1 By process

1.1 $HH \rightarrow W^+W^-\gamma$

1.2 $HH \rightarrow W^+e^-\bar{\nu}_e$

1.3 $HH \rightarrow z\nu_e\bar{\nu}_e$

1.4 $HH \rightarrow ze^+e^-$

1.5 $HW^- \rightarrow \bar{t}b$

interference square $mod1 \quad mod2 \quad 1 - mod2/mod1$ mod1 $mod2 \quad 1 - mod2/mod1$ 0 0 0 $0.3677 \quad 0.3677$ sm1.6 $HW^- \rightarrow \gamma e^- \bar{\nu}_e$ interference square $mod1 \quad mod2 \quad 1 - mod2/mod1$ mod1 mod2 1 - mod2/mod10 $1.275 \cdot 10^{-7}$ $1.275 \cdot 10^{-7}$ 0 0 sm1.7 $HW^- \rightarrow \mu^- \bar{\nu}_{\mu}$ interference square $mod1 \quad mod2 \quad 1 - mod2/mod1$ mod2 1 - mod2/mod1mod1 $0.007437 \quad 0.007437 \quad -1.345 \cdot 10^{-8}$ 0 0 0 sm1.8 $Hz \to \mu^{+}\mu^{-}$ interference square $mod1 \quad mod2 \quad 1 - mod2/mod1$ mod1mod2 1 - mod2/mod10 0 0 $0.001907 \quad 0.001907$ sm1.9 $Hz \rightarrow \nu_{\tau}\bar{\nu}_{\tau}$ interference square $mod1 \quad mod2 \quad 1 - mod2/mod1$ mod2 1 - mod2/mod1mod1

 $0.005683 \quad 0.005683$

0

sm

0

1.10 $W^+W^- \to W^+W^-$

interference $\bmod 1 \quad \bmod 2 \quad 1 - \bmod 2/\bmod 1$ $mod1 \quad mod2 \quad 1 - mod2/mod1$ 0 0 0 21.34 21.34 sm

1.11 $W^+W^- \rightarrow \gamma \gamma$

interference square $mod1 \quad mod2 \quad 1 - mod2/mod1$ $mod1 \quad mod2 \quad 1 - mod2/mod1$ $3.823 \cdot 10^{-8}$ 0 0 5.232 5.232 sm

square

1.12 $\gamma W^+ \rightarrow z W^+$

interference square $mod1 \quad mod2 \quad 1 - mod2/mod1$ $mod2 \quad 1 - mod2/mod1$ mod10 0 0 $0.3262 \quad 0.3262$ 0 sm

1.13 $\mu^{+}\mu^{-} \rightarrow \tau^{+}\tau^{-}$

interference square 1 - mod2/mod1 $mod1 \quad mod2 \quad 1 - mod2/mod1$ mod1mod2 0 0 0.009736 0.009736 $2.054 \cdot 10^{-8}$ 0 sm

1.14 $\nu_{\tau}\bar{\nu}_{\tau} \rightarrow \nu_{\tau}\bar{\nu}_{\tau}$

interference square $mod1 \quad mod2 \quad 1 - mod2/mod1$ mod1mod2 1 - mod2/mod1 $\mathtt{sm} \qquad 0 \qquad 0 \qquad \qquad 0 \qquad \qquad 0.0005449 \quad 0.0005449 \qquad \qquad 0$

1.15 $\nu_e \bar{\nu}_e \rightarrow \nu_\mu \bar{\nu}_\mu$

			interference		square			
	mod1	mod2	$1-\mathtt{mod}2/\mathtt{mod}1$	mod1	mod2	1 - mod2/mod1		
sm	0	0	0	$1.626 \cdot 10^{-5}$	$1.626 \cdot 10^{-5}$	0		

1.16 $b\bar{b} \rightarrow \nu_{\mu}\bar{\nu}_{\mu}$

		inter	ference	square			
	mod1	mod2	$1-\mathtt{mod}2/\mathtt{mod}1$	mod1	mod2	$1-\mathtt{mod}2/\mathtt{mod}1$	
cQl1	-0.007309	-0.007309	0	0.0313	0.0313	0	
cQ13	0.007309	0.007309	0	0.0313	0.0313	0	
sm	0	0	0	0.0005012	0.0005012	0	

