

1 By process

1.1 $HH \rightarrow HH$

| | | | interference | | | square |
|----|------|------|-------------------------------|--------|--------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 0.2032 | 0.2032 | 0 |

1.2 $HH \rightarrow HHH$

| | | | interference | | | square |
|----|------|------|-------------------------------|-----------------------|-----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | $8.792 \cdot 10^{-7}$ | $8.792 \cdot 10^{-7}$ | 0 |

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

| | | | interference | | | square |
|----|------|------|-------------------------------|------------------------|------------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | $1.922 \cdot 10^{-11}$ | $1.922 \cdot 10^{-11}$ | 0 |

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

| | | | interference | | | square |
|----|------|------|-------------------------------|-----------------------|-----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | $2.566 \cdot 10^{-7}$ | $2.566 \cdot 10^{-7}$ | 0 |

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

| | interference | | | square | | |
|------|------------------------|------------------------|-------------------------------|-----------------------|-----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| ctp | $-3.728 \cdot 10^{-5}$ | $-3.728 \cdot 10^{-5}$ | 0 | $1.235 \cdot 10^{-5}$ | $1.235 \cdot 10^{-5}$ | 0 |
| ctpI | $5.783 \cdot 10^{-6}$ | $5.783 \cdot 10^{-6}$ | 0 | $5.133 \cdot 10^{-5}$ | $5.133 \cdot 10^{-5}$ | 0 |
| sm | 0 | 0 | 0 | $1.768 \cdot 10^{-5}$ | $1.768 \cdot 10^{-5}$ | 0 |

1.6 $HH \rightarrow Hzz$

| | interference | | | square | | |
|----|--------------|------|-------------------------------|-----------------------|-----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | $8.273 \cdot 10^{-6}$ | $8.273 \cdot 10^{-6}$ | 0 |

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

| | interference | | | square | | |
|----|--------------|------|-------------------------------|--------|-------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 799.4 | 799.4 | 0 |

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

| | interference | | | square | | |
|----|--------------|------|-------------------------------|-----------------------|-----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | $1.481 \cdot 10^{-6}$ | $1.481 \cdot 10^{-6}$ | 0 |

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

| | interference | | | square | | |
|--|--------------|------|-------------------------------|--------|------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |

| | | | | | | |
|-------|------------------------|------------------------|------------------------|-----------------------|-----------------------|-----------------------|
| cbW | $1.722 \cdot 10^{-7}$ | $1.722 \cdot 10^{-7}$ | $5.809 \cdot 10^{-8}$ | $2.206 \cdot 10^{-5}$ | $2.206 \cdot 10^{-5}$ | 0 |
| cbWI | $-5.713 \cdot 10^{-9}$ | $-5.713 \cdot 10^{-9}$ | $-2.276 \cdot 10^{-7}$ | $2.206 \cdot 10^{-5}$ | $2.206 \cdot 10^{-5}$ | 0 |
| cpQ3 | $-3.825 \cdot 10^{-5}$ | $-3.825 \cdot 10^{-5}$ | $-2.614 \cdot 10^{-8}$ | 0.0001068 | 0.0001068 | 0 |
| cptb | $1.862 \cdot 10^{-5}$ | $1.862 \cdot 10^{-5}$ | 0 | $7.726 \cdot 10^{-6}$ | $7.726 \cdot 10^{-6}$ | $1.294 \cdot 10^{-8}$ |
| cptbI | $-1.602 \cdot 10^{-7}$ | $-1.602 \cdot 10^{-7}$ | 0 | $9.222 \cdot 10^{-6}$ | $9.222 \cdot 10^{-6}$ | $1.084 \cdot 10^{-8}$ |
| ctW | -0.0001005 | -0.0001005 | 0 | $7.244 \cdot 10^{-5}$ | $7.244 \cdot 10^{-5}$ | $1.38 \cdot 10^{-8}$ |
| ctWI | $1.235 \cdot 10^{-5}$ | $1.235 \cdot 10^{-5}$ | 0 | $8.782 \cdot 10^{-6}$ | $8.782 \cdot 10^{-6}$ | 0 |
| ctp | $2.868 \cdot 10^{-5}$ | $2.868 \cdot 10^{-5}$ | $3.487 \cdot 10^{-8}$ | $1.242 \cdot 10^{-5}$ | $1.242 \cdot 10^{-5}$ | 0 |
| ctpI | $-2.979 \cdot 10^{-6}$ | $-2.979 \cdot 10^{-6}$ | 0 | $1.949 \cdot 10^{-5}$ | $1.949 \cdot 10^{-5}$ | 0 |
| sm | 0 | 0 | 0 | $2.886 \cdot 10^{-5}$ | $2.886 \cdot 10^{-5}$ | 0 |

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

| | interference | | | square | | |
|----|--------------|------|-------------------------------|-----------------------|-----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | $1.085 \cdot 10^{-7}$ | $1.085 \cdot 10^{-7}$ | 0 |

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

| | interference | | | square | | |
|----|--------------|------|-------------------------------|-----------------------|-----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | $6.589 \cdot 10^{-7}$ | $6.589 \cdot 10^{-7}$ | $4.553 \cdot 10^{-8}$ |

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

| | interference | | | square | | |
|-----|-----------------------|-----------------------|-------------------------------|----------------------|----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| cbW | $1.047 \cdot 10^{-7}$ | $1.047 \cdot 10^{-7}$ | 0 | $1.55 \cdot 10^{-6}$ | $1.55 \cdot 10^{-6}$ | 0 |

| | | | | | | |
|------|------------------------|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| cbWI | $1.495 \cdot 10^{-7}$ | $1.495 \cdot 10^{-7}$ | 0 | $1.541 \cdot 10^{-6}$ | $1.541 \cdot 10^{-6}$ | $6.487 \cdot 10^{-8}$ |
| cpQ3 | $7.001 \cdot 10^{-6}$ | $7.001 \cdot 10^{-6}$ | $1.428 \cdot 10^{-8}$ | $1.613 \cdot 10^{-5}$ | $1.613 \cdot 10^{-5}$ | 0 |
| cpQM | $9.826 \cdot 10^{-7}$ | $9.826 \cdot 10^{-7}$ | $1.018 \cdot 10^{-8}$ | $1.709 \cdot 10^{-6}$ | $1.709 \cdot 10^{-6}$ | 0 |
| cpb | $-1.078 \cdot 10^{-7}$ | $-1.078 \cdot 10^{-7}$ | 0 | $8.768 \cdot 10^{-7}$ | $8.768 \cdot 10^{-7}$ | 0 |
| sm | 0 | 0 | 0 | $4.006 \cdot 10^{-7}$ | $4.006 \cdot 10^{-7}$ | $2.496 \cdot 10^{-8}$ |

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

| | interference | | | square | | |
|----|--------------|------|-------------------------------|----------------------|----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | $9.71 \cdot 10^{-8}$ | $9.71 \cdot 10^{-8}$ | 0 |

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

| | interference | | | square | | |
|----|--------------|------|-------------------------------|----------------------|----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | $1.39 \cdot 10^{-6}$ | $1.39 \cdot 10^{-6}$ | $7.194 \cdot 10^{-8}$ |

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

| | interference | | | square | | |
|----|--------------|------|-------------------------------|----------------------|----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | $2.54 \cdot 10^{-7}$ | $2.54 \cdot 10^{-7}$ | 0 |

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

| | interference | | | square | | |
|--|--------------|------|-------------------------------|--------|------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |

| | | | | | | |
|----|---|---|---|-----------------------|-----------------------|---|
| sm | 0 | 0 | 0 | $2.551 \cdot 10^{-8}$ | $2.551 \cdot 10^{-8}$ | 0 |
|----|---|---|---|-----------------------|-----------------------|---|

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

| | interference | | | square | | |
|------|------------------------|------------------------|-------------------------------|------------------------|-----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| cpQM | $4.392 \cdot 10^{-5}$ | $4.392 \cdot 10^{-5}$ | 0 | $4.08 \cdot 10^{-5}$ | $4.08 \cdot 10^{-5}$ | 0 |
| cpt | $-5.892 \cdot 10^{-5}$ | $-5.892 \cdot 10^{-5}$ | 0 | $4.533 \cdot 10^{-5}$ | $4.533 \cdot 10^{-5}$ | 0 |
| ctW | $9.499 \cdot 10^{-14}$ | 0 | 1 | $1.924 \cdot 10^{-17}$ | 0 | 1 |
| ctWI | $5.259 \cdot 10^{-13}$ | 0 | 1 | $9.785 \cdot 10^{-18}$ | 0 | 1 |
| ctZ | $2.47 \cdot 10^{-6}$ | $2.47 \cdot 10^{-6}$ | $6.072 \cdot 10^{-7}$ | $4.294 \cdot 10^{-5}$ | $4.294 \cdot 10^{-5}$ | $1.048 \cdot 10^{-6}$ |
| ctZI | $-5.213 \cdot 10^{-6}$ | $-5.213 \cdot 10^{-6}$ | $6.138 \cdot 10^{-7}$ | $5.829 \cdot 10^{-5}$ | $5.829 \cdot 10^{-5}$ | $1.064 \cdot 10^{-6}$ |
| ctp | $4.028 \cdot 10^{-6}$ | $4.028 \cdot 10^{-6}$ | 0 | $8.287 \cdot 10^{-6}$ | $8.287 \cdot 10^{-6}$ | $1.207 \cdot 10^{-8}$ |
| ctpI | $-1.834 \cdot 10^{-6}$ | $-1.834 \cdot 10^{-6}$ | $5.453 \cdot 10^{-8}$ | $8.533 \cdot 10^{-6}$ | $8.533 \cdot 10^{-6}$ | $1.172 \cdot 10^{-8}$ |
| sm | 0 | 0 | 0 | $3.125 \cdot 10^{-5}$ | $3.125 \cdot 10^{-5}$ | 0 |

1.18 $HH \rightarrow zz$

| sm | interference | | | square | | |
|----|--------------|------|-------------------------------|--------|--------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 0.8444 | 0.8444 | 0 |

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

| | interference | | | square | | |
|------|-----------------------|-----------------------|-------------------------------|-----------------------|-----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| cbW | $2.043 \cdot 10^{-7}$ | $2.043 \cdot 10^{-7}$ | $-4.896 \cdot 10^{-8}$ | $3.987 \cdot 10^{-5}$ | $3.987 \cdot 10^{-5}$ | $-5.016 \cdot 10^{-8}$ |
| cbWI | $4.517 \cdot 10^{-8}$ | $4.517 \cdot 10^{-8}$ | $-4.428 \cdot 10^{-8}$ | $3.987 \cdot 10^{-5}$ | $3.987 \cdot 10^{-5}$ | $-2.508 \cdot 10^{-8}$ |

