.8
113.0	1.764	+0.3	-0.2	+2.5	-2.8
113.5	1.753	+0.2	-0.2	+2.6	-2.8
114.0	1.743	+0.2	-0.2	+2.5	-2.8
114.5	1.735	+0.2	-0.2	+2.5	-2.8
115.0	1.729	+0.2	-0.2	+2.5	-2.8
115.5	1.719	+0.2	-0.2	+2.6	-2.8
116.0	1.714	+0.2	-0.2	+2.6	-2.8
116.5	1.704	+0.2	-0.2	+2.6	-2.8
117.0	1.699	+0.2	-0.2	+2.5	-2.8
117.5	1.688	+0.2	-0.2	+2.6	-2.8
118.0	1.683	+0.3	-0.2	+2.6	-2.8
118.5	1.675	+0.2	-0.2	+2.6	-2.8
119.0	1.666	+0.3	-0.2	+2.6	-2.8
119.5	1.659	+0.2	-0.2	+2.6	-2.8
120.0	1.649	+0.2	-0.2	+2.6	-2.8
120.1	1.650	+0.2	-0.2	+2.6	-2.8
120.2	1.648	+0.2	-0.2	+2.6	-2.8

120.3	1.646	+0.2	-0.1	+2.6	-2.8
120.4	1.647	+0.2	-0.1	+2.6	-2.8
120.5	1.643	+0.2	-0.1	+2.6	-2.8
120.6	1.645	+0.2	-0.1	+2.6	-2.8
120.7	1.643	+0.2	-0.1	+2.6	-2.8
120.8	1.638	+0.2	-0.2	+2.6	-2.8
120.9	1.638	+0.2	-0.2	+2.6	-2.8
121.0	1.636	+0.2	-0.2	+2.6	-2.8
121.1	1.634	+0.2	-0.2	+2.6	-2.8
121.2	1.634	+0.2	-0.2	+2.6	-2.8
121.3	1.634	+0.2	-0.2	+2.6	-2.8
121.4	1.633	+0.2	-0.2	+2.6	-2.8
121.5	1.631	+0.2	-0.2	+2.6	-2.8
121.6	1.628	+0.2	-0.2	+2.6	-2.8
121.7	1.627	+0.2	-0.2	+2.6	-2.8
121.8	1.627	+0.3	-0.2	+2.6	-2.8
121.9	1.627	+0.3	-0.2	+2.6	-2.8
122.0	1.623	+0.3	-0.2	+2.6	-2.8
122.1	1.622	+0.3	-0.2	+2.6	-2.8
122.2	1.621	+0.3	-0.2	+2.6	-2.8
122.3	1.622	+0.2	-0.2	+2.6	-2.8
122.4	1.618	+0.2	-0.2	+2.6	-2.8
122.5	1.615	+0.2	-0.2	+2.6	-2.8
122.6	1.614	+0.2	-0.2	+2.6	-2.8
122.7	1.614	+0.2	-0.2	+2.6	-2.8
122.8	1.611	+0.2	-0.2	+2.6	-2.8
122.9	1.609	+0.2	-0.2	+2.6	-2.8
123.0	1.608	+0.2	-0.2	+2.6	-2.8
123.1	1.606	+0.2	-0.2	+2.6	-2.8
123.2	1.605	+0.2	-0.2	+2.6	-2.8
123.3	1.603	+0.2	-0.2	+2.6	-2.8
123.4	1.603	+0.2	-0.2	+2.6	-2.8
123.5	1.598	+0.2	-0.2	+2.6	-2.8
123.6	1.603	+0.2	-0.2	+2.6	-2.8
123.7	1.600	+0.2	-0.2	+2.6	-2.8
123.8	1.598	+0.3	-0.2	+2.6	-2.8
123.9	1.596	+0.3	-0.2	+2.6	-2.8
124.0	1.595	+0.3	-0.2	+2.6	-2.8
124.1	1.591	+0.3	-0.2	+2.6	-2.8
124.2	1.591	+0.3	-0.2	+2.6	-2.8
124.3	1.590	+0.2	-0.2	+2.6	-2.8
124.4	1.589	+0.2	-0.2	+2.6	-2.8
124.5	1.587	+0.2	-0.2	+2.6	-2.8
124.6	1.586	+0.2	-0.2	+2.6	-2.8
124.7	1.590	+0.2	-0.2	+2.6	-2.8
124.8	1.584	+0.2	-0.2	+2.6	-2.8
124.9	1.582	+0.2	-0.2	+2.6	-2.8
125.0	1.578	+0.2	-0.2	+2.6	-2.8
125.1	1.579	+0.2	-0.2	+2.6	-2.8
125.2	1.576	+0.2	-0.2	+2.6	-2.8

125.3	1.576	+0.2	-0.2	+2.6	-2.8
125.4	1.573	+0.2	-0.2	+2.6	-2.8
125.5	1.573	+0.2	-0.2	+2.6	-2.8
125.6	1.572	+0.2	-0.2	+2.6	-2.8
125.7	1.570	+0.2	-0.2	+2.6	-2.8
125.8	1.568	+0.3	-0.1	+2.6	-2.8
125.9	1.568	+0.3	-0.1	+2.6	-2.8
126.0	1.568	+0.3	-0.1	+2.6	-2.8
126.1	1.565	+0.3	-0.1	+2.6	-2.8
126.2	1.565	+0.3	-0.1	+2.6	-2.8
126.3	1.564	+0.2	-0.2	+2.6	-2.7
126.4	1.561	+0.2	-0.2	+2.6	-2.7
126.5	1.558	+0.2	-0.2	+2.6	-2.7
126.6	1.560	+0.2	-0.2	+2.6	-2.7
126.7	1.557	+0.2	-0.2	+2.6	-2.7
126.8	1.555	+0.3	-0.2	+2.6	-2.7
126.9	1.554	+0.3	-0.2	+2.6	-2.7
127.0	1.552	+0.3	-0.2	+2.6	-2.7
127.1	1.548	+0.3	-0.2	+2.6	-2.7
127.2	1.548	+0.3	-0.2	+2.6	-2.7
127.3	1.549	+0.2	-0.2	+2.6	-2.7
127.4	1.547	+0.2	-0.2	+2.6	-2.7
127.5	1.543	+0.2	-0.2	+2.6	-2.7
127.6	1.545	+0.2	-0.2	+2.6	-2.7
127.7	1.544	+0.2	-0.2	+2.6	-2.7
127.8	1.541	+0.2	-0.2	+2.6	-2.7
127.9	1.541	+0.2	-0.2	+2.6	-2.7
128.0	1.540	+0.2	-0.2	+2.6	-2.7
128.1	1.537	+0.2	-0.2	+2.6	-2.7
128.2	1.536	+0.2	-0.2	+2.6	-2.7
128.3	1.535	+0.2	-0.2	+2.6	-2.7
128.4	1.533	+0.2	-0.2	+2.6	-2.7
128.5	1.531	+0.2	-0.2	+2.6	-2.7
128.6	1.531	+0.2	-0.2	+2.6	-2.7
128.7	1.529	+0.2	-0.2	+2.6	-2.7
128.8	1.529	+0.2	-0.2	+2.6	-2.7
128.9	1.527	+0.2	-0.2	+2.6	-2.7
129.0	1.525	+0.2	-0.2	+2.6	-2.7
129.1	1.526	+0.2	-0.2	+2.6	-2.7
129.2	1.523	+0.2	-0.2	+2.6	-2.7
129.3	1.522	+0.2	-0.2	+2.6	-2.7
129.4	1.523	+0.2	-0.2	+2.6	-2.7
129.5	1.513	+0.2	-0.2	+2.6	-2.7
129.6	1.516	+0.2	-0.2	+2.6	-2.7
129.7	1.517	+0.2	-0.2	+2.6	-2.7
129.8	1.515	+0.2	-0.2	+2.6	-2.7
129.9	1.515	+0.2	-0.2	+2.6	-2.7
130.0	1.511	+0.2	-0.2	+2.6	-2.7
130.5	1.504	+0.2	-0.2	+2.6	-2.7
131.0	1.497	+0.2	-0.2	+2.6	-2.7

131.5	1.492	+0.2	-0.2	+2.6	-2.7
132.0	1.485	+0.2	-0.1	+2.6	-2.7
132.5	1.479	+0.2	-0.2	+2.6	-2.7
133.0	1.473	+0.2	-0.2	+2.6	-2.7
133.5	1.466	+0.2	-0.2	+2.6	-2.7
134.0	1.462	+0.2	-0.2	+2.6	-2.7
134.5	1.455	+0.2	-0.2	+2.6	-2.7
135.0	1.448	+0.2	-0.2	+2.6	-2.7
135.5	1.444	+0.2	-0.2	+2.6	-2.7
136.0	1.436	+0.3	-0.2	+2.5	-2.7
136.5	1.429	+0.2	-0.2	+2.6	-2.7
137.0	1.423	+0.2	-0.2	+2.5	-2.7
137.5	1.417	+0.2	-0.2	+2.5	-2.7
138.0	1.412	+0.2	-0.2	+2.6	-2.7
138.5	1.407	+0.2	-0.2	+2.6	-2.7
139.0	1.400	+0.2	-0.2	+2.5	-2.7
139.5	1.396	+0.2	-0.2	+2.5	-2.7
140.0	1.389	+0.2	-0.2	+2.5	-2.7
140.5	1.384	+0.2	-0.2	+2.5	-2.7
141.0	1.377	+0.2	-0.2	+2.5	-2.7
141.5	1.372	+0.2	-0.2	+2.5	-2.7
142.0	1.365	+0.2	-0.2	+2.5	-2.7
142.5	1.361	+0.2	-0.2	+2.5	-2.7
143.0	1.354	+0.2	-0.2	+2.5	-2.7
143.5	1.350	+0.2	-0.2	+2.5	-2.7
144.0	1.344	+0.2	-0.2	+2.5	-2.7
144.5	1.337	+0.2	-0.2	+2.5	-2.7
145.0	1.333	+0.3	-0.1	+2.5	-2.7
145.5	1.327	+0.2	-0.1	+2.5	-2.7
146.0	1.321	+0.2	-0.1	+2.5	-2.7
146.5	1.317	+0.2	-0.1	+2.5	-2.7
147.0	1.311	+0.2	-0.1	+2.5	-2.7
147.5	1.307	+0.2	-0.1	+2.5	-2.7
148.0	1.302	+0.3	-0.1	+2.5	-2.7
148.5	1.296	+0.2	-0.1	+2.5	-2.7
149.0	1.291	+0.2	-0.1	+2.5	-2.7
149.5	1.285	+0.2	-0.2	+2.5	-2.7
150.0	1.280	+0.3	-0.2	+2.5	-2.7
152.0	1.259	+0.2	-0.1	+2.5	-2.7
154.0	1.240	+0.2	-0.1	+2.5	-2.7
156.0	1.222	+0.2	-0.1	+2.5	-2.6
158.0	1.204	+0.2	-0.2	+2.5	-2.6
160.0	1.185	+0.2	-0.1	+2.5	-2.6
162.0	1.171	+0.2	-0.1	+2.5	-2.6
164.0	1.152	+0.2	-0.1	+2.5	-2.6
165.0	1.141	+0.2	-0.1	+2.6	-2.6
166.0	1.132	+0.2	-0.1	+2.6	-2.6
168.0	1.114	+0.2	-0.1	+2.6	-2.6
170.0	1.098	+0.2	-0.1	+2.6	-2.6
172.0	1.080	+0.2	-0.1	+2.6	-2.6

174.0	1.062	+0.2	-0.1	+2.6	-2.6
175.0	1.055	+0.2	-0.1	+2.6	-2.6
176.0	1.047	+0.2	-0.1	+2.6	-2.6
178.0	1.031	+0.2	-0.1	+2.6	-2.6
180.0	1.015	+0.3	-0.1	+2.6	-2.6
182.0	0.9980	+0.3	-0.1	+2.5	-2.6
184.0	0.9830	+0.2	-0.1	+2.5	-2.6
185.0	0.9760	+0.2	-0.1	+2.5	-2.6
186.0	0.9690	+0.2	-0.1	+2.5	-2.6
188.0	0.9536	+0.3	-0.1	+2.5	-2.6
190.0	0.9387	+0.3	-0.1	+2.5	-2.5
192.0	0.9238	+0.2	-0.1	+2.5	-2.5
194.0	0.9090	+0.3	-0.1	+2.5	-2.5
195.0	0.9018	+0.2	-0.1	+2.5	-2.5
196.0	0.8953	+0.3	-0.1	+2.5	-2.7
198.0	0.8819	+0.3	-0.1	+2.5	-2.5
200.0	0.8685	+0.3	-0.1	+2.5	-2.7
202.0	0.8568	+0.2	-0.1	+2.5	-2.7
204.0	0.8456	+0.3	-0.1	+2.5	-2.7
206.0	0.8356	+0.3	-0.1	+2.5	-2.7
208.0	0.8259	+0.3	-0.1	+2.5	-2.7
210.0	0.8163	+0.2	-0.1	+2.5	-2.6
212.0	0.8067	+0.2	-0.1	+2.5	-2.7
214.0	0.7970	+0.2	-0.1	+2.5	-2.6
216.0	0.7873	+0.2	-0.1	+2.5	-2.6
218.0	0.7776	+0.2	-0.1	+2.4	-2.6
220.0	0.7677	+0.2	-0.1	+2.5	-2.6
222.0	0.7579	+0.3	-0.1	+2.6	-2.6
224.0	0.7481	+0.2	-0.1	+2.6	-2.6
226.0	0.7381	+0.2	-0.1	+2.6	-2.6
228.0	0.7287	+0.3	-0.1	+2.5	-2.6
230.0	0.7190	+0.3	-0.1	+2.5	-2.6
232.0	0.7095	+0.3	-0.1	+2.5	-2.6
234.0	0.6999	+0.2	-0.1	+2.5	-2.6
236.0	0.6903	+0.3	-0.1	+2.5	-2.6
238.0	0.6806	+0.2	-0.1	+2.5	-2.6
240.0	0.6703	+0.3	-0.1	+2.5	-2.6
242.0	0.6604	+0.3	-0.1	+2.5	-2.6
244.0	0.6506	+0.2	-0.1	+2.5	-2.6
246.0	0.6410	+0.3	-0.1	+2.5	-2.6
248.0	0.6319	+0.2	-0.1	+2.5	-2.6
250.0	0.6225	+0.3	-0.1	+2.5	-2.6
252.0	0.6136	+0.3	-0.1	+2.5	-2.6
254.0	0.6050	+0.3	-0.1	+2.5	-2.6
256.0	0.5964	+0.2	-0.1	+2.5	-2.5
258.0	0.5879	+0.3	-0.1	+2.5	-2.5
260.0	0.5797	+0.3	-0.1	+2.5	-2.5
262.0	0.5714	+0.3	-0.1	+2.5	-2.5
264.0	0.5636	+0.3	-0.1	+2.5	-2.5
266.0	0.5554	+0.3	-0.1	+2.5	-2.5

