1 By process

1.1 $HH \rightarrow HH$

1.2 $HH \rightarrow HHH$

1.3 $HH \rightarrow H\tau^+\tau^-$

1.4 $HH \rightarrow Hb\bar{b}$

1.5 $HH \rightarrow Ht\bar{t}$

| | | interfer | rence | square | | | |
|------|------------------------|------------------------|---------------------------------|-----------------------|-----------------------|-----------------------------------|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1 - \mathtt{mod}2/\mathtt{mod}1$ | |
| ctp | $-4.41 \cdot 10^{-8}$ | $-4.41 \cdot 10^{-8}$ | 0 | $1.527 \cdot 10^{-5}$ | $1.527 \cdot 10^{-5}$ | 0 | |
| ctpI | $-7.619 \cdot 10^{-7}$ | $-7.619 \cdot 10^{-7}$ | 0 | $5.19 \cdot 10^{-5}$ | $5.19\cdot10^{-5}$ | 0 | |
| sm | 0 | 0 | 0 | $4.504 \cdot 10^{-5}$ | $4.504 \cdot 10^{-5}$ | 0 | |

1.6 $HH \rightarrow Hzz$

1.7 $HH \to W^+W^-$

1.8 $HH \rightarrow W^+W^-\gamma$

1.9 $HH \rightarrow W^{+}\bar{t}b$

| cbW | $-4.015 \cdot 10^{-7}$ | $-4.015 \cdot 10^{-7}$ | 0 | $1.925 \cdot 10^{-5}$ | $1.925 \cdot 10^{-5}$ | 0 |
|-------|------------------------|------------------------|------------------------|-----------------------|-----------------------|-----------------------|
| cbWI | $-1.646 \cdot 10^{-7}$ | $-1.646 \cdot 10^{-7}$ | 0 | $7.652 \cdot 10^{-6}$ | $7.652 \cdot 10^{-6}$ | $1.307 \cdot 10^{-8}$ |
| cpQ3 | $6.929 \cdot 10^{-6}$ | $6.929 \cdot 10^{-6}$ | $-1.443 \cdot 10^{-8}$ | $9.839 \cdot 10^{-6}$ | $9.839 \cdot 10^{-6}$ | 0 |
| cptb | $-2.777 \cdot 10^{-6}$ | $-2.777 \cdot 10^{-6}$ | 0 | $2.172 \cdot 10^{-5}$ | $2.172 \cdot 10^{-5}$ | $4.604 \cdot 10^{-8}$ |
| cptbI | $1.175 \cdot 10^{-7}$ | $1.175 \cdot 10^{-7}$ | 0 | $2.465 \cdot 10^{-6}$ | $2.465 \cdot 10^{-6}$ | 0 |
| ctW | $1.573 \cdot 10^{-6}$ | $1.573 \cdot 10^{-6}$ | 0 | $7.658 \cdot 10^{-6}$ | $7.658 \cdot 10^{-6}$ | 0 |
| ctWI | $-4.187 \cdot 10^{-6}$ | $-4.187 \cdot 10^{-6}$ | 0 | $1.929 \cdot 10^{-5}$ | $1.929 \cdot 10^{-5}$ | 0 |
| ctp | $1.23 \cdot 10^{-7}$ | $1.23 \cdot 10^{-7}$ | $1.626 \cdot 10^{-7}$ | $6.345 \cdot 10^{-7}$ | $6.345 \cdot 10^{-7}$ | 0 |
| ctpI | $1.964 \cdot 10^{-7}$ | $1.964 \cdot 10^{-7}$ | $-5.091 \cdot 10^{-8}$ | $2.844 \cdot 10^{-6}$ | $2.844 \cdot 10^{-6}$ | 0 |
| sm | 0 | 0 | 0 | $4.686 \cdot 10^{-5}$ | $4.686 \cdot 10^{-5}$ | 0 |

1.10 $HH \to W^+ e^- \bar{\nu}_e$

| | | | interference | | square | |
|----|------|------|---------------------------------|-----------------------|-----------------------|---------------------------------|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ |
| sm | 0 | 0 | 0 | $1.398 \cdot 10^{-6}$ | $1.398 \cdot 10^{-6}$ | 0 |

1.11 $HH \rightarrow W^- u \bar{d}$

| | | | interference | | square | |
|----|------|------|---------------------------------|-----------------------|-----------------------|-----------------------------------|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1 - \mathtt{mod}2/\mathtt{mod}1$ |
| sm | 0 | 0 | 0 | $4.972 \cdot 10^{-7}$ | $4.972 \cdot 10^{-7}$ | $2.011 \cdot 10^{-8}$ |

1.12 $HH \rightarrow z\bar{b}b$

| | | interfe | erence | square | | |
|-----|----------|----------|---------------------------------|-----------|-----------|---------------------------------|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ |
| cbW | 0.001094 | 0.001094 | 0 | 0.0002901 | 0.0002901 | 0 |

| cbWI | $1.895 \cdot 10^{-8}$ | $1.895 \cdot 10^{-8}$ | 0 | $2.224 \cdot 10^{-6} 2.224 \cdot 10^{-6} \qquad 0$ |
|------|------------------------|------------------------|------------------------|---|
| cpQ3 | 0.01151 | 0.01151 | 0 | $0.0006452 \qquad 0.0006452 \qquad 0$ |
| cpQM | 0.005757 | 0.005757 | 0 | $0.0001613 \qquad 0.0001613 \qquad 0$ |
| cpb | $-3.037 \cdot 10^{-7}$ | $-3.037 \cdot 10^{-7}$ | $-3.292 \cdot 10^{-8}$ | $2.386 \cdot 10^{-7} 2.386 \cdot 10^{-7} 0$ |
| sm | 0 | 0 | 0 | $4.051 \cdot 10^{-6} 4.051 \cdot 10^{-6} \qquad 0$ |

1.13 $HH \rightarrow z\nu_e\bar{\nu}_e$

1.14 $HH \rightarrow zc\bar{c}$

1.15 $HH \rightarrow zd\bar{d}$

1.16 $HH \rightarrow ze^{+}e^{-}$

 ${\rm sm} \qquad \qquad 0 \qquad \qquad 0 \qquad \qquad 1.211 \cdot 10^{-7} \quad 1.211 \cdot 10^{-7} \qquad \qquad 0$

1.17 $HH \rightarrow zt\bar{t}$

| | | interfere | ence | | square | | | |
|------|-------------------------|------------------------|---------------------------------|------------------------|-----------------------|---------------------------------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | | |
| cpQM | $5.546 \cdot 10^{-5}$ | $5.546 \cdot 10^{-5}$ | 0 | $4.962 \cdot 10^{-5}$ | $4.962 \cdot 10^{-5}$ | 0 | | |
| cpt | $-5.963 \cdot 10^{-5}$ | $-5.963 \cdot 10^{-5}$ | 0 | $4.961 \cdot 10^{-5}$ | $4.961 \cdot 10^{-5}$ | 0 | | |
| ctW | $-7.426 \cdot 10^{-13}$ | 0 | 1 | $4.223 \cdot 10^{-17}$ | 0 | 1 | | |
| ctWI | $5.7 \cdot 10^{-13}$ | 0 | 1 | $1.207 \cdot 10^{-17}$ | 0 | 1 | | |
| ctZ | $-1.374 \cdot 10^{-6}$ | $-1.374 \cdot 10^{-6}$ | $5.822 \cdot 10^{-7}$ | $3.994 \cdot 10^{-5}$ | $3.994 \cdot 10^{-5}$ | $1.102 \cdot 10^{-6}$ | | |
| ctZI | $-8.521 \cdot 10^{-7}$ | $-8.521 \cdot 10^{-7}$ | $5.633 \cdot 10^{-7}$ | $2.696 \cdot 10^{-5}$ | $2.696 \cdot 10^{-5}$ | $1.076 \cdot 10^{-6}$ | | |
| ctp | $1.457 \cdot 10^{-5}$ | $1.457 \cdot 10^{-5}$ | 0 | $1.706 \cdot 10^{-5}$ | $1.706 \cdot 10^{-5}$ | 0 | | |
| ctpI | $1.719 \cdot 10^{-6}$ | $1.719 \cdot 10^{-6}$ | 0 | $1.688 \cdot 10^{-5}$ | $1.688 \cdot 10^{-5}$ | 0 | | |
| sm | 0 | 0 | 0 | 0.0001485 | 0.0001485 | 0 | | |

$\textbf{1.18} \quad HH \rightarrow zz$

| | | interference | | | square | | |
|---------------|------|--------------|---------------------------------|------|--------|---------------------------------|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | |
| \mathtt{sm} | 0 | 0 | 0 | 16.1 | 16.1 | 0 | |

1.19 $HW^+ \rightarrow \gamma t \bar{b}$

| | | ınterfei | rence | square | | | |
|------|-----------------------|-----------------------|---------------------------------|--|--|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | $\verb mod1 & \verb mod2 & 1-\verb mod2/mod1 $ | | | |
| cbW | $1.532 \cdot 10^{-8}$ | $1.532 \cdot 10^{-8}$ | 0 | $4.002 \cdot 10^{-7}$ $4.002 \cdot 10^{-7}$ $-2.499 \cdot 10^{-8}$ | | | |
| cbWI | $1.125 \cdot 10^{-8}$ | $1.125 \cdot 10^{-8}$ | $-8.892 \cdot 10^{-8}$ | $2.508 \cdot 10^{-6}$ $2.508 \cdot 10^{-6}$ 0 | | | |

| cpQ3 | $4.071 \cdot 10^{-7}$ | $4.071\cdot10^{-7}$ | $-2.457 \cdot 10^{-8}$ | $2.177 \cdot 10^{-7}$ | $2.177 \cdot 10^{-7}$ | $-4.594 \cdot 10^{-8}$ |
|-------|------------------------|------------------------|------------------------|-----------------------|-----------------------|------------------------|
| cptb | $-1.117 \cdot 10^{-7}$ | $-1.117 \cdot 10^{-7}$ | $-8.949 \cdot 10^{-8}$ | $3.498 \cdot 10^{-7}$ | $3.498 \cdot 10^{-7}$ | $-2.859 \cdot 10^{-8}$ |
| cptbI | $-3.857 \cdot 10^{-9}$ | $-3.857 \cdot 10^{-9}$ | 0 | $5.448 \cdot 10^{-8}$ | $5.448 \cdot 10^{-8}$ | $-1.836 \cdot 10^{-8}$ |
| ctW | $2.075 \cdot 10^{-5}$ | $2.075 \cdot 10^{-5}$ | $6.266 \cdot 10^{-7}$ | $1.27 \cdot 10^{-5}$ | $1.27\cdot 10^{-5}$ | $1.024 \cdot 10^{-6}$ |
| ctWI | $-3.437 \cdot 10^{-6}$ | $-3.437 \cdot 10^{-6}$ | $7.564 \cdot 10^{-7}$ | $3.549 \cdot 10^{-5}$ | $3.549 \cdot 10^{-5}$ | $1.212 \cdot 10^{-6}$ |
| ctZ | $-5.619 \cdot 10^{-6}$ | $-5.619 \cdot 10^{-6}$ | $5.517 \cdot 10^{-7}$ | $2.846 \cdot 10^{-5}$ | $2.846 \cdot 10^{-5}$ | $1.125 \cdot 10^{-6}$ |
| ctZI | $3.791 \cdot 10^{-6}$ | $3.791 \cdot 10^{-6}$ | $5.54 \cdot 10^{-7}$ | $2.846 \cdot 10^{-5}$ | $2.846 \cdot 10^{-5}$ | $1.125 \cdot 10^{-6}$ |
| ctp | $-4.639 \cdot 10^{-7}$ | $-4.639 \cdot 10^{-7}$ | $-2.156 \cdot 10^{-8}$ | $1.383 \cdot 10^{-8}$ | $1.383 \cdot 10^{-8}$ | 0 |
| ctpI | $3.726 \cdot 10^{-8}$ | $3.726 \cdot 10^{-8}$ | $-2.684 \cdot 10^{-8}$ | $1.109 \cdot 10^{-8}$ | $1.109 \cdot 10^{-8}$ | 0 |
| sm | 0 | 0 | 0 | $2.238 \cdot 10^{-5}$ | $2.238 \cdot 10^{-5}$ | 0 |

1.20 $HW^+ \rightarrow \gamma u \bar{d}$

| | | | interference | | square | |
|----|------|------|---------------------------------|-----------------------|-----------------------|---------------------------------|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ |
| sm | 0 | 0 | 0 | $3.508 \cdot 10^{-9}$ | $3.508 \cdot 10^{-9}$ | 0 |

1.21 $HW^+ \rightarrow u\bar{d}$

| | interference | | | | square | | | |
|----|--------------|------|---------------------------------|---------|---------|-----------------------------------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1 - \mathtt{mod}2/\mathtt{mod}1$ | | |
| sm | 0 | 0 | 0 | 0.01434 | 0.01434 | $6.975 \cdot 10^{-8}$ | | |

1.22 $HW^- \rightarrow \bar{t}b$

| | | interfer | square | | | |
|------|-----------------------|-----------------------|---------------------------------|-------|-------|---------------------------------|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ |
| cbW | 0.007426 | 0.007426 | 0 | 2.219 | 2.219 | 0 |
| cbWI | $3.304 \cdot 10^{-7}$ | $3.304 \cdot 10^{-7}$ | 0 | 2.276 | 2.276 | 0 |

| cpQ3 | -1.083 | -1.083 | 0 | 1.826 | 1.826 | 0 |
|-------|------------------------|------------------------|---|---------|---------|---|
| cptb | -0.05351 | -0.05351 | 0 | 0.4832 | 0.4832 | 0 |
| cptbI | $-8.778 \cdot 10^{-6}$ | $-8.778 \cdot 10^{-6}$ | 0 | 0.4566 | 0.4566 | 0 |
| ctW | -0.2671 | -0.2671 | 0 | 2.276 | 2.276 | 0 |
| ctWI | 0.0001286 | 0.0001286 | 0 | 2.219 | 2.219 | 0 |
| ctp | 0.09301 | 0.09301 | 0 | 0.05181 | 0.05181 | 0 |
| ctpI | -0.001039 | -0.001039 | 0 | 0.05832 | 0.05832 | 0 |
| sm | 0 | 0 | 0 | 0.4067 | 0.4067 | 0 |

1.23 $HW^- \rightarrow \gamma e^- \bar{\nu}_e$

| | | | interference | | square | |
|----|------|------|---------------------------------|----------------------|----------------------|---------------------------------|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ |
| sm | 0 | 0 | 0 | $8.49 \cdot 10^{-8}$ | $8.49 \cdot 10^{-8}$ | $-1.178 \cdot 10^{-8}$ |

1.24 $HW^- o \mu^- \bar{\nu}_\mu$

| | interference | | | | square | | | |
|---------------|--------------|------|---------------------------------|---------|---------|---------------------------------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | | |
| \mathtt{sm} | 0 | 0 | 0 | 0.00454 | 0.00454 | $2.203 \cdot 10^{-8}$ | | |

1.25 $H\gamma \rightarrow b\bar{b}$

| | | interfer | rence | square | | | |
|------|------------------------|------------------------|---------------------------------|-----------|-----------|------------------------|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | 1 - mod2/mod1 | |
| cbW | $-1.696 \cdot 10^{-6}$ | $-1.696 \cdot 10^{-6}$ | $-5.895 \cdot 10^{-8}$ | 0.5722 | 0.5722 | $-1.748 \cdot 10^{-8}$ | |
| cbWI | $5.294 \cdot 10^{-23}$ | $7.147 \cdot 10^{-22}$ | -12.5 | 0.2338 | 0.2338 | 0 | |
| sm | 0 | 0 | 0 | 0.0002864 | 0.0002864 | 0 | |

1.26 $H\gamma \rightarrow t\bar{t}$

| | | interfere | ence | square | | | |
|-----------------|-------------------------|-------------------------|---------------------------------|----------|----------|---------------------------------|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | |
| ctW | -0.6078 | -0.6078 | $5.923 \cdot 10^{-7}$ | 15.51 | 15.51 | $1.225 \cdot 10^{-6}$ | |
| ctWI | $-2.084 \cdot 10^{-17}$ | $-9.37 \cdot 10^{-17}$ | -3.495 | 14.39 | 14.39 | $1.181 \cdot 10^{-6}$ | |
| ctZ | 0.5809 | 0.5809 | $5.508 \cdot 10^{-7}$ | 11.03 | 11.03 | $1.179 \cdot 10^{-6}$ | |
| ctZI | $2.431 \cdot 10^{-17}$ | $4.86 \cdot 10^{-17}$ | -0.9989 | 11.03 | 11.03 | $1.179 \cdot 10^{-6}$ | |
| ctp | -0.05442 | -0.05442 | 0 | 0.00167 | 0.00167 | 0 | |
| \mathtt{ctpI} | $-2.873 \cdot 10^{-18}$ | $-2.331 \cdot 10^{-18}$ | 0.1887 | 0.002104 | 0.002104 | $-4.754 \cdot 10^{-8}$ | |
| sm | 0 | 0 | 0 | 0.4047 | 0.4047 | $-2.471 \cdot 10^{-8}$ | |

1.27 $Hz \to \mu^+ \mu^-$

1.28 $Hz \rightarrow \nu_{\tau} \bar{\nu}_{\tau}$

1.29 $Hz \rightarrow b\bar{b}$

| cbW | 0.001426 | 0.001426 | 0 | 0.9557 | 0.9557 | 0 |
|------|------------------------|------------------------|------------------------|--------|--------|---|
| cbWI | $-1.835 \cdot 10^{-6}$ | $-1.835 \cdot 10^{-6}$ | 0 | 1.496 | 1.496 | 0 |
| cpQ3 | 0.2997 | 0.2997 | 0 | 2.614 | 2.614 | 0 |
| cpQM | 0.1498 | 0.1498 | 0 | 0.6536 | 0.6536 | 0 |
| cpb | -0.04095 | -0.04095 | $-2.442 \cdot 10^{-8}$ | 0.9947 | 0.9947 | 0 |
| sm | 0 | 0 | 0 | 0.0137 | 0.0137 | 0 |

1.30 $Hz \rightarrow s\bar{s}$

| | interference | | | square | | | |
|---------------|--------------|------|---------------------------------|--------|--------|-----------------------------------|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1 - \mathtt{mod}2/\mathtt{mod}1$ | |
| \mathtt{sm} | 0 | 0 | 0 | 0.0133 | 0.0133 | 0 | |

1.31 $Hz \rightarrow t\bar{t}$

| | | interfe | erence | | square | | | |
|------|------------------------|------------|---------------------------------|------------------------|---------|---------------------------------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | | |
| cpQM | 2.016 | 2.016 | 0 | 0.7995 | 0.7995 | 0 | | |
| cpt | -2.083 | -2.083 | 0 | 0.7995 | 0.7995 | 0 | | |
| ctW | $4.407 \cdot 10^{-8}$ | 0 | 1 | $1.264 \cdot 10^{-12}$ | 0 | 1 | | |
| ctWI | $3.867 \cdot 10^{-10}$ | 0 | 1 | $1.022 \cdot 10^{-12}$ | 0 | 1 | | |
| ctZ | -0.09219 | -0.09219 | $5.857 \cdot 10^{-7}$ | 2.33 | 2.33 | $1.116 \cdot 10^{-6}$ | | |
| ctZI | -0.0005781 | -0.0005781 | $5.536 \cdot 10^{-7}$ | 2.283 | 2.283 | $1.095 \cdot 10^{-6}$ | | |
| ctp | -0.02856 | -0.02856 | $3.502 \cdot 10^{-8}$ | 0.06457 | 0.06457 | 0 | | |
| ctpI | -0.0004678 | -0.0004678 | $4.275 \cdot 10^{-8}$ | 0.06432 | 0.06432 | 0 | | |
| sm | 0 | 0 | 0 | 2.714 | 2.714 | 0 | | |
| | | | | | | | | |