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|-------|------------------------|------------------------|------------------------|-----------------------|-----------------------|------------------------|
| cpQ3 | $-1.537 \cdot 10^{-7}$ | $-1.537 \cdot 10^{-7}$ | $-6.508 \cdot 10^{-8}$ | $3.834 \cdot 10^{-7}$ | $3.834 \cdot 10^{-7}$ | $-2.608 \cdot 10^{-8}$ |
| cptb | $-2.29 \cdot 10^{-8}$ | $-2.29 \cdot 10^{-8}$ | $-4.367 \cdot 10^{-8}$ | $2.077 \cdot 10^{-7}$ | $2.077 \cdot 10^{-7}$ | $-4.815 \cdot 10^{-8}$ |
| cptbI | $-1.91 \cdot 10^{-9}$ | $-1.91 \cdot 10^{-9}$ | $-5.236 \cdot 10^{-8}$ | $6.36 \cdot 10^{-7}$ | $6.36 \cdot 10^{-7}$ | $-3.144 \cdot 10^{-8}$ |
| ctW | $-1.299 \cdot 10^{-6}$ | $-1.299 \cdot 10^{-6}$ | $4.618 \cdot 10^{-7}$ | $2.528 \cdot 10^{-5}$ | $2.528 \cdot 10^{-5}$ | $1.108 \cdot 10^{-6}$ |
| ctWI | $-2.92 \cdot 10^{-6}$ | $-2.92 \cdot 10^{-6}$ | $7.192 \cdot 10^{-7}$ | $1.063 \cdot 10^{-5}$ | $1.063 \cdot 10^{-5}$ | $2.822 \cdot 10^{-7}$ |
| ctZ | $1.08 \cdot 10^{-6}$ | $1.08 \cdot 10^{-6}$ | $5.558 \cdot 10^{-7}$ | $3.325 \cdot 10^{-5}$ | $3.325 \cdot 10^{-5}$ | $1.143 \cdot 10^{-6}$ |
| ctZI | $3.105 \cdot 10^{-6}$ | $3.105 \cdot 10^{-6}$ | $5.475 \cdot 10^{-7}$ | $2.949 \cdot 10^{-6}$ | $2.949 \cdot 10^{-6}$ | $1.119 \cdot 10^{-6}$ |
| ctp | $-1.916 \cdot 10^{-7}$ | $-1.916 \cdot 10^{-7}$ | 0 | $2.96 \cdot 10^{-8}$ | $2.96 \cdot 10^{-8}$ | $-3.379 \cdot 10^{-8}$ |
| ctpI | $9.891 \cdot 10^{-8}$ | $9.891 \cdot 10^{-8}$ | $-5.055 \cdot 10^{-8}$ | $3.944 \cdot 10^{-8}$ | $3.944 \cdot 10^{-8}$ | $-2.536 \cdot 10^{-8}$ |
| sm | 0 | 0 | 0 | $6.799 \cdot 10^{-6}$ | $6.799 \cdot 10^{-6}$ | $-2.942 \cdot 10^{-8}$ |

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

| | interference | | | square | | |
|----|--------------|------|-------------------------------|----------------------|----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | $5.76 \cdot 10^{-9}$ | $5.76 \cdot 10^{-9}$ | 0 |

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

| | interference | | | square | | |
|----|--------------|------|-------------------------------|---------|---------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 0.01962 | 0.01962 | $5.096 \cdot 10^{-8}$ |

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

| | interference | | | square | | |
|------|----------------------|----------------------|-------------------------------|--------|-------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| cbW | 0.007977 | 0.007977 | $1.254 \cdot 10^{-8}$ | 2.041 | 2.041 | 0 |
| cbWI | $1.52 \cdot 10^{-6}$ | $1.52 \cdot 10^{-6}$ | 0 | 2.041 | 2.041 | 0 |

| | | | | | | |
|-------|------------------------|------------------------|------------------------|---------|---------|-----------------------|
| cpQ3 | -1.505 | -1.505 | 0 | 1.957 | 1.957 | 0 |
| cptb | -0.03719 | -0.03719 | 0 | 0.09839 | 0.09839 | $1.016 \cdot 10^{-8}$ |
| cptbI | $-8.819 \cdot 10^{-6}$ | $-8.819 \cdot 10^{-6}$ | $1.134 \cdot 10^{-8}$ | 0.2782 | 0.2782 | 0 |
| ctW | 0.2171 | 0.2171 | $4.606 \cdot 10^{-8}$ | 0.3497 | 0.3497 | 0 |
| ctWI | 0.000336 | 0.000336 | $2.977 \cdot 10^{-8}$ | 1.63 | 1.63 | 0 |
| ctp | 0.0871 | 0.0871 | $-1.148 \cdot 10^{-8}$ | 0.05153 | 0.05153 | 0 |
| ctpI | -0.001213 | -0.001213 | 0 | 0.05792 | 0.05792 | 0 |
| sm | 0 | 0 | 0 | 0.1293 | 0.1293 | 0 |

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

| | interference | | | square | | |
|----|--------------|------|-------------------------------|-----------------------|-----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | $2.409 \cdot 10^{-9}$ | $2.409 \cdot 10^{-9}$ | 0 |

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

| | interference | | | square | | |
|----|--------------|------|-------------------------------|----------|----------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 0.006756 | 0.006756 | $2.96 \cdot 10^{-8}$ |

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

| | interference | | | square | | |
|------|------------------------|------------------------|-------------------------------|-----------|-----------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| cbW | $-1.257 \cdot 10^{-5}$ | $-1.257 \cdot 10^{-5}$ | $-7.959 \cdot 10^{-8}$ | 0.08031 | 0.08031 | $-4.98 \cdot 10^{-8}$ |
| cbWI | $4.071 \cdot 10^{-20}$ | $4.091 \cdot 10^{-20}$ | -0.00504 | 0.08031 | 0.08031 | $-4.98 \cdot 10^{-8}$ |
| sm | 0 | 0 | 0 | 0.0003634 | 0.0003634 | $-2.752 \cdot 10^{-8}$ |

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

| | interference | | | square | | |
|------|------------------------|------------------------|-------------------------------|----------|----------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| ctW | -0.8016 | -0.8016 | $5.863 \cdot 10^{-7}$ | 12.29 | 12.29 | $1.221 \cdot 10^{-6}$ |
| ctWI | $8.647 \cdot 10^{-17}$ | $1.073 \cdot 10^{-16}$ | -0.2411 | 14.94 | 14.94 | $1.205 \cdot 10^{-6}$ |
| ctZ | 2.224 | 2.224 | $5.846 \cdot 10^{-7}$ | 3.523 | 3.523 | $1.135 \cdot 10^{-6}$ |
| ctZI | $1.466 \cdot 10^{-16}$ | $5.979 \cdot 10^{-17}$ | 0.592 | 11.27 | 11.27 | $1.153 \cdot 10^{-6}$ |
| ctp | -0.2313 | -0.2313 | $-4.323 \cdot 10^{-8}$ | 0.007097 | 0.007097 | $-4.227 \cdot 10^{-8}$ |
| ctpI | $2.603 \cdot 10^{-18}$ | $4.768 \cdot 10^{-18}$ | -0.8314 | 0.008063 | 0.008063 | $-3.721 \cdot 10^{-8}$ |
| sm | 0 | 0 | 0 | 0.4237 | 0.4237 | $-4.72 \cdot 10^{-8}$ |

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

| | interference | | | square | | |
|----|--------------|------|-------------------------------|----------|----------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 0.003181 | 0.003181 | 0 |

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

| | interference | | | square | | |
|----|--------------|------|-------------------------------|----------|----------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 0.005713 | 0.005713 | 0 |

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

| | interference | | | square | | |
|--|--------------|------|-------------------------------|--------|------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |

| | | | | | | |
|------|-----------------------|-----------------------|------------------------|---------|---------|-----------------------|
| cbW | 0.001428 | 0.001428 | $7.005 \cdot 10^{-8}$ | 1.549 | 1.549 | $6.454 \cdot 10^{-8}$ |
| cbWI | $1.164 \cdot 10^{-6}$ | $1.164 \cdot 10^{-6}$ | $8.588 \cdot 10^{-8}$ | 1.549 | 1.549 | $6.454 \cdot 10^{-8}$ |
| cpQ3 | 0.3527 | 0.3527 | $2.835 \cdot 10^{-8}$ | 3.072 | 3.072 | 0 |
| cpQM | 0.2366 | 0.2366 | $4.227 \cdot 10^{-8}$ | 1.028 | 1.028 | 0 |
| cpb | -0.0307 | -0.0307 | $-3.257 \cdot 10^{-8}$ | 0.7548 | 0.7548 | 0 |
| sm | 0 | 0 | 0 | 0.01131 | 0.01131 | 0 |

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

| | interference | | | square | | |
|----|--------------|------|-------------------------------|---------|---------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 0.01182 | 0.01182 | 0 |

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

| | interference | | | square | | |
|------|-----------------------|----------------------|-------------------------------|------------------------|---------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| cpQM | 1.673 | 1.673 | 0 | 0.3369 | 0.3369 | 0 |
| cpt | -2.217 | -2.217 | 0 | 1.446 | 1.446 | 0 |
| ctW | $2.488 \cdot 10^{-8}$ | 0 | 1 | $1.577 \cdot 10^{-12}$ | 0 | 1 |
| ctWI | $1.97 \cdot 10^{-10}$ | 0 | 1 | $1.464 \cdot 10^{-12}$ | 0 | 1 |
| ctZ | -0.03868 | -0.03868 | $6.205 \cdot 10^{-7}$ | 3.705 | 3.705 | $1.08 \cdot 10^{-6}$ |
| ctZI | 0.001803 | 0.001803 | $5.547 \cdot 10^{-7}$ | 1.211 | 1.211 | $1.073 \cdot 10^{-6}$ |
| ctp | 0.00448 | 0.00448 | $-1.562 \cdot 10^{-7}$ | 0.06917 | 0.06917 | 0 |
| ctpI | $-7.3 \cdot 10^{-5}$ | $-7.3 \cdot 10^{-5}$ | $8.22 \cdot 10^{-8}$ | 0.06902 | 0.06902 | 0 |
| sm | 0 | 0 | 0 | 1.977 | 1.977 | 0 |

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

| | interference | | | square | | |
|----|--------------|------|---------------|----------|----------|-----------------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| sm | 0 | 0 | 0 | 0.003022 | 0.003022 | $3.309 \cdot 10^{-8}$ |

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

| | interference | | | square | | |
|-------|------------------------|------------------------|------------------------|-----------------------|-----------------------|-----------------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| cbW | $-5.144 \cdot 10^{-7}$ | $-5.144 \cdot 10^{-7}$ | $1.944 \cdot 10^{-8}$ | $1.015 \cdot 10^{-5}$ | $1.015 \cdot 10^{-5}$ | 0 |
| cbWI | $-4.635 \cdot 10^{-7}$ | $-4.635 \cdot 10^{-7}$ | $2.157 \cdot 10^{-8}$ | $1.015 \cdot 10^{-5}$ | $1.015 \cdot 10^{-5}$ | 0 |
| cpQ3 | $-1.179 \cdot 10^{-5}$ | $-1.179 \cdot 10^{-5}$ | 0 | $3.859 \cdot 10^{-6}$ | $3.859 \cdot 10^{-6}$ | 0 |
| cpQM | $5.285 \cdot 10^{-6}$ | $5.285 \cdot 10^{-6}$ | $3.784 \cdot 10^{-8}$ | $2.679 \cdot 10^{-7}$ | $2.679 \cdot 10^{-7}$ | $3.733 \cdot 10^{-8}$ |
| cpb | $-2.355 \cdot 10^{-8}$ | $-2.355 \cdot 10^{-8}$ | $-4.247 \cdot 10^{-8}$ | $3.498 \cdot 10^{-8}$ | $3.498 \cdot 10^{-8}$ | 0 |
| cptb | $-2.981 \cdot 10^{-7}$ | $-2.981 \cdot 10^{-7}$ | 0 | $8.424 \cdot 10^{-7}$ | $8.424 \cdot 10^{-7}$ | 0 |
| cptbI | $1.431 \cdot 10^{-7}$ | $1.431 \cdot 10^{-7}$ | 0 | $1.014 \cdot 10^{-6}$ | $1.014 \cdot 10^{-6}$ | 0 |
| ctW | $-6.135 \cdot 10^{-7}$ | $-6.135 \cdot 10^{-7}$ | 0 | $2.219 \cdot 10^{-6}$ | $2.219 \cdot 10^{-6}$ | 0 |
| ctWI | $3.517 \cdot 10^{-6}$ | $3.517 \cdot 10^{-6}$ | 0 | $4.305 \cdot 10^{-6}$ | $4.305 \cdot 10^{-6}$ | 0 |
| ctp | $9.844 \cdot 10^{-7}$ | $9.844 \cdot 10^{-7}$ | $1.016 \cdot 10^{-8}$ | $5.352 \cdot 10^{-8}$ | $5.352 \cdot 10^{-8}$ | 0 |
| ctpI | $-1.467 \cdot 10^{-6}$ | $-1.467 \cdot 10^{-6}$ | 0 | $4.028 \cdot 10^{-8}$ | $4.028 \cdot 10^{-8}$ | $2.483 \cdot 10^{-8}$ |
| sm | 0 | 0 | 0 | $8.664 \cdot 10^{-6}$ | $8.664 \cdot 10^{-6}$ | $2.308 \cdot 10^{-8}$ |