1.17 $b\bar{t} \rightarrow e^-\bar{\nu}_e$

		in	nterference		square			
	mod1	mod2	$1-\mathtt{mod}2/\mathtt{mod}1$	mod1	mod2	$1-{\tt mod2/mod1}$		
cQ13	0.03448	0.03448	0	0.163	0.163	0		
cleQt1Im	0	0	0	0.08333	0.08333	$-3.06 \cdot 10^{-6}$		
cleQt1Re	0	0	0	0.08333	0.08333	$-3.06 \cdot 10^{-6}$		
cleQt3Im	0	0	0	0.172	0.172	$-3.082 \cdot 10^{-6}$		
cleQt3Re	0	0	0	0.172	0.172	$-3.082 \cdot 10^{-6}$		
${\tt clebQIm}$	0	0	0	0.08333	0.08333	$-3.06 \cdot 10^{-6}$		
clebQRe	0	0	0	0.08333	0.08333	$-3.06 \cdot 10^{-6}$		
sm	0	0	0	0.001824	0.001824	0		

1.18 $c\bar{c} \to \mu^{+}\mu^{-}$

1.19 $c\bar{s} \rightarrow \tau^+ \nu_{\tau}$

 $1.20 \quad d\bar{d} \rightarrow e^+e^-$

1.21 $e^+\nu_{\mu} \to e^+\nu_{\mu}$

1.22 $e^+\nu_e \to \mu^+\nu_\mu$

sm 0 0

 $0.0003472 \quad 0.0003472$

0

1.23 $e^+\nu_e \to e^+\nu_e$

interference

 $\begin{array}{cc} \mathrm{square} \\ \mathrm{mod1} & \mathrm{mod2} & 1-\mathrm{mod2/mod1} \\ 0.01616 & 0.01616 & 0 \end{array}$

1.24 $e^+\tau^- \to e^+\tau^-$

interference

 $\begin{array}{ccc} \mathrm{square} \\ \mathtt{mod1} & \mathtt{mod2} & 1-\mathtt{mod2/mod1} \\ 1.145 & 1.145 & 0 \end{array}$

1.25 $e^+e^- \to \mu^+\mu^-$

interference

 $\begin{array}{c} \text{square} \\ \texttt{mod2} & 1-\texttt{mod2/mod1} \end{array}$

 $\begin{array}{cccc} \bmod 1 & \bmod 2 & 1 - \bmod 2 / \\ 0.01037 & 0.01037 & 0 \end{array}$

1.26 $e^+e^- \rightarrow e^+e^-$

interference

square

 $\begin{array}{cccc} \bmod 1 & \bmod 2 & 1-\bmod 2/\bmod 1 \\ 0.01863 & 0.01863 & 5.369 \cdot 10^{-8} \end{array}$

1.27 $s\bar{s} \rightarrow \nu_{\tau}\bar{\nu}_{\tau}$

1.28 $t\bar{t} \rightarrow \tau^+\tau^-$

		interfere		square			
	mod1	mod2	$1-{\tt mod2/mod1}$	mod1	mod2	$1-\mathtt{mod}2/\mathtt{mod}1$	
cQe	-0.003051	-0.003051	$3.277 \cdot 10^{-8}$	0.03241	0.03241	0	
cQl1	-0.04075	-0.04075	$-2.454 \cdot 10^{-8}$	0.1717	0.1717	0	
cQ13	0.04075	0.04075	$-2.454 \cdot 10^{-8}$	0.1717	0.1717	0	
cleQt1Im	$-6.071 \cdot 10^{-18}$	$-5.878 \cdot 10^{-18}$	0.03175	0.1668	0.1668	$-3.057 \cdot 10^{-6}$	
cleQt1Re	0.1592	0.1592	$-1.507 \cdot 10^{-6}$	0.1668	0.1668	$-3.057 \cdot 10^{-6}$	
cleQt3Im	$1.052 \cdot 10^{-16}$	$1.416 \cdot 10^{-17}$	0.8655	0.5972	0.5972	$-3.048 \cdot 10^{-6}$	
cleQt3Re	-0.282	-0.282	$-1.525 \cdot 10^{-6}$	0.5972	0.5972	$-3.048 \cdot 10^{-6}$	
cte	-0.02983	-0.02983	$3.353 \cdot 10^{-8}$	0.1717	0.1717	0	
ctl	-0.005051	-0.005051	0	0.03241	0.03241	0	
sm	0	0	0	0.003801	0.003801	0	