1.32 $Hz \rightarrow u\bar{u}$

1.33 $W^+W^- \rightarrow Hb\bar{b}$

| | | interfer | rence | | square | | | |
|-------|------------------------|------------------------|---------------------------------|-----------------------|-----------------------|---------------------------------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | | |
| cbW | $4.599 \cdot 10^{-5}$ | $4.599 \cdot 10^{-5}$ | $4.349 \cdot 10^{-8}$ | $3.132 \cdot 10^{-5}$ | $3.132 \cdot 10^{-5}$ | 0 | | |
| cbWI | $1.159 \cdot 10^{-7}$ | $1.159 \cdot 10^{-7}$ | 0 | $6.482 \cdot 10^{-6}$ | $6.482 \cdot 10^{-6}$ | 0 | | |
| cpQ3 | 0.0003593 | 0.0003593 | $2.783 \cdot 10^{-8}$ | $3.602 \cdot 10^{-5}$ | $3.602 \cdot 10^{-5}$ | 0 | | |
| cpQM | 0.0001718 | 0.0001718 | $5.82 \cdot 10^{-8}$ | $6.602 \cdot 10^{-6}$ | $6.602 \cdot 10^{-6}$ | $1.515 \cdot 10^{-8}$ | | |
| cpb | $-3.66 \cdot 10^{-8}$ | $-3.66 \cdot 10^{-8}$ | 0 | $1.124 \cdot 10^{-7}$ | $1.124 \cdot 10^{-7}$ | 0 | | |
| cptb | $-3.074 \cdot 10^{-7}$ | $-3.074 \cdot 10^{-7}$ | 0 | $1.533 \cdot 10^{-6}$ | $1.533 \cdot 10^{-6}$ | 0 | | |
| cptbI | $8.419 \cdot 10^{-6}$ | $8.419 \cdot 10^{-6}$ | $1.188 \cdot 10^{-8}$ | $3.54 \cdot 10^{-6}$ | $3.54 \cdot 10^{-6}$ | 0 | | |
| ctW | $9.928 \cdot 10^{-7}$ | $9.928 \cdot 10^{-7}$ | $2.014 \cdot 10^{-8}$ | $6.432 \cdot 10^{-6}$ | $6.432 \cdot 10^{-6}$ | 0 | | |
| ctWI | $4.796 \cdot 10^{-5}$ | $4.796 \cdot 10^{-5}$ | $2.085 \cdot 10^{-8}$ | $1.546 \cdot 10^{-5}$ | $1.546 \cdot 10^{-5}$ | 0 | | |
| ctp | $1.248 \cdot 10^{-6}$ | $1.248 \cdot 10^{-6}$ | 0 | $3.202 \cdot 10^{-8}$ | $3.202 \cdot 10^{-8}$ | 0 | | |
| ctpI | $7.803 \cdot 10^{-6}$ | $7.803 \cdot 10^{-6}$ | 0 | $3.218 \cdot 10^{-8}$ | $3.218 \cdot 10^{-8}$ | 0 | | |
| sm | 0 | 0 | 0 | $2.395 \cdot 10^{-5}$ | $2.395 \cdot 10^{-5}$ | 0 | | |

1.34 $W^+W^- \rightarrow Hc\bar{c}$

1.35 $W^+W^- \rightarrow Hd\bar{d}$

1.36 $W^+W^- \rightarrow Ht\bar{t}$

| | | interfere | | square | | |
|-------|-------------------------|-------------------------|---------------------------------|-----------------------|-----------------------|------------------------|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-{\tt mod2/mod1}$ |
| cbW | $1.966 \cdot 10^{-7}$ | $1.966 \cdot 10^{-7}$ | 0 | $1.635 \cdot 10^{-8}$ | $1.635 \cdot 10^{-8}$ | 0 |
| cbWI | $-1.231 \cdot 10^{-10}$ | $-1.231 \cdot 10^{-10}$ | $2.437 \cdot 10^{-7}$ | $2.571 \cdot 10^{-8}$ | $2.571 \cdot 10^{-8}$ | 0 |
| cpQ3 | $4.214 \cdot 10^{-5}$ | $4.214 \cdot 10^{-5}$ | $2.373 \cdot 10^{-8}$ | $1.026 \cdot 10^{-5}$ | $1.026 \cdot 10^{-5}$ | 0 |
| cpQM | $-1.868 \cdot 10^{-5}$ | $-1.868 \cdot 10^{-5}$ | 0 | $1.068 \cdot 10^{-6}$ | $1.068 \cdot 10^{-6}$ | $9.366 \cdot 10^{-8}$ |
| cpt | $1.917 \cdot 10^{-5}$ | $1.917 \cdot 10^{-5}$ | 0 | $1.067 \cdot 10^{-6}$ | $1.067 \cdot 10^{-6}$ | 0 |
| cptb | $-5.073 \cdot 10^{-8}$ | $-5.073 \cdot 10^{-8}$ | $1.971 \cdot 10^{-8}$ | $3.101 \cdot 10^{-9}$ | $3.101 \cdot 10^{-9}$ | 0 |
| cptbI | $7.137 \cdot 10^{-8}$ | $7.137 \cdot 10^{-8}$ | 0 | $2.517 \cdot 10^{-9}$ | $2.517 \cdot 10^{-9}$ | 0 |
| ctW | $-6.235 \cdot 10^{-7}$ | $-6.235 \cdot 10^{-7}$ | $4.651 \cdot 10^{-7}$ | $7.318 \cdot 10^{-5}$ | $7.318 \cdot 10^{-5}$ | $-2.733 \cdot 10^{-8}$ |
| ctWI | $6.586 \cdot 10^{-6}$ | $6.586 \cdot 10^{-6}$ | $-3.037 \cdot 10^{-8}$ | $2.772 \cdot 10^{-5}$ | $2.772 \cdot 10^{-5}$ | 0 |
| ctZ | $-1.17 \cdot 10^{-7}$ | $-1.17 \cdot 10^{-7}$ | $5.13 \cdot 10^{-7}$ | $1.13 \cdot 10^{-7}$ | $1.13 \cdot 10^{-7}$ | $1.062 \cdot 10^{-6}$ |
| ctZI | $4.924 \cdot 10^{-7}$ | $4.924 \cdot 10^{-7}$ | $5.484 \cdot 10^{-7}$ | $4.509 \cdot 10^{-8}$ | $4.509 \cdot 10^{-8}$ | $1.087 \cdot 10^{-6}$ |
| ctp | $-4.581 \cdot 10^{-7}$ | $-4.581 \cdot 10^{-7}$ | $2.183 \cdot 10^{-8}$ | $2.396 \cdot 10^{-8}$ | $2.396 \cdot 10^{-8}$ | 0 |
| ctpI | $-3.16 \cdot 10^{-7}$ | $-3.16 \cdot 10^{-7}$ | 0 | $2.399 \cdot 10^{-7}$ | $2.399 \cdot 10^{-7}$ | 0 |
| sm | 0 | 0 | 0 | $2.078 \cdot 10^{-5}$ | $2.078 \cdot 10^{-5}$ | 0 |

1.37 $W^+W^- \to W^+W^-$

1.38 $W^+W^- \rightarrow \gamma\gamma$

| | interference | | | | square | | |
|----|--------------|------|---------------------------------|--------|--------|-----------------------------------|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1 - \mathtt{mod}2/\mathtt{mod}1$ | |
| sm | 0 | 0 | 0 | 0.1713 | 0.1713 | 0 | |

1.39 $W^+W^- \rightarrow \gamma\gamma\gamma$

| | | | interference | | square | |
|----|------|------|-----------------------------------|-----------------------|-----------------------|-----------------------------------|
| | mod1 | mod2 | $1 - \mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1 - \mathtt{mod}2/\mathtt{mod}1$ |
| sm | 0 | 0 | 0 | $3.835 \cdot 10^{-7}$ | $3.835 \cdot 10^{-7}$ | $-5.215 \cdot 10^{-8}$ |

1.40 $\bar{b}t \rightarrow \bar{d}u$

| | interference | | | | square | | |
|---------|-----------------------|------------------------|---------------------------------|---------|---------|---------------------------------|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | |
| cQbqu1 | 0 | 0 | 0 | 0.25 | 0.25 | $3.04 \cdot 10^{-6}$ | |
| cQbqu1I | 0 | 0 | 0 | 0.25 | 0.25 | $3.04 \cdot 10^{-6}$ | |
| cQbqu8 | 0 | 0 | 0 | 0.05556 | 0.05556 | $3.06 \cdot 10^{-6}$ | |
| cQbqu8I | 0 | 0 | 0 | 0.05556 | 0.05556 | $3.06 \cdot 10^{-6}$ | |
| cQq13 | 0.07326 | 0.07326 | $1.365 \cdot 10^{-8}$ | 0.3463 | 0.3463 | 0 | |
| cQq83 | $1.01 \cdot 10^{-18}$ | $9.619 \cdot 10^{-19}$ | 0.04779 | 0.07695 | 0.07695 | 0 | |
| cQtqd1 | 0 | 0 | 0 | 0.25 | 0.25 | $3.04 \cdot 10^{-6}$ | |
| cQtqd1I | 0 | 0 | 0 | 0.25 | 0.25 | $3.04 \cdot 10^{-6}$ | |
| cQtqd8 | 0 | 0 | 0 | 0.05556 | 0.05556 | $3.06 \cdot 10^{-6}$ | |
| cQtqd8I | 0 | 0 | 0 | 0.05556 | 0.05556 | $3.06 \cdot 10^{-6}$ | |
| cbQqd1 | 0 | 0 | 0 | 0.25 | 0.25 | $3.08 \cdot 10^{-6}$ | |
| cbQqd1I | 0 | 0 | 0 | 0.25 | 0.25 | $3.08 \cdot 10^{-6}$ | |
| cbQqd8 | 0 | 0 | 0 | 0.05556 | 0.05556 | $2.934 \cdot 10^{-6}$ | |

| cbQqd8I | 0 | 0 | 0 | $0.05556 0.05556 2.934 \cdot 10^{-6}$ |
|---------|------------------------|-------------------------|-----------------------|---|
| cbW | 0.000298 | 0.000298 | $3.355 \cdot 10^{-8}$ | $0.01195 0.01195 \qquad 0$ |
| cbWI | $2.388 \cdot 10^{-19}$ | $5.882 \cdot 10^{-19}$ | -1.464 | $0.01128 0.01128 \qquad \qquad 0$ |
| cbtud1 | 0 | 0 | 0 | $0.4282 0.4282 6.072 \cdot 10^{-6}$ |
| cbtud1I | 0 | 0 | 0 | $0.08657 0.08657 6.088 \cdot 10^{-6}$ |
| cbtud8 | 0 | 0 | 0 | $0.1356 	 0.1356 	 5.901 \cdot 10^{-6}$ |
| cbtud8I | 0 | 0 | 0 | $0.09516 \qquad 0.09516 \qquad 5.906 \cdot 10^{-6}$ |
| cpQ3 | 0.002324 | 0.002324 | 0 | $7.044 \cdot 10^{-5} 7.044 \cdot 10^{-5} 1.42 \cdot 10^{-8}$ |
| cptb | $-2.193 \cdot 10^{-6}$ | $-2.193 \cdot 10^{-6}$ | 0 | $2.134 \cdot 10^{-5}$ $2.134 \cdot 10^{-5}$ $4.686 \cdot 10^{-8}$ |
| cptbI | $3.912 \cdot 10^{-21}$ | $-2.283 \cdot 10^{-21}$ | 1.584 | $5.338 \cdot 10^{-6}$ $5.338 \cdot 10^{-6}$ $1.873 \cdot 10^{-8}$ |
| ctQqu1 | 0 | 0 | 0 | $0.25 	 0.25 	 3.08 \cdot 10^{-6}$ |
| ctQqu1I | 0 | 0 | 0 | $0.25 	 0.25 	 3.08 \cdot 10^{-6}$ |
| ctQqu8 | 0 | 0 | 0 | $0.05556 \qquad 0.05556 \qquad 2.934 \cdot 10^{-6}$ |
| ctQqu8I | 0 | 0 | 0 | $0.05556 \qquad 0.05556 \qquad 2.934 \cdot 10^{-6}$ |
| ctW | 0.004693 | 0.004693 | $2.131 \cdot 10^{-8}$ | $0.01062 \qquad 0.01062 \qquad 0$ |
| ctWI | $1.383 \cdot 10^{-17}$ | $1.009 \cdot 10^{-17}$ | 0.2704 | $0.0124 \qquad 0.0124 \qquad 0$ |
| sm | 0 | 0 | 0 | $0.003874 \qquad 0.003874 \qquad 2.581 \cdot 10^{-8}$ |

$\textbf{1.41} \quad \gamma W^+ \to z W^+$

1.42 $\mu^{+}\mu^{-} \rightarrow \tau^{+}\tau^{-}$

1.43 $\nu_{\tau}\bar{\nu}_{\tau} \rightarrow \nu_{\tau}\bar{\nu}_{\tau}$

| | | | interference | square | | | |
|---------------|------|------|---------------------|----------|----------|---------------|--|
| | mod1 | mod2 | $1-{\tt mod2/mod1}$ | mod1 | mod2 | 1 - mod2/mod1 | |
| \mathtt{sm} | 0 | 0 | 0 | 0.001516 | 0.001516 | 0 | |

1.44 $\nu_e \bar{\nu}_e \rightarrow \nu_\mu \bar{\nu}_\mu$

| | interference | | | | square | | | |
|---------------|--------------|------|---------------------------------|---------|---------|---------------------------------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | | |
| \mathtt{sm} | 0 | 0 | 0 | 0.01384 | 0.01384 | 0 | | |

1.45 $b\bar{b} \rightarrow \gamma \gamma$

| | | interfe | erence | square | | | |
|------|------------------------|-----------------------|---------------------------------|---|-----------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | $\mathtt{mod1} \hspace{1cm} \mathtt{mod2} \hspace{1cm} 1-\mathtt{mod2}$ | /mod1 | | |
| cbW | $2.206 \cdot 10^{-5}$ | $2.206 \cdot 10^{-5}$ | $-4.533 \cdot 10^{-8}$ | $0.0006187 0.0006187 -4.848 \cdot$ | 10^{-8} | | |
| cbWI | $1.401 \cdot 10^{-21}$ | $9.33 \cdot 10^{-22}$ | 0.3339 | $0.0006184 0.0006184 -3.234 \cdot$ | 10^{-8} | | |
| sm | 0 | 0 | 0 | $0.0025 \qquad 0.0025 \qquad 0$ | | | |

1.46 $b\bar{b} \rightarrow \mu^+\mu^-$

| | | interfe | erence | | square | | | |
|------|------------------------|------------------------|------------------------|-----------------------|-----------------------|-----------------------------------|--|--|
| | mod1 | mod2 | $1-{\tt mod2/mod1}$ | mod1 | mod2 | $1 - \mathtt{mod}2/\mathtt{mod}1$ | | |
| cbW | $1.571 \cdot 10^{-5}$ | $1.571 \cdot 10^{-5}$ | $-6.367 \cdot 10^{-8}$ | $8.614 \cdot 10^{-5}$ | $8.614 \cdot 10^{-5}$ | 0 | | |
| cbWI | $4.554 \cdot 10^{-16}$ | $4.554 \cdot 10^{-16}$ | $2.854 \cdot 10^{-7}$ | 0.001249 | 0.001249 | $8.006 \cdot 10^{-8}$ | | |
| cpQ3 | 0.0001118 | 0.0001118 | 0 | $2.007 \cdot 10^{-5}$ | $2.007 \cdot 10^{-5}$ | $-4.983 \cdot 10^{-8}$ | | |
| срQМ | $5.59 \cdot 10^{-5}$ | $5.59 \cdot 10^{-5}$ | $-3.578 \cdot 10^{-8}$ | $5.017 \cdot 10^{-6}$ | $5.017 \cdot 10^{-6}$ | $-3.986 \cdot 10^{-8}$ | | |

| cpb | $3.939 \cdot 10^{-5}$ | $3.939 \cdot 10^{-5}$ | 0 | $4.663 \cdot 10^{-6}$ | $4.663 \cdot 10^{-6}$ | $2.145 \cdot 10^{-8}$ |
|-----|-----------------------|-----------------------|---|-----------------------|-----------------------|------------------------|
| sm | 0 | 0 | 0 | 0.0003231 | 0.0003231 | $-3.095 \cdot 10^{-8}$ |

1.47 $b\bar{b} \rightarrow \nu_e \bar{\nu}_e$

| | | interfer | ence | square | | | |
|------|-------------------------|------------------------|---------------------------------|--|--|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | $\verb mod1 \qquad \verb mod2 \qquad 1-\verb mod2/mod1 $ | | | |
| cbW | $1.407 \cdot 10^{-5}$ | $1.407 \cdot 10^{-5}$ | 0 | $0.001809 \qquad 0.001809 \qquad 0$ | | | |
| cbWI | $-1.433 \cdot 10^{-20}$ | $-2.81 \cdot 10^{-20}$ | -0.9604 | $0.0006872 \qquad 0.0006872 \qquad 0$ | | | |
| cpQ3 | 0.0001163 | 0.0001163 | 0 | $8.349 \cdot 10^{-6} 8.349 \cdot 10^{-6}$ | | | |
| cpQM | $5.813 \cdot 10^{-5}$ | $5.813 \cdot 10^{-5}$ | 0 | $2.087 \cdot 10^{-6}$ $2.087 \cdot 10^{-6}$ 0 | | | |
| cpb | $-9.006 \cdot 10^{-7}$ | $-9.006 \cdot 10^{-7}$ | $-2.221 \cdot 10^{-8}$ | $1.78 \cdot 10^{-7}$ $1.78 \cdot 10^{-7}$ 0 | | | |
| sm | 0 | 0 | 0 | $0.003788 \qquad 0.003788 \qquad 0$ | | | |

1.48 $b\bar{b} \rightarrow b\bar{b}$

| | | interfe | rence | | square | | | |
|------|------------------------|------------------------|------------------------|-----------|-----------|-----------------------|--|--|
| | mod1 | mod2 | $1-{\tt mod2/mod1}$ | mod1 | mod2 | $1-{\tt mod2/mod1}$ | | |
| cQQ1 | -0.1073 | -0.1073 | 0 | 0.3307 | 0.3307 | 0 | | |
| cQQ8 | -0.5291 | -0.5291 | 0 | 0.1377 | 0.1377 | 0 | | |
| cQb1 | 0.08055 | 0.08055 | $-1.241 \cdot 10^{-8}$ | 2.203 | 2.203 | 0 | | |
| cQb8 | -1.48 | -1.48 | 0 | 0.631 | 0.631 | 0 | | |
| cbW | -0.004393 | -0.004393 | 0 | 0.1385 | 0.1385 | 0 | | |
| cbWI | $2.146 \cdot 10^{-18}$ | $1.934 \cdot 10^{-18}$ | 0.09889 | 0.05084 | 0.05084 | $1.967 \cdot 10^{-8}$ | | |
| cpQ3 | -0.08306 | -0.08306 | 0 | 0.003179 | 0.003179 | 0 | | |
| cpQM | -0.04153 | -0.04153 | 0 | 0.0007946 | 0.0007946 | $1.258 \cdot 10^{-8}$ | | |
| cpb | 0.000859 | 0.000859 | $-2.328 \cdot 10^{-8}$ | 0.0002733 | 0.0002733 | $3.658 \cdot 10^{-8}$ | | |
| sm | 0 | 0 | 0 | 3.208 | 3.208 | 0 | | |