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

| | interference | | | square | | |
|----|--------------|------|---------------|-----------------------|-----------------------|-----------------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| sm | 0 | 0 | 0 | $8.981 \cdot 10^{-7}$ | $8.981 \cdot 10^{-7}$ | $4.454 \cdot 10^{-8}$ |

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

| | interference | | | square | | |
|----|--------------|------|-------------------------------|-----------------------|-----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | $2.301 \cdot 10^{-6}$ | $2.301 \cdot 10^{-6}$ | $4.347 \cdot 10^{-8}$ |

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

| | interference | | | square | | |
|-------|------------------------|------------------------|-------------------------------|-----------------------|-----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| cbW | $4.826 \cdot 10^{-7}$ | $4.826 \cdot 10^{-7}$ | 0 | $2.568 \cdot 10^{-8}$ | $2.568 \cdot 10^{-8}$ | 0 |
| cbWI | $3.833 \cdot 10^{-8}$ | $3.833 \cdot 10^{-8}$ | $2.609 \cdot 10^{-8}$ | $2.665 \cdot 10^{-8}$ | $2.665 \cdot 10^{-8}$ | 0 |
| cpQ3 | $5.267 \cdot 10^{-6}$ | $5.267 \cdot 10^{-6}$ | $-1.899 \cdot 10^{-8}$ | $2.129 \cdot 10^{-5}$ | $2.129 \cdot 10^{-5}$ | 0 |
| cpQM | $-3.988 \cdot 10^{-5}$ | $-3.988 \cdot 10^{-5}$ | $2.508 \cdot 10^{-8}$ | $1.136 \cdot 10^{-6}$ | $1.136 \cdot 10^{-6}$ | 0 |
| cpt | $-2.833 \cdot 10^{-7}$ | $-2.833 \cdot 10^{-7}$ | $-3.53 \cdot 10^{-7}$ | $2.159 \cdot 10^{-6}$ | $2.159 \cdot 10^{-6}$ | 0 |
| cptb | $-7.08 \cdot 10^{-8}$ | $-7.08 \cdot 10^{-8}$ | $5.65 \cdot 10^{-8}$ | $9.712 \cdot 10^{-9}$ | $9.712 \cdot 10^{-9}$ | 0 |
| cptbI | $-2.012 \cdot 10^{-9}$ | $-2.012 \cdot 10^{-9}$ | 0 | $1.16 \cdot 10^{-9}$ | $1.16 \cdot 10^{-9}$ | 0 |
| ctW | $-2.32 \cdot 10^{-7}$ | $-2.32 \cdot 10^{-7}$ | $6.034 \cdot 10^{-7}$ | $5.683 \cdot 10^{-5}$ | $5.683 \cdot 10^{-5}$ | $-1.76 \cdot 10^{-8}$ |
| ctWI | $1.33 \cdot 10^{-6}$ | $1.33 \cdot 10^{-6}$ | 0 | $5.85 \cdot 10^{-5}$ | $5.85 \cdot 10^{-5}$ | $-1.709 \cdot 10^{-8}$ |
| ctZ | $1.646 \cdot 10^{-8}$ | $1.646 \cdot 10^{-8}$ | $-3.037 \cdot 10^{-7}$ | $1.371 \cdot 10^{-7}$ | $1.371 \cdot 10^{-7}$ | $1.021 \cdot 10^{-6}$ |
| ctZI | $-7.823 \cdot 10^{-7}$ | $-7.823 \cdot 10^{-7}$ | $5.497 \cdot 10^{-7}$ | $1.655 \cdot 10^{-8}$ | $1.655 \cdot 10^{-8}$ | $1.027 \cdot 10^{-6}$ |
| ctp | $-8.034 \cdot 10^{-7}$ | $-8.034 \cdot 10^{-7}$ | $-1.245 \cdot 10^{-8}$ | $5.599 \cdot 10^{-7}$ | $5.599 \cdot 10^{-7}$ | 0 |
| ctpI | $-4.996 \cdot 10^{-7}$ | $-4.996 \cdot 10^{-7}$ | $2.002 \cdot 10^{-8}$ | $7.919 \cdot 10^{-7}$ | $7.919 \cdot 10^{-7}$ | 0 |
| sm | 0 | 0 | 0 | $3.056 \cdot 10^{-6}$ | $3.056 \cdot 10^{-6}$ | 0 |

1.37 $W^+W^- \rightarrow W^+W^-$

| | interference | | | square | | |
|----|--------------|------|-------------------------------|--------|-------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 175.7 | 175.7 | $5.692 \cdot 10^{-8}$ |

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

| | interference | | | square | | |
|----|--------------|------|-------------------------------|---------|---------|-------------------------------|
| sm | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| | 0 | 0 | 0 | 0.09113 | 0.09113 | $-7.681 \cdot 10^{-8}$ |

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

| | interference | | | square | | |
|----|--------------|------|-------------------------------|-----------------------|-----------------------|-------------------------------|
| sm | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| | 0 | 0 | 0 | $4.285 \cdot 10^{-6}$ | $4.285 \cdot 10^{-6}$ | $-1.167 \cdot 10^{-7}$ |

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

| | interference | | | square | | |
|----------|------------------------|------------------------|-------------------------------|---------|---------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| cQbqu1 | 0 | 0 | 0 | 0.25 | 0.25 | $3.08 \cdot 10^{-6}$ |
| cQbqu1I | 0 | 0 | 0 | 0.25 | 0.25 | $3.04 \cdot 10^{-6}$ |
| cQbqu1T | 0 | 0 | 0 | 31.89 | 2.739 | 0.9141 |
| cQbqu1TI | 0 | 0 | 0 | 6.337 | 2.282 | 0.6399 |
| cQbqu8 | 0 | 0 | 0 | 0.05556 | 0.05556 | $3.042 \cdot 10^{-6}$ |
| cQbqu8I | 0 | 0 | 0 | 0.05556 | 0.05556 | $3.042 \cdot 10^{-6}$ |
| cQbqu8T | 0 | 0 | 0 | 1.408 | 0.5071 | 0.6399 |
| cQbqu8TI | 0 | 0 | 0 | 7.086 | 0.6086 | 0.9141 |
| cQq13 | 0.1244 | 0.1244 | 0 | 0.588 | 0.588 | 0 |
| cQq83 | $9.411 \cdot 10^{-23}$ | $9.633 \cdot 10^{-20}$ | -1022 | 0.3123 | 0.3123 | 0 |
| cQtqd1 | 0 | 0 | 0 | 0.25 | 0.25 | $3.04 \cdot 10^{-6}$ |
| cQtqd1I | 0 | 0 | 0 | 0.25 | 0.25 | $3.08 \cdot 10^{-6}$ |
| cQtqd1T | 0 | 0 | 0 | 20.39 | 0.3639 | 0.9821 |

| | | | | | | |
|----------|------------------------|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| cQtqd1TI | 0 | 0 | 0 | 13.46 | 0.2351 | 0.9825 |
| cQtqd8 | 0 | 0 | 0 | 0.05556 | 0.05556 | $3.042 \cdot 10^{-6}$ |
| cQtqd8I | 0 | 0 | 0 | 0.05556 | 0.05556 | $3.042 \cdot 10^{-6}$ |
| cQtqd8T | 0 | 0 | 0 | 7.086 | 0.6086 | 0.9141 |
| cQtqd8TI | 0 | 0 | 0 | 2.991 | 0.05224 | 0.9825 |
| cbQqd1 | 0 | 0 | 0 | 0.25 | 0.25 | $3.12 \cdot 10^{-6}$ |
| cbQqd1I | 0 | 0 | 0 | 0.25 | 0.25 | $3.12 \cdot 10^{-6}$ |
| cbQqd8 | 0 | 0 | 0 | 0.05556 | 0.05556 | $2.916 \cdot 10^{-6}$ |
| cbQqd8I | 0 | 0 | 0 | 0.05556 | 0.05556 | $2.916 \cdot 10^{-6}$ |
| cbW | 0.0001775 | 0.0001775 | $5.635 \cdot 10^{-8}$ | 0.01269 | 0.01269 | 0 |
| cbWI | $1.881 \cdot 10^{-20}$ | $-1.213 \cdot 10^{-20}$ | 1.645 | 0.01269 | 0.01269 | 0 |
| cbtud1 | 0 | 0 | 0 | 0.147 | 0.147 | $6.122 \cdot 10^{-6}$ |
| cbtud1I | 0 | 0 | 0 | 0.3514 | 0.3514 | $6.09 \cdot 10^{-6}$ |
| cbtud8 | 0 | 0 | 0 | 0.1702 | 0.1702 | $5.934 \cdot 10^{-6}$ |
| cbtud8I | 0 | 0 | 0 | 0.002302 | 0.002302 | $5.909 \cdot 10^{-6}$ |
| cpQ3 | $5.621 \cdot 10^{-5}$ | $5.621 \cdot 10^{-5}$ | $3.558 \cdot 10^{-8}$ | $1.704 \cdot 10^{-6}$ | $1.704 \cdot 10^{-6}$ | 0 |
| cptb | $-2.193 \cdot 10^{-6}$ | $-2.193 \cdot 10^{-6}$ | $4.559 \cdot 10^{-8}$ | $7.321 \cdot 10^{-6}$ | $7.321 \cdot 10^{-6}$ | $2.732 \cdot 10^{-8}$ |
| cptbI | $1.714 \cdot 10^{-23}$ | $-2.38 \cdot 10^{-23}$ | 2.389 | $7.952 \cdot 10^{-7}$ | $7.952 \cdot 10^{-7}$ | $3.773 \cdot 10^{-8}$ |
| ctQqu1 | 0 | 0 | 0 | 0.25 | 0.25 | $3.08 \cdot 10^{-6}$ |
| ctQqu1I | 0 | 0 | 0 | 0.25 | 0.25 | $3.12 \cdot 10^{-6}$ |
| ctQqu8 | 0 | 0 | 0 | 0.05556 | 0.05556 | $2.934 \cdot 10^{-6}$ |
| ctQqu8I | 0 | 0 | 0 | 0.05556 | 0.05556 | $2.916 \cdot 10^{-6}$ |
| ctW | 0.009702 | 0.009702 | $2.061 \cdot 10^{-8}$ | 0.01305 | 0.01305 | 0 |
| ctWI | $4.504 \cdot 10^{-20}$ | $2.367 \cdot 10^{-20}$ | 0.4745 | 0.006879 | 0.006879 | $1.454 \cdot 10^{-8}$ |
| sm | 0 | 0 | 0 | 0.03428 | 0.03428 | $2.917 \cdot 10^{-8}$ |

1.41 $\gamma W^+ \rightarrow z W^+$

interference

square

| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
|----|------|------|---------------|-------|-------|---------------|
| sm | 0 | 0 | 0 | 1.743 | 1.743 | 0 |