1.29 $t\bar{t} \rightarrow t\bar{t}$

1.30 $u\bar{d} \rightarrow \mu^+ \nu_\mu$

interference square

1.31 $u\bar{u} \rightarrow \nu_e \bar{\nu}_e$

1.32 $zz \to W^+W^-$

2 By parameter point

2.1 cQe

2.2 cQl1

 $t\bar{t} \to \tau^+ \tau^-$ -0.04075 -0.04075 $-2.454 \cdot 10^{-8}$ 0.1717 0.1717 0

2.3 cQl3

	interference				square			
	mod1	mod2	$1-\mathtt{mod}2/\mathtt{mod}1$	mod1	mod2	$1-\mathtt{mod}2/\mathtt{mod}1$		
$b\bar{b} o u_{\mu} \bar{ u}_{\mu}$	0.007309	0.007309	0	0.0313	0.0313	0		
$b\bar{t} \to e^- \bar{\nu}_e$	0.03448	0.03448	0	0.163	0.163	0		
$t\bar{t} \to \tau^+ \tau^-$	0.04075	0.04075	$-2.454 \cdot 10^{-8}$	0.1717	0.1717	0		

2.4 cleQt1Im

		interfere	square			
	mod1	mod2	$1-\mathtt{mod}2/\mathtt{mod}1$	mod1	mod2	$1 - \mathtt{mod}2/\mathtt{mod}1$
$b\bar{t} \to e^- \bar{\nu}_e$	0	0	0	0.08333	0.08333	$-3.06 \cdot 10^{-6}$
$t\bar{t} \to \tau^+ \tau^-$	$-6.071 \cdot 10^{-18}$	$-5.878 \cdot 10^{-18}$	0.03175	0.1668	0.1668	$-3.057 \cdot 10^{-6}$

2.5 cleQt1Re

$2.6 \quad cleQt3Im$

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b\bar{t} \to e^- \bar{\nu}_e 0 0 0 0.172 0.172 -3.082 \cdot 10^{-6} t\bar{t} \to \tau^+ \tau^- 1.052 · 10<sup>-16</sup> 1.416 · 10<sup>-17</sup> 0.8655 0.5972 0.5972 -3.048 \cdot 10^{-6}
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2.7 cleQt3Re

2.8 clebQIm

2.9 clebQRe

2.10 cte

2.11 ctl

		inter	rference		square		
	mod1	mod2	$1-\mathtt{mod}2/\mathtt{mod}1$	mod1	mod2	$1 - \mathtt{mod}2/\mathtt{mod}1$	
$t\bar{t} \to \tau^+ \tau^-$	-0.005051	-0.005051	0	0.03241	0.03241	0	