268.0	0.5477	+0.2	-0.1	+2.5	-2.5
270.0	0.5401	+0.3	-0.1	+2.5	-2.5
272.0	0.5328	+0.3	-0.1	+2.5	-2.5
274.0	0.5255	+0.3	-0.1	+2.5	-2.5
276.0	0.5184	+0.3	-0.1	+2.4	-2.5
278.0	0.5115	+0.2	-0.1	+2.4	-2.5
280.0	0.5045	+0.3	-0.1	+2.4	-2.5
282.0	0.4978	+0.3	-0.1	+2.4	-2.5
284.0	0.4911	+0.3	-0.1	+2.5	-2.5
286.0	0.4845	+0.2	-0.1	+2.5	-2.6
288.0	0.4780	+0.3	-0.1	+2.5	-2.6
290.0	0.4716	+0.3	-0.2	+2.5	-2.6
292.0	0.4654	+0.3	-0.2	+2.5	-2.6
294.0	0.4591	+0.3	-0.2	+2.5	-2.6
296.0	0.4530	+0.3	-0.2	+2.5	-2.6
298.0	0.4469	+0.3	-0.2	+2.5	-2.6
300.0	0.4408	+0.3	-0.2	+2.5	-2.6
305.0	0.4267	+0.3	-0.2	+2.5	-2.6
310.0	0.4132	+0.3	-0.2	+2.5	-2.6
315.0	0.4000	+0.3	-0.2	+2.5	-2.6
320.0	0.3875	+0.3	-0.2	+2.5	-2.6
325.0	0.3753	+0.3	-0.2	+2.4	-2.6
330.0	0.3638	+0.3	-0.3	+2.5	-2.6
335.0	0.3526	+0.3	-0.3	+2.5	-2.5
340.0	0.3422	+0.3	-0.3	+2.5	-2.5
345.0	0.3305	+0.3	-0.3	+2.5	-2.5
350.0	0.3200	+0.3	-0.3	+2.5	-2.6
360.0	0.3028	+0.3	-0.3	+2.5	-2.7
370.0	0.2896	+0.3	-0.3	+2.5	-2.7
380.0	0.2776	+0.3	-0.3	+2.6	-2.8
390.0	0.2660	+0.3	-0.4	+2.6	-2.8
400.0	0.2543	+0.3	-0.4	+2.6	-2.8
420.0	0.2317	+0.3	-0.4	+2.8	-2.8
440.0	0.2103	+0.3	-0.4	+2.8	-2.9
450.0	0.2002	+0.3	-0.5	+2.8	-3.1
460.0	0.1905	+0.3	-0.5	+2.9	-3.1
480.0	0.1724	+0.3	-0.5	+2.9	-3.1
500.0	0.1561	+0.3	-0.5	+3.1	-3.2
520.0	0.1414	+0.3	-0.6	+3.1	-3.3
540.0	0.1283	+0.3	-0.6	+3.2	-3.5
550.0	0.1223	+0.3	-0.6	+3.2	-3.5
560.0	0.1166	+0.3	-0.6	+3.2	-3.5
580.0	0.1062	+0.3	-0.7	+3.4	-3.6
600.0	0.09688	+0.4	-0.7	+3.5	-3.6
620.0	0.08861	+0.4	-0.7	+3.5	-3.7
640.0	0.08121	+0.4	-0.8	+3.6	-3.8
650.0	0.07784	+0.4	-0.8	+3.6	-4.0
660.0	0.07459	+0.4	-0.8	+3.8	-4.0
680.0	0.06865	+0.4	-0.8	+3.9	-4.1
700.0	0.06330	+0.4	-0.8	+4.0	-4.2

720.0	0.05853	+0.4	-0.9	+4.0	-4.4
740.0	0.05420	+0.4	-0.9	+4.1	-4.3
750.0	0.05235	+0.4	-0.9	+4.3	-4.3
760.0	0.05032	+0.5	-0.9	+4.3	-4.5
780.0	0.04682	+0.5	-1.0	+4.4	-4.6
800.0	0.04365	+0.5	-1.0	+4.5	-4.7
820.0	0.04078	+0.5	-1.1	+4.5	-4.9
840.0	0.03815	+0.6	-1.0	+4.6	-5.1
850.0	0.03706	+0.6	-1.1	+4.8	-4.9
860.0	0.03579	+0.6	-1.1	+4.9	-5.1
880.0	0.03363	+0.6	-1.1	+4.9	-5.2
900.0	0.03164	+0.6	-1.2	+5.0	-5.3
920.0	0.02986	+0.6	-1.2	+5.1	-5.6
940.0	0.02820	+0.6	-1.2	+5.2	-5.7
950.0	0.02745	+0.6	-1.3	+5.4	-5.5
960.0	0.02669	+0.7	-1.2	+5.4	-5.8
980.0	0.02524	+0.7	-1.3	+5.5	-5.8
1000.0	0.02399	+0.7	-1.3	+5.6	-5.9

WH Process

- The cross section are calculated at NNLO QCD and NLO EW.
- The last two columns show separate cross sections for W⁺H and W⁻H. The scale uncertainties for W⁺H and W⁻ are practically the same, but the PDF uncertainties differ a bit. For M_H=125 GeV: W⁺H = +/- 2.2% and W⁻H = +/- 3.5%.

m _H (GeV)	Cross Section (pb)	+QCD scale %	-QCD scale %	+(PDF+ _s) %	-(PDF+ _s) %	W ⁺ H (pb)	W ⁻ H (pb)
80.0	2.808	+1.1	-1.1	+2.2	-2.2	1.736	1.0720
81.0	2.711	+1.1	-1.1	+2.2	-2.2	1.677	1.0350
82.0	2.619	+1.0	-1.0	+2.2	-2.2	1.619	0.9985
83.0	2.528	+1.0	-1.0	+2.2	-2.2	1.566	0.9626
84.0	2.442	+1.0	-1.0	+2.2	-2.2	1.512	0.9289
85.0	2.359	+1.0	-1.0	+2.1	-2.1	1.463	0.8972
86.0	2.279	+1.0	-1.0	+2.2	-2.2	1.413	0.8658
87.0	2.203	+1.0	-1.0	+2.2	-2.2	1.366	0.8367
88.0	2.129	+1.0	-1.0	+2.2	-2.2	1.322	0.8084
89.0	2.058	+1.0	-1.0	+2.2	-2.2	1.279	0.7802
90.0	1.990	+1.0	-1.0	+2.2	-2.2	1.237	0.7541
91.0	1.929	+1.0	-1.0	+2.2	-2.2	1.197	0.7292
92.0	1.866	+1.0	-1.0	+2.2	-2.2	1.160	0.7049
93.0	1.806	+1.0	-1.0	+2.2	-2.2	1.123	0.6822
94.0	1.749	+1.0	-1.0	+2.2	-2.2	1.088	0.6598
95.0	1.695	+1.0	-1.0	+2.2	-2.2	1.054	0.6380
96.0	1.641	+1.0	-1.0	+2.2	-2.2	1.022	0.6179
97.0	1.589	+1.0	-1.0	+2.3	-2.3	0.9902	0.5981
98.0	1.540	+1.0	-1.0	+2.3	-2.3	0.9602	0.5794
99.0	1.495	+1.0	-1.0	+2.3	-2.3	0.9312	0.5609
100.0	1.447	+1.0	-1.0	+2.3	-2.3	0.9028	0.5434
101.0	1.403	+1.0	-1.0	+2.3	-2.3	0.8765	0.5261
102.0	1.360	+1.0	-1.0	+2.3	-2.3	0.8495	0.5097

103.0	1.319	+1.0	-1.0	+2.3	-2.3	0.8245	0.4939
104.0	1.280	+1.0	-1.0	+2.3	-2.3	0.8006	0.4791
105.0	1.242	+1.0	-1.0	+2.3	-2.3	0.7777	0.4643
106.0	1.204	+1.0	-1.0	+2.3	-2.3	0.7542	0.4503
107.0	1.169	+1.0	-1.0	+2.3	-2.3	0.7324	0.4374
108.0	1.135	+1.0	-1.0	+2.3	-2.3	0.7117	0.4240
109.0	1.103	+1.0	-1.0	+2.4	-2.4	0.6913	0.4116
110.0	1.071	+1.0	-1.0	+2.4	-2.4	0.6720	0.3995
110.5	1.056	+1.0	-1.0	+2.3	-2.3	0.6621	0.3935
111.0	1.040	+1.0	-1.0	+2.3	-2.3	0.6529	0.3877
111.5	1.026	+1.0	-1.0	+2.3	-2.3	0.6434	0.3816
112.0	1.010	+1.0	-1.0	+2.3	-2.3	0.6343	0.3761
112.5	0.9959	+1.0	-1.0	+2.3	-2.3	0.6256	0.3705
113.0	0.9813	+1.0	-1.0	+2.3	-2.3	0.6166	0.3649
113.5	0.9676	+1.0	-1.0	+2.3	-2.3	0.6080	0.3598
114.0	0.9535	+1.0	-1.0	+2.3	-2.3	0.5993	0.3540
114.5	0.9395	+1.0	-1.0	+2.3	-2.3	0.5903	0.3489
115.0	0.9266	+1.0	-1.0	+2.3	-2.3	0.5824	0.3439
115.5	0.9135	+1.0	-1.0	+2.3	-2.3	0.5743	0.3386
116.0	0.9002	+1.0	-1.0	+2.3	-2.3	0.5662	0.3338
116.5	0.8880	+1.0	-1.0	+2.3	-2.3	0.5585	0.3292
117.0	0.8758	+1.0	-1.0	+2.3	-2.3	0.5511	0.3246
117.5	0.8642	+1.0	-1.0	+2.3	-2.3	0.5436	0.3199
118.0	0.8515	+1.0	-1.0	+2.3	-2.3	0.5362	0.3154
118.5	0.8403	+1.0	-1.0	+2.4	-2.4	0.5288	0.3110
119.0	0.8284	+1.0	-1.0	+2.4	-2.4	0.5219	0.3064
119.5	0.8170	+1.0	-1.0	+2.4	-2.4	0.5145	0.3021
120.0	0.8052	+1.0	-1.0	+2.5	-2.5	0.5079	0.2980
120.1	0.8034	+1.0	-1.0	+2.4	-2.4	0.5064	0.2971
120.2	0.8009	+1.0	-1.0	+2.4	-2.4	0.5051	0.2962
120.3	0.7992	+1.0	-1.0	+2.4	-2.4	0.5037	0.2955
120.4	0.7967	+1.0	-1.0	+2.4	-2.4	0.5022	0.2946
120.5	0.7946	+0.9	-0.9	+2.3	-2.3	0.5010	0.2938
120.6	0.7928	+1.0	-1.0	+2.3	-2.3	0.4997	0.2929
120.7	0.7902	+1.0	-1.0	+2.3	-2.3	0.4983	0.2921
120.8	0.7881	+1.0	-1.0	+2.3	-2.3	0.4969	0.2913
120.9	0.7863	+1.0	-1.0	+2.3	-2.3	0.4956	0.2905
121.0	0.7844	+1.0	-1.0	+2.3	-2.3	0.4943	0.2897
121.1	0.7825	+1.0	-1.0	+2.3	-2.3	0.4929	0.2890
121.2	0.7802	+1.0	-1.0	+2.3	-2.3	0.4917	0.2882
121.3	0.7782	+1.0	-1.0	+2.3	-2.3	0.4906	0.2874
121.4	0.7758	+1.0	-1.0	+2.4	-2.4	0.4891	0.2866
121.5	0.7737	+1.0	-1.0	+2.4	-2.4	0.4878	0.2859
121.6	0.7713	+1.0	-1.0	+2.4	-2.4	0.4867	0.2851
121.7	0.7697	+1.0	-1.0	+2.3	-2.3	0.4855	0.2842
121.8	0.7675	+1.0	-1.0	+2.3	-2.3	0.4844	0.2833
121.9	0.7653	+1.0	-1.0	+2.3	-2.3	0.4829	0.2827
122.0	0.7631	+1.0	-1.0	+2.3	-2.3	0.4815	0.2818
122.1	0.7612	+1.0	-1.0	+2.3	-2.3	0.4803	0.2810
122.2	0.7589	+1.0	-1.0	+2.3	-2.3	0.4789	0.2804