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

| | mod1 | mod2 | interference 1 - mod2/mod1 | mod1 | mod2 | square 1 - mod2/mod1 |
|----|------|------|-------------------------------|----------|----------|-------------------------|
| sm | 0 | 0 | 0 | 0.006635 | 0.006635 | $-1.055 \cdot 10^{-7}$ |

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

| | mod1 | mod2 | interference 1 - mod2/mod1 | mod1 | mod2 | square 1 - mod2/mod1 |
|----|------|------|-------------------------------|----------------------|----------------------|-------------------------|
| sm | 0 | 0 | 0 | $1.67 \cdot 10^{-5}$ | $1.67 \cdot 10^{-5}$ | 0 |

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

| | mod1 | mod2 | interference 1 - mod2/mod1 | mod1 | mod2 | square 1 - mod2/mod1 |
|----|------|------|-------------------------------|-----------|-----------|-------------------------|
| sm | 0 | 0 | 0 | 0.0002767 | 0.0002767 | 0 |

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

| | mod1 | mod2 | interference 1 - mod2/mod1 | mod1 | mod2 | square 1 - mod2/mod1 |
|------|------------------------|------------------------|-------------------------------|-----------|-----------|-------------------------|
| cbW | $5.607 \cdot 10^{-6}$ | $5.607 \cdot 10^{-6}$ | $-8.917 \cdot 10^{-8}$ | 0.0006187 | 0.0006187 | $-8.082 \cdot 10^{-8}$ |
| cbWI | $1.842 \cdot 10^{-22}$ | $2.577 \cdot 10^{-22}$ | -0.3987 | 0.0006186 | 0.0006186 | $-9.699 \cdot 10^{-8}$ |
| sm | 0 | 0 | 0 | 0.0006201 | 0.0006201 | $-6.45 \cdot 10^{-8}$ |

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

| | interference | | | square | | |
|--------|------------------------|------------------------|------------------------|-----------------------|-----------------------|------------------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| cQe2 | -0.008526 | -0.008526 | $-4.691 \cdot 10^{-8}$ | 0.1954 | 0.1954 | 0 |
| cQ132 | 0.05571 | 0.05571 | $1.795 \cdot 10^{-8}$ | 0.5868 | 0.5868 | 0 |
| cQ1M2 | 0.02151 | 0.02151 | 0 | 0.1133 | 0.1133 | 0 |
| cbW | $5.129 \cdot 10^{-5}$ | $5.129 \cdot 10^{-5}$ | $1.95 \cdot 10^{-8}$ | 0.001827 | 0.001827 | $5.474 \cdot 10^{-8}$ |
| cbWI | $4.554 \cdot 10^{-16}$ | $4.554 \cdot 10^{-16}$ | $-2.558 \cdot 10^{-5}$ | 0.001826 | 0.001826 | $5.475 \cdot 10^{-8}$ |
| cbLS2 | 0 | 0 | 0 | 0.1667 | 0.1667 | 0 |
| cbLSI2 | 0 | 0 | 0 | 0.1667 | 0.1667 | 0 |
| cpQ3 | $9.791 \cdot 10^{-5}$ | $9.791 \cdot 10^{-5}$ | $-5.107 \cdot 10^{-8}$ | $1.346 \cdot 10^{-5}$ | $1.346 \cdot 10^{-5}$ | $-7.427 \cdot 10^{-8}$ |
| cpQM | 0.0001408 | 0.0001408 | $7.101 \cdot 10^{-8}$ | $3.67 \cdot 10^{-6}$ | $3.67 \cdot 10^{-6}$ | $8.174 \cdot 10^{-8}$ |
| cpb | $-4.205 \cdot 10^{-5}$ | $-4.205 \cdot 10^{-5}$ | $-1.189 \cdot 10^{-7}$ | $3.006 \cdot 10^{-6}$ | $3.006 \cdot 10^{-6}$ | $-6.652 \cdot 10^{-8}$ |
| sm | 0 | 0 | 0 | 0.001283 | 0.001283 | 0 |

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

| | interference | | | square | | |
|-------|-------------------------|------------------------|------------------------|-----------------------|-----------------------|-----------------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| cQ1M1 | -0.07123 | -0.07123 | $1.404 \cdot 10^{-8}$ | 0.305 | 0.305 | 0 |
| cbW | $4.374 \cdot 10^{-5}$ | $4.374 \cdot 10^{-5}$ | $2.286 \cdot 10^{-8}$ | 0.002075 | 0.002075 | $4.819 \cdot 10^{-8}$ |
| cbWI | $-1.455 \cdot 10^{-19}$ | $-4.99 \cdot 10^{-20}$ | 0.657 | 0.002075 | 0.002075 | 0 |
| cpQ3 | 0.001194 | 0.001194 | 0 | $8.578 \cdot 10^{-5}$ | $8.578 \cdot 10^{-5}$ | 0 |
| cpQM | 0.0002343 | 0.0002343 | $4.268 \cdot 10^{-8}$ | $8.413 \cdot 10^{-6}$ | $8.413 \cdot 10^{-6}$ | 0 |
| cpb | $-2.504 \cdot 10^{-6}$ | $-2.504 \cdot 10^{-6}$ | $-7.986 \cdot 10^{-8}$ | $4.9 \cdot 10^{-7}$ | $4.9 \cdot 10^{-7}$ | 0 |
| sm | 0 | 0 | 0 | 0.003365 | 0.003365 | $2.972 \cdot 10^{-8}$ |

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

| | interference | | | square | | |
|------|------------------------|------------------------|-------------------------------|-----------------------|-----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| cQQ1 | -0.1819 | -0.1819 | 0 | 0.4427 | 0.4427 | 0 |
| cQQ8 | -5.179 | -5.179 | $1.931 \cdot 10^{-8}$ | 0.2511 | 0.2511 | 0 |
| cQb1 | 0.2704 | 0.2704 | $-7.397 \cdot 10^{-8}$ | 2.013 | 2.013 | 0 |
| cQb8 | -37.15 | -37.15 | 0 | 0.445 | 0.445 | 0 |
| cbW | 0.001342 | 0.001342 | 0 | 0.0605 | 0.0605 | 0 |
| cbWI | $1.931 \cdot 10^{-18}$ | $6.707 \cdot 10^{-19}$ | 0.6526 | 0.0605 | 0.0605 | $1.653 \cdot 10^{-8}$ |
| cpQ3 | -0.1036 | -0.1036 | $-9.648 \cdot 10^{-8}$ | 0.08428 | 0.08428 | $1.186 \cdot 10^{-8}$ |
| cpQM | -0.008997 | -0.008997 | $1.112 \cdot 10^{-8}$ | $9.788 \cdot 10^{-5}$ | $9.788 \cdot 10^{-5}$ | $1.022 \cdot 10^{-8}$ |
| cpb | 0.05624 | 0.05624 | $-1.778 \cdot 10^{-8}$ | 0.05464 | 0.05464 | $1.83 \cdot 10^{-8}$ |
| sm | 0 | 0 | 0 | 143.6 | 143.6 | 0 |

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

| | interference | | | square | | |
|---------|------------------------|----------|-------------------------------|---------|---------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| cQd1 | -0.00291 | -0.00291 | $-6.872 \cdot 10^{-8}$ | 0.2001 | 0.2001 | 0 |
| cQd8 | 0.1994 | 0.1994 | 0 | 0.06729 | 0.06729 | 0 |
| cQq11 | 0.08461 | 0.08461 | $1.182 \cdot 10^{-8}$ | 0.3864 | 0.3864 | 0 |
| cQq13 | 0.08461 | 0.08461 | $1.182 \cdot 10^{-8}$ | 0.3864 | 0.3864 | 0 |
| cQq81 | 0.2012 | 0.2012 | 0 | 0.06789 | 0.06789 | 0 |
| cQq83 | 0.2012 | 0.2012 | 0 | 0.06789 | 0.06789 | 0 |
| cbQqd1 | -0.01371 | 0 | 1 | 0.5 | 0.5 | $3.1 \cdot 10^{-6}$ |
| cbQqd1I | $3.58 \cdot 10^{-19}$ | 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 | $2.146 \cdot 10^{-19}$ | 0 | 1 | 0.1111 | 0.1111 | $2.97 \cdot 10^{-6}$ |

| | | | | | | |
|------|------------------------|------------------------|------------------------|-----------------------|-----------------------|-----------------------|
| cbW | 0.0001396 | 0.0001396 | 0 | 0.006081 | 0.006081 | $1.644 \cdot 10^{-8}$ |
| cbWI | $9.755 \cdot 10^{-18}$ | $9.756 \cdot 10^{-18}$ | $-2.63 \cdot 10^{-5}$ | 0.00608 | 0.00608 | $1.645 \cdot 10^{-8}$ |
| cpQ3 | 0.0006385 | 0.0006385 | $3.132 \cdot 10^{-8}$ | $4.261 \cdot 10^{-5}$ | $4.261 \cdot 10^{-5}$ | $2.347 \cdot 10^{-8}$ |
| cpQM | 0.0006016 | 0.0006016 | $1.662 \cdot 10^{-8}$ | $1.961 \cdot 10^{-5}$ | $1.961 \cdot 10^{-5}$ | $5.101 \cdot 10^{-8}$ |
| cpb | $-3.196 \cdot 10^{-5}$ | $-3.196 \cdot 10^{-5}$ | $-6.257 \cdot 10^{-8}$ | $1.055 \cdot 10^{-5}$ | $1.055 \cdot 10^{-5}$ | $9.482 \cdot 10^{-8}$ |
| sm | 0 | 0 | 0 | 0.5087 | 0.5087 | 0 |

1.50 $b\bar{b} \rightarrow t\bar{t}$

| | interference | | | square | | |
|---------|-------------------------|-------------------------|-------------------------------|-----------------------|-----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| cQQ1 | -0.7487 | -0.7487 | $1.336 \cdot 10^{-8}$ | 0.6575 | 0.6575 | 0 |
| cQQ8 | 0.05685 | 0.05685 | $-1.759 \cdot 10^{-8}$ | 0.0461 | 0.0461 | 0 |
| cQb1 | -0.005979 | -0.005979 | $-5.017 \cdot 10^{-8}$ | 0.2962 | 0.2962 | 0 |
| cQb8 | 0.2332 | 0.2332 | 0 | 0.07219 | 0.07219 | 0 |
| cQt1 | -0.1905 | -0.1905 | $5.25 \cdot 10^{-8}$ | 0.2962 | 0.2962 | 0 |
| cQt8 | -0.03459 | -0.03459 | 0 | 0.07219 | 0.07219 | 0 |
| cQtQb1 | -0.00868 | -0.00868 | 0 | 0.648 | 0.648 | 0 |
| cQtQb1I | $-8.67 \cdot 10^{-19}$ | $1.179 \cdot 10^{-21}$ | 1.001 | 0.8126 | 0.8126 | 0 |
| cQtQb8 | 0.004542 | 0.004542 | 0 | 0.1006 | 0.1006 | 0 |
| cQtQb8I | $-1.202 \cdot 10^{-18}$ | $-5.181 \cdot 10^{-19}$ | 0.5689 | 0.09664 | 0.09664 | 0 |
| cbW | 0.01159 | 0.01159 | 0 | 0.4547 | 0.4547 | 0 |
| cbWI | $-2.623 \cdot 10^{-18}$ | $-3.662 \cdot 10^{-18}$ | -0.3961 | 0.4548 | 0.4548 | 0 |
| cpQ3 | 0.01367 | 0.01367 | 0 | 0.004674 | 0.004674 | 0 |
| cpQM | -0.001237 | -0.001237 | $-8.083 \cdot 10^{-8}$ | $1.628 \cdot 10^{-6}$ | $1.628 \cdot 10^{-6}$ | $-1.228 \cdot 10^{-7}$ |
| cpb | $-6.17 \cdot 10^{-6}$ | $-6.17 \cdot 10^{-6}$ | $-3.242 \cdot 10^{-7}$ | $1.185 \cdot 10^{-5}$ | $1.185 \cdot 10^{-5}$ | 0 |
| cpt | -0.001318 | -0.001318 | 0 | $1.585 \cdot 10^{-5}$ | $1.585 \cdot 10^{-5}$ | 0 |
| cptb | 0.0001943 | 0.0001943 | 0 | 0.0007713 | 0.0007713 | $1.296 \cdot 10^{-8}$ |
| cptbI | $2.433 \cdot 10^{-20}$ | $1.969 \cdot 10^{-19}$ | -7.095 | 0.001254 | 0.001254 | $7.977 \cdot 10^{-8}$ |