2.12 sm

			interference		square	
	mod1	mod2	$1-{\tt mod2/mod1}$	mod1	mod2	$1-{\tt mod2/mod1}$
$HH o W^+W^-\gamma$	0	0	0	$1.992 \cdot 10^{-1}$	$^{-6}$ $1.992 \cdot 10^{-6}$	0
$HH \to W^+ e^- \bar{\nu}_e$	0	0	0	$2.32\cdot 10^{-}$	$2.32 \cdot 10^{-7}$	0
$HH \to z \nu_e \bar{\nu}_e$	0	0	0	$9.566 \cdot 10^{-3}$	$9.566 \cdot 10^{-7}$	0
$HH \rightarrow ze^+e^-$	0	0	0	$4.446 \cdot 10^{-1}$	$^{-8}$ $4.446 \cdot 10^{-8}$	0
$HW^- \to \bar{t}b$	0	0	0	0.3677	0.3677	0
$HW^- \to \gamma e^- \bar{\nu}_e$	0	0	0	$1.275 \cdot 10^{-1}$	$^{-7}$ $1.275 \cdot 10^{-7}$	0
$HW^- o \mu^- \bar{\nu}_\mu$	0	0	0	0.007437	0.007437	$-1.345 \cdot 10^{-8}$
$Hz \to \mu^+\mu^-$	0	0	0	0.001907	0.001907	0
$Hz \to \nu_{\tau} \bar{\nu}_{\tau}$	0	0	0	0.005683	0.005683	0
$W^+W^- \to W^+W^-$	0	0	0	21.34	21.34	0
$W^+W^- o \gamma\gamma$	0	0	0	5.232	5.232	$3.823 \cdot 10^{-8}$
$\gamma W^+ \to z W^+$	0	0	0	0.3262	0.3262	0
$\mu^+\mu^- \to \tau^+\tau^-$	0	0	0	0.009736	0.009736	$2.054 \cdot 10^{-8}$
$\nu_{ au} \bar{\nu}_{ au} ightarrow \nu_{ au} \bar{\nu}_{ au}$	0	0	0	0.000544	9 0.0005449	0
$ u_e \bar{\nu}_e o u_\mu \bar{\nu}_\mu$	0	0	0	$1.626 \cdot 10^{-6}$	$^{-5}$ $1.626 \cdot 10^{-5}$	0
$b\bar{b} o u_{\mu} \bar{ u}_{\mu}$	0	0	0	0.000501	0.0005012	0
$b\bar{t} \to e^-\bar{\nu}_e$	0	0	0	0.001824	0.001824	0
$c\bar{c} \to \mu^+ \mu^-$	0	0	0	0.005361	0.005361	$1.865 \cdot 10^{-8}$
$c\bar{s} \to \tau^+ \nu_{\tau}$	0	0	0	0.004672	0.004672	$-2.14 \cdot 10^{-8}$

$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$d\bar{d} \rightarrow e^+e^-$	0	0	0	0.003027	0.003027	0
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		0	0	0			$3.816 \cdot 10^{-8}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		0	0	0	0.0003472	0.0003472	0
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	•	0	0	0	0.01616	0.01616	0
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$e^+\tau^- \rightarrow e^+\tau^-$	0	0	0	1.145	1.145	0
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$e^+e^- \rightarrow \mu^+\mu^-$	0	0	0	0.01037	0.01037	0
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	' '	0	0	0	0.01863	0.01863	$5.369 \cdot 10^{-8}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$s\bar{s} \to \nu_{ au} \bar{\nu}_{ au}$	0	0	0	0.002504	0.002504	0
$u\bar{d} \to \mu^+ \nu_{\mu}$ 0 0 0 0 0.01077 0.01077 0 $u\bar{u} \to \nu_e \bar{\nu}_e$ 0 0 0 0 0.0009629 0.0009629 $-1.039 \cdot 10^{-8}$	$t\bar{t} \to \tau^+ \tau^-$	0	0	0	0.003801	0.003801	0
$u\bar{u} \to \nu_e \bar{\nu}_e$ 0 0 0 0.0009629 0.0009629 $-1.039 \cdot 10^{-8}$	$t\bar{t} o t\bar{t}$	0	0	0	0.3372	0.3372	0
$u\bar{u} \to \nu_e \bar{\nu}_e$ 0 0 0 0.0009629 0.0009629 $-1.039 \cdot 10^{-8}$	$u\bar{d} \rightarrow \mu^+ \nu_\mu$	0	0	0	0.01077	0.01077	0
$zz \to W^+W^-$ 0 0 0 103.1 103.1 0		0	0	0	0.0009629	0.0009629	$-1.039 \cdot 10^{-8}$
	$zz \to W^+W^-$	0	0	0	103.1	103.1	0