122.3	0.7573	+1.0	-1.0	+2.4	-2.4	0.4777	0.2796
122.4	0.7555	+1.0	-1.0	+2.4	-2.4	0.4764	0.2787
122.5	0.7533	+1.0	-1.0	+2.4	-2.4	0.4752	0.2780
122.6	0.7510	+1.0	-1.0	+2.4	-2.4	0.4739	0.2771
122.7	0.7493	+1.0	-1.0	+2.4	-2.4	0.4727	0.2765
122.8	0.7475	+1.0	-1.0	+2.4	-2.4	0.4712	0.2757
122.9	0.7453	+1.0	-1.0	+2.4	-2.4	0.4701	0.2750
123.0	0.7434	+1.0	-1.0	+2.4	-2.4	0.4692	0.2742
123.1	0.7414	+1.0	-1.0	+2.4	-2.4	0.4679	0.2733
123.2	0.7393	+1.0	-1.0	+2.4	-2.4	0.4666	0.2727
123.3	0.7374	+1.0	-1.0	+2.4	-2.4	0.4653	0.2719
123.4	0.7352	+1.0	-1.0	+2.4	-2.4	0.4642	0.2711
123.5	0.7334	+1.0	-1.0	+2.4	-2.4	0.4627	0.2703
123.6	0.7317	+1.0	-1.0	+2.4	-2.4	0.4614	0.2697
123.7	0.7294	+1.0	-1.0	+2.3	-2.3	0.4603	0.2690
123.8	0.7277	+1.0	-1.0	+2.3	-2.3	0.4593	0.2683
123.9	0.7259	+1.0	-1.0	+2.3	-2.3	0.4580	0.2674
124.0	0.7239	+0.9	-0.9	+2.3	-2.3	0.4568	0.2666
124.1	0.7218	+0.9	-0.9	+2.3	-2.3	0.4555	0.2659
124.2	0.7201	+1.0	-1.0	+2.3	-2.3	0.4546	0.2653
124.3	0.7181	+1.0	-1.0	+2.3	-2.3	0.4533	0.2646
124.4	0.7159	+1.0	-1.0	+2.3	-2.3	0.4521	0.2638
124.5	0.7143	+1.0	-1.0	+2.3	-2.3	0.4509	0.2631
124.6	0.7125	+1.0	-1.0	+2.3	-2.3	0.4497	0.2624
124.7	0.7105	+1.0	-1.0	+2.3	-2.3	0.4484	0.2616
124.8	0.7086	+1.0	-1.0	+2.3	-2.3	0.4473	0.2610
124.9	0.7065	+1.0	-1.0	+2.3	-2.3	0.4461	0.2602
125.0	0.7046	+1.0	-1.0	+2.3	-2.3	0.4450	0.2597
125.1	0.7027	+1.0	-1.0	+2.3	-2.3	0.4438	0.2589
125.2	0.7005	+1.0	-1.0	+2.4	-2.4	0.4427	0.2581
125.3	0.6988	+1.0	-1.0	+2.4	-2.4	0.4414	0.2574
125.4	0.6970	+1.0	-1.0	+2.4	-2.4	0.4404	0.2568
125.5	0.6951	+1.0	-1.0	+2.4	-2.4	0.4392	0.2559
125.6	0.6931	+1.0	-1.0	+2.4	-2.4	0.4379	0.2553
125.7	0.6913	+1.0	-1.0	+2.3	-2.3	0.4369	0.2547
125.8	0.6895	+1.0	-1.0	+2.3	-2.3	0.4359	0.2539
125.9	0.6878	+1.0	-1.0	+2.3	-2.3	0.4345	0.2532
126.0	0.6860	+1.0	-1.0	+2.3	-2.3	0.4335	0.2525
126.1	0.6838	+1.0	-1.0	+2.3	-2.3	0.4321	0.2518
126.2	0.6818	+1.0	-1.0	+2.3	-2.3	0.4310	0.2511
126.3	0.6802	+1.0	-1.0	+2.3	-2.3	0.4299	0.2504
126.4	0.6784	+1.0	-1.0	+2.3	-2.3	0.4288	0.2498
126.5	0.6767	+1.0	-1.0	+2.3	-2.3	0.4277	0.2490
126.6	0.6747	+1.0	-1.0	+2.3	-2.3	0.4266	0.2485
126.7	0.6731	+1.0	-1.0	+2.3	-2.3	0.4253	0.2476
126.8	0.6711	+1.0	-1.0	+2.3	-2.3	0.4243	0.2469
126.9	0.6693	+1.0	-1.0	+2.3	-2.3	0.4232	0.2464
127.0	0.6676	+1.0	-1.0	+2.3	-2.3	0.4220	0.2457
127.1	0.6658	+1.0	-1.0	+2.3	-2.3	0.4210	0.2449
127.2	0.6640	+1.0	-1.0	+2.3	-2.3	0.4199	0.2442

127.3	0.6623	+1.0	-1.0	+2.4	-2.4	0.4187	0.2435
127.4	0.6605	+1.0	-1.0	+2.4	-2.4	0.4177	0.2429
127.5	0.6588	+1.0	-1.0	+2.4	-2.4	0.4167	0.2423
127.6	0.6572	+1.0	-1.0	+2.4	-2.4	0.4155	0.2417
127.7	0.6553	+1.0	-1.0	+2.4	-2.4	0.4144	0.2410
127.8	0.6535	+1.0	-1.0	+2.4	-2.4	0.4135	0.2402
127.9	0.6518	+1.0	-1.0	+2.4	-2.4	0.4122	0.2396
128.0	0.6501	+1.0	-1.0	+2.4	-2.4	0.4113	0.2390
128.1	0.6485	+1.0	-1.0	+2.4	-2.4	0.4102	0.2384
128.2	0.6470	+1.0	-1.0	+2.4	-2.4	0.4093	0.2377
128.3	0.6448	+1.0	-1.0	+2.4	-2.4	0.4081	0.2371
128.4	0.6430	+1.0	-1.0	+2.4	-2.4	0.4072	0.2364
128.5	0.6415	+1.0	-1.0	+2.4	-2.4	0.4061	0.2357
128.6	0.6398	+1.0	-1.0	+2.4	-2.4	0.4050	0.2350
128.7	0.6380	+1.0	-1.0	+2.4	-2.4	0.4039	0.2344
128.8	0.6364	+1.0	-1.0	+2.3	-2.3	0.4028	0.2337
128.9	0.6344	+1.0	-1.0	+2.3	-2.3	0.4016	0.2332
129.0	0.6329	+1.0	-1.0	+2.3	-2.3	0.4005	0.2325
129.1	0.6310	+1.0	-1.0	+2.3	-2.3	0.3994	0.2319
129.2	0.6294	+1.0	-1.0	+2.3	-2.3	0.3986	0.2313
129.3	0.6278	+1.0	-1.0	+2.4	-2.4	0.3976	0.2307
129.4	0.6264	+1.0	-1.0	+2.4	-2.4	0.3965	0.2300
129.5	0.6247	+1.0	-1.0	+2.4	-2.4	0.3955	0.2294
129.6	0.6233	+1.0	-1.0	+2.4	-2.4	0.3945	0.2287
129.7	0.6216	+0.9	-0.9	+2.4	-2.4	0.3933	0.2282
129.8	0.6201	+0.9	-0.9	+2.4	-2.4	0.3922	0.2276
129.9	0.6185	+0.9	-0.9	+2.4	-2.4	0.3914	0.2269
130.0	0.6169	+0.9	-0.9	+2.4	-2.4	0.3904	0.2263
130.5	0.6085	+0.9	-0.9	+2.4	-2.4	0.3853	0.2232
131.0	0.6005	+1.0	-1.0	+2.4	-2.4	0.3804	0.2201
131.5	0.5929	+1.0	-1.0	+2.4	-2.4	0.3756	0.2175
132.0	0.5856	+1.0	-1.0	+2.4	-2.4	0.3708	0.2146
132.5	0.5778	+1.0	-1.0	+2.5	-2.5	0.3659	0.2116
133.0	0.5703	+1.0	-1.0	+2.5	-2.5	0.3613	0.2088
133.5	0.5632	+1.0	-1.0	+2.5	-2.5	0.3567	0.2061
134.0	0.5556	+1.0	-1.0	+2.5	-2.5	0.3522	0.2034
134.5	0.5487	+1.0	-1.0	+2.5	-2.5	0.3478	0.2006
135.0	0.5416	+1.0	-1.0	+2.5	-2.5	0.3433	0.1980
135.5	0.5347	+1.0	-1.0	+2.5	-2.5	0.3391	0.1954
136.0	0.5277	+1.0	-1.0	+2.5	-2.5	0.3349	0.1928
136.5	0.5210	+1.0	-1.0	+2.5	-2.5	0.3307	0.1903
137.0	0.5145	+1.0	-1.0	+2.4	-2.4	0.3267	0.1879
137.5	0.5080	+1.0	-1.0	+2.4	-2.4	0.3226	0.1855
138.0	0.5018	+1.0	-1.0	+2.4	-2.4	0.3188	0.1831
138.5	0.4955	+1.0	-1.0	+2.4	-2.4	0.3147	0.1807
139.0	0.4890	+1.0	-1.0	+2.4	-2.4	0.3108	0.1785
139.5	0.4829	+1.0	-1.0	+2.4	-2.4	0.3070	0.1760
140.0	0.4768	+1.0	-1.0	+2.4	-2.4	0.3032	0.1738
140.5	0.4709	+1.0	-1.0	+2.4	-2.4	0.2996	0.1716
141.0	0.4651	+1.0	-1.0	+2.4	-2.4	0.2960	0.1692

141.5	0.4596	+1.0	-1.0	+2.4	-2.4	0.2922	0.1672
142.0	0.4540	+1.0	-1.0	+2.5	-2.5	0.2887	0.1650
142.5	0.4484	+1.0	-1.0	+2.5	-2.5	0.2852	0.1629
143.0	0.4426	+1.0	-1.0	+2.5	-2.5	0.2818	0.1608
143.5	0.4376	+1.0	-1.0	+2.5	-2.5	0.2785	0.1588
144.0	0.4320	+1.0	-1.0	+2.5	-2.5	0.2751	0.1569
144.5	0.4266	+1.0	-1.0	+2.5	-2.5	0.2719	0.1549
145.0	0.4216	+1.0	-1.0	+2.4	-2.4	0.2686	0.1530
145.5	0.4164	+1.0	-1.0	+2.5	-2.5	0.2652	0.1510
146.0	0.4112	+1.0	-1.0	+2.5	-2.5	0.2621	0.1490
146.5	0.4061	+1.0	-1.0	+2.5	-2.5	0.2590	0.1471
147.0	0.4014	+1.0	-1.0	+2.5	-2.5	0.2557	0.1453
147.5	0.3962	+1.0	-1.0	+2.6	-2.6	0.2527	0.1435
148.0	0.3913	+1.0	-1.0	+2.6	-2.6	0.2499	0.1417
148.5	0.3868	+1.0	-1.0	+2.6	-2.6	0.2469	0.1400
149.0	0.3821	+1.0	-1.0	+2.6	-2.6	0.2439	0.1382
149.5	0.3774	+1.0	-1.0	+2.6	-2.6	0.2408	0.1364
150.0	0.3728	+1.0	-1.0	+2.6	-2.6	0.2381	0.1348
152.0	0.3546	+1.0	-1.0	+2.6	-2.6	0.2267	0.1280
154.0	0.3376	+1.0	-1.0	+2.6	-2.6	0.2160	0.1217
156.0	0.3202	+1.0	-1.0	+2.6	-2.6	0.2050	0.1152
158.0	0.3024	+1.0	-1.0	+2.5	-2.5	0.1939	0.1086
160.0	0.2855	+1.0	-1.0	+2.5	-2.5	0.1832	0.1025
162.0	0.2763	+1.0	-1.0	+2.6	-2.6	0.1772	0.09896
164.0	0.2675	+1.0	-1.0	+2.6	-2.6	0.1718	0.09565
165.0	0.2630	+1.0	-1.0	+2.6	-2.6	0.1691	0.09405
166.0	0.2575	+1.0	-1.0	+2.6	-2.6	0.1655	0.09193
168.0	0.2466	+1.0	-1.0	+2.7	-2.7	0.1586	0.08791
170.0	0.2362	+1.0	-1.0	+2.7	-2.7	0.1521	0.08405
172.0	0.2261	+1.0	-1.0	+2.7	-2.7	0.1457	0.08035
174.0	0.2165	+1.0	-1.0	+2.7	-2.7	0.1397	0.07683
175.0	0.2118	+1.0	-1.0	+2.7	-2.7	0.1368	0.07512
176.0	0.2076	+1.0	-1.0	+2.7	-2.7	0.1340	0.07356
178.0	0.1991	+1.0	-1.0	+2.7	-2.7	0.1286	0.07045
180.0	0.1911	+1.0	-1.0	+2.7	-2.7	0.1235	0.06752
182.0	0.1841	+1.0	-1.0	+2.7	-2.7	0.1190	0.06492
184.0	0.1774	+1.0	-1.0	+2.8	-2.8	0.1148	0.06249
185.0	0.1741	+1.0	-1.0	+2.8	-2.8	0.1127	0.06128
186.0	0.1707	+1.0	-1.0	+2.8	-2.8	0.1106	0.06004
188.0	0.1642	+1.1	-1.1	+2.8	-2.8	0.1064	0.05767
190.0	0.1579	+1.1	-1.1	+2.9	-2.9	0.1024	0.05535
192.0	0.1520	+1.1	-1.1	+2.9	-2.9	0.09873	0.05323
194.0	0.1464	+1.1	-1.1	+2.9	-2.9	0.09517	0.05117
195.0	0.1436	+1.1	-1.1	+2.9	-2.9	0.09344	0.05019
196.0	0.1409	+1.1	-1.1	+2.9	-2.9	0.09165	0.04920
198.0	0.1356	+1.1	-1.1	+2.9	-2.9	0.08826	0.04730
200.0	0.1305	+1.1	-1.1	+2.9	-2.9	0.08503	0.04545
202.0	0.1257	+1.1	-1.1	+2.9	-2.9	0.08201	0.04373
204.0	0.1211	+1.1	-1.1	+2.9	-2.9	0.07908	0.04207
206.0	0.1168	+1.1	-1.1	+2.9	-2.9	0.07632	0.04050