1.49 $b\bar{b} \rightarrow d\bar{d}$

| | interference | | | square |
|---------|------------------------|------------------------|------------------------|---|
| | mod1 | mod2 | $1-{\tt mod2/mod1}$ | $\verb mod1 & \verb mod2 & 1-\verb mod2/mod1 $ |
| cQd1 | -0.003708 | -0.003708 | $-2.697 \cdot 10^{-8}$ | 0.2549 0.2549 0 |
| cQd8 | 0.3181 | 0.3181 | 0 | $0.1074 \qquad 0.1074 \qquad 0$ |
| cQq11 | 0.02037 | 0.02037 | 0 | $0.09301 \qquad 0.09301 \qquad 0$ |
| cQq13 | 0.05368 | 0.05368 | $1.863 \cdot 10^{-8}$ | 0.2451 	 0.2451 	 0 |
| cQq81 | 0.1614 | 0.1614 | 0 | $0.05447 \qquad 0.05447 \qquad 0$ |
| cQq83 | 0.1614 | 0.1614 | 0 | $0.05447 \qquad 0.05447 \qquad 0$ |
| cbQqd1 | -0.01371 | 0 | 1 | $0.5 	 0.5 	 3.1 \cdot 10^{-6}$ |
| cbQqd1I | $2.891 \cdot 10^{-19}$ | 0 | 1 | $0.5 	 0.5 	 3.1 \cdot 10^{-6}$ |
| cbQqd8 | $6.094 \cdot 10^{-10}$ | 0 | 1 | 0.1111 0.1111 $2.97 \cdot 10^{-6}$ |
| cbQqd8I | $2.187 \cdot 10^{-20}$ | 0 | 1 | $0.1111 	 0.1111 	 2.88 \cdot 10^{-6}$ |
| cbW | $6.056 \cdot 10^{-5}$ | $6.056 \cdot 10^{-5}$ | 0 | 0.00548 0.00548 0 |
| cbWI | $8.58 \cdot 10^{-18}$ | $8.58 \cdot 10^{-18}$ | $7.156 \cdot 10^{-6}$ | $0.006462 \qquad 0.006462 \qquad 1.548 \cdot 10^{-8}$ |
| cpQ3 | 0.0003067 | 0.0003067 | 0 | $2.194 \cdot 10^{-5}$ $2.194 \cdot 10^{-5}$ 0 |
| cpQM | 0.0001533 | 0.0001533 | 0 | $5.485 \cdot 10^{-6}$ $5.485 \cdot 10^{-6}$ 0 |
| cpb | $-3.536 \cdot 10^{-5}$ | $-3.536 \cdot 10^{-5}$ | $-2.828 \cdot 10^{-8}$ | $1.319 \cdot 10^{-5}$ $1.319 \cdot 10^{-5}$ 0 |
| sm | 0 | 0 | 0 | $0.4909 \qquad 0.4909 \qquad 0$ |

$1.50 \quad b\bar{b} \to t\bar{t}$

| | interference | | | square | | | |
|------|--------------|----------|---------------------------------|----------|----------|---------------------------------|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | |
| cQQ1 | -2.551 | -2.551 | 0 | 0.8506 | 0.8506 | 0 | |
| cQQ8 | 0.02053 | 0.02053 | 0 | 0.009495 | 0.009495 | 0 | |
| cQb1 | -0.01071 | -0.01071 | 0 | 0.6289 | 0.6289 | 0 | |
| cQb8 | 0.02337 | 0.02337 | 0 | 0.001334 | 0.001334 | 0 | |

| cQt1 | -0.259 | -0.259 | 0 | 0.6289 | 0.6289 | 0 |
|---------|-------------------------|-------------------------|------------------------|-----------------------|-----------------------|------------------------|
| cQt8 | -0.1268 | -0.1268 | 0 | 0.001334 | 0.001334 | 0 |
| cQtQb1 | -0.004921 | -0.004921 | 0 | 0.7858 | 0.7858 | 0 |
| cQtQb1I | $-2.223 \cdot 10^{-18}$ | $-4.502 \cdot 10^{-18}$ | -1.025 | 0.4891 | 0.4891 | 0 |
| cQtQb8 | 0.01058 | 0.01058 | 0 | 0.1016 | 0.1016 | 0 |
| cQtQb8I | $-3.416 \cdot 10^{-19}$ | $7.749 \cdot 10^{-20}$ | 1.227 | 0.1016 | 0.1016 | 0 |
| cbW | 0.003542 | 0.003542 | 0 | 0.0249 | 0.0249 | $4.016 \cdot 10^{-8}$ |
| cbWI | $3.838 \cdot 10^{-18}$ | $3.08 \cdot 10^{-18}$ | 0.1974 | 1.475 | 1.475 | 0 |
| cpQ3 | -0.006456 | -0.006456 | 0 | 0.003798 | 0.003798 | 0 |
| cpQM | -0.0006996 | -0.0006996 | $-2.859 \cdot 10^{-8}$ | $5.641 \cdot 10^{-6}$ | $5.641 \cdot 10^{-6}$ | $-5.318 \cdot 10^{-8}$ |
| cpb | -0.000131 | -0.000131 | 0 | $5.768 \cdot 10^{-6}$ | $5.768 \cdot 10^{-6}$ | $-3.468 \cdot 10^{-8}$ |
| cpt | -0.001815 | -0.001815 | 0 | $3.224 \cdot 10^{-5}$ | $3.224\cdot10^{-5}$ | $3.102 \cdot 10^{-8}$ |
| cptb | 0.00258 | 0.00258 | 0 | 0.03072 | 0.03072 | 0 |
| cptbI | $-5.009 \cdot 10^{-20}$ | $1.774 \cdot 10^{-20}$ | 1.354 | 0.0006119 | 0.0006119 | 0 |
| ctG | 0.1194 | 0.1194 | 0 | 0.0309 | 0.0309 | 0 |
| ctGI | $-4.011 \cdot 10^{-17}$ | $-6.116 \cdot 10^{-18}$ | 0.8475 | 0.02145 | 0.02145 | 0 |
| ctW | -1.529 | -1.529 | $6.541 \cdot 10^{-8}$ | 1.35 | 1.35 | 0 |
| ctWI | $-5.599 \cdot 10^{-17}$ | $-3.18 \cdot 10^{-18}$ | 0.9432 | 0.0222 | 0.0222 | $1.352 \cdot 10^{-7}$ |
| ctZ | 0.005242 | 0.005242 | $5.532 \cdot 10^{-7}$ | 0.003617 | 0.003617 | $1.106 \cdot 10^{-6}$ |
| ctZI | $3.117 \cdot 10^{-18}$ | $8.656 \cdot 10^{-20}$ | 0.9722 | 0.002511 | 0.002511 | $1.075 \cdot 10^{-6}$ |
| ctb1 | -0.00286 | -0.00286 | $-3.497 \cdot 10^{-8}$ | 0.04273 | 0.04273 | 0 |
| ctb8 | 0.5796 | 0.5796 | 0 | 0.189 | 0.189 | 0 |
| ctp | $-1.314 \cdot 10^{-5}$ | $-1.314 \cdot 10^{-5}$ | 0 | $6.089 \cdot 10^{-7}$ | $6.089 \cdot 10^{-7}$ | 0 |
| ctpI | $-1.912 \cdot 10^{-22}$ | $8.228 \cdot 10^{-23}$ | 1.43 | $6.906 \cdot 10^{-7}$ | $6.906 \cdot 10^{-7}$ | 0 |
| sm | 0 | 0 | 0 | 11.59 | 11.59 | 0 |

1.51 $b\bar{b} \rightarrow u\bar{u}$

interference square

| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ |
|-----------------|-------------------------|-------------------------|---------------------------------|-----------------------|-----------------------|---------------------------------|
| cQbqu1 | -0.01371 | 0 | 1 | 0.5 | 0.5 | $3.06 \cdot 10^{-6}$ |
| cQbqu1I | $-2.353 \cdot 10^{-23}$ | 0 | 1 | 0.5 | 0.5 | $3.04 \cdot 10^{-6}$ |
| cQbqu8 | $-9.637 \cdot 10^{-20}$ | 0 | 1 | 0.1111 | 0.1111 | $3.06 \cdot 10^{-6}$ |
| cQbqu8I | 0 | 0 | 0 | 0.1111 | 0.1111 | $3.06 \cdot 10^{-6}$ |
| cQq11 | -0.05074 | -0.05074 | $1.971 \cdot 10^{-8}$ | 0.2482 | 0.2482 | 0 |
| cQq13 | 0.04124 | 0.04124 | 0 | 0.2017 | 0.2017 | 0 |
| cQq81 | 0.1328 | 0.1328 | 0 | 0.04483 | 0.04483 | 0 |
| cQq83 | -0.1328 | -0.1328 | 0 | 0.04483 | 0.04483 | 0 |
| cQu1 | 0.008829 | 0.008829 | $-1.133 \cdot 10^{-8}$ | 0.3035 | 0.3035 | 0 |
| cQu8 | 0.1998 | 0.1998 | 0 | 0.06744 | 0.06744 | 0 |
| cbW | 0.0001162 | 0.0001162 | 0 | 0.006447 | 0.006447 | 0 |
| cbWI | $-2.927 \cdot 10^{-19}$ | $-3.929 \cdot 10^{-19}$ | -0.3422 | 0.006379 | 0.006379 | $1.568 \cdot 10^{-8}$ |
| cpQ3 | 0.000624 | 0.000624 | 0 | $3.995 \cdot 10^{-5}$ | $3.995 \cdot 10^{-5}$ | 0 |
| \mathtt{cpQM} | 0.000312 | 0.000312 | $3.205 \cdot 10^{-8}$ | $9.988 \cdot 10^{-6}$ | $9.988 \cdot 10^{-6}$ | 0 |
| cpb | $-5.541 \cdot 10^{-6}$ | $-5.541 \cdot 10^{-6}$ | $-1.805 \cdot 10^{-7}$ | $1.149 \cdot 10^{-5}$ | $1.149 \cdot 10^{-5}$ | 0 |
| sm | 0 | 0 | 0 | 0.4953 | 0.4953 | 0 |

1.52 $b\bar{t} \rightarrow e^-\bar{\nu}_e$

| | interference | | | square | | | |
|-------|-------------------------|-------------------------|---------------------------------|-----------------------|-----------------------|---------------------------------|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | |
| cbW | $3.98 \cdot 10^{-5}$ | $3.98 \cdot 10^{-5}$ | $2.512 \cdot 10^{-8}$ | 0.003448 | 0.003448 | 0 | |
| cbWI | $-3.212 \cdot 10^{-20}$ | $1.098 \cdot 10^{-19}$ | 4.418 | 0.003956 | 0.003956 | 0 | |
| cpQ3 | 0.0001156 | 0.0001156 | $8.65 \cdot 10^{-8}$ | $3.504 \cdot 10^{-6}$ | $3.504 \cdot 10^{-6}$ | $2.854 \cdot 10^{-8}$ | |
| cptb | $-7.312 \cdot 10^{-7}$ | $-7.312 \cdot 10^{-7}$ | $1.368 \cdot 10^{-8}$ | $1.733 \cdot 10^{-6}$ | $1.733 \cdot 10^{-6}$ | 0 | |
| cptbI | $-3.574 \cdot 10^{-22}$ | $-1.85 \cdot 10^{-23}$ | 0.9482 | $7.954 \cdot 10^{-6}$ | $7.954 \cdot 10^{-6}$ | $1.257 \cdot 10^{-8}$ | |
| ctW | 0.003605 | 0.003605 | 0 | 0.004113 | 0.004113 | 0 | |
| ctWI | $-1.279 \cdot 10^{-18}$ | $-9.831 \cdot 10^{-19}$ | 0.2313 | 0.003185 | 0.003185 | 0 | |

 $\mathtt{sm} \qquad \qquad 0 \qquad \qquad 0$

0.00648 0.00648 $1.543 \cdot 10^{-8}$

1.53 $c\bar{c} \to \mu^{+}\mu^{-}$

1.54 $c\bar{s} \rightarrow \tau^+ \nu_{\tau}$

1.55 $d\bar{d} \rightarrow c\bar{c}$

1.56 $d\bar{d} \to e^+e^-$

1.57 $e^+\nu_{\mu} \to e^+\nu_{\mu}$

interference square $\verb|mod1| \verb|mod2| 1 - \verb|mod2| \verb|mod1|$ mod1mod2 1 - mod2/mod10 0 $0.004689 \quad 0.004689 \quad -4.266 \cdot 10^{-8}$ sm**1.58** $e^+\nu_e \to \mu^+\nu_\mu$ interference square $mod1 \quad mod2 \quad 1 - mod2/mod1$ mod2 1 - mod2/mod1mod1 $0.008295 \quad 0.008295 \quad 1.206 \cdot 10^{-8}$ 0 0 0 sm**1.59** $e^+\nu_e \to e^+\nu_e$ interference square $mod1 \quad mod2 \quad 1 - mod2/mod1$ $mod2 \quad 1 - mod2/mod1$ mod1 0 0 0.1871 0.1871 sm**1.60** $e^+\tau^- \to e^+\tau^$ interference square $mod1 \quad mod2 \quad 1 - mod2/mod1$ mod2 1 - mod2/mod1mod10 0 0 $0.01227 \quad 0.01227$ sm**1.61** $e^+e^- \to \mu^+\mu^$ interference square $mod1 \quad mod2 \quad 1 - mod2/mod1$ mod1mod2 1 - mod2/mod10 0 0 $0.01719 \quad 0.01719$

sm

1.62 $e^+e^- \rightarrow e^+e^-$

1.63 $gg \rightarrow gg$

1.64 $gg \rightarrow ggg$

1.65 $gg \rightarrow t\bar{t}$

interference square $1-\mathtt{mod}2/\mathtt{mod}1$ mod2 1 - mod2/mod1mod1mod2 mod10.38890 0.1082ctG 0.38890.10820 ctGI $-1.451 \cdot 10^{-17} \quad -1.554 \cdot 10^{-17}$ -0.070960.09343 0.09343 0 0 0 0 0.3902 0.3902

1.66 $gg \rightarrow u\bar{u}$

interference square $\verb|mod1| \verb|mod2| 1 - \verb|mod2| mod1|$ $mod1 \quad mod2 \quad 1 - mod2/mod1$ 0 7.332 7.332 0 0 0 sm1.67 $s\bar{s} \rightarrow \nu_{\tau}\bar{\nu}_{\tau}$ interference square $mod1 \quad mod2 \quad 1 - mod2/mod1$ mod1mod2 1 - mod2/mod10 0 0 $0.002076 \quad 0.002076$ 0 sm1.68 $s\bar{s} \rightarrow s\bar{s}$ interference square $mod1 \quad mod2 \quad 1 - mod2/mod1$ $mod1 \quad mod2 \quad 1 - mod2/mod1$ 0 0 0 29.03 29.03 sm**1.69** $t\bar{t} \rightarrow \nu_{\mu}\bar{\nu}_{\mu}$ interference square mod2 1 - mod2/mod11 - mod2/mod1mod1 mod1mod2 $1.078 \cdot 10^{-5}$ $1.078 \cdot 10^{-5}$ cpQM -0.0002376-0.00023760 0 $1.402 \cdot 10^{-5}$ $1.402 \cdot 10^{-5}$ $-7.133 \cdot 10^{-8}$ $2.896 \cdot 10^{-6}$ $2.896 \cdot 10^{-6}$ cpt 0

 $1.486 \cdot 10^{-15}$

0

 $-5.678 \cdot 10^{-10}$

ctW

ctWI

ctZ

ctZI

sm

0

1.70 $t\bar{t} \rightarrow \tau^+\tau^-$

| | | interfere | ence | | square | | | |
|-----------------|-------------------------|-------------------------|---------------------------------|-----------------------|-----------------------|---------------------------------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | | |
| \mathtt{cpQM} | $5.013 \cdot 10^{-5}$ | $5.013 \cdot 10^{-5}$ | $-3.99 \cdot 10^{-8}$ | $4.747 \cdot 10^{-6}$ | $4.747 \cdot 10^{-6}$ | $-4.213 \cdot 10^{-8}$ | | |
| cpt | -0.0001222 | -0.0001222 | 0 | $6.136 \cdot 10^{-6}$ | $6.136 \cdot 10^{-6}$ | $3.26 \cdot 10^{-8}$ | | |
| ctW | 0.004213 | 0.004213 | $4.984 \cdot 10^{-7}$ | 0.009158 | 0.009158 | $1.158 \cdot 10^{-6}$ | | |
| ctWI | $-9.8 \cdot 10^{-19}$ | $-2.749 \cdot 10^{-19}$ | 0.7195 | 0.002765 | 0.002765 | $1.157 \cdot 10^{-6}$ | | |
| ctZ | -0.003014 | -0.003014 | $5.308 \cdot 10^{-7}$ | 0.005543 | 0.005543 | $1.101 \cdot 10^{-6}$ | | |
| ctZI | $6.278 \cdot 10^{-19}$ | $3.946 \cdot 10^{-19}$ | 0.3714 | 0.002258 | 0.002258 | $1.107 \cdot 10^{-6}$ | | |
| ctp | $-1.026 \cdot 10^{-6}$ | $-1.026 \cdot 10^{-6}$ | 0 | $3.101 \cdot 10^{-8}$ | $3.101 \cdot 10^{-8}$ | 0 | | |
| ctpI | $-9.482 \cdot 10^{-23}$ | $-6.768 \cdot 10^{-23}$ | 0.2862 | $3.49 \cdot 10^{-8}$ | $3.49 \cdot 10^{-8}$ | 0 | | |
| sm | 0 | 0 | 0 | 0.0008695 | 0.0008695 | $-3.45 \cdot 10^{-8}$ | | |

1.71 $t\bar{t} \rightarrow c\bar{c}$

| | interference | | | | square | | | |
|--------|-------------------------|-------------------------|---------------------------------|-----------------------|-----------------------|-----------------------------------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1 - \mathtt{mod}2/\mathtt{mod}1$ | | |
| cQq11 | 0.1731 | 0.1731 | 0 | 0.7885 | 0.7885 | 0 | | |
| cQq13 | 0.08795 | 0.08795 | 0 | 0.3989 | 0.3989 | 0 | | |
| cQq81 | 0.2821 | 0.2821 | 0 | 0.08864 | 0.08864 | 0 | | |
| cQq83 | 0.2821 | 0.2821 | 0 | 0.08864 | 0.08864 | 0 | | |
| cQu1 | 0.007814 | 0.007814 | $-2.56 \cdot 10^{-8}$ | 0.1584 | 0.1584 | 0 | | |
| cQu8 | 0.1238 | 0.1238 | 0 | 0.03521 | 0.03521 | 0 | | |
| cpQM | -0.0009886 | -0.0009886 | $1.012 \cdot 10^{-8}$ | $2.641 \cdot 10^{-5}$ | $2.641 \cdot 10^{-5}$ | $3.787 \cdot 10^{-8}$ | | |
| cpt | 0.0001969 | 0.0001969 | $-5.079 \cdot 10^{-8}$ | $6.051 \cdot 10^{-6}$ | $6.051 \cdot 10^{-6}$ | $-3.305 \cdot 10^{-8}$ | | |
| ctG | 0.1977 | 0.1977 | 0 | 0.0248 | 0.0248 | 0 | | |
| ctGI | $-7.353 \cdot 10^{-25}$ | $-2.206 \cdot 10^{-24}$ | -2 | 0.01535 | 0.01535 | 0 | | |
| ctQqu1 | -0.4725 | 0 | 1 | 0.5004 | 0.5004 | $3.097 \cdot 10^{-6}$ | | |

| ctQqu1I | $-1.164 \cdot 10^{-17}$ | 0 | 1 | 0.5004 | 0.5004 | $3.097 \cdot 10^{-6}$ |
|---------|-------------------------|-------------------------|-----------------------|----------|----------|-----------------------|
| ctQqu8 | $2.1\cdot 10^{-8}$ | 0 | 1 | 0.1112 | 0.1112 | $2.967 \cdot 10^{-6}$ |
| ctQqu8I | $1.915 \cdot 10^{-18}$ | 0 | 1 | 0.1112 | 0.1112 | $2.967 \cdot 10^{-6}$ |
| ctW | 0.01203 | 0.01203 | $4.156 \cdot 10^{-7}$ | 0.02546 | 0.02546 | $9.819 \cdot 10^{-7}$ |
| ctWI | $1.156 \cdot 10^{-10}$ | $1.156 \cdot 10^{-10}$ | $6.922 \cdot 10^{-7}$ | 0.008714 | 0.008714 | $9.64 \cdot 10^{-7}$ |
| ctZ | -0.00912 | -0.00912 | $5.373 \cdot 10^{-7}$ | 0.009775 | 0.009775 | $1.105 \cdot 10^{-6}$ |
| ctZI | $-1.012 \cdot 10^{-10}$ | $-1.012 \cdot 10^{-10}$ | $5.931 \cdot 10^{-7}$ | 0.006051 | 0.006051 | $1.091 \cdot 10^{-6}$ |
| ctq1 | 0.0109 | 0.0109 | 0 | 0.1584 | 0.1584 | 0 |
| ctq8 | 0.1467 | 0.1467 | 0 | 0.04295 | 0.04295 | 0 |
| ctu1 | 0.09087 | 0.09087 | $-1.1\cdot10^{-8}$ | 0.7885 | 0.7885 | 0 |
| ctu8 | 0.2821 | 0.2821 | 0 | 0.08864 | 0.08864 | 0 |
| sm | 0 | 0 | 0 | 0.6077 | 0.6077 | 0 |