| | | | | | | |
|------|-------------------------|-------------------------|------------------------|-----------------------|-----------------------|-----------------------|
| ctG | -0.01416 | -0.01416 | $1.412 \cdot 10^{-7}$ | 0.02918 | 0.02918 | 0 |
| ctGI | $-3.012 \cdot 10^{-20}$ | $-1.752 \cdot 10^{-17}$ | -580.8 | 0.01973 | 0.01973 | 0 |
| ctW | 0.004937 | 0.004937 | $-9.722 \cdot 10^{-7}$ | 0.06733 | 0.06733 | $1.04 \cdot 10^{-7}$ |
| ctWI | $-1.244 \cdot 10^{-17}$ | $1.98 \cdot 10^{-17}$ | 2.592 | 0.1681 | 0.1681 | $5.95 \cdot 10^{-8}$ |
| ctZ | 0.007171 | 0.007171 | $5.439 \cdot 10^{-7}$ | 0.005187 | 0.005187 | $1.06 \cdot 10^{-6}$ |
| ctZI | $9.443 \cdot 10^{-19}$ | $2.175 \cdot 10^{-18}$ | -1.304 | 0.00231 | 0.00231 | $1.082 \cdot 10^{-6}$ |
| ctb1 | -0.01225 | -0.01225 | $-8.16 \cdot 10^{-8}$ | 0.2075 | 0.2075 | 0 |
| ctb8 | 0.1411 | 0.1411 | 0 | 0.04105 | 0.04105 | 0 |
| ctp | $-1.303 \cdot 10^{-5}$ | $-1.303 \cdot 10^{-5}$ | 0 | $6.089 \cdot 10^{-7}$ | $6.089 \cdot 10^{-7}$ | 0 |
| ctpI | $6.854 \cdot 10^{-23}$ | $-1.931 \cdot 10^{-21}$ | 29.18 | $6.906 \cdot 10^{-7}$ | $6.906 \cdot 10^{-7}$ | 0 |
| sm | 0 | 0 | 0 | 0.4239 | 0.4239 | 0 |

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

| | interference | | | square | | |
|----------|-------------------------|----------|-------------------------------|---------|---------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| cQbqu1 | -0.01371 | 0 | 1 | 0.5 | 0.5 | $3.06 \cdot 10^{-6}$ |
| cQbqu1I | $2.409 \cdot 10^{-20}$ | 0 | 1 | 0.5 | 0.5 | $3.06 \cdot 10^{-6}$ |
| cQbqu1T | 0.1637 | 0 | 1 | 71.25 | 7.751 | 0.8912 |
| cQbqu1TI | $-3.08 \cdot 10^{-18}$ | 0 | 1 | 11.25 | 5.301 | 0.5289 |
| cQbqu8 | $-1.883 \cdot 10^{-19}$ | 0 | 1 | 0.1111 | 0.1111 | $3.06 \cdot 10^{-6}$ |
| cQbqu8I | $-6.596 \cdot 10^{-21}$ | 0 | 1 | 0.1111 | 0.1111 | $3.06 \cdot 10^{-6}$ |
| cQbqu8T | $-1.055 \cdot 10^{-22}$ | 0 | 1 | 2.501 | 1.178 | 0.5289 |
| cQbqu8TI | $-2.089 \cdot 10^{-18}$ | 0 | 1 | 15.83 | 1.722 | 0.8912 |
| cQq11 | -0.04183 | -0.04183 | $2.39 \cdot 10^{-8}$ | 0.2046 | 0.2046 | 0 |
| cQq13 | 0.04183 | 0.04183 | $2.39 \cdot 10^{-8}$ | 0.2046 | 0.2046 | 0 |
| cQq81 | 0.04661 | 0.04661 | 0 | 0.01573 | 0.01573 | 0 |
| cQq83 | -0.04661 | -0.04661 | 0 | 0.01573 | 0.01573 | 0 |
| cQu1 | 0.01568 | 0.01568 | $-6.38 \cdot 10^{-8}$ | 0.5388 | 0.5388 | 0 |

| | | | | | | |
|------|------------------------|------------------------|------------------------|-----------------------|-----------------------|------------------------|
| cQu8 | 0.1975 | 0.1975 | 0 | 0.06665 | 0.06665 | 0 |
| cbW | 0.0001069 | 0.0001069 | $9.359 \cdot 10^{-8}$ | 0.006388 | 0.006388 | $1.565 \cdot 10^{-8}$ |
| cbWI | $2.751 \cdot 10^{-18}$ | $2.851 \cdot 10^{-18}$ | -0.03653 | 0.006387 | 0.006387 | $1.566 \cdot 10^{-8}$ |
| cpQ3 | 0.0001498 | 0.0001498 | $-6.675 \cdot 10^{-8}$ | $2.689 \cdot 10^{-5}$ | $2.689 \cdot 10^{-5}$ | $-1.116 \cdot 10^{-7}$ |
| cpQM | 0.0002643 | 0.0002643 | $3.784 \cdot 10^{-8}$ | $8.866 \cdot 10^{-6}$ | $8.866 \cdot 10^{-6}$ | $1.128 \cdot 10^{-8}$ |
| cpb | $3.301 \cdot 10^{-5}$ | $3.301 \cdot 10^{-5}$ | 0 | $1.843 \cdot 10^{-5}$ | $1.843 \cdot 10^{-5}$ | $5.425 \cdot 10^{-8}$ |
| sm | 0 | 0 | 0 | 0.8203 | 0.8203 | 0 |

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

| | interference | | | square | | |
|--------|------------------------|------------------------|-------------------------------|-----------------------|-----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| cQl31 | 0.01028 | 0.01028 | 0 | 0.04858 | 0.04858 | 0 |
| cbW | $3.064 \cdot 10^{-5}$ | $3.064 \cdot 10^{-5}$ | $3.264 \cdot 10^{-8}$ | 0.002874 | 0.002874 | $3.48 \cdot 10^{-8}$ |
| cbWI | $-1.35 \cdot 10^{-20}$ | $-5.41 \cdot 10^{-20}$ | -3.008 | 0.002874 | 0.002874 | $3.48 \cdot 10^{-8}$ |
| cbLS1 | 0 | 0 | 0 | 0.08333 | 0.08333 | 0 |
| cbLSI1 | 0 | 0 | 0 | 0.08333 | 0.08333 | 0 |
| cpQ3 | 0.0007496 | 0.0007496 | $2.668 \cdot 10^{-8}$ | $2.272 \cdot 10^{-5}$ | $2.272 \cdot 10^{-5}$ | $4.401 \cdot 10^{-8}$ |
| cptb | $-7.312 \cdot 10^{-7}$ | $-7.312 \cdot 10^{-7}$ | $4.103 \cdot 10^{-8}$ | $9.885 \cdot 10^{-6}$ | $9.885 \cdot 10^{-6}$ | $3.035 \cdot 10^{-8}$ |
| cptbI | $3.936 \cdot 10^{-22}$ | $-1.66 \cdot 10^{-22}$ | 1.422 | $1.358 \cdot 10^{-7}$ | $1.358 \cdot 10^{-7}$ | $7.363 \cdot 10^{-8}$ |
| ctW | 0.0008439 | 0.0008439 | $2.37 \cdot 10^{-8}$ | 0.002244 | 0.002244 | 0 |
| ctWI | $3.932 \cdot 10^{-19}$ | $3.292 \cdot 10^{-19}$ | 0.1629 | 0.001791 | 0.001791 | $5.585 \cdot 10^{-8}$ |
| ctlS1 | 0 | 0 | 0 | 0.08333 | 0.08333 | 0 |
| ctlSI1 | 0 | 0 | 0 | 0.08333 | 0.08333 | 0 |
| ctlT1 | 0 | 0 | 0 | 0.6623 | 0.6623 | 0 |
| ctlTI1 | 0 | 0 | 0 | 0.9225 | 0.9225 | 0 |
| sm | 0 | 0 | 0 | 0.01247 | 0.01247 | 0 |

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

| | interference | | | square | | |
|----|--------------|------|-------------------------------|----------|----------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 0.006227 | 0.006227 | $-1.606 \cdot 10^{-8}$ |

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

| | interference | | | square | | |
|----|--------------|------|-------------------------------|-----------|-----------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 0.0003694 | 0.0003694 | $5.415 \cdot 10^{-8}$ |

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

| | interference | | | square | | |
|----|--------------|------|-------------------------------|--------|-------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 0.788 | 0.788 | 0 |

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

| | interference | | | square | | |
|----|--------------|------|-------------------------------|----------|----------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 0.002245 | 0.002245 | $4.455 \cdot 10^{-8}$ |

1.57 $d\bar{d} \rightarrow s\bar{s}$

| | interference | | | square | | |
|--|--------------|------|-------------------------------|--------|------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |

| | | | | | | |
|----|---|---|---|--------|--------|---|
| sm | 0 | 0 | 0 | 0.5283 | 0.5283 | 0 |
|----|---|---|---|--------|--------|---|

1.58 $e^+\nu_\mu \rightarrow e^+\nu_\mu$

| | | | | | | |
|----|------|------|-------------------------------|---------|---------|-------------------------------|
| | | | interference | | | square |
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 0.07807 | 0.07807 | $-2.562 \cdot 10^{-8}$ |

1.59 $e^+\nu_e \rightarrow \mu^+\nu_\mu$

| | | | | | | |
|----|------|------|-------------------------------|---------|---------|-------------------------------|
| | | | interference | | | square |
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 0.01355 | 0.01355 | $7.38 \cdot 10^{-8}$ |

1.60 $e^+\nu_e \rightarrow e^+\nu_e$

| | | | | | | |
|----|------|------|-------------------------------|----------|----------|-------------------------------|
| | | | interference | | | square |
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 0.005253 | 0.005253 | $-7.615 \cdot 10^{-8}$ |

1.61 $e^+\tau^- \rightarrow e^+\tau^-$

| | | | | | | |
|----|------|------|-------------------------------|--------|--------|-------------------------------|
| | | | interference | | | square |
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 0.5331 | 0.5331 | $-7.503 \cdot 10^{-8}$ |

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

| | interference | | | square | | |
|----|--------------|------|-------------------------------|----------|----------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 0.006941 | 0.006941 | $-1.009 \cdot 10^{-7}$ |

1.63 $e^+e^- \rightarrow e^+e^-$

| | interference | | | square | | |
|----|--------------|------|-------------------------------|--------|--------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 0.2858 | 0.2858 | $-6.998 \cdot 10^{-8}$ |

1.64 $gg \rightarrow gg$

| | interference | | | square | | |
|----|--------------|------|-------------------------------|--------|-------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 59.62 | 59.62 | 0 |

1.65 $gg \rightarrow ggg$

| | interference | | | square | | |
|----|--------------|------|-------------------------------|----------|----------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 0.006263 | 0.006263 | 0 |