208.0	0.1127	+1.1	-1.1	+2.9	-2.9	0.07362	0.03899
210.0	0.1087	+1.1	-1.1	+3.0	-3.0	0.07105	0.03756
212.0	0.1048	+1.1	-1.1	+3.0	-3.0	0.06858	0.03616
214.0	0.1011	+1.1	-1.1	+3.0	-3.0	0.06623	0.03485
216.0	0.09761	+1.1	-1.1	+3.0	-3.0	0.06399	0.03360
218.0	0.09427	+1.1	-1.1	+3.0	-3.0	0.06181	0.03239
220.0	0.09098	+1.1	-1.1	+3.0	-3.0	0.05976	0.03124
222.0	0.08792	+1.1	-1.1	+3.1	-3.1	0.05778	0.03014
224.0	0.08496	+1.2	-1.2	+3.1	-3.1	0.05591	0.02908
226.0	0.08212	+1.2	-1.2	+3.1	-3.1	0.05403	0.02808
228.0	0.07940	+1.2	-1.2	+3.1	-3.1	0.05230	0.02710
230.0	0.07678	+1.2	-1.2	+3.1	-3.1	0.05061	0.02617
232.0	0.07424	+1.2	-1.2	+3.1	-3.1	0.04897	0.02527
234.0	0.07181	+1.2	-1.2	+3.1	-3.1	0.04740	0.02441
236.0	0.06944	+1.2	-1.2	+3.1	-3.1	0.04588	0.02357
238.0	0.06718	+1.2	-1.2	+3.2	-3.2	0.04442	0.02277
240.0	0.06501	+1.2	-1.2	+3.1	-3.1	0.04300	0.02201
242.0	0.06294	+1.2	-1.2	+3.2	-3.2	0.04167	0.02128
244.0	0.06094	+1.2	-1.2	+3.2	-3.2	0.04037	0.02057
246.0	0.05902	+1.2	-1.2	+3.2	-3.2	0.03912	0.01990
248.0	0.05719	+1.2	-1.2	+3.2	-3.2	0.03792	0.01924
250.0	0.05540	+1.2	-1.2	+3.3	-3.3	0.03678	0.01862
252.0	0.05367	+1.2	-1.2	+3.3	-3.3	0.03565	0.01802
254.0	0.05200	+1.2	-1.2	+3.3	-3.3	0.03457	0.01743
256.0	0.05040	+1.3	-1.3	+3.3	-3.3	0.03353	0.01688
258.0	0.04886	+1.3	-1.3	+3.4	-3.4	0.03252	0.01634
260.0	0.04738	+1.3	-1.3	+3.4	-3.4	0.03155	0.01582
262.0	0.04598	+1.3	-1.3	+3.4	-3.4	0.03065	0.01533
264.0	0.04461	+1.3	-1.3	+3.4	-3.4	0.02977	0.01486
266.0	0.04331	+1.3	-1.3	+3.4	-3.4	0.02890	0.01440
268.0	0.04205	+1.3	-1.3	+3.4	-3.4	0.02810	0.01397
270.0	0.04083	+1.3	-1.3	+3.5	-3.5	0.02730	0.01355
272.0	0.03964	+1.3	-1.3	+3.5	-3.5	0.02650	0.01312
274.0	0.03847	+1.3	-1.3	+3.5	-3.5	0.02574	0.01272
276.0	0.03733	+1.3	-1.3	+3.5	-3.5	0.02501	0.01233
278.0	0.03624	+1.3	-1.3	+3.5	-3.5	0.02430	0.01196
280.0	0.03519	+1.3	-1.3	+3.5	-3.5	0.02361	0.01160
282.0	0.03417	+1.3	-1.3	+3.6	-3.6	0.02295	0.01125
284.0	0.03320	+1.3	-1.3	+3.6	-3.6	0.02230	0.01091
286.0	0.03226	+1.3	-1.3	+3.6	-3.6	0.02168	0.01058
288.0	0.03134	+1.3	-1.3	+3.6	-3.6	0.02107	0.01027
290.0	0.03046	+1.3	-1.3	+3.6	-3.6	0.02050	0.009964
292.0	0.02960	+1.4	-1.4	+3.6	-3.6	0.01993	0.009678
294.0	0.02879	+1.4	-1.4	+3.7	-3.7	0.01940	0.009396
296.0	0.02799	+1.4	-1.4	+3.7	-3.7	0.01888	0.009124
298.0	0.02723	+1.4	-1.4	+3.7	-3.7	0.01837	0.008862
300.0	0.02649	+1.4	-1.4	+3.7	-3.7	0.01787	0.008611
305.0	0.02474	+1.4	-1.4	+3.8	-3.8	0.01673	0.008018
310.0	0.02313	+1.4	-1.4	+3.8	-3.8	0.01565	0.007468
315.0	0.02160	+1.5	-1.5	+3.9	-3.9	0.01464	0.006954

320.0	0.02019	+1.5	-1.5	+3.9	-3.9	0.01371	0.006481
325.0	0.01889	+1.5	-1.5	+3.9	-3.9	0.01285	0.006045
330.0	0.01769	+1.5	-1.5	+4.0	-4.0	0.01205	0.005642
335.0	0.01655	+1.5	-1.5	+4.1	-4.1	0.01129	0.005261
340.0	0.01550	+1.5	-1.5	+4.1	-4.1	0.01058	0.004912
345.0	0.01447	+1.6	-1.6	+4.2	-4.2	0.009898	0.004572
350.0	0.01352	+1.6	-1.6	+4.2	-4.2	0.009260	0.004258
360.0	0.01207	+1.6	-1.6	+4.4	-4.4	0.008293	0.003779
370.0	0.01076	+1.7	-1.7	+4.5	-4.5	0.007411	0.003348
380.0	0.009627	+1.7	-1.7	+4.6	-4.6	0.006648	0.002979
390.0	0.008629	+1.7	-1.7	+4.6	-4.6	0.005976	0.002655
400.0	0.007765	+1.7	-1.7	+4.6	-4.6	0.005390	0.002375

ZH Process

- The cross section are calculated at NNLO QCD in qq/gg ZH and NLO EW.
- The last column shows the cross section for gg ZH (box-diagram) which occurs at NNLO.

m_H (GeV)	Cross Section (pb)	+QCD scale %	-QCD scale %	+(PDF+ s) %	-(PDF+ s) %	(gg ZH) (fb)
80.0	1.508	+1.9	-1.9	+2.1	-2.1	51.69
81.0	1.459	+1.9	-1.9	+2.1	-2.1	51.20
82.0	1.411	+2.0	-2.0	+2.1	-2.1	50.71
83.0	1.366	+2.0	-2.0	+2.1	-2.1	50.22
84.0	1.321	+2.0	-2.0	+2.1	-2.1	49.74
85.0	1.281	+2.0	-2.0	+2.1	-2.1	49.28
86.0	1.238	+2.1	-2.1	+2.1	-2.1	48.65
87.0	1.200	+2.1	-2.1	+2.1	-2.1	48.20
88.0	1.163	+2.1	-2.1	+2.2	-2.2	47.75
89.0	1.126	+2.1	-2.1	+2.2	-2.2	47.28
90.0	1.092	+2.1	-2.1	+2.2	-2.2	46.85
91.0	1.059	+2.2	-2.2	+2.2	-2.2	46.41
92.0	1.028	+2.2	-2.2	+2.2	-2.2	45.99
93.0	0.9965	+2.2	-2.2	+2.2	-2.2	45.72
94.0	0.9670	+2.2	-2.2	+2.3	-2.3	45.11
95.0	0.9383	+2.3	-2.3	+2.3	-2.3	44.67
96.0	0.9109	+2.3	-2.3	+2.3	-2.3	44.22
97.0	0.8840	+2.3	-2.3	+2.3	-2.3	43.79
98.0	0.8592	+2.3	-2.3	+2.3	-2.3	43.36
99.0	0.8340	+2.4	-2.4	+2.3	-2.3	42.94
100.0	0.8102	+2.4	-2.4	+2.3	-2.3	42.51
101.0	0.7876	+2.4	-2.4	+2.3	-2.3	42.09
102.0	0.7650	+2.4	-2.4	+2.3	-2.3	41.66
103.0	0.7436	+2.5	-2.5	+2.3	-2.3	41.23
104.0	0.7226	+2.5	-2.5	+2.3	-2.3	40.81
105.0	0.7022	+2.5	-2.5	+2.3	-2.3	40.39
106.0	0.6833	+2.6	-2.6	+2.4	-2.4	39.97
107.0	0.6646	+2.6	-2.6	+2.4	-2.4	39.58
108.0	0.6469	+2.6	-2.6	+2.4	-2.4	39.20
109.0	0.6296	+2.7	-2.7	+2.4	-2.4	38.81
110.0	0.6125	+2.7	-2.7	+2.4	-2.4	38.40

110.5	0.6040	+2.7	-2.7	+2.4	-2.4	38.20
111.0	0.5960	+2.7	-2.7	+2.4	-2.4	37.99
111.5	0.5880	+2.8	-2.8	+2.4	-2.4	37.79
112.0	0.5803	+2.8	-2.8	+2.4	-2.4	37.58
112.5	0.5725	+2.8	-2.8	+2.4	-2.4	37.38
113.0	0.5646	+2.8	-2.8	+2.4	-2.4	37.18
113.5	0.5573	+2.8	-2.8	+2.4	-2.4	36.98
114.0	0.5501	+2.8	-2.8	+2.4	-2.4	36.76
114.5	0.5427	+2.8	-2.8	+2.4	-2.4	36.55
115.0	0.5358	+2.8	-2.8	+2.5	-2.5	36.34
115.5	0.5286	+2.8	-2.8	+2.5	-2.5	36.11
116.0	0.5218	+2.9	-2.9	+2.5	-2.5	35.84
116.5	0.5152	+2.9	-2.9	+2.5	-2.5	35.75
117.0	0.5083	+2.9	-2.9	+2.5	-2.5	35.56
117.5	0.5020	+3.0	-3.0	+2.5	-2.5	35.37
118.0	0.4956	+3.0	-3.0	+2.5	-2.5	35.17
118.5	0.4893	+3.0	-3.0	+2.5	-2.5	34.97
119.0	0.4829	+3.0	-3.0	+2.5	-2.5	34.77
119.5	0.4772	+3.0	-3.0	+2.5	-2.5	34.58
120.0	0.4710	+3.0	-3.0	+2.5	-2.5	34.39
120.1	0.4698	+3.0	-3.0	+2.5	-2.5	34.34
120.2	0.4685	+3.0	-3.0	+2.5	-2.5	34.30
120.3	0.4675	+3.0	-3.0	+2.5	-2.5	34.27
120.4	0.4661	+3.0	-3.0	+2.5	-2.5	34.23
120.5	0.4648	+3.0	-3.0	+2.5	-2.5	34.19
120.6	0.4636	+3.0	-3.0	+2.5	-2.5	34.15
120.7	0.4625	+3.0	-3.0	+2.5	-2.5	34.11
120.8	0.4613	+3.0	-3.0	+2.5	-2.5	34.07
120.9	0.4601	+3.0	-3.0	+2.5	-2.5	34.04
121.0	0.4589	+3.0	-3.0	+2.5	-2.5	34.00
121.1	0.4580	+3.0	-3.0	+2.5	-2.5	33.95
121.2	0.4567	+3.0	-3.0	+2.5	-2.5	33.92
121.3	0.4556	+3.0	-3.0	+2.5	-2.5	33.88
121.4	0.4545	+3.0	-3.0	+2.4	-2.4	33.84
121.5	0.4535	+3.0	-3.0	+2.4	-2.4	33.80
121.6	0.4522	+3.0	-3.0	+2.4	-2.4	33.76
121.7	0.4509	+3.0	-3.0	+2.4	-2.4	33.73
121.8	0.4498	+3.0	-3.0	+2.5	-2.5	33.69
121.9	0.4488	+3.0	-3.0	+2.5	-2.5	33.65
122.0	0.4478	+3.0	-3.0	+2.5	-2.5	33.61
122.1	0.4468	+3.0	-3.0	+2.5	-2.5	33.58
122.2	0.4457	+3.0	-3.0	+2.5	-2.5	33.53
122.3	0.4444	+3.0	-3.0	+2.5	-2.5	33.49
122.4	0.4434	+3.0	-3.0	+2.6	-2.6	33.45
122.5	0.4421	+3.0	-3.0	+2.6	-2.6	33.41
122.6	0.4409	+3.0	-3.0	+2.6	-2.6	33.37
122.7	0.4396	+3.0	-3.0	+2.6	-2.6	33.33
122.8	0.4385	+3.1	-3.1	+2.6	-2.6	33.30
122.9	0.4376	+3.1	-3.1	+2.5	-2.5	33.26
123.0	0.4366	+3.1	-3.1	+2.5	-2.5	33.22

123.1	0.4356	+3.1	-3.1	+2.6	-2.6	33.19
123.2	0.4346	+3.1	-3.1	+2.6	-2.6	33.15
123.3	0.4335	+3.1	-3.1	+2.6	-2.6	33.11
123.4	0.4325	+3.1	-3.1	+2.6	-2.6	33.07
123.5	0.4311	+3.1	-3.1	+2.6	-2.6	33.03
123.6	0.4301	+3.1	-3.1	+2.6	-2.6	32.99
123.7	0.4292	+3.1	-3.1	+2.6	-2.6	32.95
123.8	0.4280	+3.1	-3.1	+2.5	-2.5	32.92
123.9	0.4271	+3.1	-3.1	+2.5	-2.5	32.88
124.0	0.4260	+3.1	-3.1	+2.4	-2.4	32.84
124.1	0.4249	+3.1	-3.1	+2.4	-2.4	32.80
124.2	0.4238	+3.1	-3.1	+2.4	-2.4	32.77
124.3	0.4228	+3.1	-3.1	+2.4	-2.4	32.73
124.4	0.4217	+3.2	-3.2	+2.5	-2.5	32.70
124.5	0.4206	+3.2	-3.2	+2.5	-2.5	32.66
124.6	0.4194	+3.2	-3.2	+2.5	-2.5	32.62
124.7	0.4185	+3.1	-3.1	+2.5	-2.5	32.58
124.8	0.4174	+3.1	-3.1	+2.5	-2.5	32.54
124.9	0.4164	+3.1	-3.1	+2.5	-2.5	32.50
125.0	0.4153	+3.1	-3.1	+2.5	-2.5	32.46
125.1	0.4142	+3.1	-3.1	+2.5	-2.5	32.43
125.2	0.4133	+3.1	-3.1	+2.5	-2.5	32.39
125.3	0.4123	+3.1	-3.1	+2.5	-2.5	32.35
125.4	0.4112	+3.1	-3.1	+2.5	-2.5	32.31
125.5	0.4102	+3.1	-3.1	+2.5	-2.5	32.27
125.6	0.4091	+3.2	-3.2	+2.5	-2.5	32.23
125.7	0.4082	+3.2	-3.2	+2.5	-2.5	32.20
125.8	0.4070	+3.2	-3.2	+2.5	-2.5	32.16
125.9	0.4061	+3.2	-3.2	+2.5	-2.5	32.12
126.0	0.4050	+3.2	-3.2	+2.5	-2.5	32.08
126.1	0.4042	+3.2	-3.2	+2.5	-2.5	32.05
126.2	0.4030	+3.2	-3.2	+2.5	-2.5	32.01
126.3	0.4020	+3.2	-3.2	+2.5	-2.5	31.97
126.4	0.4010	+3.2	-3.2	+2.5	-2.5	31.93
126.5	0.4000	+3.2	-3.2	+2.5	-2.5	31.90
126.6	0.3990	+3.2	-3.2	+2.5	-2.5	31.86
126.7	0.3980	+3.2	-3.2	+2.5	-2.5	31.82
126.8	0.3970	+3.2	-3.2	+2.5	-2.5	31.78
126.9	0.3962	+3.2	-3.2	+2.6	-2.6	31.75
127.0	0.3953	+3.2	-3.2	+2.6	-2.6	31.71
127.1	0.3943	+3.2	-3.2	+2.6	-2.6	31.67
127.2	0.3932	+3.2	-3.2	+2.5	-2.5	31.63
127.3	0.3921	+3.2	-3.2	+2.5	-2.5	31.59
127.4	0.3912	+3.2	-3.2	+2.5	-2.5	31.56
127.5	0.3901	+3.2	-3.2	+2.5	-2.5	31.52
127.6	0.3892	+3.2	-3.2	+2.5	-2.5	31.48
127.7	0.3883	+3.2	-3.2	+2.5	-2.5	31.44
127.8	0.3874	+3.2	-3.2	+2.4	-2.4	31.40
127.9	0.3863	+3.2	-3.2	+2.4	-2.4	31.37
128.0	0.3856	+3.3	-3.3	+2.4	-2.4	31.33