1.72 $t\bar{t} \rightarrow d\bar{d}$

| | | interfer | ence | | square | | | |
|-----------------|-------------------------|-----------------------|---------------------------------|-----------------------|-----------------------|---------------------------------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | | |
| cQd1 | -0.003572 | -0.003572 | $-2.799 \cdot 10^{-8}$ | 0.1345 | 0.1345 | 0 | | |
| cQd8 | 0.04722 | 0.04722 | 0 | 0.00936 | 0.00936 | 0 | | |
| cQq11 | -0.1381 | -0.1381 | 0 | 0.6796 | 0.6796 | 0 | | |
| cQq13 | 0.08895 | 0.08895 | $1.124 \cdot 10^{-8}$ | 0.4393 | 0.4393 | 0 | | |
| cQq81 | 0.3088 | 0.3088 | 0 | 0.09763 | 0.09763 | 0 | | |
| cQq83 | -0.3088 | -0.3088 | 0 | 0.09763 | 0.09763 | 0 | | |
| cQtqd1 | -0.4725 | 0 | 1 | 0.5004 | 0.5004 | $3.037 \cdot 10^{-6}$ | | |
| cQtqd1I | $-1.156 \cdot 10^{-17}$ | 0 | 1 | 0.5004 | 0.5004 | $3.057 \cdot 10^{-6}$ | | |
| cQtqd8 | 0 | 0 | 0 | 0.1112 | 0.1112 | $3.057 \cdot 10^{-6}$ | | |
| cQtqd8I | $-3.989 \cdot 10^{-18}$ | 0 | 1 | 0.1112 | 0.1112 | $3.057 \cdot 10^{-6}$ | | |
| \mathtt{cpQM} | -0.0009743 | -0.0009743 | $1.026 \cdot 10^{-8}$ | $3.412 \cdot 10^{-5}$ | $3.412 \cdot 10^{-5}$ | 0 | | |
| cpt | $1.709 \cdot 10^{-5}$ | $1.709 \cdot 10^{-5}$ | $-1.755 \cdot 10^{-7}$ | $3.27 \cdot 10^{-6}$ | $3.27 \cdot 10^{-6}$ | $-3.058 \cdot 10^{-8}$ | | |

| ctG | 0.1977 | 0.1977 | 0 | 0.03174 | 0.03174 | 0 |
|------|-------------------------|-------------------------|------------------------|----------|----------|-----------------------|
| ctGI | $-2.573 \cdot 10^{-24}$ | $-8.799 \cdot 10^{-32}$ | 1 | 0.02229 | 0.02229 | 0 |
| ctW | 0.004344 | 0.004344 | $-9.208 \cdot 10^{-8}$ | 0.006178 | 0.006178 | $3.723 \cdot 10^{-7}$ |
| ctWI | $1.612 \cdot 10^{-15}$ | $1.605 \cdot 10^{-15}$ | 0.004306 | 0.003163 | 0.003163 | $3.794 \cdot 10^{-7}$ |
| ctZ | 0.0009748 | 0.0009748 | $6.053 \cdot 10^{-7}$ | 0.003716 | 0.003716 | $1.103 \cdot 10^{-6}$ |
| ctZI | $-1.412 \cdot 10^{-15}$ | $-1.414 \cdot 10^{-15}$ | -0.001546 | 0.00261 | 0.00261 | $1.073 \cdot 10^{-6}$ |
| ctd1 | -0.0255 | -0.0255 | 0 | 0.4393 | 0.4393 | 0 |
| ctd8 | 0.3088 | 0.3088 | 0 | 0.09763 | 0.09763 | 0 |
| ctq1 | -0.002134 | -0.002134 | $4.687 \cdot 10^{-8}$ | 0.1345 | 0.1345 | 0 |
| ctq8 | 0.183 | 0.183 | 0 | 0.05518 | 0.05518 | 0 |
| sm | 0 | 0 | 0 | 0.6225 | 0.6225 | 0 |

1.73 $t\bar{t} \rightarrow s\bar{s}$

| | interference | | | | square | | | |
|-----------------|-------------------------|-----------------------|---------------------------------|-----------------------|-----------------------|---------------------------------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | | |
| cQd1 | -0.002036 | -0.002036 | $-4.913 \cdot 10^{-8}$ | 0.02475 | 0.02475 | 0 | | |
| cQd8 | 0.1883 | 0.1883 | 0 | 0.05697 | 0.05697 | 0 | | |
| cQq11 | -0.05511 | -0.05511 | $1.814 \cdot 10^{-8}$ | 0.2738 | 0.2738 | 0 | | |
| cQq13 | 0.1547 | 0.1547 | 0 | 0.7609 | 0.7609 | 0 | | |
| cQq81 | 0.5205 | 0.5205 | 0 | 0.1691 | 0.1691 | 0 | | |
| cQq83 | -0.5205 | -0.5205 | 0 | 0.1691 | 0.1691 | 0 | | |
| cQtqd1 | -0.4725 | 0 | 1 | 0.5004 | 0.5004 | $3.057 \cdot 10^{-6}$ | | |
| cQtqd1I | $2.294 \cdot 10^{-17}$ | 0 | 1 | 0.5004 | 0.5004 | $3.057 \cdot 10^{-6}$ | | |
| cQtqd8 | $3.368 \cdot 10^{-18}$ | 0 | 1 | 0.1112 | 0.1112 | $3.057 \cdot 10^{-6}$ | | |
| cQtqd8I | $-2.948 \cdot 10^{-18}$ | 0 | 1 | 0.1112 | 0.1112 | $3.057 \cdot 10^{-6}$ | | |
| \mathtt{cpQM} | -0.0003832 | -0.0003832 | $2.609 \cdot 10^{-8}$ | $1.416 \cdot 10^{-5}$ | $1.416 \cdot 10^{-5}$ | 0 | | |
| cpt | $3.096 \cdot 10^{-5}$ | $3.096 \cdot 10^{-5}$ | $-6.461 \cdot 10^{-8}$ | $1.331 \cdot 10^{-5}$ | $1.331 \cdot 10^{-5}$ | 0 | | |
| ctG | 0.1977 | 0.1977 | 0 | 0.04703 | 0.04703 | 0 | | |

| ctGI | $-5.882 \cdot 10^{-24}$ | $5.882 \cdot 10^{-24}$ | 2 | 0.03758 | 0.03758 | 0 |
|------|-------------------------|-------------------------|------------------------|----------|----------|-----------------------|
| ctW | 0.005844 | 0.005844 | $-1.198 \cdot 10^{-7}$ | 0.003779 | 0.003779 | $3.705 \cdot 10^{-7}$ |
| ctWI | $5.664 \cdot 10^{-13}$ | $5.664 \cdot 10^{-13}$ | $-3.866 \cdot 10^{-6}$ | 0.005332 | 0.005332 | $3.751 \cdot 10^{-7}$ |
| ctZ | 0.0002975 | 0.0002975 | $7.058 \cdot 10^{-7}$ | 0.005506 | 0.005506 | $1.09 \cdot 10^{-6}$ |
| ctZI | $-4.958 \cdot 10^{-13}$ | $-4.958 \cdot 10^{-13}$ | $3.529 \cdot 10^{-6}$ | 0.0044 | 0.0044 | $1.114 \cdot 10^{-6}$ |
| ctd1 | -0.04386 | -0.04386 | $-2.28 \cdot 10^{-8}$ | 0.7609 | 0.7609 | 0 |
| ctd8 | 0.5205 | 0.5205 | 0 | 0.1691 | 0.1691 | 0 |
| ctq1 | -0.005328 | -0.005328 | $1.877 \cdot 10^{-8}$ | 0.02475 | 0.02475 | 0 |
| ctq8 | 0.5988 | 0.5988 | 0 | 0.1955 | 0.1955 | 0 |
| sm | 0 | 0 | 0 | 0.8326 | 0.8326 | 0 |

1.74 $t\bar{t} \rightarrow t\bar{t}$

| | interference | | | square |
|------|-------------------------|-------------------------|-----------------------|--|
| | mod1 | mod2 | $1-{\tt mod2/mod1}$ | $\verb mod1 \qquad \verb mod2 \qquad 1-\verb mod2 \\ \verb mod1 $ |
| cQQ1 | -1.357 | -1.357 | 0 | 3.075 	 3.075 	 0 |
| cQQ8 | -4.646 | -4.646 | 0 | $0.7718 \qquad 0.7718 \qquad 0$ |
| cQt1 | -2.327 | -2.327 | 0 | 7.376 	 7.376 	 0 |
| cQt8 | -4.14 | -4.14 | 0 | 1.875 	 1.875 	 0 |
| cpQM | 0.5108 | 0.5108 | 0 | 0.01432 0.01432 0 |
| cpt | -0.4959 | -0.4959 | 0 | 0.01416 0.01416 0 |
| ctG | 0.7747 | 0.7747 | 0 | 3.432 	 3.432 	 0 |
| ctGI | $3.385 \cdot 10^{-17}$ | $5.846 \cdot 10^{-17}$ | -0.727 | 3.367 	 3.367 	 0 |
| ctW | -0.543 | -0.543 | $4.604 \cdot 10^{-7}$ | $0.719 	 0.719 	 9.736 \cdot 10^{-7}$ |
| ctWI | $1.642 \cdot 10^{-17}$ | $3.056 \cdot 10^{-17}$ | -0.8614 | $2.293 	 2.293 	 1.003 \cdot 10^{-6}$ |
| ctZ | 2.411 | 2.411 | $5.393 \cdot 10^{-7}$ | 1.594 1.594 $1.067 \cdot 10^{-6}$ |
| ctZI | $-1.383 \cdot 10^{-16}$ | $1.934 \cdot 10^{-17}$ | 1.14 | 1.578 1.578 $1.077 \cdot 10^{-6}$ |
| ctp | 0.4057 | 0.4057 | 0 | 0.01057 0.01057 0 |
| ctpI | $2.23 \cdot 10^{-18}$ | $-7.486 \cdot 10^{-19}$ | 1.336 | $0.005147 0.005147 \qquad 0$ |

-2.485-2.48512.3 12.3 ctt1 0 0 4.934 4.934 sm1.75 $u\bar{d} \rightarrow \mu^+\nu_\mu$ interference square $\verb|mod1| \verb|mod2| 1 - \verb|mod2| mod1|$ mod2 1 - mod2/mod1mod10 0 0 $0.0005352 \quad 0.0005352$ $1.868 \cdot 10^{-8}$ sm1.76 $u\bar{d} \rightarrow c\bar{s}$ interference square $\verb|mod1| \verb|mod2| 1 - \verb|mod2| mod1|$ 1 - mod2/mod1mod1mod2 0 0 $0.00338 \quad 0.00338$ 0 sm1.77 $u\bar{d} \rightarrow u\bar{d}$ interference square $mod1 \quad mod2 \quad 1 - mod2/mod1$ $mod1 \quad mod2 \quad 1 - mod2/mod1$ 0 28.5 0 28.5 0 sm1.78 $u\bar{u} \rightarrow \nu_e \bar{\nu}_e$ interference square

 $mod1 \quad mod2 \quad 1 - mod2/mod1$

0

0

0

sm

0

0

 $1-\mathtt{mod}2/\mathtt{mod}1$

0

mod1

0.002413 0.002413

mod2

1.79 $u\bar{u} \rightarrow u\bar{u}$

1.80 $zz \to W^+W^-$

1.81 $zz \rightarrow zz$

2 By parameter point

2.1 cQQ1

| | | terference | | square | | |
|-------------------------|---------|------------|---------------------|--------|--------|---------------------------------|
| | mod1 | mod2 | $1-{\tt mod2/mod1}$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ |
| $b\bar{b} 	o b\bar{b}$ | -0.1073 | -0.1073 | 0 | 0.3307 | 0.3307 | 0 |
| $b\bar{b} \to t\bar{t}$ | -2.551 | -2.551 | 0 | 0.8506 | 0.8506 | 0 |
| $t\bar{t} \to t\bar{t}$ | -1.357 | -1.357 | 0 | 3.075 | 3.075 | 0 |

2.2 cQQ8

| | | in^{r} | terference | | square | | | |
|-------------------------|---------|----------|---------------------------------|----------|----------|-----------------------------------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1 - \mathtt{mod}2/\mathtt{mod}1$ | | |
| $b\bar{b} 	o b\bar{b}$ | -0.5291 | -0.5291 | 0 | 0.1377 | 0.1377 | 0 | | |
| $b\bar{b} \to t\bar{t}$ | 0.02053 | 0.02053 | 0 | 0.009495 | 0.009495 | 0 | | |
| $t\bar{t} \to t\bar{t}$ | -4.646 | -4.646 | 0 | 0.7718 | 0.7718 | 0 | | |

2.3 cQb1

| | | erference | | square | | |
|-------------------------|----------|-----------|-----------------------------------|--------|--------|---------------|
| | mod1 | mod2 | $1 - \mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | 1 - mod2/mod1 |
| $b\bar{b} 	o b\bar{b}$ | 0.08055 | 0.08055 | $-1.241 \cdot 10^{-8}$ | 2.203 | 2.203 | 0 |
| $b\bar{b} \to t\bar{t}$ | -0.01071 | -0.01071 | 0 | 0.6289 | 0.6289 | 0 |

2.4 cQb8

| | | in | nterference | | square | | | |
|------------------------|---------|---------|---------------------------------|----------|----------|---------------------------------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | | |
| $b\bar{b} 	o b\bar{b}$ | -1.48 | -1.48 | 0 | 0.631 | 0.631 | 0 | | |
| $b\bar{b} 	o t\bar{t}$ | 0.02337 | 0.02337 | 0 | 0.001334 | 0.001334 | 0 | | |

2.5 cQbqu1

| | interference | | | | square | | |
|-------------------------|--------------|------|---------------------------------|------|--------|----------------------|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | 1 - mod2/mod1 | |
| $\bar{b}t \to \bar{d}u$ | 0 | 0 | 0 | 0.25 | 0.25 | $3.04 \cdot 10^{-6}$ | |
| $b\bar{b} \to u\bar{u}$ | -0.01371 | 0 | 1 | 0.5 | 0.5 | $3.06 \cdot 10^{-6}$ | |

2.6 cQbqu1I

| | interference | | | | square | | |
|-------------------------|-------------------------|------|---------------------------------|------|--------|----------------------|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | 1 - mod2/mod1 | |
| $\bar{b}t \to \bar{d}u$ | 0 | 0 | 0 | 0.25 | 0.25 | $3.04 \cdot 10^{-6}$ | |
| $b\bar{b} \to u\bar{u}$ | $-2.353 \cdot 10^{-23}$ | 0 | 1 | 0.5 | 0.5 | $3.04 \cdot 10^{-6}$ | |

2.7 cQbqu8

| | | $\mathrm{int}\epsilon$ | erference | square |
|-------------------------|-------------------------|------------------------|---------------------------------|---|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | $\verb mod1 & \verb mod2 & 1-\verb mod2 \\ \verb mod1 & \\$ |
| $\bar{b}t \to \bar{d}u$ | 0 | 0 | 0 | $0.05556 0.05556 3.06 \cdot 10^{-6}$ |
| $b\bar{b} \to u\bar{u}$ | $-9.637 \cdot 10^{-20}$ | 0 | 1 | $0.1111 0.1111 3.06 \cdot 10^{-6}$ |

2.8 cQbqu8I

| | | | interference | | square | | | |
|-------------------------|------|------|---------------------------------|---------|---------|---------------------------------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | | |
| $\bar{b}t \to \bar{d}u$ | 0 | 0 | 0 | 0.05556 | 0.05556 | $3.06 \cdot 10^{-6}$ | | |
| $b\bar{b} \to u\bar{u}$ | 0 | 0 | 0 | 0.1111 | 0.1111 | $3.06 \cdot 10^{-6}$ | | |

2.9 cQd1

| | | inter | rference | | square | | | |
|-------------------------|-----------|-----------|---------------------------------|---------|---------|---------------------------------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | | |
| $b\bar{b} \to d\bar{d}$ | -0.003708 | -0.003708 | $-2.697 \cdot 10^{-8}$ | 0.2549 | 0.2549 | 0 | | |
| $t\bar{t} \to d\bar{d}$ | -0.003572 | -0.003572 | $-2.799 \cdot 10^{-8}$ | 0.1345 | 0.1345 | 0 | | |
| $t\bar{t} \to s\bar{s}$ | -0.002036 | -0.002036 | $-4.913 \cdot 10^{-8}$ | 0.02475 | 0.02475 | 0 | | |

2.10 cQd8

| | | ir | nterference | | square | | | |
|-------------------------|---------|---------|---------------------|---------|---------|---------------------|--|--|
| | mod1 | mod2 | $1-{\tt mod2/mod1}$ | mod1 | mod2 | $1-{\tt mod2/mod1}$ | | |
| $b\bar{b} \to d\bar{d}$ | 0.3181 | 0.3181 | 0 | 0.1074 | 0.1074 | 0 | | |
| $t\bar{t} \to d\bar{d}$ | 0.04722 | 0.04722 | 0 | 0.00936 | 0.00936 | 0 | | |
| $t\bar{t} \to s\bar{s}$ | 0.1883 | 0.1883 | 0 | 0.05697 | 0.05697 | 0 | | |

$2.11 \quad \mathrm{cQq}11$

| | | ${ m int}\epsilon$ | erference | | square | | | |
|-------------------------|----------|--------------------|---------------------------------|---------|---------|---------------------------------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | | |
| $b\bar{b} \to d\bar{d}$ | 0.02037 | 0.02037 | 0 | 0.09301 | 0.09301 | 0 | | |
| $b\bar{b} \to u\bar{u}$ | -0.05074 | -0.05074 | $1.971 \cdot 10^{-8}$ | 0.2482 | 0.2482 | 0 | | |
| $t\bar{t} \to c\bar{c}$ | 0.1731 | 0.1731 | 0 | 0.7885 | 0.7885 | 0 | | |
| $t\bar{t} \to d\bar{d}$ | -0.1381 | -0.1381 | 0 | 0.6796 | 0.6796 | 0 | | |
| $t\bar{t} \to s\bar{s}$ | -0.05511 | -0.05511 | $1.814 \cdot 10^{-8}$ | 0.2738 | 0.2738 | 0 | | |