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

| | interference | | | square | | |
|------|-------------------------|-------------------------|-------------------------------|---------|---------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| ctG | 0.6921 | 0.6921 | 0 | 0.1219 | 0.1219 | 0 |
| ctGI | $-4.807 \cdot 10^{-17}$ | $-4.295 \cdot 10^{-17}$ | 0.1066 | 0.09984 | 0.09984 | 0 |

| | | | | | | |
|----|---|---|---|--------|--------|---|
| sm | 0 | 0 | 0 | 0.7636 | 0.7636 | 0 |
|----|---|---|---|--------|--------|---|

1.67 $gg \rightarrow u\bar{u}$

| | interference | | | square | | |
|----|--------------|------|-------------------------------|--------|--------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 0.6311 | 0.6311 | 0 |

1.68 $s\bar{s} \rightarrow \nu_\tau \bar{\nu}_\tau$

| | interference | | | square | | |
|----|--------------|------|-------------------------------|-----------|-----------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 0.0001513 | 0.0001513 | $-1.322 \cdot 10^{-7}$ |

1.69 $s\bar{s} \rightarrow s\bar{s}$

| | interference | | | square | | |
|----|--------------|------|-------------------------------|--------|-------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 2.853 | 2.853 | 0 |

1.70 $t\bar{t} \rightarrow \nu_\mu \bar{\nu}_\mu$

| | interference | | | square | | |
|-------|------------------------|------------------------|-------------------------------|-----------------------|-----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| cQ132 | -0.0008597 | -0.0008597 | $-1.279 \cdot 10^{-7}$ | 0.008825 | 0.008825 | 0 |
| cQ1M2 | 0.02793 | 0.02793 | $3.58 \cdot 10^{-8}$ | 0.1512 | 0.1512 | 0 |
| cpQM | $3.814 \cdot 10^{-6}$ | $3.814 \cdot 10^{-6}$ | $-1.311 \cdot 10^{-7}$ | $1.459 \cdot 10^{-7}$ | $1.459 \cdot 10^{-7}$ | 0 |
| cpt | $-6.266 \cdot 10^{-6}$ | $-6.266 \cdot 10^{-6}$ | $1.436 \cdot 10^{-7}$ | $9.222 \cdot 10^{-7}$ | $9.222 \cdot 10^{-7}$ | 0 |

| | | | | | | |
|------|-------------------------|------------------------|------------------------|------------------------|-----------|-----------------------|
| ctW | $6.427 \cdot 10^{-10}$ | 0 | 1 | $5.094 \cdot 10^{-16}$ | 0 | 1 |
| ctWI | $-5.758 \cdot 10^{-25}$ | 0 | 1 | $1.004 \cdot 10^{-15}$ | 0 | 1 |
| ctZ | 0.002105 | 0.002105 | $5.7 \cdot 10^{-7}$ | 0.002192 | 0.002192 | $1.095 \cdot 10^{-6}$ |
| ctZI | $1.605 \cdot 10^{-19}$ | $1.609 \cdot 10^{-19}$ | -0.002235 | 0.0005121 | 0.0005121 | $1.074 \cdot 10^{-6}$ |
| ctl2 | -0.001767 | -0.001767 | $-1.697 \cdot 10^{-7}$ | 0.04229 | 0.04229 | 0 |
| sm | 0 | 0 | 0 | 0.001368 | 0.001368 | $7.311 \cdot 10^{-8}$ |

1.71 $t\bar{t} \rightarrow \tau^+ \tau^-$

| | interference | | | square | | |
|--------|-------------------------|------------------------|------------------------|-----------------------|-----------------------|------------------------|
| | mod1 | mod2 | $1 - \text{mod2/mod1}$ | mod1 | mod2 | $1 - \text{mod2/mod1}$ |
| cQe3 | -0.006019 | -0.006019 | $-4.984 \cdot 10^{-8}$ | 0.1031 | 0.1031 | 0 |
| cQlM3 | -0.01691 | -0.01691 | 0 | 0.06914 | 0.06914 | 0 |
| cpQM | $-5.877 \cdot 10^{-5}$ | $-5.877 \cdot 10^{-5}$ | $1.191 \cdot 10^{-7}$ | $3.105 \cdot 10^{-6}$ | $3.105 \cdot 10^{-6}$ | 0 |
| cpt | $-2.934 \cdot 10^{-6}$ | $-2.934 \cdot 10^{-6}$ | $1.84 \cdot 10^{-6}$ | $3.285 \cdot 10^{-6}$ | $3.285 \cdot 10^{-6}$ | $3.045 \cdot 10^{-8}$ |
| ctW | 0.004344 | 0.004344 | $4.604 \cdot 10^{-7}$ | 0.01012 | 0.01012 | $1.086 \cdot 10^{-6}$ |
| ctWI | $1.224 \cdot 10^{-18}$ | $1.565 \cdot 10^{-18}$ | -0.2787 | 0.006715 | 0.006715 | $1.132 \cdot 10^{-6}$ |
| ctZ | -0.005304 | -0.005304 | $4.902 \cdot 10^{-7}$ | 0.01616 | 0.01616 | $1.052 \cdot 10^{-6}$ |
| ctZI | $5.383 \cdot 10^{-18}$ | $4.69 \cdot 10^{-18}$ | 0.1288 | 0.01297 | 0.01297 | $1.079 \cdot 10^{-6}$ |
| cte3 | -0.01226 | -0.01226 | 0 | 0.06914 | 0.06914 | 0 |
| ctl3 | -0.02509 | -0.02509 | $-3.986 \cdot 10^{-8}$ | 0.2678 | 0.2678 | 0 |
| ctlS3 | 0.003359 | 0.003359 | 0 | 0.1668 | 0.1668 | 0 |
| ctlSI3 | $1.79 \cdot 10^{-20}$ | $4.788 \cdot 10^{-20}$ | -1.674 | 0.1668 | 0.1668 | 0 |
| ctlT3 | 0.00146 | 0.00146 | 0 | 0.176 | 0.176 | 0 |
| ctlTI3 | $1.023 \cdot 10^{-18}$ | $3.636 \cdot 10^{-21}$ | 0.9964 | 0.176 | 0.176 | 0 |
| ctp | $-1.013 \cdot 10^{-6}$ | $-1.013 \cdot 10^{-6}$ | 0 | $3.101 \cdot 10^{-8}$ | $3.101 \cdot 10^{-8}$ | 0 |
| ctpI | $-1.206 \cdot 10^{-24}$ | $3.527 \cdot 10^{-24}$ | 3.924 | $3.49 \cdot 10^{-8}$ | $3.49 \cdot 10^{-8}$ | 0 |
| sm | 0 | 0 | 0 | 0.0008833 | 0.0008833 | $-9.057 \cdot 10^{-8}$ |

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

| | interference | | | square | | |
|---------|-------------------------|-------------------------|------------------------|-----------------------|-----------------------|------------------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| cQq11 | 0.008964 | 0.008964 | $1.116 \cdot 10^{-8}$ | 0.03725 | 0.03725 | 0 |
| cQq13 | 0.008964 | 0.008964 | $1.116 \cdot 10^{-8}$ | 0.03725 | 0.03725 | 0 |
| cQq81 | 0.221 | 0.221 | 0 | 0.06801 | 0.06801 | 0 |
| cQq83 | 0.221 | 0.221 | 0 | 0.06801 | 0.06801 | 0 |
| cQu1 | 0.009732 | 0.009732 | $-5.138 \cdot 10^{-8}$ | 0.2269 | 0.2269 | 0 |
| cQu8 | 0.4803 | 0.4803 | 0 | 0.1555 | 0.1555 | 0 |
| cpQM | $8.284 \cdot 10^{-6}$ | $8.284 \cdot 10^{-6}$ | $-9.657 \cdot 10^{-7}$ | $6.019 \cdot 10^{-6}$ | $6.019 \cdot 10^{-6}$ | $-8.308 \cdot 10^{-8}$ |
| cpt | -0.0001383 | -0.0001383 | 0 | $2.373 \cdot 10^{-5}$ | $2.373 \cdot 10^{-5}$ | $4.214 \cdot 10^{-8}$ |
| ctG | 0.1977 | 0.1977 | 0 | 0.03051 | 0.03051 | 0 |
| ctGI | $-7.353 \cdot 10^{-25}$ | $3.676 \cdot 10^{-24}$ | 6 | 0.02106 | 0.02106 | 0 |
| ctQqu1 | -0.4725 | 0 | 1 | 0.5004 | 0.5004 | $3.097 \cdot 10^{-6}$ |
| ctQqu1I | $1.255 \cdot 10^{-17}$ | 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 | $-1.905 \cdot 10^{-18}$ | 0 | 1 | 0.1112 | 0.1112 | $2.878 \cdot 10^{-6}$ |
| ctW | 0.01091 | 0.01091 | $3.667 \cdot 10^{-7}$ | 0.02656 | 0.02656 | $9.412 \cdot 10^{-7}$ |
| ctWI | $1.156 \cdot 10^{-10}$ | $1.156 \cdot 10^{-10}$ | $6.922 \cdot 10^{-7}$ | 0.01219 | 0.01219 | $9.845 \cdot 10^{-7}$ |
| ctZ | -0.003624 | -0.003624 | $4.968 \cdot 10^{-7}$ | 0.0119 | 0.0119 | $1.008 \cdot 10^{-6}$ |
| ctZI | $-1.012 \cdot 10^{-10}$ | $-1.012 \cdot 10^{-10}$ | $5.931 \cdot 10^{-7}$ | 0.008299 | 0.008299 | $1.06 \cdot 10^{-6}$ |
| ctq1 | 0.01282 | 0.01282 | $-7.803 \cdot 10^{-8}$ | 0.2269 | 0.2269 | 0 |
| ctq8 | 0.4758 | 0.4758 | 0 | 0.154 | 0.154 | 0 |
| ctu1 | 0.005082 | 0.005082 | $-3.936 \cdot 10^{-8}$ | 0.03725 | 0.03725 | 0 |
| ctu8 | 0.04401 | 0.04401 | 0 | 0.008277 | 0.008277 | 0 |
| sm | 0 | 0 | 0 | 0.7727 | 0.7727 | 0 |