128.1	0.3847	+3.3	-3.3	+2.5	-2.5	31.29
128.2	0.3838	+3.2	-3.2	+2.5	-2.5	31.26
128.3	0.3830	+3.2	-3.2	+2.5	-2.5	31.22
128.4	0.3819	+3.2	-3.2	+2.6	-2.6	31.18
128.5	0.3809	+3.2	-3.2	+2.6	-2.6	31.14
128.6	0.3799	+3.2	-3.2	+2.6	-2.6	31.11
128.7	0.3790	+3.3	-3.3	+2.6	-2.6	31.07
128.8	0.3780	+3.3	-3.3	+2.6	-2.6	31.04
128.9	0.3770	+3.3	-3.3	+2.6	-2.6	31.00
129.0	0.3762	+3.3	-3.3	+2.6	-2.6	30.96
129.1	0.3751	+3.3	-3.3	+2.6	-2.6	30.92
129.2	0.3741	+3.3	-3.3	+2.6	-2.6	30.89
129.3	0.3731	+3.3	-3.3	+2.6	-2.6	30.85
129.4	0.3723	+3.3	-3.3	+2.6	-2.6	30.81
129.5	0.3714	+3.3	-3.3	+2.6	-2.6	30.78
129.6	0.3705	+3.3	-3.3	+2.5	-2.5	30.74
129.7	0.3696	+3.3	-3.3	+2.5	-2.5	30.70
129.8	0.3688	+3.3	-3.3	+2.5	-2.5	30.67
129.9	0.3679	+3.3	-3.3	+2.5	-2.5	30.63
130.0	0.3671	+3.3	-3.3	+2.4	-2.4	30.60
130.5	0.3626	+3.3	-3.3	+2.5	-2.5	30.42
131.0	0.3583	+3.3	-3.3	+2.5	-2.5	30.23
131.5	0.3539	+3.3	-3.3	+2.5	-2.5	30.04
132.0	0.3498	+3.3	-3.3	+2.5	-2.5	29.86
132.5	0.3457	+3.4	-3.4	+2.6	-2.6	29.68
133.0	0.3418	+3.4	-3.4	+2.6	-2.6	29.50
133.5	0.3376	+3.4	-3.4	+2.6	-2.6	29.33
134.0	0.3337	+3.4	-3.4	+2.6	-2.6	29.14
134.5	0.3297	+3.4	-3.4	+2.6	-2.6	28.97
135.0	0.3259	+3.5	-3.5	+2.7	-2.7	28.79
135.5	0.3221	+3.5	-3.5	+2.6	-2.6	28.62
136.0	0.3184	+3.5	-3.5	+2.6	-2.6	28.44
136.5	0.3145	+3.5	-3.5	+2.6	-2.6	28.27
137.0	0.3109	+3.5	-3.5	+2.6	-2.6	28.10
137.5	0.3073	+3.6	-3.6	+2.6	-2.6	27.93
138.0	0.3036	+3.6	-3.6	+2.6	-2.6	27.75
138.5	0.3003	+3.6	-3.6	+2.6	-2.6	27.59
139.0	0.2966	+3.6	-3.6	+2.7	-2.7	27.41
139.5	0.2933	+3.6	-3.6	+2.7	-2.7	27.25
140.0	0.2898	+3.6	-3.6	+2.7	-2.7	27.07
140.5	0.2865	+3.6	-3.6	+2.7	-2.7	26.90
141.0	0.2831	+3.6	-3.6	+2.7	-2.7	26.73
141.5	0.2799	+3.6	-3.6	+2.7	-2.7	26.56
142.0	0.2769	+3.6	-3.6	+2.7	-2.7	26.39
142.5	0.2736	+3.6	-3.6	+2.7	-2.7	26.23
143.0	0.2705	+3.7	-3.7	+2.7	-2.7	26.07
143.5	0.2674	+3.7	-3.7	+2.7	-2.7	25.91
144.0	0.2644	+3.7	-3.7	+2.7	-2.7	25.73
144.5	0.2613	+3.8	-3.8	+2.7	-2.7	25.56
145.0	0.2583	+3.8	-3.8	+2.7	-2.7	25.39

145.5	0.2554	+3.8	-3.8	+2.7	-2.7	25.22
146.0	0.2527	+3.8	-3.8	+2.7	-2.7	25.05
146.5	0.2497	+3.8	-3.8	+2.7	-2.7	24.88
147.0	0.2469	+3.8	-3.8	+2.7	-2.7	24.71
147.5	0.2442	+3.8	-3.8	+2.7	-2.7	24.54
148.0	0.2415	+3.8	-3.8	+2.7	-2.7	24.38
148.5	0.2387	+3.8	-3.8	+2.7	-2.7	24.22
149.0	0.2361	+3.8	-3.8	+2.7	-2.7	24.06
149.5	0.2334	+3.9	-3.9	+2.7	-2.7	23.90
150.0	0.2308	+3.9	-3.9	+2.7	-2.7	23.73
152.0	0.2207	+3.9	-3.9	+2.7	-2.7	23.09
154.0	0.2109	+4.0	-4.0	+2.8	-2.8	22.47
156.0	0.2010	+4.1	-4.1	+2.8	-2.8	21.86
158.0	0.1911	+4.1	-4.1	+2.8	-2.8	21.24
160.0	0.1816	+4.2	-4.2	+2.8	-2.8	20.59
162.0	0.1762	+4.2	-4.2	+2.8	-2.8	20.03
164.0	0.1708	+4.2	-4.2	+2.8	-2.8	19.43
165.0	0.1683	+4.2	-4.2	+2.8	-2.8	19.14
166.0	0.1649	+4.2	-4.2	+2.8	-2.8	18.87
168.0	0.1582	+4.3	-4.3	+2.8	-2.8	18.33
170.0	0.1518	+4.3	-4.3	+2.9	-2.9	17.79
172.0	0.1457	+4.3	-4.3	+2.9	-2.9	17.24
174.0	0.1398	+4.4	-4.4	+2.9	-2.9	16.69
175.0	0.1369	+4.4	-4.4	+2.9	-2.9	16.43
176.0	0.1340	+4.4	-4.4	+2.9	-2.9	16.17
178.0	0.1284	+4.5	-4.5	+2.9	-2.9	15.65
180.0	0.1231	+4.6	-4.6	+2.9	-2.9	15.14
182.0	0.1187	+4.6	-4.6	+2.9	-2.9	14.64
184.0	0.1145	+4.6	-4.6	+2.9	-2.9	14.16
185.0	0.1125	+4.5	-4.5	+2.9	-2.9	13.93
186.0	0.1103	+4.6	-4.6	+3.0	-3.0	13.70
188.0	0.1062	+4.6	-4.6	+3.0	-3.0	13.24
190.0	0.1022	+4.6	-4.6	+3.0	-3.0	12.79
192.0	0.09848	+4.6	-4.6	+3.0	-3.0	12.36
194.0	0.09489	+4.6	-4.6	+3.0	-3.0	11.92
195.0	0.09314	+4.6	-4.6	+3.0	-3.0	11.70
196.0	0.09146	+4.6	-4.6	+3.0	-3.0	11.49
198.0	0.08813	+4.6	-4.6	+3.0	-3.0	11.08
200.0	0.08491	+4.7	-4.7	+3.1	-3.1	10.67
202.0	0.08192	+4.7	-4.7	+3.1	-3.1	10.28
204.0	0.07896	+4.7	-4.7	+3.1	-3.1	9.894
206.0	0.07613	+4.7	-4.7	+3.1	-3.1	9.515
208.0	0.07344	+4.6	-4.6	+3.2	-3.2	9.145
210.0	0.07082	+4.6	-4.6	+3.2	-3.2	8.785
212.0	0.06834	+4.6	-4.6	+3.2	-3.2	8.434
214.0	0.06593	+4.6	-4.6	+3.2	-3.2	8.094
216.0	0.06366	+4.6	-4.6	+3.2	-3.2	7.766
218.0	0.06145	+4.6	-4.6	+3.2	-3.2	7.445
220.0	0.05933	+4.6	-4.6	+3.2	-3.2	7.130
222.0	0.05727	+4.5	-4.5	+3.3	-3.3	6.825

224.0	0.05529	+4.5	-4.5	+3.3	-3.3	6.528
226.0	0.05339	+4.5	-4.5	+3.3	-3.3	6.241
228.0	0.05156	+4.5	-4.5	+3.4	-3.4	5.965
230.0	0.04986	+4.5	-4.5	+3.4	-3.4	5.760
232.0	0.04816	+4.5	-4.5	+3.4	-3.4	5.493
234.0	0.04652	+4.4	-4.4	+3.4	-3.4	5.226
236.0	0.04494	+4.4	-4.4	+3.5	-3.5	4.984
238.0	0.04344	+4.3	-4.3	+3.5	-3.5	4.745
240.0	0.04199	+4.3	-4.3	+3.5	-3.5	4.517
242.0	0.04060	+4.2	-4.2	+3.5	-3.5	4.319
244.0	0.03926	+4.2	-4.2	+3.5	-3.5	4.107
246.0	0.03797	+4.2	-4.2	+3.5	-3.5	3.906
248.0	0.03672	+4.1	-4.1	+3.5	-3.5	3.715
250.0	0.03552	+4.1	-4.1	+3.5	-3.5	3.532
252.0	0.03437	+4.0	-4.0	+3.6	-3.6	3.355
254.0	0.03325	+4.0	-4.0	+3.6	-3.6	3.190
256.0	0.03215	+4.0	-4.0	+3.6	-3.6	3.018
258.0	0.03112	+3.9	-3.9	+3.7	-3.7	2.864
260.0	0.03012	+3.9	-3.9	+3.7	-3.7	2.719
262.0	0.02916	+3.8	-3.8	+3.7	-3.7	2.581
264.0	0.02823	+3.8	-3.8	+3.7	-3.7	2.452
266.0	0.02736	+3.7	-3.7	+3.8	-3.8	2.333
268.0	0.02649	+3.7	-3.7	+3.8	-3.8	2.208
270.0	0.02568	+3.7	-3.7	+3.8	-3.8	2.094
272.0	0.02488	+3.6	-3.6	+3.8	-3.8	1.987
274.0	0.02411	+3.6	-3.6	+3.8	-3.8	1.884
276.0	0.02337	+3.5	-3.5	+3.8	-3.8	1.788
278.0	0.02266	+3.5	-3.5	+3.9	-3.9	1.696
280.0	0.02198	+3.5	-3.5	+3.9	-3.9	1.609
282.0	0.02131	+3.4	-3.4	+3.9	-3.9	1.530
284.0	0.02066	+3.4	-3.4	+3.9	-3.9	1.447
286.0	0.02004	+3.4	-3.4	+3.9	-3.9	1.372
288.0	0.01945	+3.3	-3.3	+4.0	-4.0	1.300
290.0	0.01887	+3.3	-3.3	+4.0	-4.0	1.231
292.0	0.01830	+3.2	-3.2	+4.0	-4.0	1.167
294.0	0.01777	+3.2	-3.2	+4.0	-4.0	1.107
296.0	0.01725	+3.2	-3.2	+4.1	-4.1	1.049
298.0	0.01675	+3.1	-3.1	+4.1	-4.1	0.9953
300.0	0.01627	+3.1	-3.1	+4.1	-4.1	0.9462
305.0	0.01513	+3.0	-3.0	+4.2	-4.2	0.8255
310.0	0.01408	+2.9	-2.9	+4.2	-4.2	0.7207
315.0	0.01311	+2.9	-2.9	+4.3	-4.3	0.6296
320.0	0.01221	+2.8	-2.8	+4.3	-4.3	0.5500
325.0	0.01139	+2.8	-2.8	+4.3	-4.3	0.4818
330.0	0.01063	+2.7	-2.7	+4.4	-4.4	0.4229
335.0	0.009912	+2.7	-2.7	+4.4	-4.4	0.3722
340.0	0.009251	+2.7	-2.7	+4.5	-4.5	0.3288
345.0	0.008625	+2.6	-2.6	+4.5	-4.5	0.2943
350.0	0.008056	+2.6	-2.6	+4.5	-4.5	0.2680
360.0	0.007150	+2.7	-2.7	+4.7	-4.7	0.2290