$2.12 \quad \mathrm{cQq} 13$

| | | in | nterference | | square | | |
|-------------------------|---------|---------|---------------------------------|--------|--------|---------------------------------|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | |
| $\bar{b}t \to \bar{d}u$ | 0.07326 | 0.07326 | $1.365 \cdot 10^{-8}$ | 0.3463 | 0.3463 | 0 | |
| $b\bar{b} \to d\bar{d}$ | 0.05368 | 0.05368 | $1.863 \cdot 10^{-8}$ | 0.2451 | 0.2451 | 0 | |
| $b\bar{b} \to u\bar{u}$ | 0.04124 | 0.04124 | 0 | 0.2017 | 0.2017 | 0 | |
| $t\bar{t} \to c\bar{c}$ | 0.08795 | 0.08795 | 0 | 0.3989 | 0.3989 | 0 | |
| $t\bar{t} \to d\bar{d}$ | 0.08895 | 0.08895 | $1.124 \cdot 10^{-8}$ | 0.4393 | 0.4393 | 0 | |
| $t \bar t 	o s \bar s$ | 0.1547 | 0.1547 | 0 | 0.7609 | 0.7609 | 0 | |

$2.13 \quad \mathrm{cQq}81$

| | | j | interference | | square | | | |
|-------------------------|--------|--------|---------------------------------|---------|---------|---------------------------------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | | |
| $b\bar{b} \to d\bar{d}$ | 0.1614 | 0.1614 | 0 | 0.05447 | 0.05447 | 0 | | |
| $b\bar{b} \to u\bar{u}$ | 0.1328 | 0.1328 | 0 | 0.04483 | 0.04483 | 0 | | |
| $t\bar{t} \to c\bar{c}$ | 0.2821 | 0.2821 | 0 | 0.08864 | 0.08864 | 0 | | |
| $t\bar{t} \to d\bar{d}$ | 0.3088 | 0.3088 | 0 | 0.09763 | 0.09763 | 0 | | |
| $t\bar{t} \to s\bar{s}$ | 0.5205 | 0.5205 | 0 | 0.1691 | 0.1691 | 0 | | |

$2.14 \quad \text{cQq83}$

| | interference | | | | square | | | |
|-------------------------|-----------------------|------------------------|-----------------------------------|---------|---------|---------------|--|--|
| | mod1 | mod2 | $1 - \mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | 1 - mod2/mod1 | | |
| $\bar{b}t \to \bar{d}u$ | $1.01 \cdot 10^{-18}$ | $9.619 \cdot 10^{-19}$ | 0.04779 | 0.07695 | 0.07695 | 0 | | |
| $b\bar{b} \to d\bar{d}$ | 0.1614 | 0.1614 | 0 | 0.05447 | 0.05447 | 0 | | |
| $b\bar{b} \to u\bar{u}$ | -0.1328 | -0.1328 | 0 | 0.04483 | 0.04483 | 0 | | |
| $t\bar{t} \to c\bar{c}$ | 0.2821 | 0.2821 | 0 | 0.08864 | 0.08864 | 0 | | |
| $t\bar{t} \to d\bar{d}$ | -0.3088 | -0.3088 | 0 | 0.09763 | 0.09763 | 0 | | |
| $t\bar{t} \to s\bar{s}$ | -0.5205 | -0.5205 | 0 | 0.1691 | 0.1691 | 0 | | |

2.15 cQt1

| | | i | nterference | | square | | |
|-------------------------|--------|--------|---------------------------------|--------|--------|---------------------------------|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | |
| $b\bar{b} \to t\bar{t}$ | -0.259 | -0.259 | 0 | 0.6289 | 0.6289 | 0 | |
| $t\bar{t} \to t\bar{t}$ | -2.327 | -2.327 | 0 | 7.376 | 7.376 | 0 | |

2.16 cQt8

2.17 cQtQb1

2.18 cQtQb1I

2.19 cQtQb8

2.20 cQtQb8I

interference square

| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1 - \mathtt{mod}2/\mathtt{mod}1$ |
|------------------|-------------------------|------------------------|---------------------------------|--------|--------|-----------------------------------|
| b ar b 	o t ar t | $-3.416 \cdot 10^{-19}$ | $7.749 \cdot 10^{-20}$ | 1.227 | 0.1016 | 0.1016 | 0 |

$2.21 \quad \text{cQtqd1}$

| | | j | nterference | square | | | |
|-------------------------|---------|------|---------------------------------|--------|--------|-----------------------|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | 1 - mod2/mod1 | |
| $\bar{b}t \to \bar{d}u$ | 0 | 0 | 0 | 0.25 | 0.25 | $3.04 \cdot 10^{-6}$ | |
| $t\bar{t} \to d\bar{d}$ | -0.4725 | 0 | 1 | 0.5004 | 0.5004 | $3.037 \cdot 10^{-6}$ | |
| $t\bar{t} \to s\bar{s}$ | -0.4725 | 0 | 1 | 0.5004 | 0.5004 | $3.057 \cdot 10^{-6}$ | |

$2.22 \quad \text{cQtqd1I}$

| | | erference | | square | | |
|-------------------------|-------------------------|-----------|---------------------------------|--------|--------|-----------------------|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | 1 - mod2/mod1 |
| $\bar{b}t \to \bar{d}u$ | 0 | 0 | 0 | 0.25 | 0.25 | $3.04 \cdot 10^{-6}$ |
| $t\bar{t} \to d\bar{d}$ | $-1.156 \cdot 10^{-17}$ | 0 | 1 | 0.5004 | 0.5004 | $3.057 \cdot 10^{-6}$ |
| $t\bar{t} \to s\bar{s}$ | $2.294 \cdot 10^{-17}$ | 0 | 1 | 0.5004 | 0.5004 | $3.057 \cdot 10^{-6}$ |

2.23 cQtqd8

| | | int | erference | | square | | |
|-------------------------|------------------------|------|---------------------------------|---------|---------|---------------------------------|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | |
| $\bar{b}t \to \bar{d}u$ | 0 | 0 | 0 | 0.05556 | 0.05556 | $3.06 \cdot 10^{-6}$ | |
| $t\bar{t} \to d\bar{d}$ | 0 | 0 | 0 | 0.1112 | 0.1112 | $3.057 \cdot 10^{-6}$ | |
| $t\bar{t} \to s\bar{s}$ | $3.368 \cdot 10^{-18}$ | 0 | 1 | 0.1112 | 0.1112 | $3.057 \cdot 10^{-6}$ | |

$2.24 \quad \text{cQtqd8I}$

| | | erference | | square | | |
|-------------------------|-------------------------|-----------|---------------------------------|---------|---------|-----------------------|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | 1 - mod2/mod1 |
| $\bar{b}t \to \bar{d}u$ | 0 | 0 | 0 | 0.05556 | 0.05556 | $3.06 \cdot 10^{-6}$ |
| $t\bar{t} \to d\bar{d}$ | $-3.989 \cdot 10^{-18}$ | 0 | 1 | 0.1112 | 0.1112 | $3.057 \cdot 10^{-6}$ |
| $t\bar{t} \to s\bar{s}$ | $-2.948 \cdot 10^{-18}$ | 0 | 1 | 0.1112 | 0.1112 | $3.057 \cdot 10^{-6}$ |

2.25 cQu1

| | | erference | | square | | |
|-------------------------|----------|-----------|---------------------------------|--------|--------|---------------|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | 1 - mod2/mod1 |
| $b\bar{b} \to u\bar{u}$ | 0.008829 | 0.008829 | $-1.133 \cdot 10^{-8}$ | 0.3035 | 0.3035 | 0 |
| $t\bar{t} \to c\bar{c}$ | 0.007814 | 0.007814 | $-2.56 \cdot 10^{-8}$ | 0.1584 | 0.1584 | 0 |

2.26 cQu8

| | | j | interference | | square | | | |
|-------------------------|--------|--------|---------------------------------|---------|---------|---------------------------------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | | |
| $b\bar{b} \to u\bar{u}$ | 0.1998 | 0.1998 | 0 | 0.06744 | 0.06744 | 0 | | |
| $t\bar{t} \to c\bar{c}$ | 0.1238 | 0.1238 | 0 | 0.03521 | 0.03521 | 0 | | |

2.27 cbQqd1

| | | nterference | | square | | |
|-------------------------|----------|-------------|---------------------------------|--------|------|-----------------------------------|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1 - \mathtt{mod}2/\mathtt{mod}1$ |
| $\bar{b}t \to \bar{d}u$ | 0 | 0 | 0 | 0.25 | 0.25 | $3.08 \cdot 10^{-6}$ |
| $b\bar{b} \to d\bar{d}$ | -0.01371 | 0 | 1 | 0.5 | 0.5 | $3.1 \cdot 10^{-6}$ |

$2.28 \quad cbQqd1I$

| | | erference | | square | | |
|-------------------------|------------------------|-----------|-----------------------------------|--------|------|----------------------|
| | mod1 | mod2 | $1 - \mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | 1 - mod2/mod1 |
| $\bar{b}t \to \bar{d}u$ | 0 | 0 | 0 | 0.25 | 0.25 | $3.08 \cdot 10^{-6}$ |
| $b\bar{b} \to d\bar{d}$ | $2.891 \cdot 10^{-19}$ | 0 | 1 | 0.5 | 0.5 | $3.1 \cdot 10^{-6}$ |

$2.29 \quad \mathrm{cbQqd8}$

| | | erference | | square | | |
|-------------------------|---|-----------|---|---------|---------|---------------------------------|
| | $\mathtt{mod1} \qquad \mathtt{mod2} 1-\mathtt{mod2}/\mathtt{mod1}$ | | | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ |
| $\bar{b}t \to \bar{d}u$ | 0 | 0 | 0 | 0.05556 | 0.05556 | $2.934 \cdot 10^{-6}$ |
| $b\bar{b} \to d\bar{d}$ | $6.094 \cdot 10^{-10}$ | 0 | 1 | 0.1111 | 0.1111 | $2.97 \cdot 10^{-6}$ |

2.30 cbQqd8I

| | | int | erference | square | | |
|-------------------------|------------------------|------|---------------------------------|---|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | $\mathtt{mod1} \mathtt{mod2} 1 - \mathtt{mod2}/\mathtt{mod1}$ | | |
| $\bar{b}t \to \bar{d}u$ | 0 | 0 | 0 | $0.05556 0.05556 2.934 \cdot 10^{-6}$ | | |
| $b\bar{b} \to d\bar{d}$ | $2.187 \cdot 10^{-20}$ | 0 | 1 | $0.1111 0.1111 2.88 \cdot 10^{-6}$ | | |

2.31 cbW

| | | interfer | rence | | square | | |
|-----------------------------|------------------------|------------------------|---------------------------------|-----------------------|-----------------------|---------------------------------|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | |
| $HH \to W^+ \bar{t} b$ | $-4.015 \cdot 10^{-7}$ | $-4.015 \cdot 10^{-7}$ | 0 | $1.925 \cdot 10^{-5}$ | $1.925 \cdot 10^{-5}$ | 0 | |
| $HH \to z\bar{b}b$ | 0.001094 | 0.001094 | 0 | 0.0002901 | 0.0002901 | 0 | |
| $HW^+ \to \gamma t \bar{b}$ | $1.532 \cdot 10^{-8}$ | $1.532 \cdot 10^{-8}$ | 0 | $4.002 \cdot 10^{-7}$ | $4.002 \cdot 10^{-7}$ | $-2.499 \cdot 10^{-8}$ | |

| $HW^- 	o \bar{t}b$ | 0.007426 | 0.007426 | 0 | 2.219 | 2.219 | 0 |
|-------------------------------|------------------------|------------------------|------------------------|-----------------------|-----------------------|------------------------|
| $H\gamma \to b\bar{b}$ | $-1.696 \cdot 10^{-6}$ | $-1.696 \cdot 10^{-6}$ | $-5.895 \cdot 10^{-8}$ | 0.5722 | 0.5722 | $-1.748 \cdot 10^{-8}$ |
| $Hz 	o b\bar{b}$ | 0.001426 | 0.001426 | 0 | 0.9557 | 0.9557 | 0 |
| $W^+W^- 	o Hb\bar{b}$ | $4.599 \cdot 10^{-5}$ | $4.599 \cdot 10^{-5}$ | $4.349 \cdot 10^{-8}$ | $3.132 \cdot 10^{-5}$ | $3.132 \cdot 10^{-5}$ | 0 |
| $W^+W^- 	o H t \bar t$ | $1.966 \cdot 10^{-7}$ | $1.966 \cdot 10^{-7}$ | 0 | $1.635 \cdot 10^{-8}$ | $1.635 \cdot 10^{-8}$ | 0 |
| $\bar{b}t \to \bar{d}u$ | 0.000298 | 0.000298 | $3.355 \cdot 10^{-8}$ | 0.01195 | 0.01195 | 0 |
| $b\bar{b} 	o \gamma \gamma$ | $2.206 \cdot 10^{-5}$ | $2.206 \cdot 10^{-5}$ | $-4.533 \cdot 10^{-8}$ | 0.0006187 | 0.0006187 | $-4.848 \cdot 10^{-8}$ |
| $b\bar{b} 	o \mu^+\mu^-$ | $1.571 \cdot 10^{-5}$ | $1.571 \cdot 10^{-5}$ | $-6.367 \cdot 10^{-8}$ | $8.614 \cdot 10^{-5}$ | $8.614 \cdot 10^{-5}$ | 0 |
| $b\bar{b} 	o u_e \bar{ u}_e$ | $1.407 \cdot 10^{-5}$ | $1.407 \cdot 10^{-5}$ | 0 | 0.001809 | 0.001809 | 0 |
| $b\bar{b} 	o b\bar{b}$ | -0.004393 | -0.004393 | 0 | 0.1385 | 0.1385 | 0 |
| $b\bar{b} 	o d\bar{d}$ | $6.056 \cdot 10^{-5}$ | $6.056 \cdot 10^{-5}$ | 0 | 0.00548 | 0.00548 | 0 |
| $b\bar{b} 	o t\bar{t}$ | 0.003542 | 0.003542 | 0 | 0.0249 | 0.0249 | $4.016 \cdot 10^{-8}$ |
| $b\bar{b} \to u\bar{u}$ | 0.0001162 | 0.0001162 | 0 | 0.006447 | 0.006447 | 0 |
| $b\bar{t} \to e^-\bar{\nu}_e$ | $3.98\cdot10^{-5}$ | $3.98 \cdot 10^{-5}$ | $2.512 \cdot 10^{-8}$ | 0.003448 | 0.003448 | 0 |

2.32 cbWI

| | | interfere | ence | | square | | | |
|-----------------------------|-------------------------|-------------------------|---------------------------------|-----------------------|-----------------------|---------------------------------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | | |
| $HH 	o W^+ \bar t b$ | $-1.646 \cdot 10^{-7}$ | $-1.646 \cdot 10^{-7}$ | 0 | $7.652 \cdot 10^{-6}$ | $7.652 \cdot 10^{-6}$ | $1.307 \cdot 10^{-8}$ | | |
| $HH 	o z \bar b b$ | $1.895 \cdot 10^{-8}$ | $1.895 \cdot 10^{-8}$ | 0 | $2.224 \cdot 10^{-6}$ | $2.224 \cdot 10^{-6}$ | 0 | | |
| $HW^+ 	o \gamma t \bar{b}$ | $1.125 \cdot 10^{-8}$ | $1.125 \cdot 10^{-8}$ | $-8.892 \cdot 10^{-8}$ | $2.508 \cdot 10^{-6}$ | $2.508 \cdot 10^{-6}$ | 0 | | |
| $HW^- \to \bar{t}b$ | $3.304 \cdot 10^{-7}$ | $3.304 \cdot 10^{-7}$ | 0 | 2.276 | 2.276 | 0 | | |
| $H\gamma \to b\bar{b}$ | $5.294 \cdot 10^{-23}$ | $7.147 \cdot 10^{-22}$ | -12.5 | 0.2338 | 0.2338 | 0 | | |
| $Hz \to b\bar{b}$ | $-1.835 \cdot 10^{-6}$ | $-1.835 \cdot 10^{-6}$ | 0 | 1.496 | 1.496 | 0 | | |
| $W^+W^- 	o Hbar b$ | $1.159 \cdot 10^{-7}$ | $1.159 \cdot 10^{-7}$ | 0 | $6.482 \cdot 10^{-6}$ | $6.482 \cdot 10^{-6}$ | 0 | | |
| $W^+W^- 	o H t \bar t$ | $-1.231 \cdot 10^{-10}$ | $-1.231 \cdot 10^{-10}$ | $2.437 \cdot 10^{-7}$ | $2.571 \cdot 10^{-8}$ | $2.571 \cdot 10^{-8}$ | 0 | | |
| $\bar{b}t \to \bar{d}u$ | $2.388 \cdot 10^{-19}$ | $5.882 \cdot 10^{-19}$ | -1.464 | 0.01128 | 0.01128 | 0 | | |
| $b\bar{b} 	o \gamma \gamma$ | $1.401 \cdot 10^{-21}$ | $9.33 \cdot 10^{-22}$ | 0.3339 | 0.0006184 | 0.0006184 | $-3.234 \cdot 10^{-8}$ | | |

| $b\bar{b} \to \mu^+ \mu^-$ | $4.554 \cdot 10^{-16}$ | $4.554 \cdot 10^{-16}$ | $2.854 \cdot 10^{-7}$ | 0.001249 | 0.001249 | $8.006 \cdot 10^{-8}$ |
|----------------------------------|-------------------------|-------------------------|-----------------------|-----------|-----------|-----------------------|
| $b\bar{b} \to \nu_e \bar{\nu}_e$ | $-1.433 \cdot 10^{-20}$ | $-2.81 \cdot 10^{-20}$ | -0.9604 | 0.0006872 | 0.0006872 | 0 |
| $b\bar{b} 	o b\bar{b}$ | $2.146 \cdot 10^{-18}$ | $1.934 \cdot 10^{-18}$ | 0.09889 | 0.05084 | 0.05084 | $1.967 \cdot 10^{-8}$ |
| $b\bar{b} \to d\bar{d}$ | $8.58 \cdot 10^{-18}$ | $8.58 \cdot 10^{-18}$ | $7.156 \cdot 10^{-6}$ | 0.006462 | 0.006462 | $1.548 \cdot 10^{-8}$ |
| $b\bar{b} \to t\bar{t}$ | $3.838 \cdot 10^{-18}$ | $3.08 \cdot 10^{-18}$ | 0.1974 | 1.475 | 1.475 | 0 |
| $b\bar{b} \to u\bar{u}$ | $-2.927 \cdot 10^{-19}$ | $-3.929 \cdot 10^{-19}$ | -0.3422 | 0.006379 | 0.006379 | $1.568 \cdot 10^{-8}$ |
| $b\bar{t} \to e^- \bar{\nu}_e$ | $-3.212 \cdot 10^{-20}$ | $1.098 \cdot 10^{-19}$ | 4.418 | 0.003956 | 0.003956 | 0 |

2.33 cbtud1

| | | | interference | | square | | | |
|-------------------------|------|------|---------------------------------|--------|--------|---------------------------------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | | |
| $\bar{b}t \to \bar{d}u$ | 0 | 0 | 0 | 0.4282 | 0.4282 | $6.072 \cdot 10^{-6}$ | | |

2.34 cbtud1I

| | | | interference | | square | | |
|-------------------------|------|------|---------------------------------|---------|---------|---------------------------------|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | |
| $\bar{b}t \to \bar{d}u$ | 0 | 0 | 0 | 0.08657 | 0.08657 | $6.088 \cdot 10^{-6}$ | |

2.35 cbtud8

2.36 cbtud8I

| | | | interference | | square | | |
|-------------------------|------|------|---------------------------------|---------|---------|-----------------------|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | 1 - mod2/mod1 | |
| $\bar{b}t \to \bar{d}u$ | 0 | 0 | 0 | 0.09516 | 0.09516 | $5.906 \cdot 10^{-6}$ | |