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

| | interference | | | square | | |
|----------|-------------------------|-------------------------|------------------------|-----------------------|-----------------------|------------------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| cQd1 | -0.009976 | -0.009976 | $-6.014 \cdot 10^{-8}$ | 0.592 | 0.592 | 0 |
| cQd8 | 0.04156 | 0.04156 | 0 | 0.007452 | 0.007452 | 0 |
| cQq11 | -0.1444 | -0.1444 | $6.927 \cdot 10^{-8}$ | 0.7104 | 0.7104 | 0 |
| cQq13 | 0.1444 | 0.1444 | $6.927 \cdot 10^{-8}$ | 0.7104 | 0.7104 | 0 |
| cQq81 | 0.06406 | 0.06406 | 0 | 0.01504 | 0.01504 | 0 |
| cQq83 | -0.06406 | -0.06406 | 0 | 0.01504 | 0.01504 | 0 |
| cQtqd1 | -0.4725 | 0 | 1 | 0.5004 | 0.5004 | $3.057 \cdot 10^{-6}$ |
| cQtqd1I | $3.701 \cdot 10^{-17}$ | 0 | 1 | 0.5004 | 0.5004 | $3.037 \cdot 10^{-6}$ |
| cQtqd1T | 2.424 | 0 | 1 | 14.33 | 3.918 | 0.7266 |
| cQtqd1TI | $-1.87 \cdot 10^{-16}$ | 0 | 1 | 51.35 | 2.548 | 0.9504 |
| cQtqd8 | $-2.846 \cdot 10^{-18}$ | 0 | 1 | 0.1112 | 0.1112 | $3.057 \cdot 10^{-6}$ |
| cQtqd8I | $1.371 \cdot 10^{-18}$ | 0 | 1 | 0.1112 | 0.1112 | $3.057 \cdot 10^{-6}$ |
| cQtqd8T | $1.419 \cdot 10^{-17}$ | 0 | 1 | 3.148 | 0.8874 | 0.7181 |
| cQtqd8TI | $-3.356 \cdot 10^{-17}$ | 0 | 1 | 11.41 | 0.5661 | 0.9504 |
| cpQM | -0.001019 | -0.001019 | $9.813 \cdot 10^{-8}$ | $3.566 \cdot 10^{-5}$ | $3.566 \cdot 10^{-5}$ | $2.805 \cdot 10^{-8}$ |
| cpt | $1.808 \cdot 10^{-5}$ | $1.808 \cdot 10^{-5}$ | $-3.871 \cdot 10^{-7}$ | $2.903 \cdot 10^{-6}$ | $2.903 \cdot 10^{-6}$ | $-3.445 \cdot 10^{-8}$ |
| ctG | 0.1977 | 0.1977 | 0 | 0.02985 | 0.02985 | 0 |
| ctGI | $-8.534 \cdot 10^{-32}$ | $-6.617 \cdot 10^{-24}$ | $-7.754 \cdot 10^7$ | 0.02041 | 0.02041 | 0 |
| ctW | 0.001461 | 0.001461 | $2.054 \cdot 10^{-7}$ | 0.005206 | 0.005206 | $3.842 \cdot 10^{-7}$ |
| ctWI | $1.214 \cdot 10^{-15}$ | $1.214 \cdot 10^{-15}$ | $-7.413 \cdot 10^{-7}$ | 0.003334 | 0.003334 | $3.899 \cdot 10^{-7}$ |
| ctZ | 0.001025 | 0.001025 | $6.833 \cdot 10^{-7}$ | 0.003451 | 0.003451 | $1.072 \cdot 10^{-6}$ |
| ctZI | $-1.3 \cdot 10^{-15}$ | $-1.301 \cdot 10^{-15}$ | -0.0005302 | 0.002389 | 0.002389 | $1.088 \cdot 10^{-6}$ |
| ctd1 | -0.00428 | -0.00428 | $-7.01 \cdot 10^{-8}$ | 0.0677 | 0.0677 | 0 |
| ctd8 | 0.06406 | 0.06406 | 0 | 0.01504 | 0.01504 | 0 |
| ctq1 | 0.01118 | 0.01118 | $-8.947 \cdot 10^{-8}$ | 0.592 | 0.592 | 0 |
| ctq8 | 0.05069 | 0.05069 | 0 | 0.01053 | 0.01053 | 0 |
| sm | 0 | 0 | 0 | 0.7544 | 0.7544 | 0 |

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

| | interference | | | square | | |
|----------|-------------------------|-------------------------|------------------------|-----------------------|-----------------------|-----------------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| cQd1 | -0.002456 | -0.002456 | $-4.071 \cdot 10^{-8}$ | 0.0548 | 0.0548 | 0 |
| cQd8 | 0.08227 | 0.08227 | 0 | 0.02119 | 0.02119 | 0 |
| cQq11 | -0.02242 | -0.02242 | $4.46 \cdot 10^{-8}$ | 0.1139 | 0.1139 | 0 |
| cQq13 | 0.02242 | 0.02242 | $4.46 \cdot 10^{-8}$ | 0.1139 | 0.1139 | 0 |
| cQq81 | 0.4362 | 0.4362 | 0 | 0.1406 | 0.1406 | 0 |
| cQq83 | -0.4362 | -0.4362 | 0 | 0.1406 | 0.1406 | 0 |
| cQtqd1 | -0.4725 | 0 | 1 | 0.5004 | 0.5004 | $3.057 \cdot 10^{-6}$ |
| cQtqd1I | $-1.542 \cdot 10^{-17}$ | 0 | 1 | 0.5004 | 0.5004 | $3.037 \cdot 10^{-6}$ |
| cQtqd1T | 4.513 | 0 | 1 | 45.19 | 1.479 | 0.9673 |
| cQtqd1TI | $-2.756 \cdot 10^{-17}$ | 0 | 1 | 16.53 | 2.995 | 0.8188 |
| cQtqd8 | $-2.826 \cdot 10^{-18}$ | 0 | 1 | 0.1112 | 0.1112 | $3.057 \cdot 10^{-6}$ |
| cQtqd8I | $-1.733 \cdot 10^{-18}$ | 0 | 1 | 0.1112 | 0.1112 | $3.057 \cdot 10^{-6}$ |
| cQtqd8T | $-7.271 \cdot 10^{-17}$ | 0 | 1 | 4.508 | 0.4069 | 0.9097 |
| cQtqd8TI | 0 | 0 | 0 | 3.672 | 0.6655 | 0.8188 |
| cpQM | -0.0001478 | -0.0001478 | $6.768 \cdot 10^{-8}$ | $6.525 \cdot 10^{-6}$ | $6.525 \cdot 10^{-6}$ | 0 |
| cpt | $1.612 \cdot 10^{-5}$ | $1.612 \cdot 10^{-5}$ | $-3.721 \cdot 10^{-7}$ | $5.665 \cdot 10^{-6}$ | $5.665 \cdot 10^{-6}$ | 0 |
| ctG | 0.1977 | 0.1977 | 0 | 0.04202 | 0.04202 | 0 |
| ctGI | $-7.353 \cdot 10^{-25}$ | $2.941 \cdot 10^{-24}$ | 5 | 0.03257 | 0.03257 | 0 |
| ctW | 0.005294 | 0.005294 | $-9.444 \cdot 10^{-8}$ | 0.004889 | 0.004889 | $3.886 \cdot 10^{-7}$ |
| ctWI | $5.663 \cdot 10^{-13}$ | $5.663 \cdot 10^{-13}$ | $-5.827 \cdot 10^{-7}$ | 0.002183 | 0.002183 | $4.122 \cdot 10^{-7}$ |
| ctZ | 0.0007418 | 0.0007418 | $7.01 \cdot 10^{-7}$ | 0.004714 | 0.004714 | $1.061 \cdot 10^{-6}$ |
| ctZI | $-4.957 \cdot 10^{-13}$ | $-4.957 \cdot 10^{-13}$ | $5.649 \cdot 10^{-7}$ | 0.003814 | 0.003814 | $1.075 \cdot 10^{-6}$ |
| ctd1 | -0.03655 | -0.03655 | $-5.473 \cdot 10^{-8}$ | 0.6328 | 0.6328 | 0 |
| ctd8 | 0.4362 | 0.4362 | 0 | 0.1406 | 0.1406 | 0 |
| ctq1 | -0.004453 | -0.004453 | $4.491 \cdot 10^{-8}$ | 0.0548 | 0.0548 | 0 |
| ctq8 | 0.03274 | 0.03274 | 0 | 0.004474 | 0.004474 | 0 |

| | | | | | | |
|----|---|---|---|--------|--------|---|
| sm | 0 | 0 | 0 | 0.8549 | 0.8549 | 0 |
|----|---|---|---|--------|--------|---|

1.75 $t\bar{t} \rightarrow t\bar{t}$

| | interference | | | square | | |
|------|-------------------------|-------------------------|-------------------------------|----------|----------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| cQQ1 | -6.763 | -6.763 | 0 | 5.748 | 5.748 | 0 |
| cQQ8 | -0.329 | -0.329 | 0 | 0.2937 | 0.2937 | 0 |
| cQt1 | -0.1744 | -0.1744 | $-5.733 \cdot 10^{-8}$ | 8.883 | 8.883 | 0 |
| cQt8 | -0.284 | -0.284 | 0 | 2.949 | 2.949 | 0 |
| cpQM | 0.3062 | 0.3062 | 0 | 0.01062 | 0.01062 | 0 |
| cpt | -0.08684 | -0.08684 | $-1.152 \cdot 10^{-8}$ | 0.009137 | 0.009137 | 0 |
| ctG | 0.4707 | 0.4707 | 0 | 1.981 | 1.981 | 0 |
| ctGI | $-2.59 \cdot 10^{-17}$ | $-3.288 \cdot 10^{-17}$ | -0.2694 | 1.914 | 1.914 | 0 |
| ctW | -0.05627 | -0.05627 | $4.798 \cdot 10^{-7}$ | 0.1348 | 0.1348 | $9.647 \cdot 10^{-7}$ |
| ctWI | $-3.388 \cdot 10^{-17}$ | $-8.541 \cdot 10^{-17}$ | -1.521 | 0.5395 | 0.5395 | $9.453 \cdot 10^{-7}$ |
| ctZ | 0.3081 | 0.3081 | $5.517 \cdot 10^{-7}$ | 0.4268 | 0.4268 | $1.054 \cdot 10^{-6}$ |
| ctZI | $-2.584 \cdot 10^{-18}$ | $6.434 \cdot 10^{-17}$ | 25.9 | 0.9878 | 0.9878 | $1.063 \cdot 10^{-6}$ |
| ctp | 0.08418 | 0.08418 | 0 | 0.00874 | 0.00874 | 0 |
| ctpI | $-7.384 \cdot 10^{-18}$ | $-3.075 \cdot 10^{-18}$ | 0.5836 | 0.004852 | 0.004852 | 0 |
| ctt1 | -12.39 | -12.39 | 0 | 22.99 | 22.99 | 0 |
| sm | 0 | 0 | 0 | 3.275 | 3.275 | 0 |

1.76 $u\bar{d} \rightarrow \mu^+ \nu_\mu$

| sm | interference | | | square | | |
|----|--------------|------|-------------------------------|----------|----------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 0.005364 | 0.005364 | $3.729 \cdot 10^{-8}$ |

1.77 $u\bar{d} \rightarrow c\bar{s}$

| interference | | | | square | | |
|--------------|------|------|-------------------------------|-----------|-----------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 0.0007798 | 0.0007798 | $2.565 \cdot 10^{-8}$ |

1.78 $u\bar{d} \rightarrow u\bar{d}$

| interference | | | | square | | |
|--------------|------|------|-------------------------------|--------|-------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 39.42 | 39.42 | 0 |

1.79 $u\bar{u} \rightarrow \nu_e \bar{\nu}_e$

| interference | | | | square | | |
|--------------|------|------|-------------------------------|-----------|-----------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 0.0007665 | 0.0007665 | 0 |

1.80 $u\bar{u} \rightarrow c\bar{c}$

| interference | | | | square | | |
|--------------|------|------|-------------------------------|--------|--------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| sm | 0 | 0 | 0 | 0.8487 | 0.8487 | 0 |

1.81 $u\bar{u} \rightarrow u\bar{u}$

| interference | | | square | | |
|--------------|------|-------------------------------|--------|------|-------------------------------|
| mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |

| | | | | | | |
|----|---|---|---|------|------|---|
| sm | 0 | 0 | 0 | 6.63 | 6.63 | 0 |
|----|---|---|---|------|------|---|

1.82 $zz \rightarrow W^+W^-$

| sm | interference | | | square | | |
|----|--------------|------|-------------------------------|--------|-------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| | 0 | 0 | 0 | 40.26 | 40.26 | $7.451 \cdot 10^{-8}$ |

1.83 $zz \rightarrow zz$

| sm | interference | | | square | | |
|----|--------------|------|-------------------------------|---------|---------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| | 0 | 0 | 0 | 0.08114 | 0.08114 | 0 |

2 By parameter point

2.1 cQQ1

| | interference | | | square | | |
|---------------------------------|--------------|---------|-------------------------------|--------|--------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $b\bar{b} \rightarrow b\bar{b}$ | -0.1819 | -0.1819 | 0 | 0.4427 | 0.4427 | 0 |
| $b\bar{b} \rightarrow t\bar{t}$ | -0.7487 | -0.7487 | $1.336 \cdot 10^{-8}$ | 0.6575 | 0.6575 | 0 |
| $t\bar{t} \rightarrow t\bar{t}$ | -6.763 | -6.763 | 0 | 5.748 | 5.748 | 0 |