370.0	0.006364	+2.7	-2.7	+4.9	-4.9	0.2010
380.0	0.005684	+2.8	-2.8	+5.0	-5.0	0.1810
390.0	0.005090	+2.8	-2.8	+5.0	-5.0	0.1653
400.0	0.004568	+2.8	-2.8	+5.0	-5.0	0.1531

ttH Process

• The cross section are calculated at NLO QCD.

m_H (GeV)	Cross Section (pb)	+QCD Scale %	-QCD Scale %	+(PDF+ _s) %	-(PDF+ _s) %
80.0	0.4277	+4.7	-9.7	+8.0	-8.0
81.0	0.4152	+4.7	-9.7	+8.0	-8.0
82.0	0.4032	+4.7	-9.7	+8.0	-8.0
83.0	0.3915	+4.7	-9.7	+8.0	-8.0
84.0	0.3803	+4.7	-9.7	+8.0	-8.0
85.0	0.3694	+4.6	-9.7	+8.0	-8.0
86.0	0.3589	+4.6	-9.7	+8.0	-8.0
87.0	0.3487	+4.6	-9.7	+8.0	-8.0
88.0	0.3389	+4.6	-9.6	+8.0	-8.0
89.0	0.3294	+4.5	-9.6	+8.0	-8.0
90.0	0.3202	+4.5	-9.6	+8.0	-8.0
91.0	0.3113	+4.5	-9.6	+8.0	-8.0
92.0	0.3027	+4.5	-9.6	+8.0	-8.0
93.0	0.2944	+4.4	-9.6	+8.0	-8.0
94.0	0.2864	+4.4	-9.6	+8.0	-8.0
95.0	0.2786	+4.4	-9.6	+8.0	-8.0
96.0	0.2711	+4.4	-9.6	+8.0	-8.0
97.0	0.2638	+4.3	-9.5	+8.0	-8.0
98.0	0.2567	+4.3	-9.5	+8.0	-8.0
99.0	0.2499	+4.3	-9.5	+8.0	-8.0
100.0	0.2433	+4.3	-9.5	+8.0	-8.0
101.0	0.2369	+4.3	-9.5	+8.0	-8.0
102.0	0.2308	+4.2	-9.5	+8.0	-8.0
103.0	0.2248	+4.2	-9.5	+8.1	-8.1
104.0	0.2190	+4.2	-9.5	+8.1	-8.1
105.0	0.2133	+4.2	-9.5	+8.1	-8.1
106.0	0.2077	+4.1	-9.4	+8.1	-8.1
107.0	0.2023	+4.1	-9.4	+8.1	-8.1
108.0	0.1971	+4.1	-9.4	+8.1	-8.1
109.0	0.1920	+4.1	-9.4	+8.1	-8.1
110.0	0.1871	+4.1	-9.4	+8.1	-8.1
110.5	0.1847	+4.1	-9.4	+8.1	-8.1
111.0	0.1824	+4.0	-9.4	+8.1	-8.1
111.5	0.1801	+4.0	-9.4	+8.1	-8.1
112.0	0.1779	+4.0	-9.4	+8.1	-8.1
112.5	0.1757	+4.0	-9.4	+8.1	-8.1
113.0	0.1735	+4.0	-9.4	+8.1	-8.1
113.5	0.1713	+4.0	-9.4	+8.1	-8.1
114.0	0.1692	+4.0	-9.4	+8.1	-8.1
114.5	0.1671	+4.0	-9.4	+8.1	-8.1
115.0	0.1651	+4.0	-9.4	+8.1	-8.1

115.5	0.1630	+4.0	-9.4	+8.1	-8.1
116.0	0.1610	+3.9	-9.4	+8.1	-8.1
116.5	0.1590	+3.9	-9.3	+8.1	-8.1
117.0	0.1571	+3.9	-9.3	+8.1	-8.1
117.5	0.1552	+3.9	-9.3	+8.1	-8.1
118.0	0.1533	+3.9	-9.3	+8.1	-8.1
118.5	0.1514	+3.9	-9.3	+8.1	-8.1
119.0	0.1495	+3.9	-9.3	+8.1	-8.1
119.5	0.1477	+3.9	-9.3	+8.1	-8.1
120.0	0.1459	+3.9	-9.3	+8.1	-8.1
120.1	0.1456	+3.9	-9.3	+8.1	-8.1
120.2	0.1452	+3.9	-9.3	+8.1	-8.1
120.3	0.1449	+3.9	-9.3	+8.1	-8.1
120.4	0.1445	+3.9	-9.3	+8.1	-8.1
120.5	0.1441	+3.9	-9.3	+8.1	-8.1
120.6	0.1438	+3.9	-9.3	+8.1	-8.1
120.7	0.1434	+3.9	-9.3	+8.1	-8.1
120.8	0.1431	+3.9	-9.3	+8.1	-8.1
120.9	0.1427	+3.9	-9.3	+8.1	-8.1
121.0	0.1424	+3.9	-9.3	+8.1	-8.1
121.1	0.1420	+3.9	-9.3	+8.1	-8.1
121.2	0.1417	+3.9	-9.3	+8.1	-8.1
121.3	0.1414	+3.8	-9.3	+8.1	-8.1
121.4	0.1410	+3.8	-9.3	+8.1	-8.1
121.5	0.1407	+3.8	-9.3	+8.1	-8.1
121.6	0.1403	+3.8	-9.3	+8.1	-8.1
121.7	0.1400	+3.8	-9.3	+8.1	-8.1
121.8	0.1396	+3.8	-9.3	+8.1	-8.1
121.9	0.1393	+3.8	-9.3	+8.1	-8.1
122.0	0.1390	+3.8	-9.3	+8.1	-8.1
122.1	0.1386	+3.8	-9.3	+8.1	-8.1
122.2	0.1383	+3.8	-9.3	+8.1	-8.1
122.3	0.1380	+3.8	-9.3	+8.1	-8.1
122.4	0.1376	+3.8	-9.3	+8.1	-8.1
122.5	0.1373	+3.8	-9.3	+8.1	-8.1
122.6	0.1370	+3.8	-9.3	+8.1	-8.1
122.7	0.1366	+3.8	-9.3	+8.1	-8.1
122.8	0.1363	+3.8	-9.3	+8.1	-8.1
122.9	0.1360	+3.8	-9.3	+8.1	-8.1
123.0	0.1356	+3.8	-9.3	+8.1	-8.1
123.1	0.1353	+3.8	-9.3	+8.1	-8.1
123.2	0.1350	+3.8	-9.3	+8.1	-8.1
123.3	0.1347	+3.8	-9.3	+8.1	-8.1
123.4	0.1343	+3.8	-9.3	+8.1	-8.1
123.5	0.1340	+3.8	-9.3	+8.1	-8.1
123.6	0.1337	+3.8	-9.3	+8.1	-8.1
123.7	0.1334	+3.8	-9.3	+8.1	-8.1
123.8	0.1330	+3.8	-9.3	+8.1	-8.1
123.9	0.1327	+3.8	-9.3	+8.1	-8.1
124.0	0.1324	+3.8	-9.3	+8.1	-8.1

124.1	0.1321	+3.8	-9.3	+8.1	-8.1
124.2	0.1318	+3.8	-9.3	+8.1	-8.1
124.3	0.1314	+3.8	-9.3	+8.1	-8.1
124.4	0.1311	+3.8	-9.3	+8.1	-8.1
124.5	0.1308	+3.8	-9.3	+8.1	-8.1
124.6	0.1305	+3.8	-9.3	+8.1	-8.1
124.7	0.1302	+3.8	-9.3	+8.1	-8.1
124.8	0.1299	+3.8	-9.3	+8.1	-8.1
124.9	0.1296	+3.8	-9.3	+8.1	-8.1
125.0	0.1293	+3.8	-9.3	+8.1	-8.1
125.1	0.1290	+3.8	-9.3	+8.1	-8.1
125.2	0.1286	+3.8	-9.3	+8.1	-8.1
125.3	0.1283	+3.8	-9.3	+8.1	-8.1
125.4	0.1280	+3.8	-9.3	+8.1	-8.1
125.5	0.1277	+3.8	-9.3	+8.1	-8.1
125.6	0.1274	+3.8	-9.3	+8.1	-8.1
125.7	0.1271	+3.8	-9.3	+8.1	-8.1
125.8	0.1268	+3.8	-9.3	+8.1	-8.1
125.9	0.1265	+3.8	-9.3	+8.1	-8.1
126.0	0.1262	+3.8	-9.3	+8.1	-8.1
126.1	0.1259	+3.8	-9.3	+8.1	-8.1
126.2	0.1256	+3.8	-9.3	+8.1	-8.1
126.3	0.1253	+3.8	-9.3	+8.1	-8.1
126.4	0.1250	+3.8	-9.3	+8.1	-8.1
126.5	0.1247	+3.8	-9.3	+8.1	-8.1
126.6	0.1245	+3.8	-9.3	+8.1	-8.1
126.7	0.1242	+3.8	-9.3	+8.1	-8.1
126.8	0.1239	+3.8	-9.3	+8.1	-8.1
126.9	0.1236	+3.8	-9.3	+8.1	-8.1
127.0	0.1233	+3.8	-9.3	+8.1	-8.1
127.1	0.1230	+3.8	-9.3	+8.1	-8.1
127.2	0.1227	+3.7	-9.3	+8.1	-8.1
127.3	0.1224	+3.7	-9.3	+8.1	-8.1
127.4	0.1221	+3.7	-9.3	+8.1	-8.1
127.5	0.1218	+3.7	-9.3	+8.1	-8.1
127.6	0.1216	+3.7	-9.3	+8.1	-8.1
127.7	0.1213	+3.7	-9.3	+8.1	-8.1
127.8	0.1210	+3.7	-9.3	+8.1	-8.1
127.9	0.1207	+3.7	-9.3	+8.1	-8.1
128.0	0.1204	+3.7	-9.3	+8.1	-8.1
128.1	0.1201	+3.7	-9.3	+8.1	-8.1
128.2	0.1199	+3.7	-9.3	+8.1	-8.1
128.3	0.1196	+3.7	-9.3	+8.1	-8.1
128.4	0.1193	+3.7	-9.3	+8.1	-8.1
128.5	0.1190	+3.7	-9.2	+8.1	-8.1
128.6	0.1187	+3.7	-9.2	+8.1	-8.1
128.7	0.1185	+3.7	-9.2	+8.1	-8.1
128.8	0.1182	+3.7	-9.2	+8.1	-8.1
128.9	0.1179	+3.7	-9.2	+8.1	-8.1
129.0	0.1176	+3.7	-9.2	+8.1	-8.1

129.1	0.1174	+3.7	-9.2	+8.1	-8.1
129.2	0.1171	+3.7	-9.2	+8.1	-8.1
129.3	0.1168	+3.7	-9.2	+8.1	-8.1
129.4	0.1166	+3.7	-9.2	+8.1	-8.1
129.5	0.1163	+3.7	-9.2	+8.1	-8.1
129.6	0.1160	+3.7	-9.2	+8.1	-8.1
129.7	0.1157	+3.7	-9.2	+8.1	-8.1
129.8	0.1155	+3.7	-9.2	+8.1	-8.1
129.9	0.1152	+3.7	-9.2	+8.1	-8.1
130.0	0.1149	+3.7	-9.2	+8.1	-8.1
130.5	0.1136	+3.7	-9.2	+8.1	-8.1
131.0	0.1123	+3.7	-9.2	+8.1	-8.1
131.5	0.1110	+3.7	-9.2	+8.1	-8.1
132.0	0.1097	+3.7	-9.2	+8.1	-8.1
132.5	0.1085	+3.7	-9.2	+8.1	-8.1
133.0	0.1072	+3.7	-9.2	+8.1	-8.1
133.5	0.1060	+3.6	-9.2	+8.1	-8.1
134.0	0.1048	+3.6	-9.2	+8.1	-8.1
134.5	0.1036	+3.6	-9.2	+8.1	-8.1
135.0	0.1024	+3.6	-9.2	+8.1	-8.1
135.5	0.1013	+3.6	-9.2	+8.1	-8.1
136.0	0.1001	+3.6	-9.2	+8.1	-8.1
136.5	0.09898	+3.6	-9.2	+8.2	-8.2
137.0	0.09787	+3.6	-9.2	+8.2	-8.2
137.5	0.09677	+3.6	-9.2	+8.2	-8.2
138.0	0.09569	+3.6	-9.2	+8.2	-8.2
138.5	0.09462	+3.6	-9.2	+8.2	-8.2
139.0	0.09356	+3.6	-9.2	+8.2	-8.2
139.5	0.09252	+3.6	-9.2	+8.2	-8.2
140.0	0.09150	+3.6	-9.2	+8.2	-8.2
140.5	0.09049	+3.5	-9.2	+8.2	-8.2
141.0	0.08949	+3.5	-9.2	+8.2	-8.2
141.5	0.08851	+3.5	-9.2	+8.2	-8.2
142.0	0.08754	+3.5	-9.2	+8.2	-8.2
142.5	0.08659	+3.5	-9.2	+8.2	-8.2
143.0	0.08564	+3.5	-9.2	+8.2	-8.2
143.5	0.08471	+3.5	-9.2	+8.2	-8.2
144.0	0.08379	+3.5	-9.2	+8.2	-8.2
144.5	0.08289	+3.5	-9.2	+8.2	-8.2
145.0	0.08199	+3.5	-9.2	+8.2	-8.2
145.5	0.08111	+3.5	-9.2	+8.2	-8.2
146.0	0.08023	+3.5	-9.1	+8.2	-8.2
146.5	0.07937	+3.5	-9.1	+8.2	-8.2
147.0	0.07851	+3.5	-9.1	+8.2	-8.2
147.5	0.07767	+3.5	-9.1	+8.2	-8.2
148.0	0.07684	+3.5	-9.1	+8.2	-8.2
148.5	0.07602	+3.5	-9.1	+8.2	-8.2
149.0	0.07521	+3.5	-9.1	+8.2	-8.2
149.5	0.07440	+3.4	-9.1	+8.2	-8.2
150.0	0.07361	+3.4	-9.1	+8.2	-8.2