$2.37 \quad \text{cpQ3}$

| | | interf | erence | | square | | |
|----------------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|------------------------|--|
| | mod1 | mod2 | $1-{\tt mod2/mod1}$ | mod1 | mod2 | $1-{\tt mod2/mod1}$ | |
| $HH \to W^+ \bar{t} b$ | $6.929 \cdot 10^{-6}$ | $6.929 \cdot 10^{-6}$ | $-1.443 \cdot 10^{-8}$ | $9.839 \cdot 10^{-6}$ | $9.839 \cdot 10^{-6}$ | 0 | |
| $HH \to z\bar{b}b$ | 0.01151 | 0.01151 | 0 | 0.0006452 | 0.0006452 | 0 | |
| $HW^+ 	o \gamma t \bar{b}$ | $4.071 \cdot 10^{-7}$ | $4.071 \cdot 10^{-7}$ | $-2.457 \cdot 10^{-8}$ | $2.177 \cdot 10^{-7}$ | $2.177 \cdot 10^{-7}$ | $-4.594 \cdot 10^{-8}$ | |
| $HW^- \to \bar{t}b$ | -1.083 | -1.083 | 0 | 1.826 | 1.826 | 0 | |
| $Hz \to b\bar{b}$ | 0.2997 | 0.2997 | 0 | 2.614 | 2.614 | 0 | |
| $W^+W^- \to H b \bar b$ | 0.0003593 | 0.0003593 | $2.783 \cdot 10^{-8}$ | $3.602 \cdot 10^{-5}$ | $3.602 \cdot 10^{-5}$ | 0 | |
| $W^+W^- 	o H t ar t$ | $4.214 \cdot 10^{-5}$ | $4.214 \cdot 10^{-5}$ | $2.373 \cdot 10^{-8}$ | $1.026 \cdot 10^{-5}$ | $1.026 \cdot 10^{-5}$ | 0 | |
| $\bar{b}t \to \bar{d}u$ | 0.002324 | 0.002324 | 0 | $7.044 \cdot 10^{-5}$ | $7.044 \cdot 10^{-5}$ | $1.42 \cdot 10^{-8}$ | |
| $b\bar{b} 	o \mu^+\mu^-$ | 0.0001118 | 0.0001118 | 0 | $2.007 \cdot 10^{-5}$ | $2.007 \cdot 10^{-5}$ | $-4.983 \cdot 10^{-8}$ | |
| $b\bar{b} \to \nu_e \bar{\nu}_e$ | 0.0001163 | 0.0001163 | 0 | $8.349 \cdot 10^{-6}$ | $8.349 \cdot 10^{-6}$ | 0 | |
| $b\bar{b} 	o b\bar{b}$ | -0.08306 | -0.08306 | 0 | 0.003179 | 0.003179 | 0 | |
| $b\bar{b} \to d\bar{d}$ | 0.0003067 | 0.0003067 | 0 | $2.194 \cdot 10^{-5}$ | $2.194 \cdot 10^{-5}$ | 0 | |
| $b\bar{b} \to t\bar{t}$ | -0.006456 | -0.006456 | 0 | 0.003798 | 0.003798 | 0 | |
| $b\bar{b} \to u\bar{u}$ | 0.000624 | 0.000624 | 0 | $3.995 \cdot 10^{-5}$ | $3.995 \cdot 10^{-5}$ | 0 | |
| $b\bar{t} \to e^- \bar{\nu}_e$ | 0.0001156 | 0.0001156 | $8.65 \cdot 10^{-8}$ | $3.504 \cdot 10^{-6}$ | $3.504 \cdot 10^{-6}$ | $2.854 \cdot 10^{-8}$ | |

2.38 cpQM

| | | interfe | erence | square | | |
|----------------|----------|----------|---------------------------------|-----------|-----------|---------------------------------|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ |
| HH 	o z ar b b | 0.005757 | 0.005757 | 0 | 0.0001613 | 0.0001613 | 0 |

| $HH \to z t \bar t$ | $5.546 \cdot 10^{-5}$ | $5.546 \cdot 10^{-5}$ | 0 | $4.962 \cdot 10^{-5}$ | $4.962 \cdot 10^{-5}$ | 0 |
|---------------------------------------|------------------------|------------------------|------------------------|-----------------------|-----------------------|------------------------|
| $Hz \to b\bar{b}$ | 0.1498 | 0.1498 | 0 | 0.6536 | 0.6536 | 0 |
| $Hz \to t\bar{t}$ | 2.016 | 2.016 | 0 | 0.7995 | 0.7995 | 0 |
| $W^+W^- 	o Hb\bar{b}$ | 0.0001718 | 0.0001718 | $5.82 \cdot 10^{-8}$ | $6.602 \cdot 10^{-6}$ | $6.602 \cdot 10^{-6}$ | $1.515 \cdot 10^{-8}$ |
| $W^+W^- \to H t \bar t$ | $-1.868 \cdot 10^{-5}$ | $-1.868 \cdot 10^{-5}$ | 0 | $1.068 \cdot 10^{-6}$ | $1.068 \cdot 10^{-6}$ | $9.366 \cdot 10^{-8}$ |
| $b\bar{b} 	o \mu^+\mu^-$ | $5.59\cdot10^{-5}$ | $5.59\cdot10^{-5}$ | $-3.578 \cdot 10^{-8}$ | $5.017 \cdot 10^{-6}$ | $5.017 \cdot 10^{-6}$ | $-3.986 \cdot 10^{-8}$ |
| $b\bar{b} 	o u_e \bar{ u}_e$ | $5.813 \cdot 10^{-5}$ | $5.813 \cdot 10^{-5}$ | 0 | $2.087 \cdot 10^{-6}$ | $2.087 \cdot 10^{-6}$ | 0 |
| $b\bar{b} 	o b\bar{b}$ | -0.04153 | -0.04153 | 0 | 0.0007946 | 0.0007946 | $1.258 \cdot 10^{-8}$ |
| $b\bar{b} 	o d\bar{d}$ | 0.0001533 | 0.0001533 | 0 | $5.485 \cdot 10^{-6}$ | $5.485 \cdot 10^{-6}$ | 0 |
| $b\bar{b} 	o t\bar{t}$ | -0.0006996 | -0.0006996 | $-2.859 \cdot 10^{-8}$ | $5.641 \cdot 10^{-6}$ | $5.641 \cdot 10^{-6}$ | $-5.318 \cdot 10^{-8}$ |
| $b\bar{b} \to u\bar{u}$ | 0.000312 | 0.000312 | $3.205 \cdot 10^{-8}$ | $9.988 \cdot 10^{-6}$ | $9.988 \cdot 10^{-6}$ | 0 |
| $t\bar{t} 	o u_{\mu} \bar{ u}_{\mu}$ | -0.0002376 | -0.0002376 | 0 | $1.078 \cdot 10^{-5}$ | $1.078 \cdot 10^{-5}$ | 0 |
| $t\bar{t} \to \tau^+ \tau^-$ | $5.013 \cdot 10^{-5}$ | $5.013 \cdot 10^{-5}$ | $-3.99 \cdot 10^{-8}$ | $4.747 \cdot 10^{-6}$ | $4.747 \cdot 10^{-6}$ | $-4.213 \cdot 10^{-8}$ |
| $t\bar{t} \to c\bar{c}$ | -0.0009886 | -0.0009886 | $1.012 \cdot 10^{-8}$ | $2.641 \cdot 10^{-5}$ | $2.641 \cdot 10^{-5}$ | $3.787 \cdot 10^{-8}$ |
| $t\bar{t} \to d\bar{d}$ | -0.0009743 | -0.0009743 | $1.026 \cdot 10^{-8}$ | $3.412 \cdot 10^{-5}$ | $3.412 \cdot 10^{-5}$ | 0 |
| $t\bar{t} \to s\bar{s}$ | -0.0003832 | -0.0003832 | $2.609 \cdot 10^{-8}$ | $1.416 \cdot 10^{-5}$ | $1.416 \cdot 10^{-5}$ | 0 |
| $t\bar{t} \to t\bar{t}$ | 0.5108 | 0.5108 | 0 | 0.01432 | 0.01432 | 0 |

2.39 cpb

| | | interfer | ence | | square | | | |
|-------------------------------|------------------------|------------------------|---------------------------------|-----------------------|-----------------------|---------------------------------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | | |
| $HH \to z\bar{b}b$ | $-3.037 \cdot 10^{-7}$ | $-3.037 \cdot 10^{-7}$ | $-3.292 \cdot 10^{-8}$ | $2.386 \cdot 10^{-7}$ | $2.386 \cdot 10^{-7}$ | 0 | | |
| $Hz \to b\bar{b}$ | -0.04095 | -0.04095 | $-2.442 \cdot 10^{-8}$ | 0.9947 | 0.9947 | 0 | | |
| $W^+W^- 	o Hb\bar{b}$ | $-3.66 \cdot 10^{-8}$ | $-3.66 \cdot 10^{-8}$ | 0 | $1.124 \cdot 10^{-7}$ | $1.124 \cdot 10^{-7}$ | 0 | | |
| $b\bar{b} \to \mu^+ \mu^-$ | $3.939 \cdot 10^{-5}$ | $3.939 \cdot 10^{-5}$ | 0 | $4.663 \cdot 10^{-6}$ | $4.663 \cdot 10^{-6}$ | $2.145 \cdot 10^{-8}$ | | |
| $b\bar{b} 	o u_e \bar{ u}_e$ | $-9.006 \cdot 10^{-7}$ | $-9.006 \cdot 10^{-7}$ | $-2.221 \cdot 10^{-8}$ | $1.78 \cdot 10^{-7}$ | $1.78 \cdot 10^{-7}$ | 0 | | |
| $b\bar{b} 	o b\bar{b}$ | 0.000859 | 0.000859 | $-2.328 \cdot 10^{-8}$ | 0.0002733 | 0.0002733 | $3.658 \cdot 10^{-8}$ | | |
| $b\bar{b} 	o d\bar{d}$ | $-3.536 \cdot 10^{-5}$ | $-3.536 \cdot 10^{-5}$ | $-2.828 \cdot 10^{-8}$ | $1.319 \cdot 10^{-5}$ | $1.319 \cdot 10^{-5}$ | 0 | | |

2.40 cpt

| | | rence | | square | | | |
|---------------------------------------|------------------------|------------------------|---------------------------------|-----------------------|-----------------------|---------------------------------|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | |
| $HH \to z t \bar{t}$ | $-5.963 \cdot 10^{-5}$ | $-5.963 \cdot 10^{-5}$ | 0 | $4.961 \cdot 10^{-5}$ | $4.961 \cdot 10^{-5}$ | 0 | |
| $Hz \to t\bar{t}$ | -2.083 | -2.083 | 0 | 0.7995 | 0.7995 | 0 | |
| $W^+W^- \to H t \bar t$ | $1.917 \cdot 10^{-5}$ | $1.917 \cdot 10^{-5}$ | 0 | $1.067 \cdot 10^{-6}$ | $1.067 \cdot 10^{-6}$ | 0 | |
| $b\bar{b} 	o t\bar{t}$ | -0.001815 | -0.001815 | 0 | $3.224 \cdot 10^{-5}$ | $3.224 \cdot 10^{-5}$ | $3.102 \cdot 10^{-8}$ | |
| $t\bar{t} 	o u_{\mu} \bar{ u}_{\mu}$ | $1.402 \cdot 10^{-5}$ | $1.402 \cdot 10^{-5}$ | $-7.133 \cdot 10^{-8}$ | $2.896 \cdot 10^{-6}$ | $2.896 \cdot 10^{-6}$ | 0 | |
| $t\bar{t} \to \tau^+ \tau^-$ | -0.0001222 | -0.0001222 | 0 | $6.136 \cdot 10^{-6}$ | $6.136 \cdot 10^{-6}$ | $3.26 \cdot 10^{-8}$ | |
| $t\bar{t} \to c\bar{c}$ | 0.0001969 | 0.0001969 | $-5.079 \cdot 10^{-8}$ | $6.051 \cdot 10^{-6}$ | $6.051 \cdot 10^{-6}$ | $-3.305 \cdot 10^{-8}$ | |
| $t\bar{t} 	o d\bar{d}$ | $1.709 \cdot 10^{-5}$ | $1.709 \cdot 10^{-5}$ | $-1.755 \cdot 10^{-7}$ | $3.27 \cdot 10^{-6}$ | $3.27 \cdot 10^{-6}$ | $-3.058 \cdot 10^{-8}$ | |
| $t\bar{t} \to s\bar{s}$ | $3.096 \cdot 10^{-5}$ | $3.096 \cdot 10^{-5}$ | $-6.461 \cdot 10^{-8}$ | $1.331 \cdot 10^{-5}$ | $1.331 \cdot 10^{-5}$ | 0 | |
| $t\bar{t} \to t\bar{t}$ | -0.4959 | -0.4959 | 0 | 0.01416 | 0.01416 | 0 | |

2.41 cptb

| | | interfer | ence | | square | | | |
|-----------------------------|------------------------|------------------------|---------------------------------|-----------------------|-----------------------|---------------------------------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | | |
| $HH 	o W^+ \bar t b$ | $-2.777 \cdot 10^{-6}$ | $-2.777 \cdot 10^{-6}$ | 0 | $2.172 \cdot 10^{-5}$ | $2.172 \cdot 10^{-5}$ | $4.604 \cdot 10^{-8}$ | | |
| $HW^+ \to \gamma t \bar{b}$ | $-1.117 \cdot 10^{-7}$ | $-1.117 \cdot 10^{-7}$ | $-8.949 \cdot 10^{-8}$ | $3.498 \cdot 10^{-7}$ | $3.498 \cdot 10^{-7}$ | $-2.859 \cdot 10^{-8}$ | | |
| $HW^- 	o \bar{t}b$ | -0.05351 | -0.05351 | 0 | 0.4832 | 0.4832 | 0 | | |
| $W^+W^- \to Hb\bar{b}$ | $-3.074 \cdot 10^{-7}$ | $-3.074 \cdot 10^{-7}$ | 0 | $1.533 \cdot 10^{-6}$ | $1.533 \cdot 10^{-6}$ | 0 | | |
| $W^+W^- 	o Ht\bar{t}$ | $-5.073 \cdot 10^{-8}$ | $-5.073 \cdot 10^{-8}$ | $1.971 \cdot 10^{-8}$ | $3.101 \cdot 10^{-9}$ | $3.101 \cdot 10^{-9}$ | 0 | | |
| $\bar{b}t \to \bar{d}u$ | $-2.193 \cdot 10^{-6}$ | $-2.193 \cdot 10^{-6}$ | 0 | $2.134 \cdot 10^{-5}$ | $2.134 \cdot 10^{-5}$ | $4.686 \cdot 10^{-8}$ | | |
| $b\bar{b} \to t\bar{t}$ | 0.00258 | 0.00258 | 0 | 0.03072 | 0.03072 | 0 | | |

 $b\bar{t} \to e^-\bar{\nu}_e$ $-7.312 \cdot 10^{-7}$ $-7.312 \cdot 10^{-7}$ $1.368 \cdot 10^{-8}$ $1.733 \cdot 10^{-6}$ $1.733 \cdot 10^{-6}$ 0

2.42 cptbI

| | | interfere | ence | | square | | | |
|--------------------------------|-------------------------|-------------------------|---------------------------------|-----------------------|-----------------------|---------------------------------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | | |
| $HH 	o W^+ \bar t b$ | $1.175 \cdot 10^{-7}$ | $1.175 \cdot 10^{-7}$ | 0 | $2.465 \cdot 10^{-6}$ | $2.465 \cdot 10^{-6}$ | 0 | | |
| $HW^+ \to \gamma t \bar{b}$ | $-3.857 \cdot 10^{-9}$ | $-3.857 \cdot 10^{-9}$ | 0 | $5.448 \cdot 10^{-8}$ | $5.448 \cdot 10^{-8}$ | $-1.836 \cdot 10^{-8}$ | | |
| $HW^- 	o \bar{t}b$ | $-8.778 \cdot 10^{-6}$ | $-8.778 \cdot 10^{-6}$ | 0 | 0.4566 | 0.4566 | 0 | | |
| $W^+W^- \to Hb\bar{b}$ | $8.419 \cdot 10^{-6}$ | $8.419 \cdot 10^{-6}$ | $1.188 \cdot 10^{-8}$ | $3.54 \cdot 10^{-6}$ | $3.54 \cdot 10^{-6}$ | 0 | | |
| $W^+W^- 	o H t \bar t$ | $7.137 \cdot 10^{-8}$ | $7.137 \cdot 10^{-8}$ | 0 | $2.517 \cdot 10^{-9}$ | $2.517 \cdot 10^{-9}$ | 0 | | |
| $\bar{b}t \to \bar{d}u$ | $3.912 \cdot 10^{-21}$ | $-2.283 \cdot 10^{-21}$ | 1.584 | $5.338 \cdot 10^{-6}$ | $5.338 \cdot 10^{-6}$ | $1.873 \cdot 10^{-8}$ | | |
| $b\bar{b} 	o t\bar{t}$ | $-5.009 \cdot 10^{-20}$ | $1.774 \cdot 10^{-20}$ | 1.354 | 0.0006119 | 0.0006119 | 0 | | |
| $b\bar{t} \to e^- \bar{\nu}_e$ | $-3.574 \cdot 10^{-22}$ | $-1.85 \cdot 10^{-23}$ | 0.9482 | $7.954 \cdot 10^{-6}$ | $7.954 \cdot 10^{-6}$ | $1.257 \cdot 10^{-8}$ | | |

2.43 ctG

| | interference | | | | square | | | |
|-------------------------|--------------|--------|---------------------|---------|---------|---------------------|--|--|
| | mod1 | mod2 | $1-{\tt mod2/mod1}$ | mod1 | mod2 | $1-{\tt mod2/mod1}$ | | |
| $b\bar{b} \to t\bar{t}$ | 0.1194 | 0.1194 | 0 | 0.0309 | 0.0309 | 0 | | |
| $gg \to t\bar{t}$ | 0.3889 | 0.3889 | 0 | 0.1082 | 0.1082 | 0 | | |
| $t\bar{t} \to c\bar{c}$ | 0.1977 | 0.1977 | 0 | 0.0248 | 0.0248 | 0 | | |
| $t\bar{t} \to d\bar{d}$ | 0.1977 | 0.1977 | 0 | 0.03174 | 0.03174 | 0 | | |
| $t\bar{t} \to s\bar{s}$ | 0.1977 | 0.1977 | 0 | 0.04703 | 0.04703 | 0 | | |
| $t\bar{t} \to t\bar{t}$ | 0.7747 | 0.7747 | 0 | 3.432 | 3.432 | 0 | | |

2.44 ctGI

interference square

| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ |
|-------------------------|-------------------------|-------------------------|---------------------------------|---------|---------|---------------------------------|
| $b\bar{b} \to t\bar{t}$ | $-4.011 \cdot 10^{-17}$ | $-6.116 \cdot 10^{-18}$ | 0.8475 | 0.02145 | 0.02145 | 0 |
| gg 	o t ar t | $-1.451 \cdot 10^{-17}$ | $-1.554 \cdot 10^{-17}$ | -0.07096 | 0.09343 | 0.09343 | 0 |
| $t\bar{t} \to c\bar{c}$ | $-7.353 \cdot 10^{-25}$ | $-2.206 \cdot 10^{-24}$ | -2 | 0.01535 | 0.01535 | 0 |
| $t\bar{t} \to d\bar{d}$ | $-2.573 \cdot 10^{-24}$ | $-8.799 \cdot 10^{-32}$ | 1 | 0.02229 | 0.02229 | 0 |
| $t\bar{t} \to s\bar{s}$ | $-5.882 \cdot 10^{-24}$ | $5.882 \cdot 10^{-24}$ | 2 | 0.03758 | 0.03758 | 0 |
| $t\bar{t} \to t\bar{t}$ | $3.385 \cdot 10^{-17}$ | $5.846 \cdot 10^{-17}$ | -0.727 | 3.367 | 3.367 | 0 |

2.45 ctQqu1

| | interference | | | | square | | |
|-------------------------|--------------|------|---------------------------------|--------|--------|---------------------------------|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | |
| $\bar{b}t \to \bar{d}u$ | 0 | 0 | 0 | 0.25 | 0.25 | $3.08 \cdot 10^{-6}$ | |
| $t\bar{t} \to c\bar{c}$ | -0.4725 | 0 | 1 | 0.5004 | 0.5004 | $3.097 \cdot 10^{-6}$ | |

$2.46 \quad ctQqu1I$

| | | erference | | square | | |
|-------------------------|-------------------------|-----------|---------------------------------|--------|--------|-----------------------|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | 1 - mod2/mod1 |
| $\bar{b}t \to \bar{d}u$ | 0 | 0 | 0 | 0.25 | 0.25 | $3.08 \cdot 10^{-6}$ |
| $t\bar{t} \to c\bar{c}$ | $-1.164 \cdot 10^{-17}$ | 0 | 1 | 0.5004 | 0.5004 | $3.097 \cdot 10^{-6}$ |

2.47 ctQqu8

| | interference | | | | square | | | |
|-------------------------|---------------------|------|---------------------------------|---------|---------|-----------------------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | 1 - mod2/mod1 | | |
| $\bar{b}t \to \bar{d}u$ | 0 | 0 | 0 | 0.05556 | 0.05556 | $2.934 \cdot 10^{-6}$ | | |
| $t\bar{t} \to c\bar{c}$ | $2.1 \cdot 10^{-8}$ | 0 | 1 | 0.1112 | 0.1112 | $2.967 \cdot 10^{-6}$ | | |

$2.48 \quad ctQqu8I$

| | | erference | | square | | |
|-------------------------|------------------------|-----------|---------------------------------|---------|---------|-----------------------------------|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1 - \mathtt{mod}2/\mathtt{mod}1$ |
| $\bar{b}t \to \bar{d}u$ | 0 | 0 | 0 | 0.05556 | 0.05556 | $2.934 \cdot 10^{-6}$ |
| $t\bar{t} \to c\bar{c}$ | $1.915 \cdot 10^{-18}$ | 0 | 1 | 0.1112 | 0.1112 | $2.967 \cdot 10^{-6}$ |

2.49 ctW

| | | interfere | ence | | square | | | |
|---------------------------------------|-------------------------|------------------------|---------------------------------|------------------------|-----------------------|---------------------------------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | | |
| $HH 	o W^+ \bar t b$ | $1.573 \cdot 10^{-6}$ | $1.573 \cdot 10^{-6}$ | 0 | $7.658 \cdot 10^{-6}$ | $7.658 \cdot 10^{-6}$ | 0 | | |
| $HH \to z t \bar t$ | $-7.426 \cdot 10^{-13}$ | 0 | 1 | $4.223 \cdot 10^{-17}$ | 0 | 1 | | |
| $HW^+ 	o \gamma t \bar{b}$ | $2.075 \cdot 10^{-5}$ | $2.075 \cdot 10^{-5}$ | $6.266 \cdot 10^{-7}$ | $1.27 \cdot 10^{-5}$ | $1.27\cdot 10^{-5}$ | $1.024 \cdot 10^{-6}$ | | |
| $HW^- \to \bar{t}b$ | -0.2671 | -0.2671 | 0 | 2.276 | 2.276 | 0 | | |
| $H\gamma \to t\bar{t}$ | -0.6078 | -0.6078 | $5.923 \cdot 10^{-7}$ | 15.51 | 15.51 | $1.225 \cdot 10^{-6}$ | | |
| $Hz \to t\bar{t}$ | $4.407 \cdot 10^{-8}$ | 0 | 1 | $1.264 \cdot 10^{-12}$ | 0 | 1 | | |
| $W^+W^- 	o Hb\bar{b}$ | $9.928 \cdot 10^{-7}$ | $9.928 \cdot 10^{-7}$ | $2.014 \cdot 10^{-8}$ | $6.432 \cdot 10^{-6}$ | $6.432 \cdot 10^{-6}$ | 0 | | |
| $W^+W^- 	o H t \bar t$ | $-6.235 \cdot 10^{-7}$ | $-6.235 \cdot 10^{-7}$ | $4.651 \cdot 10^{-7}$ | $7.318 \cdot 10^{-5}$ | $7.318 \cdot 10^{-5}$ | $-2.733 \cdot 10^{-8}$ | | |
| $\bar{b}t \to \bar{d}u$ | 0.004693 | 0.004693 | $2.131 \cdot 10^{-8}$ | 0.01062 | 0.01062 | 0 | | |
| b ar b 	o t ar t | -1.529 | -1.529 | $6.541 \cdot 10^{-8}$ | 1.35 | 1.35 | 0 | | |
| $b\bar{t} \to e^-\bar{\nu}_e$ | 0.003605 | 0.003605 | 0 | 0.004113 | 0.004113 | 0 | | |
| $t\bar{t} 	o u_{\mu} \bar{ u}_{\mu}$ | $-5.678 \cdot 10^{-10}$ | 0 | 1 | $1.486 \cdot 10^{-15}$ | 0 | 1 | | |
| $t\bar{t} \to \tau^+ \tau^-$ | 0.004213 | 0.004213 | $4.984 \cdot 10^{-7}$ | 0.009158 | 0.009158 | $1.158 \cdot 10^{-6}$ | | |
| $t\bar{t} \to c\bar{c}$ | 0.01203 | 0.01203 | $4.156 \cdot 10^{-7}$ | 0.02546 | 0.02546 | $9.819 \cdot 10^{-7}$ | | |
| $t\bar{t} \to d\bar{d}$ | 0.004344 | 0.004344 | $-9.208 \cdot 10^{-8}$ | 0.006178 | 0.006178 | $3.723 \cdot 10^{-7}$ | | |
| $t\bar{t} \to s\bar{s}$ | 0.005844 | 0.005844 | $-1.198 \cdot 10^{-7}$ | 0.003779 | 0.003779 | $3.705 \cdot 10^{-7}$ | | |
| $t\bar{t} \to t\bar{t}$ | -0.543 | -0.543 | $4.604 \cdot 10^{-7}$ | 0.719 | 0.719 | $9.736 \cdot 10^{-7}$ | | |

2.50 ctWI

| | | interfere | ence | square | | | |
|---------------------------------------|-------------------------|-------------------------|---------------------------------|------------------------|-----------------------|---------------------------------|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | |
| $HH 	o W^+ \bar t b$ | $-4.187 \cdot 10^{-6}$ | $-4.187 \cdot 10^{-6}$ | 0 | $1.929 \cdot 10^{-5}$ | $1.929 \cdot 10^{-5}$ | 0 | |
| $HH \to z t \bar t$ | $5.7 \cdot 10^{-13}$ | 0 | 1 | $1.207 \cdot 10^{-17}$ | 0 | 1 | |
| $HW^+ 	o \gamma t \bar{b}$ | $-3.437 \cdot 10^{-6}$ | $-3.437 \cdot 10^{-6}$ | $7.564 \cdot 10^{-7}$ | $3.549 \cdot 10^{-5}$ | $3.549 \cdot 10^{-5}$ | $1.212 \cdot 10^{-6}$ | |
| $HW^- \to \bar{t}b$ | 0.0001286 | 0.0001286 | 0 | 2.219 | 2.219 | 0 | |
| $H\gamma \to t\bar{t}$ | $-2.084 \cdot 10^{-17}$ | $-9.37 \cdot 10^{-17}$ | -3.495 | 14.39 | 14.39 | $1.181 \cdot 10^{-6}$ | |
| $Hz \to t\bar{t}$ | $3.867 \cdot 10^{-10}$ | 0 | 1 | $1.022 \cdot 10^{-12}$ | 0 | 1 | |
| $W^+W^- 	o Hbar{b}$ | $4.796 \cdot 10^{-5}$ | $4.796 \cdot 10^{-5}$ | $2.085 \cdot 10^{-8}$ | $1.546 \cdot 10^{-5}$ | $1.546 \cdot 10^{-5}$ | 0 | |
| $W^+W^- 	o H t \bar t$ | $6.586 \cdot 10^{-6}$ | $6.586 \cdot 10^{-6}$ | $-3.037 \cdot 10^{-8}$ | $2.772 \cdot 10^{-5}$ | $2.772 \cdot 10^{-5}$ | 0 | |
| $\bar{b}t \to \bar{d}u$ | $1.383 \cdot 10^{-17}$ | $1.009 \cdot 10^{-17}$ | 0.2704 | 0.0124 | 0.0124 | 0 | |
| $b\bar{b} 	o t\bar{t}$ | $-5.599 \cdot 10^{-17}$ | $-3.18 \cdot 10^{-18}$ | 0.9432 | 0.0222 | 0.0222 | $1.352 \cdot 10^{-7}$ | |
| $b\bar{t} \to e^- \bar{\nu}_e$ | $-1.279 \cdot 10^{-18}$ | $-9.831 \cdot 10^{-19}$ | 0.2313 | 0.003185 | 0.003185 | 0 | |
| $t\bar{t} 	o u_{\mu} \bar{ u}_{\mu}$ | $2.283 \cdot 10^{-24}$ | 0 | 1 | $1.053 \cdot 10^{-15}$ | 0 | 1 | |
| $t\bar{t} \to \tau^+ \tau^-$ | $-9.8 \cdot 10^{-19}$ | $-2.749 \cdot 10^{-19}$ | 0.7195 | 0.002765 | 0.002765 | $1.157 \cdot 10^{-6}$ | |
| $t\bar{t} \to c\bar{c}$ | $1.156 \cdot 10^{-10}$ | $1.156 \cdot 10^{-10}$ | $6.922 \cdot 10^{-7}$ | 0.008714 | 0.008714 | $9.64 \cdot 10^{-7}$ | |
| $t\bar{t} 	o d\bar{d}$ | $1.612 \cdot 10^{-15}$ | $1.605 \cdot 10^{-15}$ | 0.004306 | 0.003163 | 0.003163 | $3.794 \cdot 10^{-7}$ | |
| $t\bar{t} \to s\bar{s}$ | $5.664 \cdot 10^{-13}$ | $5.664 \cdot 10^{-13}$ | $-3.866 \cdot 10^{-6}$ | 0.005332 | 0.005332 | $3.751 \cdot 10^{-7}$ | |
| $t\bar{t} \to t\bar{t}$ | $1.642 \cdot 10^{-17}$ | $3.056 \cdot 10^{-17}$ | -0.8614 | 2.293 | 2.293 | $1.003 \cdot 10^{-6}$ | |

2.51 ctZ

| | | interfer | rence | | square | | |
|-----------------------------|------------------------|------------------------|---------------------------------|-----------------------|-----------------------|-----------------------------------|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1 - \mathtt{mod}2/\mathtt{mod}1$ | |
| $HH \to z t \bar{t}$ | $-1.374 \cdot 10^{-6}$ | $-1.374 \cdot 10^{-6}$ | $5.822 \cdot 10^{-7}$ | $3.994 \cdot 10^{-5}$ | $3.994 \cdot 10^{-5}$ | $1.102 \cdot 10^{-6}$ | |
| $HW^+ \to \gamma t \bar{b}$ | $-5.619 \cdot 10^{-6}$ | $-5.619 \cdot 10^{-6}$ | $5.517 \cdot 10^{-7}$ | $2.846 \cdot 10^{-5}$ | $2.846 \cdot 10^{-5}$ | $1.125 \cdot 10^{-6}$ | |
| $H\gamma \to t\bar{t}$ | 0.5809 | 0.5809 | $5.508 \cdot 10^{-7}$ | 11.03 | 11.03 | $1.179 \cdot 10^{-6}$ | |

| $Hz \to t\bar{t}$ | -0.09219 | -0.09219 | $5.857 \cdot 10^{-7}$ | 2.33 | 2.33 | $1.116 \cdot 10^{-6}$ |
|-------------------------------|-----------------------|-----------------------|-----------------------|----------------------|----------------------|-----------------------|
| $W^+W^- 	o H t \bar t$ | $-1.17 \cdot 10^{-7}$ | $-1.17 \cdot 10^{-7}$ | $5.13 \cdot 10^{-7}$ | $1.13 \cdot 10^{-7}$ | $1.13 \cdot 10^{-7}$ | $1.062 \cdot 10^{-6}$ |
| b ar b 	o t ar t | 0.005242 | 0.005242 | $5.532 \cdot 10^{-7}$ | 0.003617 | 0.003617 | $1.106 \cdot 10^{-6}$ |
| $t \bar t 	o u_\mu ar u_\mu$ | 0.001474 | 0.001474 | $6.107 \cdot 10^{-7}$ | 0.003021 | 0.003021 | $1.093 \cdot 10^{-6}$ |
| $t\bar{t} \to \tau^+ \tau^-$ | -0.003014 | -0.003014 | $5.308 \cdot 10^{-7}$ | 0.005543 | 0.005543 | $1.101 \cdot 10^{-6}$ |
| $t\bar{t} \to c\bar{c}$ | -0.00912 | -0.00912 | $5.373 \cdot 10^{-7}$ | 0.009775 | 0.009775 | $1.105 \cdot 10^{-6}$ |
| $t\bar{t} 	o d\bar{d}$ | 0.0009748 | 0.0009748 | $6.053 \cdot 10^{-7}$ | 0.003716 | 0.003716 | $1.103 \cdot 10^{-6}$ |
| $t\bar{t} \to s\bar{s}$ | 0.0002975 | 0.0002975 | $7.058 \cdot 10^{-7}$ | 0.005506 | 0.005506 | $1.09 \cdot 10^{-6}$ |
| $t \bar t 	o t \bar t$ | 2.411 | 2.411 | $5.393 \cdot 10^{-7}$ | 1.594 | 1.594 | $1.067 \cdot 10^{-6}$ |

2.52 ctZI

| | | interfere | ence | | square | | | |
|---------------------------------------|-------------------------|-------------------------|---------------------------------|-----------------------|-----------------------|---------------------------------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | | |
| $HH \to z t \bar{t}$ | $-8.521 \cdot 10^{-7}$ | $-8.521 \cdot 10^{-7}$ | $5.633 \cdot 10^{-7}$ | $2.696 \cdot 10^{-5}$ | $2.696 \cdot 10^{-5}$ | $1.076 \cdot 10^{-6}$ | | |
| $HW^+ 	o \gamma t \bar{b}$ | $3.791 \cdot 10^{-6}$ | $3.791 \cdot 10^{-6}$ | $5.54\cdot10^{-7}$ | $2.846 \cdot 10^{-5}$ | $2.846 \cdot 10^{-5}$ | $1.125 \cdot 10^{-6}$ | | |
| $H\gamma \to t\bar{t}$ | $2.431 \cdot 10^{-17}$ | $4.86 \cdot 10^{-17}$ | -0.9989 | 11.03 | 11.03 | $1.179 \cdot 10^{-6}$ | | |
| $Hz \to t\bar{t}$ | -0.0005781 | -0.0005781 | $5.536 \cdot 10^{-7}$ | 2.283 | 2.283 | $1.095 \cdot 10^{-6}$ | | |
| $W^+W^- \to H t \bar t$ | $4.924 \cdot 10^{-7}$ | $4.924 \cdot 10^{-7}$ | $5.484 \cdot 10^{-7}$ | $4.509 \cdot 10^{-8}$ | $4.509 \cdot 10^{-8}$ | $1.087 \cdot 10^{-6}$ | | |
| $b\bar{b} 	o t\bar{t}$ | $3.117 \cdot 10^{-18}$ | $8.656 \cdot 10^{-20}$ | 0.9722 | 0.002511 | 0.002511 | $1.075 \cdot 10^{-6}$ | | |
| $t\bar{t} 	o u_{\mu} \bar{ u}_{\mu}$ | $-3.412 \cdot 10^{-18}$ | $-2.599 \cdot 10^{-18}$ | 0.2382 | 0.002354 | 0.002354 | $1.105 \cdot 10^{-6}$ | | |
| $t\bar{t} \to \tau^+ \tau^-$ | $6.278 \cdot 10^{-19}$ | $3.946 \cdot 10^{-19}$ | 0.3714 | 0.002258 | 0.002258 | $1.107 \cdot 10^{-6}$ | | |
| $t\bar{t} \to c\bar{c}$ | $-1.012 \cdot 10^{-10}$ | $-1.012 \cdot 10^{-10}$ | $5.931 \cdot 10^{-7}$ | 0.006051 | 0.006051 | $1.091 \cdot 10^{-6}$ | | |
| $t\bar{t} \to d\bar{d}$ | $-1.412 \cdot 10^{-15}$ | $-1.414 \cdot 10^{-15}$ | -0.001546 | 0.00261 | 0.00261 | $1.073 \cdot 10^{-6}$ | | |
| $t\bar{t} \to s\bar{s}$ | $-4.958 \cdot 10^{-13}$ | $-4.958 \cdot 10^{-13}$ | $3.529 \cdot 10^{-6}$ | 0.0044 | 0.0044 | $1.114 \cdot 10^{-6}$ | | |
| $t\bar{t} \to t\bar{t}$ | $-1.383 \cdot 10^{-16}$ | $1.934 \cdot 10^{-17}$ | 1.14 | 1.578 | 1.578 | $1.077 \cdot 10^{-6}$ | | |

2.53 ctb1

2.54 ctb8

$2.55 \quad \text{ctd1}$

| | | ${ m int}\epsilon$ | erference | square |
|-------------------------|----------|--------------------|---------------------------------|---|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | $\mathtt{mod1} \mathtt{mod2} 1 - \mathtt{mod2}/\mathtt{mod1}$ |
| $t\bar{t} \to d\bar{d}$ | -0.0255 | -0.0255 | 0 | $0.4393 0.4393 \qquad \qquad 0$ |
| $t\bar{t} \to s\bar{s}$ | -0.04386 | -0.04386 | $-2.28 \cdot 10^{-8}$ | $0.7609 0.7609 \qquad 0$ |

2.56 ctd8

interference square $mod2 \quad 1 - mod2/mod1$ mod2 1 - mod2/mod1mod1mod1 $t\bar{t} \to d\bar{d}$ 0.3088 0.30880.097630.097630 $t\bar{t} \to s\bar{s}$ 0.52050.52050.16910.16910

2.57 ctp

| $HH 	o Htar{t}$ | $-4.41 \cdot 10^{-8}$ | $-4.41 \cdot 10^{-8}$ | 0 | $1.527 \cdot 10^{-5} 1.527 \cdot 10^{-5}$ |
|------------------------------|------------------------|------------------------|------------------------|--|
| $HH \to W^+ \bar{t} b$ | $1.23 \cdot 10^{-7}$ | $1.23 \cdot 10^{-7}$ | $1.626 \cdot 10^{-7}$ | $6.345 \cdot 10^{-7} 6.345 \cdot 10^{-7} \qquad 0$ |
| $HH \to z t \bar t$ | $1.457 \cdot 10^{-5}$ | $1.457 \cdot 10^{-5}$ | 0 | $1.706 \cdot 10^{-5} 1.706 \cdot 10^{-5}$ |
| $HW^+ 	o \gamma t \bar{b}$ | $-4.639 \cdot 10^{-7}$ | $-4.639 \cdot 10^{-7}$ | $-2.156 \cdot 10^{-8}$ | $1.383 \cdot 10^{-8} 1.383 \cdot 10^{-8} \qquad 0$ |
| $HW^- \to \bar{t}b$ | 0.09301 | 0.09301 | 0 | $0.05181 \qquad 0.05181 \qquad 0$ |
| $H\gamma \to t\bar{t}$ | -0.05442 | -0.05442 | 0 | $0.00167 \qquad 0.00167 \qquad 0$ |
| $Hz \to t\bar{t}$ | -0.02856 | -0.02856 | $3.502 \cdot 10^{-8}$ | $0.06457 \qquad 0.06457 \qquad 0$ |
| $W^+W^- 	o Hb\bar{b}$ | $1.248 \cdot 10^{-6}$ | $1.248 \cdot 10^{-6}$ | 0 | $3.202 \cdot 10^{-8} 3.202 \cdot 10^{-8} \qquad 0$ |
| $W^+W^- \to H t \bar t$ | $-4.581 \cdot 10^{-7}$ | $-4.581 \cdot 10^{-7}$ | $2.183 \cdot 10^{-8}$ | $2.396 \cdot 10^{-8} 2.396 \cdot 10^{-8} 0$ |
| $b\bar{b} 	o t\bar{t}$ | $-1.314 \cdot 10^{-5}$ | $-1.314 \cdot 10^{-5}$ | 0 | $6.089 \cdot 10^{-7} 6.089 \cdot 10^{-7}$ |
| $t\bar{t} \to \tau^+ \tau^-$ | $-1.026 \cdot 10^{-6}$ | $-1.026 \cdot 10^{-6}$ | 0 | $3.101 \cdot 10^{-8} 3.101 \cdot 10^{-8} \qquad \qquad 0$ |
| $t\bar{t} \to t\bar{t}$ | 0.4057 | 0.4057 | 0 | $0.01057 \qquad 0.01057 \qquad 0$ |