152.0	0.07053	+3.4	-9.1	+8.2	-8.2
154.0	0.06760	+3.4	-9.1	+8.2	-8.2
156.0	0.06485	+3.4	-9.1	+8.2	-8.2
158.0	0.06225	+3.4	-9.1	+8.3	-8.3
160.0	0.05978	+3.4	-9.1	+8.3	-8.3
162.0	0.05743	+3.4	-9.1	+8.3	-8.3
164.0	0.05519	+3.3	-9.1	+8.3	-8.3
165.0	0.05411	+3.3	-9.1	+8.3	-8.3
166.0	0.05304	+3.4	-9.1	+8.3	-8.3
168.0	0.05099	+3.4	-9.1	+8.3	-8.3
170.0	0.04904	+3.4	-9.1	+8.3	-8.3
172.0	0.04719	+3.4	-9.1	+8.3	-8.3
174.0	0.04543	+3.4	-9.1	+8.3	-8.3
175.0	0.04458	+3.4	-9.1	+8.3	-8.3
176.0	0.04375	+3.4	-9.1	+8.3	-8.3
178.0	0.04215	+3.4	-9.1	+8.4	-8.4
180.0	0.04061	+3.3	-9.1	+8.4	-8.4
182.0	0.03913	+3.3	-9.1	+8.4	-8.4
184.0	0.03772	+3.3	-9.1	+8.4	-8.4
185.0	0.03704	+3.3	-9.1	+8.4	-8.4
186.0	0.03638	+3.3	-9.1	+8.4	-8.4
188.0	0.03511	+3.4	-9.1	+8.4	-8.4
190.0	0.03390	+3.4	-9.1	+8.4	-8.4
192.0	0.03274	+3.4	-9.2	+8.4	-8.4
194.0	0.03164	+3.4	-9.2	+8.4	-8.4
195.0	0.03110	+3.4	-9.2	+8.5	-8.5
196.0	0.03058	+3.4	-9.2	+8.5	-8.5
198.0	0.02956	+3.4	-9.2	+8.5	-8.5
200.0	0.02858	+3.4	-9.2	+8.5	-8.5
202.0	0.02765	+3.5	-9.2	+8.5	-8.5
204.0	0.02676	+3.5	-9.2	+8.5	-8.5
206.0	0.02591	+3.5	-9.3	+8.5	-8.5
208.0	0.02509	+3.5	-9.3	+8.6	-8.6
210.0	0.02430	+3.6	-9.3	+8.6	-8.6
212.0	0.02354	+3.6	-9.3	+8.6	-8.6
214.0	0.02281	+3.6	-9.4	+8.6	-8.6
216.0	0.02211	+3.7	-9.4	+8.6	-8.6
218.0	0.02144	+3.7	-9.4	+8.6	-8.6
220.0	0.02080	+3.8	-9.4	+8.6	-8.6
222.0	0.02018	+3.8	-9.5	+8.7	-8.7
224.0	0.01959	+3.9	-9.5	+8.7	-8.7
226.0	0.01903	+3.9	-9.5	+8.7	-8.7
228.0	0.01848	+4.0	-9.6	+8.7	-8.7
230.0	0.01796	+4.0	-9.6	+8.7	-8.7
232.0	0.01745	+4.0	-9.6	+8.8	-8.8
234.0	0.01696	+4.0	-9.6	+8.8	-8.8
236.0	0.01649	+4.0	-9.6	+8.8	-8.8
238.0	0.01604	+4.0	-9.6	+8.8	-8.8
240.0	0.01561	+4.1	-9.7	+8.8	-8.8
242.0	0.01519	+4.1	-9.7	+8.8	-8.8

244.0	0.01479	+4.2	-9.7	+8.8	-8.8
246.0	0.01441	+4.3	-9.8	+8.9	-8.9
248.0	0.01404	+4.3	-9.8	+8.9	-8.9
250.0	0.01368	+4.4	-9.9	+8.9	-8.9
252.0	0.01333	+4.5	-9.9	+8.9	-8.9
254.0	0.01300	+4.6	-10.0	+8.9	-8.9
256.0	0.01268	+4.6	-10.0	+9.0	-9.0
258.0	0.01237	+4.7	-10.0	+9.0	-9.0
260.0	0.01206	+4.8	-10.1	+9.0	-9.0
262.0	0.01177	+4.9	-10.1	+9.0	-9.0
264.0	0.01149	+4.9	-10.2	+9.0	-9.0
266.0	0.01121	+5.0	-10.2	+9.0	-9.0
268.0	0.01095	+5.1	-10.3	+9.1	-9.1
270.0	0.01070	+5.2	-10.3	+9.1	-9.1
272.0	0.01045	+5.3	-10.4	+9.1	-9.1
274.0	0.01021	+5.4	-10.4	+9.1	-9.1
276.0	0.009984	+5.4	-10.5	+9.1	-9.1
278.0	0.009762	+5.5	-10.5	+9.2	-9.2
280.0	0.009547	+5.6	-10.6	+9.2	-9.2
282.0	0.009337	+5.7	-10.6	+9.2	-9.2
284.0	0.009133	+5.8	-10.7	+9.2	-9.2
286.0	0.008936	+5.9	-10.7	+9.2	-9.2
288.0	0.008744	+6.0	-10.8	+9.3	-9.3
290.0	0.008559	+6.1	-10.8	+9.3	-9.3
292.0	0.008381	+6.2	-10.9	+9.3	-9.3
294.0	0.008208	+6.2	-11.0	+9.3	-9.3
296.0	0.008041	+6.3	-11.0	+9.3	-9.3
298.0	0.007879	+6.4	-11.1	+9.4	-9.4
300.0	0.007721	+6.5	-11.1	+9.4	-9.4
305.0	0.007347	+6.5	-11.1	+9.5	-9.5
310.0	0.006999	+6.4	-11.1	+9.6	-9.6
315.0	0.006675	+6.2	-11.1	+9.7	-9.7
320.0	0.006371	+6.1	-11.1	+9.8	-9.8
325.0	0.006087	+6.2	-11.1	+10.0	-10.0
330.0	0.005821	+6.3	-11.2	+10.1	-10.1
335.0	0.005571	+6.5	-11.3	+10.2	-10.2
340.0	0.005337	+6.7	-11.4	+10.4	-10.4
345.0	0.005116	+6.8	-11.5	+10.5	-10.5
350.0	0.004909	+6.9	-11.6	+10.7	-10.7
360.0	0.004529	+7.2	-11.8	+10.9	-10.9
370.0	0.004192	+7.4	-12.0	+11.2	-11.2
380.0	0.003889	+7.7	-12.1	+11.4	-11.4
390.0	0.003615	+7.9	-12.3	+11.7	-11.7
400.0	0.003366	+8.1	-12.5	+12.0	-12.0

bbH Process NEW

- The cross sections are the Santander matched numbers with 5FS (NNLO) and 4FS (NLO) (see Section 12.2.2 in CERN Report 2).
- 4FS includes $Y_t * Y_b$ term (O(10%) negative correction) in addition to Y_b^2 .

• 5FS and 4FS cross sections agree at O(10%) level for light Higgs of $m_H=125$ GeV.

m_H (GeV)	Cross Section (pb)	+QCD Scale %	-QCD Scale %	+(PDF+ α_s) %	-(PDF+ α_s) %
80.0	0.8601	+15.1	-20.5	+6.5	-6.5
81.0	0.8302	+14.9	-20.3	+6.5	-6.5
82.0	0.8008	+14.7	-20.2	+6.5	-6.5
83.0	0.7720	+14.5	-20.0	+6.5	-6.5
84.0	0.7437	+14.2	-19.9	+6.5	-6.5
85.0	0.7160	+14.0	-19.8	+6.5	-6.5
86.0	0.6917	+13.9	-19.6	+6.4	-6.4
87.0	0.6680	+13.8	-19.5	+6.4	-6.4
88.0	0.6446	+13.6	-19.4	+6.4	-6.4
89.0	0.6218	+13.5	-19.3	+6.4	-6.4
90.0	0.5994	+13.4	-19.1	+6.4	-6.4
91.0	0.5796	+13.3	-19.0	+6.4	-6.4
92.0	0.5603	+13.2	-18.8	+6.3	-6.3
93.0	0.5414	+13.1	-18.6	+6.3	-6.3
94.0	0.5228	+12.9	-18.4	+6.3	-6.3
95.0	0.5046	+12.8	-18.3	+6.3	-6.3
96.0	0.4886	+12.7	-18.1	+6.3	-6.3
97.0	0.4731	+12.7	-18.0	+6.3	-6.3
98.0	0.4578	+12.6	-17.8	+6.3	-6.3
99.0	0.4428	+12.5	-17.7	+6.4	-6.4
100.0	0.4281	+12.4	-17.5	+6.4	-6.4
101.0	0.4151	+12.3	-17.4	+6.3	-6.3
102.0	0.4023	+12.1	-17.3	+6.3	-6.3
103.0	0.3898	+12.0	-17.2	+6.3	-6.3
104.0	0.3775	+11.8	-17.1	+6.3	-6.3
105.0	0.3655	+11.7	-16.9	+6.2	-6.2
106.0	0.3546	+11.6	-16.8	+6.2	-6.2
107.0	0.3440	+11.6	-16.7	+6.2	-6.2
108.0	0.3336	+11.6	-16.6	+6.2	-6.2
109.0	0.3234	+11.6	-16.5	+6.2	-6.2
110.0	0.3134	+11.5	-16.4	+6.2	-6.2
110.5	0.3089	+11.5	-16.3	+6.2	-6.2
111.0	0.3044	+11.4	-16.3	+6.2	-6.2
111.5	0.3000	+11.4	-16.2	+6.2	-6.2
112.0	0.2956	+11.4	-16.1	+6.2	-6.2
112.5	0.2913	+11.3	-16.1	+6.2	-6.2
113.0	0.2870	+11.3	-16.0	+6.2	-6.2
113.5	0.2827	+11.3	-16.0	+6.2	-6.2
114.0	0.2785	+11.2	-15.9	+6.2	-6.2
114.5	0.2743	+11.2	-15.8	+6.2	-6.2
115.0	0.2702	+11.1	-15.8	+6.2	-6.2
115.5	0.2664	+11.1	-15.7	+6.2	-6.2
116.0	0.2626	+11.0	-15.7	+6.1	-6.1
116.5	0.2589	+11.0	-15.6	+6.1	-6.1
117.0	0.2552	+10.9	-15.6	+6.1	-6.1
117.5	0.2516	+10.8	-15.5	+6.1	-6.1
118.0	0.2480	+10.8	-15.5	+6.2	-6.2
118.5	0.2444	+10.7	-15.4	+6.2	-6.2

119.0	0.2409	+10.7	-15.3	+6.2	-6.2
119.5	0.2373	+10.6	-15.3	+6.2	-6.2
120.0	0.2339	+10.5	-15.2	+6.2	-6.2
120.1	0.2332	+10.5	-15.2	+6.2	-6.2
120.2	0.2326	+10.5	-15.2	+6.2	-6.2
120.3	0.2320	+10.5	-15.2	+6.2	-6.2
120.4	0.2313	+10.5	-15.2	+6.1	-6.1
120.5	0.2307	+10.5	-15.2	+6.1	-6.1
120.6	0.2301	+10.5	-15.2	+6.1	-6.1
120.7	0.2294	+10.5	-15.2	+6.1	-6.1
120.8	0.2288	+10.5	-15.2	+6.1	-6.1
120.9	0.2282	+10.5	-15.2	+6.1	-6.1
121.0	0.2276	+10.5	-15.2	+6.1	-6.1
121.1	0.2269	+10.5	-15.2	+6.1	-6.1
121.2	0.2263	+10.5	-15.1	+6.1	-6.1
121.3	0.2257	+10.5	-15.1	+6.1	-6.1
121.4	0.2251	+10.5	-15.1	+6.1	-6.1
121.5	0.2245	+10.5	-15.1	+6.1	-6.1
121.6	0.2238	+10.5	-15.1	+6.1	-6.1
121.7	0.2232	+10.5	-15.1	+6.1	-6.1
121.8	0.2226	+10.5	-15.1	+6.1	-6.1
121.9	0.2220	+10.4	-15.1	+6.1	-6.1
122.0	0.2214	+10.4	-15.1	+6.1	-6.1
122.1	0.2208	+10.4	-15.1	+6.1	-6.1
122.2	0.2202	+10.4	-15.1	+6.1	-6.1
122.3	0.2195	+10.4	-15.1	+6.1	-6.1
122.4	0.2189	+10.4	-15.0	+6.2	-6.2
122.5	0.2183	+10.4	-15.0	+6.2	-6.2
122.6	0.2177	+10.4	-15.0	+6.2	-6.2
122.7	0.2171	+10.4	-15.0	+6.2	-6.2
122.8	0.2165	+10.4	-15.0	+6.2	-6.2
122.9	0.2159	+10.4	-15.0	+6.2	-6.2
123.0	0.2153	+10.4	-15.0	+6.2	-6.2
123.1	0.2147	+10.4	-15.0	+6.1	-6.1
123.2	0.2141	+10.4	-15.0	+6.1	-6.1
123.3	0.2135	+10.4	-15.0	+6.1	-6.1
123.4	0.2129	+10.4	-15.0	+6.1	-6.1
123.5	0.2123	+10.4	-14.9	+6.1	-6.1
123.6	0.2117	+10.4	-14.9	+6.1	-6.1
123.7	0.2111	+10.4	-14.9	+6.1	-6.1
123.8	0.2105	+10.4	-14.9	+6.1	-6.1
123.9	0.2099	+10.4	-14.9	+6.1	-6.1
124.0	0.2094	+10.4	-14.9	+6.2	-6.2
124.1	0.2088	+10.4	-14.9	+6.1	-6.1
124.2	0.2082	+10.4	-14.9	+6.1	-6.1
124.3	0.2076	+10.3	-14.9	+6.1	-6.1
124.4	0.2070	+10.3	-14.9	+6.1	-6.1
124.5	0.2064	+10.3	-14.9	+6.1	-6.1
124.6	0.2058	+10.3	-14.9	+6.1	-6.1
124.7	0.2053	+10.3	-14.8	+6.1	-6.1