2.58 ctpI

| | | interfere | ence | | square | | | |
|------------------------------|-------------------------|-------------------------|---------------------------------|-----------------------|-----------------------|---------------------------------|--|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | | |
| $HH 	o Ht ar{t}$ | $-7.619 \cdot 10^{-7}$ | $-7.619 \cdot 10^{-7}$ | 0 | $5.19 \cdot 10^{-5}$ | $5.19\cdot10^{-5}$ | 0 | | |
| $HH \to W^+ \bar{t} b$ | $1.964 \cdot 10^{-7}$ | $1.964 \cdot 10^{-7}$ | $-5.091 \cdot 10^{-8}$ | $2.844 \cdot 10^{-6}$ | $2.844 \cdot 10^{-6}$ | 0 | | |
| $HH \to z t \bar{t}$ | $1.719 \cdot 10^{-6}$ | $1.719 \cdot 10^{-6}$ | 0 | $1.688 \cdot 10^{-5}$ | $1.688 \cdot 10^{-5}$ | 0 | | |
| $HW^+ 	o \gamma t \bar{b}$ | $3.726 \cdot 10^{-8}$ | $3.726 \cdot 10^{-8}$ | $-2.684 \cdot 10^{-8}$ | $1.109 \cdot 10^{-8}$ | $1.109 \cdot 10^{-8}$ | 0 | | |
| $HW^- 	o \bar{t}b$ | -0.001039 | -0.001039 | 0 | 0.05832 | 0.05832 | 0 | | |
| $H\gamma \to t\bar{t}$ | $-2.873 \cdot 10^{-18}$ | $-2.331 \cdot 10^{-18}$ | 0.1887 | 0.002104 | 0.002104 | $-4.754 \cdot 10^{-8}$ | | |
| $Hz \to t\bar{t}$ | -0.0004678 | -0.0004678 | $4.275 \cdot 10^{-8}$ | 0.06432 | 0.06432 | 0 | | |
| $W^+W^- \to H b \bar b$ | $7.803 \cdot 10^{-6}$ | $7.803 \cdot 10^{-6}$ | 0 | $3.218 \cdot 10^{-8}$ | $3.218 \cdot 10^{-8}$ | 0 | | |
| $W^+W^- 	o H t \bar t$ | $-3.16 \cdot 10^{-7}$ | $-3.16 \cdot 10^{-7}$ | 0 | $2.399 \cdot 10^{-7}$ | $2.399 \cdot 10^{-7}$ | 0 | | |
| $b\bar{b} 	o t\bar{t}$ | $-1.912 \cdot 10^{-22}$ | $8.228 \cdot 10^{-23}$ | 1.43 | $6.906 \cdot 10^{-7}$ | $6.906 \cdot 10^{-7}$ | 0 | | |
| $t\bar{t} \to \tau^+ \tau^-$ | $-9.482 \cdot 10^{-23}$ | $-6.768 \cdot 10^{-23}$ | 0.2862 | $3.49 \cdot 10^{-8}$ | $3.49\cdot10^{-8}$ | 0 | | |
| $t\bar{t} \to t\bar{t}$ | $2.23 \cdot 10^{-18}$ | $-7.486 \cdot 10^{-19}$ | 1.336 | 0.005147 | 0.005147 | 0 | | |

2.59 ctq1

| | | inter | ference | | square | | | |
|-------------------------|-----------|-----------|-----------------------|---------|---------|---------------------------------|--|--|
| | mod1 | mod2 | $1-{\tt mod2/mod1}$ | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | | |
| $t\bar{t} \to c\bar{c}$ | 0.0109 | 0.0109 | 0 | 0.1584 | 0.1584 | 0 | | |
| $t\bar{t} \to d\bar{d}$ | -0.002134 | -0.002134 | $4.687 \cdot 10^{-8}$ | 0.1345 | 0.1345 | 0 | | |
| $t\bar{t} \to s\bar{s}$ | -0.005328 | -0.005328 | $1.877 \cdot 10^{-8}$ | 0.02475 | 0.02475 | 0 | | |

2.60 ctq8

| | | - | interference | | square | | | |
|-------------------------|--------|--------|---------------------|---------|---------|---------------------|--|--|
| | mod1 | mod2 | $1-{\tt mod2/mod1}$ | mod1 | mod2 | $1-{\tt mod2/mod1}$ | | |
| $t\bar{t} \to c\bar{c}$ | 0.1467 | 0.1467 | 0 | 0.04295 | 0.04295 | 0 | | |
| $t\bar{t} \to d\bar{d}$ | 0.183 | 0.183 | 0 | 0.05518 | 0.05518 | 0 | | |
| $t\bar{t} \to s\bar{s}$ | 0.5988 | 0.5988 | 0 | 0.1955 | 0.1955 | 0 | | |

2.61 ctt1

| | | i | nterference | | square | | |
|-------------------------|--------|--------|---------------------|------|--------|---------------------|--|
| | mod1 | mod2 | $1-{\tt mod2/mod1}$ | mod1 | mod2 | $1-{\tt mod2/mod1}$ | |
| $t\bar{t} \to t\bar{t}$ | -2.485 | -2.485 | 0 | 12.3 | 12.3 | 0 | |

2.62 ctu1

| | | in | nterference | | square | | |
|-------------------------|---------|---------|---------------------------------|--------|--------|-----------------------------------|--|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | $1 - \mathtt{mod}2/\mathtt{mod}1$ | |
| $t\bar{t} \to c\bar{c}$ | 0.09087 | 0.09087 | $-1.1 \cdot 10^{-8}$ | 0.7885 | 0.7885 | 0 | |

2.63 ctu8

| | | | interference | | squa | are |
|-------------------------|--------|--------|---------------------------------|---------|---------|---------------|
| | mod1 | mod2 | $1-\mathtt{mod}2/\mathtt{mod}1$ | mod1 | mod2 | 1 - mod2/mod1 |
| $t\bar{t} \to c\bar{c}$ | 0.2821 | 0.2821 | 0 | 0.08864 | 0.08864 | 0 |

2.64 sm

| | | | interference | | square | |
|------------------------------|------|------|---------------------|------------------------|------------------------|------------------------|
| | mod1 | mod2 | $1-{\tt mod2/mod1}$ | mod1 | mod2 | $1-{\tt mod2/mod1}$ |
| $HH \to HH$ | 0 | 0 | 0 | 0.003749 | 0.003749 | 0 |
| $HH \rightarrow HHH$ | 0 | 0 | 0 | $3.146 \cdot 10^{-7}$ | $3.146 \cdot 10^{-7}$ | 0 |
| $HH \to H \tau^+ \tau^-$ | 0 | 0 | 0 | $3.141 \cdot 10^{-10}$ | $3.141 \cdot 10^{-10}$ | 0 |
| $HH 	o Hbar{b}$ | 0 | 0 | 0 | $1.161 \cdot 10^{-9}$ | $1.161 \cdot 10^{-9}$ | 0 |
| $HH \to H t \bar t$ | 0 | 0 | 0 | $4.504 \cdot 10^{-5}$ | $4.504 \cdot 10^{-5}$ | 0 |
| $HH \to Hzz$ | 0 | 0 | 0 | $2.815 \cdot 10^{-5}$ | $2.815 \cdot 10^{-5}$ | 0 |
| $HH 	o W^+W^-$ | 0 | 0 | 0 | 1.406 | 1.406 | $7.111 \cdot 10^{-8}$ |
| $HH \to W^+W^-\gamma$ | 0 | 0 | 0 | $1.099 \cdot 10^{-7}$ | $1.099 \cdot 10^{-7}$ | $-9.098 \cdot 10^{-8}$ |
| $HH \to W^+ \bar{t} b$ | 0 | 0 | 0 | $4.686 \cdot 10^{-5}$ | $4.686 \cdot 10^{-5}$ | 0 |
| $HH \to W^+ e^- \bar{\nu}_e$ | 0 | 0 | 0 | $1.398 \cdot 10^{-6}$ | $1.398 \cdot 10^{-6}$ | 0 |
| $HH \to W^- u \bar{d}$ | 0 | 0 | 0 | $4.972 \cdot 10^{-7}$ | $4.972 \cdot 10^{-7}$ | $2.011 \cdot 10^{-8}$ |
| $HH 	o z \bar{b} b$ | 0 | 0 | 0 | $4.051 \cdot 10^{-6}$ | $4.051 \cdot 10^{-6}$ | 0 |
| $HH \to z \nu_e \bar{\nu}_e$ | 0 | 0 | 0 | $3.914 \cdot 10^{-6}$ | $3.914 \cdot 10^{-6}$ | 0 |
| $HH \to zc\bar{c}$ | 0 | 0 | 0 | $2.478 \cdot 10^{-6}$ | $2.478 \cdot 10^{-6}$ | 0 |
| $HH \to z d\bar{d}$ | 0 | 0 | 0 | $3.613 \cdot 10^{-7}$ | $3.613 \cdot 10^{-7}$ | 0 |
| $HH \rightarrow ze^+e^-$ | 0 | 0 | 0 | $1.211 \cdot 10^{-7}$ | $1.211 \cdot 10^{-7}$ | 0 |
| $HH \to z t \bar{t}$ | 0 | 0 | 0 | 0.0001485 | 0.0001485 | 0 |
| $HH \rightarrow zz$ | 0 | 0 | 0 | 16.1 | 16.1 | 0 |
| $HW^+ 	o \gamma t \bar b$ | 0 | 0 | 0 | $2.238 \cdot 10^{-5}$ | $2.238 \cdot 10^{-5}$ | 0 |

| $HW^+ \to \gamma u \bar{d}$ | 0 | 0 | 0 | $3.508 \cdot 10^{-9}$ | $3.508 \cdot 10^{-9}$ | 0 |
|--|---|---|---|-----------------------|-----------------------|------------------------|
| $HW^+ ightarrow u ar{d}$ | 0 | 0 | 0 | 0.01434 | 0.01434 | $6.975 \cdot 10^{-8}$ |
| $HW^- \to \bar{t}b$ | 0 | 0 | 0 | 0.4067 | 0.4067 | 0 |
| $HW^- \to \gamma e^- \bar{\nu}_e$ | 0 | 0 | 0 | $8.49 \cdot 10^{-8}$ | $8.49 \cdot 10^{-8}$ | $-1.178 \cdot 10^{-8}$ |
| $HW^- 	o \mu^- \bar{\nu}_\mu$ | 0 | 0 | 0 | 0.00454 | 0.00454 | $2.203 \cdot 10^{-8}$ |
| $H\gamma 	o b\bar{b}$ | 0 | 0 | 0 | 0.0002864 | 0.0002864 | 0 |
| $H\gamma \to t\bar{t}$ | 0 | 0 | 0 | 0.4047 | 0.4047 | $-2.471 \cdot 10^{-8}$ |
| $Hz \to \mu^+\mu^-$ | 0 | 0 | 0 | 0.0032 | 0.0032 | 0 |
| $Hz \to \nu_{	au} \bar{\nu}_{	au}$ | 0 | 0 | 0 | 0.005752 | 0.005752 | 0 |
| $Hz \to b\bar{b}$ | 0 | 0 | 0 | 0.0137 | 0.0137 | 0 |
| $Hz \to s\bar{s}$ | 0 | 0 | 0 | 0.0133 | 0.0133 | 0 |
| $Hz \to t\bar{t}$ | 0 | 0 | 0 | 2.714 | 2.714 | 0 |
| $Hz \to u\bar{u}$ | 0 | 0 | 0 | 0.01129 | 0.01129 | 0 |
| $W^+W^- \to H b \bar b$ | 0 | 0 | 0 | $2.395 \cdot 10^{-5}$ | $2.395 \cdot 10^{-5}$ | 0 |
| $W^+W^- \to Hc\bar{c}$ | 0 | 0 | 0 | $1.138 \cdot 10^{-6}$ | $1.138 \cdot 10^{-6}$ | $8.784 \cdot 10^{-8}$ |
| $W^+W^- \to H d\bar{d}$ | 0 | 0 | 0 | $4.53 \cdot 10^{-7}$ | $4.53 \cdot 10^{-7}$ | 0 |
| $W^+W^- 	o H t \bar t$ | 0 | 0 | 0 | $2.078 \cdot 10^{-5}$ | $2.078 \cdot 10^{-5}$ | 0 |
| $W^+W^- \rightarrow W^+W^-$ | 0 | 0 | 0 | 18.12 | 18.12 | 0 |
| $W^+W^- 	o \gamma\gamma$ | 0 | 0 | 0 | 0.1713 | 0.1713 | 0 |
| $W^+W^- \to \gamma\gamma\gamma$ | 0 | 0 | 0 | $3.835 \cdot 10^{-7}$ | $3.835 \cdot 10^{-7}$ | $-5.215 \cdot 10^{-8}$ |
| $\bar{b}t \to \bar{d}u$ | 0 | 0 | 0 | 0.003874 | 0.003874 | $2.581 \cdot 10^{-8}$ |
| $\gamma W^+ \to z W^+$ | 0 | 0 | 0 | 0.6885 | 0.6885 | 0 |
| $\mu^+\mu^- \to \tau^+\tau^-$ | 0 | 0 | 0 | 0.006623 | 0.006623 | $-4.53 \cdot 10^{-8}$ |
| $\nu_{	au} \bar{\nu}_{	au} 	o \nu_{	au} \bar{\nu}_{	au}$ | 0 | 0 | 0 | 0.001516 | 0.001516 | 0 |
| $ u_e \bar{\nu}_e \to \nu_\mu \bar{\nu}_\mu$ | 0 | 0 | 0 | 0.01384 | 0.01384 | 0 |
| $b\bar{b} 	o \gamma \gamma$ | 0 | 0 | 0 | 0.0025 | 0.0025 | 0 |
| $b\bar{b} \to \mu^+\mu^-$ | 0 | 0 | 0 | 0.0003231 | 0.0003231 | $-3.095 \cdot 10^{-8}$ |
| $b\bar{b} ightarrow u_e \bar{ u}_e$ | 0 | 0 | 0 | 0.003788 | 0.003788 | 0 |
| $b\bar{b} 	o b\bar{b}$ | 0 | 0 | 0 | 3.208 | 3.208 | 0 |

| $b\bar{b} 	o d\bar{d}$ | 0 | 0 | 0 | 0.4909 | 0.4909 | 0 |
|---|---|---|---|-----------------------|-----------------------|------------------------|
| $b\bar{b} 	o t\bar{t}$ | 0 | 0 | 0 | 11.59 | 11.59 | 0 |
| $b\bar{b} \to u\bar{u}$ | 0 | 0 | 0 | 0.4953 | 0.4953 | 0 |
| $b\bar{t} \to e^- \bar{\nu}_e$ | 0 | 0 | 0 | 0.00648 | 0.00648 | $1.543 \cdot 10^{-8}$ |
| $c\bar{c} \rightarrow \mu^+ \mu^-$ | 0 | 0 | 0 | 0.003908 | 0.003908 | 0 |
| $c\bar{s} \rightarrow \tau^+ \nu_{\tau}$ | 0 | 0 | 0 | $7.044 \cdot 10^{-5}$ | $7.044 \cdot 10^{-5}$ | $1.42 \cdot 10^{-8}$ |
| $d\bar{d} \rightarrow c\bar{c}$ | 0 | 0 | 0 | 0.5544 | 0.5544 | 0 |
| $d\bar{d} \rightarrow e^+e^-$ | 0 | 0 | 0 | 0.0006706 | 0.0006706 | 0 |
| $e^+\nu_\mu \to e^+\nu_\mu$ | 0 | 0 | 0 | 0.004689 | 0.004689 | $-4.266 \cdot 10^{-8}$ |
| $e^+\nu_e^- 	o \mu^+\nu_\mu^-$ | 0 | 0 | 0 | 0.008295 | 0.008295 | $1.206 \cdot 10^{-8}$ |
| $e^+\nu_e \to e^+\nu_e$ | 0 | 0 | 0 | 0.1871 | 0.1871 | 0 |
| $e^+\tau^- \rightarrow e^+\tau^-$ | 0 | 0 | 0 | 0.01227 | 0.01227 | 0 |
| $e^+e^- \to \mu^+\mu^-$ | 0 | 0 | 0 | 0.01719 | 0.01719 | 0 |
| $e^+e^- \rightarrow e^+e^-$ | 0 | 0 | 0 | 5.967 | 5.967 | $-3.352 \cdot 10^{-8}$ |
| gg 	o gg | 0 | 0 | 0 | 43.1 | 43.1 | 0 |
| gg 	o ggg | 0 | 0 | 0 | 0.06519 | 0.06519 | 0 |
| gg 	o t ar t | 0 | 0 | 0 | 0.3902 | 0.3902 | 0 |
| $gg \to u\bar{u}$ | 0 | 0 | 0 | 7.332 | 7.332 | 0 |
| $s\bar{s} \to \nu_{\tau}\bar{\nu}_{\tau}$ | 0 | 0 | 0 | 0.002076 | 0.002076 | 0 |
| $s\bar{s} \to s\bar{s}$ | 0 | 0 | 0 | 29.03 | 29.03 | 0 |
| $t \bar t 	o u_\mu ar u_\mu$ | 0 | 0 | 0 | 0.0009136 | 0.0009136 | $1.095 \cdot 10^{-8}$ |
| $t\bar{t} \to \tau^+ \tau^-$ | 0 | 0 | 0 | 0.0008695 | 0.0008695 | $-3.45 \cdot 10^{-8}$ |
| $t\bar{t} \to c\bar{c}$ | 0 | 0 | 0 | 0.6077 | 0.6077 | 0 |
| $t\bar{t} \to d\bar{d}$ | 0 | 0 | 0 | 0.6225 | 0.6225 | 0 |
| $t\bar{t} \to s\bar{s}$ | 0 | 0 | 0 | 0.8326 | 0.8326 | 0 |
| $t\bar{t} 	o t\bar{t}$ | 0 | 0 | 0 | 4.934 | 4.934 | 0 |
| $u\bar{d} \to \mu^+ \nu_{\mu}$ | 0 | 0 | 0 | 0.0005352 | 0.0005352 | $1.868 \cdot 10^{-8}$ |
| $u\bar{d} \to c\bar{s}$ | 0 | 0 | 0 | 0.00338 | 0.00338 | 0 |
| $u\bar{d} \to u\bar{d}$ | 0 | 0 | 0 | 28.5 | 28.5 | 0 |
| | | | | | | |

| $u\bar{u} \to \nu_e \bar{\nu}_e$ | 0 | 0 | 0 | 0.002413 | 0.002413 | 0 |
|----------------------------------|---|---|---|----------|----------|-----------------------|
| $u\bar{u} \to u\bar{u}$ | 0 | 0 | 0 | 6536 | 6536 | 0 |
| $zz \to W^+W^-$ | 0 | 0 | 0 | 30.63 | 30.63 | $3.265 \cdot 10^{-8}$ |
| $zz \rightarrow zz$ | 0 | 0 | 0 | 0.07959 | 0.07959 | 0 |