124.8	0.2047	+10.3	-14.8	+6.1	-6.1
124.9	0.2041	+10.3	-14.8	+6.2	-6.2
125.0	0.2035	+10.3	-14.8	+6.2	-6.2
125.1	0.2030	+10.3	-14.8	+6.2	-6.2
125.2	0.2024	+10.3	-14.8	+6.1	-6.1
125.3	0.2019	+10.3	-14.8	+6.1	-6.1
125.4	0.2013	+10.3	-14.8	+6.1	-6.1
125.5	0.2008	+10.4	-14.9	+6.1	-6.1
125.6	0.2002	+10.3	-14.8	+6.1	-6.1
125.7	0.1996	+10.3	-14.8	+6.1	-6.1
125.8	0.1991	+10.3	-14.8	+6.1	-6.1
125.9	0.1985	+10.3	-14.8	+6.1	-6.1
126.0	0.1979	+10.3	-14.8	+6.1	-6.1
126.1	0.1974	+10.3	-14.8	+6.1	-6.1
126.2	0.1969	+10.3	-14.8	+6.1	-6.1
126.3	0.1964	+10.2	-14.8	+6.1	-6.1
126.4	0.1959	+10.2	-14.8	+6.1	-6.1
126.5	0.1953	+10.2	-14.8	+6.1	-6.1
126.6	0.1948	+10.2	-14.8	+6.1	-6.1
126.7	0.1943	+10.2	-14.8	+6.1	-6.1
126.8	0.1938	+10.1	-14.8	+6.1	-6.1
126.9	0.1933	+10.1	-14.7	+6.1	-6.1
127.0	0.1928	+10.1	-14.7	+6.1	-6.1
127.1	0.1923	+10.1	-14.7	+6.1	-6.1
127.2	0.1917	+10.1	-14.7	+6.1	-6.1
127.3	0.1912	+10.0	-14.7	+6.1	-6.1
127.4	0.1907	+10.0	-14.7	+6.0	-6.0
127.5	0.1902	+10.0	-14.7	+6.0	-6.0
127.6	0.1897	+10.0	-14.7	+6.0	-6.0
127.7	0.1892	+10.0	-14.7	+6.0	-6.0
127.8	0.1887	+9.9	-14.7	+6.0	-6.0
127.9	0.1882	+9.9	-14.7	+6.0	-6.0
128.0	0.1877	+9.9	-14.7	+6.0	-6.0
128.1	0.1872	+9.9	-14.7	+6.0	-6.0
128.2	0.1867	+9.9	-14.7	+6.0	-6.0
128.3	0.1862	+9.8	-14.7	+6.0	-6.0
128.4	0.1857	+9.8	-14.7	+6.0	-6.0
128.5	0.1852	+9.8	-14.7	+6.0	-6.0
128.6	0.1847	+9.8	-14.7	+6.0	-6.0
128.7	0.1842	+9.7	-14.7	+6.0	-6.0
128.8	0.1837	+9.7	-14.7	+6.0	-6.0
128.9	0.1832	+9.7	-14.6	+6.0	-6.0
129.0	0.1827	+9.7	-14.6	+6.0	-6.0
129.1	0.1822	+9.7	-14.6	+6.0	-6.0
129.2	0.1817	+9.6	-14.6	+6.0	-6.0
129.3	0.1812	+9.6	-14.6	+6.1	-6.1
129.4	0.1807	+9.6	-14.6	+6.1	-6.1
129.5	0.1802	+9.6	-14.6	+6.1	-6.1
129.6	0.1798	+9.5	-14.6	+6.1	-6.1
129.7	0.1793	+9.5	-14.6	+6.1	-6.1

129.8	0.1788	+9.5	-14.6	+6.1	-6.1
129.9	0.1783	+9.5	-14.6	+6.1	-6.1
130.0	0.1778	+9.5	-14.6	+6.0	-6.0
130.5	0.1755	+9.5	-14.5	+6.0	-6.0
131.0	0.1732	+9.6	-14.5	+6.0	-6.0
131.5	0.1710	+9.6	-14.5	+6.0	-6.0
132.0	0.1688	+9.7	-14.4	+6.0	-6.0
132.5	0.1666	+9.8	-14.4	+6.0	-6.0
133.0	0.1644	+9.8	-14.3	+6.0	-6.0
133.5	0.1622	+9.9	-14.3	+6.0	-6.0
134.0	0.1600	+10.0	-14.2	+6.0	-6.0
134.5	0.1579	+10.0	-14.2	+6.0	-6.0
135.0	0.1558	+10.1	-14.1	+6.0	-6.0
135.5	0.1538	+10.1	-14.1	+6.0	-6.0
136.0	0.1519	+10.1	-14.1	+6.0	-6.0
136.5	0.1499	+10.0	-14.0	+6.0	-6.0
137.0	0.1480	+10.0	-14.0	+6.0	-6.0
137.5	0.1461	+10.0	-14.0	+6.0	-6.0
138.0	0.1442	+9.9	-13.9	+6.0	-6.0
138.5	0.1423	+9.9	-13.9	+6.0	-6.0
139.0	0.1405	+9.9	-13.8	+6.0	-6.0
139.5	0.1386	+9.8	-13.8	+6.0	-6.0
140.0	0.1368	+9.8	-13.8	+6.0	-6.0
140.5	0.1352	+9.8	-13.7	+6.0	-6.0
141.0	0.1335	+9.8	-13.7	+6.0	-6.0
141.5	0.1319	+9.8	-13.7	+6.0	-6.0
142.0	0.1303	+9.8	-13.7	+6.0	-6.0
142.5	0.1288	+9.8	-13.7	+6.1	-6.1
143.0	0.1272	+9.8	-13.7	+6.0	-6.0
143.5	0.1257	+9.7	-13.6	+6.0	-6.0
144.0	0.1241	+9.7	-13.6	+6.0	-6.0
144.5	0.1226	+9.7	-13.6	+6.0	-6.0
145.0	0.1211	+9.7	-13.6	+6.0	-6.0
145.5	0.1196	+9.7	-13.5	+6.0	-6.0
146.0	0.1182	+9.7	-13.5	+6.0	-6.0
146.5	0.1167	+9.6	-13.4	+6.0	-6.0
147.0	0.1153	+9.6	-13.4	+6.0	-6.0
147.5	0.1139	+9.6	-13.3	+6.0	-6.0
148.0	0.1125	+9.5	-13.2	+6.0	-6.0
148.5	0.1111	+9.5	-13.2	+6.0	-6.0
149.0	0.1097	+9.4	-13.1	+6.0	-6.0
149.5	0.1083	+9.4	-13.1	+6.0	-6.0
150.0	0.1070	+9.4	-13.0	+6.0	-6.0
152.0	0.1020	+9.3	-12.9	+6.0	-6.0
154.0	0.09722	+9.2	-12.8	+6.0	-6.0
156.0	0.09273	+9.1	-12.6	+6.0	-6.0
158.0	0.08854	+9.1	-12.5	+6.0	-6.0
160.0	0.08449	+9.0	-12.4	+6.0	-6.0
162.0	0.08078	+8.9	-12.3	+5.9	-5.9
164.0	0.07721	+8.8	-12.3	+5.9	-5.9

165.0	0.07546	+8.8	-12.2	+5.8	-5.8
166.0	0.07383	+8.8	-12.2	+5.8	-5.8
168.0	0.07064	+8.8	-12.1	+5.8	-5.8
170.0	0.06756	+8.8	-12.0	+5.9	-5.9
172.0	0.06468	+8.7	-11.9	+5.9	-5.9
174.0	0.06190	+8.6	-11.7	+5.9	-5.9
175.0	0.06054	+8.5	-11.6	+5.9	-5.9
176.0	0.05930	+8.5	-11.6	+5.9	-5.9
178.0	0.05690	+8.4	-11.6	+5.9	-5.9
180.0	0.05458	+8.3	-11.6	+5.8	-5.8
182.0	0.05231	+8.2	-11.5	+5.8	-5.8
184.0	0.05012	+8.1	-11.3	+5.9	-5.9
185.0	0.04905	+8.0	-11.3	+5.9	-5.9
186.0	0.04806	+8.0	-11.2	+5.8	-5.8
188.0	0.04614	+8.0	-11.1	+5.8	-5.8
190.0	0.04428	+8.0	-11.0	+5.7	-5.7
192.0	0.04256	+8.0	-11.0	+5.8	-5.8
194.0	0.04090	+7.9	-10.9	+5.8	-5.8
195.0	0.04009	+7.9	-10.9	+5.9	-5.9
196.0	0.03929	+7.9	-10.8	+5.9	-5.9
198.0	0.03774	+7.8	-10.7	+5.8	-5.8
200.0	0.03623	+7.8	-10.6	+5.8	-5.8
202.0	0.03495	+7.8	-10.6	+5.8	-5.8
204.0	0.03370	+7.8	-10.5	+5.8	-5.8
206.0	0.03249	+7.8	-10.5	+5.8	-5.8
208.0	0.03131	+7.9	-10.5	+5.8	-5.8
210.0	0.03018	+7.9	-10.4	+5.8	-5.8
212.0	0.02907	+7.9	-10.4	+5.8	-5.8
214.0	0.02800	+7.9	-10.4	+5.8	-5.8
216.0	0.02696	+7.9	-10.4	+5.8	-5.8
218.0	0.02595	+7.9	-10.3	+5.8	-5.8
220.0	0.02496	+7.9	-10.3	+5.8	-5.8
222.0	0.02412	+7.9	-10.2	+5.8	-5.8
224.0	0.02331	+7.8	-10.2	+5.8	-5.8
226.0	0.02252	+7.8	-10.1	+5.8	-5.8
228.0	0.02175	+7.8	-10.1	+5.8	-5.8
230.0	0.02100	+7.8	-10.0	+5.7	-5.7
232.0	0.02028	+7.7	-10.0	+5.7	-5.7
234.0	0.01957	+7.7	-9.9	+5.7	-5.7
236.0	0.01888	+7.6	-9.8	+5.7	-5.7
238.0	0.01822	+7.6	-9.7	+5.7	-5.7
240.0	0.01756	+7.5	-9.7	+5.7	-5.7
242.0	0.01701	+7.6	-9.6	+5.8	-5.8
244.0	0.01646	+7.6	-9.6	+5.8	-5.8
246.0	0.01594	+7.7	-9.6	+5.8	-5.8
248.0	0.01543	+7.7	-9.5	+5.9	-5.9
250.0	0.01493	+7.8	-9.5	+5.9	-5.9
252.0	0.01444	+7.8	-9.4	+5.9	-5.9
254.0	0.01397	+7.9	-9.4	+5.9	-5.9
256.0	0.01351	+7.9	-9.3	+5.9	-5.9

258.0	0.01306	+8.0	-9.3	+6.0	-6.0
260.0	0.01262	+8.0	-9.2	+6.0	-6.0
262.0	0.01224	+8.0	-9.2	+6.0	-6.0
264.0	0.01187	+8.0	-9.2	+5.9	-5.9
266.0	0.01151	+8.0	-9.1	+5.9	-5.9
268.0	0.01116	+7.9	-9.1	+5.9	-5.9
270.0	0.01082	+7.9	-9.1	+5.9	-5.9
272.0	0.01049	+7.9	-9.0	+5.9	-5.9
274.0	0.01017	+7.8	-9.0	+5.8	-5.8
276.0	0.009851	+7.8	-9.0	+5.8	-5.8
278.0	0.009542	+7.8	-8.9	+5.8	-5.8
280.0	0.009241	+7.7	-8.9	+5.7	-5.7
282.0	0.008978	+7.7	-8.8	+5.8	-5.8
284.0	0.008720	+7.8	-8.8	+5.8	-5.8
286.0	0.008470	+7.8	-8.8	+5.8	-5.8
288.0	0.008225	+7.9	-8.8	+5.8	-5.8
290.0	0.007987	+7.9	-8.8	+5.8	-5.8
292.0	0.007755	+7.9	-8.8	+5.9	-5.9
294.0	0.007528	+7.9	-8.7	+5.9	-5.9
296.0	0.007306	+8.0	-8.7	+5.9	-5.9
298.0	0.007090	+8.0	-8.7	+6.0	-6.0
300.0	0.006878	+8.0	-8.6	+6.0	-6.0
305.0	0.006421	+8.0	-8.6	+6.0	-6.0
310.0	0.005991	+8.0	-8.7	+6.0	-6.0
315.0	0.005585	+8.0	-8.7	+5.9	-5.9
320.0	0.005203	+7.9	-8.6	+5.9	-5.9
325.0	0.004871	+8.0	-8.6	+5.9	-5.9
330.0	0.004558	+8.1	-8.6	+5.9	-5.9
335.0	0.004263	+8.2	-8.5	+6.0	-6.0
340.0	0.003983	+8.2	-8.4	+6.0	-6.0
345.0	0.003740	+8.2	-8.4	+6.0	-6.0
350.0	0.003509	+8.2	-8.4	+6.1	-6.1
360.0	0.003084	+8.2	-8.3	+6.2	-6.2
370.0	0.002730	+8.5	-8.3	+6.2	-6.2
380.0	0.002411	+8.7	-8.1	+6.3	-6.3
390.0	0.002142	+9.0	-8.1	+6.4	-6.4
400.0	0.001899	+9.2	-8.1	+6.6	-6.6

- Table below is the 5FS (NNLO) and 4FS (NLO) with Santander matching, but 4FS with Y_b^2 only and $Y_t^*Y_b$ term is not included.
- 5FS and 4FS cross sections agree very well below 5% level for light Higgs of $m_H=125$ GeV as discussed in Section 12.2.2 in CERN Report 2.

m_H (GeV)	Cross Section (pb)	+QCD Scale %	-QCD Scale %	+(PDF+ α_s) %	-(PDF+ α_s) %
125.0	0.2106	+13.0	-23.0	+6.4	-6.4
125.5	0.2076	+12.0	-23.0	+6.6	-6.6
126.0	0.2047	+13.0	-23.0	+6.4	-6.4

-- ChiaraMariotti, ReiTanaka - 10-Sep-2013

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