2.2 cQQ8

| | interference | | | square | | |
|--|--------------|------|-------------------------------|--------|------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |

| | | | | | | |
|---------------------------------|---------|---------|------------------------|--------|--------|---|
| $b\bar{b} \rightarrow b\bar{b}$ | -5.179 | -5.179 | $1.931 \cdot 10^{-8}$ | 0.2511 | 0.2511 | 0 |
| $b\bar{b} \rightarrow t\bar{t}$ | 0.05685 | 0.05685 | $-1.759 \cdot 10^{-8}$ | 0.0461 | 0.0461 | 0 |
| $t\bar{t} \rightarrow t\bar{t}$ | -0.329 | -0.329 | 0 | 0.2937 | 0.2937 | 0 |

2.3 cQb1

| | interference | | | square | | |
|---------------------------------|--------------|-----------|-------------------------------|--------|--------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $b\bar{b} \rightarrow b\bar{b}$ | 0.2704 | 0.2704 | $-7.397 \cdot 10^{-8}$ | 2.013 | 2.013 | 0 |
| $b\bar{b} \rightarrow t\bar{t}$ | -0.005979 | -0.005979 | $-5.017 \cdot 10^{-8}$ | 0.2962 | 0.2962 | 0 |

2.4 cQb8

| | interference | | | square | | |
|---------------------------------|--------------|--------|-------------------------------|---------|---------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $b\bar{b} \rightarrow b\bar{b}$ | -37.15 | -37.15 | 0 | 0.445 | 0.445 | 0 |
| $b\bar{b} \rightarrow t\bar{t}$ | 0.2332 | 0.2332 | 0 | 0.07219 | 0.07219 | 0 |

2.5 cQbqu1

| | interference | | | square | | |
|---------------------------------|--------------|------|-------------------------------|--------|------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 0.25 | 0.25 | $3.08 \cdot 10^{-6}$ |
| $b\bar{b} \rightarrow u\bar{u}$ | -0.01371 | 0 | 1 | 0.5 | 0.5 | $3.06 \cdot 10^{-6}$ |

2.6 cQbqu1I

| interference | square |
|--------------|--------|
|--------------|--------|

| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
|---------------------------------|------------------------|------|---------------|------|------|----------------------|
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 0.25 | 0.25 | $3.04 \cdot 10^{-6}$ |
| $b\bar{b} \rightarrow u\bar{u}$ | $2.409 \cdot 10^{-20}$ | 0 | 1 | 0.5 | 0.5 | $3.06 \cdot 10^{-6}$ |

2.7 cQbqu1T

| | interference | | | square | | |
|---------------------------------|--------------|------|---------------|--------|-------|---------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 31.89 | 2.739 | 0.9141 |
| $b\bar{b} \rightarrow u\bar{u}$ | 0.1637 | 0 | 1 | 71.25 | 7.751 | 0.8912 |

2.8 cQbqu1TI

| | interference | | | square | | |
|---------------------------------|------------------------|------|---------------|--------|-------|---------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 6.337 | 2.282 | 0.6399 |
| $b\bar{b} \rightarrow u\bar{u}$ | $-3.08 \cdot 10^{-18}$ | 0 | 1 | 11.25 | 5.301 | 0.5289 |

2.9 cQbqu8

| | interference | | | square | | |
|---------------------------------|-------------------------|------|---------------|---------|---------|-----------------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 0.05556 | 0.05556 | $3.042 \cdot 10^{-6}$ |
| $b\bar{b} \rightarrow u\bar{u}$ | $-1.883 \cdot 10^{-19}$ | 0 | 1 | 0.1111 | 0.1111 | $3.06 \cdot 10^{-6}$ |

2.10 cQbqu8I

| interference | square |
|--------------|--------|
|--------------|--------|

| | mod1 | mod2 | 1 − mod2/mod1 | mod1 | mod2 | 1 − mod2/mod1 |
|---------------------------------|-------------------------|------|---------------|---------|---------|-----------------------|
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 0.05556 | 0.05556 | $3.042 \cdot 10^{-6}$ |
| $b\bar{b} \rightarrow u\bar{u}$ | $-6.596 \cdot 10^{-21}$ | 0 | 1 | 0.1111 | 0.1111 | $3.06 \cdot 10^{-6}$ |

2.11 cQbqu8T

| | interference | | | square | | |
|---------------------------------|-------------------------|------|---------------|--------|--------|---------------|
| | mod1 | mod2 | 1 − mod2/mod1 | mod1 | mod2 | 1 − mod2/mod1 |
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 1.408 | 0.5071 | 0.6399 |
| $b\bar{b} \rightarrow u\bar{u}$ | $-1.055 \cdot 10^{-22}$ | 0 | 1 | 2.501 | 1.178 | 0.5289 |

2.12 cQbqu8TI

| | interference | | | square | | |
|---------------------------------|-------------------------|------|---------------|--------|--------|---------------|
| | mod1 | mod2 | 1 − mod2/mod1 | mod1 | mod2 | 1 − mod2/mod1 |
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 7.086 | 0.6086 | 0.9141 |
| $b\bar{b} \rightarrow u\bar{u}$ | $-2.089 \cdot 10^{-18}$ | 0 | 1 | 15.83 | 1.722 | 0.8912 |

2.13 cQd1

| | interference | | | square | | |
|---------------------------------|--------------|-----------|------------------------|--------|--------|---------------|
| | mod1 | mod2 | 1 − mod2/mod1 | mod1 | mod2 | 1 − mod2/mod1 |
| $b\bar{b} \rightarrow d\bar{d}$ | −0.00291 | −0.00291 | $-6.872 \cdot 10^{-8}$ | 0.2001 | 0.2001 | 0 |
| $t\bar{t} \rightarrow d\bar{d}$ | −0.009976 | −0.009976 | $-6.014 \cdot 10^{-8}$ | 0.592 | 0.592 | 0 |
| $t\bar{t} \rightarrow s\bar{s}$ | −0.002456 | −0.002456 | $-4.071 \cdot 10^{-8}$ | 0.0548 | 0.0548 | 0 |

2.14 cQd8

| | interference | | | square | | |
|---------------------------------|--------------|---------|-------------------------------|----------|----------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $b\bar{b} \rightarrow d\bar{d}$ | 0.1994 | 0.1994 | 0 | 0.06729 | 0.06729 | 0 |
| $t\bar{t} \rightarrow d\bar{d}$ | 0.04156 | 0.04156 | 0 | 0.007452 | 0.007452 | 0 |
| $t\bar{t} \rightarrow s\bar{s}$ | 0.08227 | 0.08227 | 0 | 0.02119 | 0.02119 | 0 |

2.15 cQe2

| | interference | | | square | | |
|-----------------------------------|--------------|-----------|-------------------------------|--------|--------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $b\bar{b} \rightarrow \mu^+\mu^-$ | -0.008526 | -0.008526 | $-4.691 \cdot 10^{-8}$ | 0.1954 | 0.1954 | 0 |

2.16 cQe3

| | interference | | | square | | |
|-------------------------------------|--------------|-----------|-------------------------------|--------|--------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $t\bar{t} \rightarrow \tau^+\tau^-$ | -0.006019 | -0.006019 | $-4.984 \cdot 10^{-8}$ | 0.1031 | 0.1031 | 0 |

2.17 cQl31

| | interference | | | square | | |
|---------------------------------------|--------------|---------|-------------------------------|---------|---------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $b\bar{t} \rightarrow e^-\bar{\nu}_e$ | 0.01028 | 0.01028 | 0 | 0.04858 | 0.04858 | 0 |

2.18 cQl32

| | interference | | | square | | |
|--|--------------|------|-------------------------------|--------|------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |

| | | | | | | |
|---|------------|------------|------------------------|----------|----------|---|
| $b\bar{b} \rightarrow \mu^+\mu^-$ | 0.05571 | 0.05571 | $1.795 \cdot 10^{-8}$ | 0.5868 | 0.5868 | 0 |
| $t\bar{t} \rightarrow \nu_\mu\bar{\nu}_\mu$ | -0.0008597 | -0.0008597 | $-1.279 \cdot 10^{-7}$ | 0.008825 | 0.008825 | 0 |

2.19 cQIM1

| | interference | | | square | | |
|---|--------------|----------|-------------------------------|--------|-------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $b\bar{b} \rightarrow \nu_e\bar{\nu}_e$ | -0.07123 | -0.07123 | $1.404 \cdot 10^{-8}$ | 0.305 | 0.305 | 0 |

2.20 cQIM2

| | interference | | | square | | |
|---|--------------|---------|-------------------------------|--------|--------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $b\bar{b} \rightarrow \mu^+\mu^-$ | 0.02151 | 0.02151 | 0 | 0.1133 | 0.1133 | 0 |
| $t\bar{t} \rightarrow \nu_\mu\bar{\nu}_\mu$ | 0.02793 | 0.02793 | $3.58 \cdot 10^{-8}$ | 0.1512 | 0.1512 | 0 |

2.21 cQIM3

| | interference | | | square | | |
|-------------------------------------|--------------|----------|-------------------------------|---------|---------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $t\bar{t} \rightarrow \tau^+\tau^-$ | -0.01691 | -0.01691 | 0 | 0.06914 | 0.06914 | 0 |

2.22 cQq11

| | interference | | | square | | |
|---------------------------------|--------------|----------|-------------------------------|--------|--------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $b\bar{b} \rightarrow d\bar{d}$ | 0.08461 | 0.08461 | $1.182 \cdot 10^{-8}$ | 0.3864 | 0.3864 | 0 |
| $b\bar{b} \rightarrow u\bar{u}$ | -0.04183 | -0.04183 | $2.39 \cdot 10^{-8}$ | 0.2046 | 0.2046 | 0 |

| | | | | | | |
|---------------------------------|----------|----------|-----------------------|---------|---------|---|
| $t\bar{t} \rightarrow c\bar{c}$ | 0.008964 | 0.008964 | $1.116 \cdot 10^{-8}$ | 0.03725 | 0.03725 | 0 |
| $t\bar{t} \rightarrow d\bar{d}$ | -0.1444 | -0.1444 | $6.927 \cdot 10^{-8}$ | 0.7104 | 0.7104 | 0 |
| $t\bar{t} \rightarrow s\bar{s}$ | -0.02242 | -0.02242 | $4.46 \cdot 10^{-8}$ | 0.1139 | 0.1139 | 0 |

2.23 cQq13

| | interference | | | square | | |
|---------------------------------|--------------|----------|-------------------------------|---------|---------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $\bar{b}t \rightarrow \bar{d}u$ | 0.1244 | 0.1244 | 0 | 0.588 | 0.588 | 0 |
| $b\bar{b} \rightarrow d\bar{d}$ | 0.08461 | 0.08461 | $1.182 \cdot 10^{-8}$ | 0.3864 | 0.3864 | 0 |
| $b\bar{b} \rightarrow u\bar{u}$ | 0.04183 | 0.04183 | $2.39 \cdot 10^{-8}$ | 0.2046 | 0.2046 | 0 |
| $t\bar{t} \rightarrow c\bar{c}$ | 0.008964 | 0.008964 | $1.116 \cdot 10^{-8}$ | 0.03725 | 0.03725 | 0 |
| $t\bar{t} \rightarrow d\bar{d}$ | 0.1444 | 0.1444 | $6.927 \cdot 10^{-8}$ | 0.7104 | 0.7104 | 0 |
| $t\bar{t} \rightarrow s\bar{s}$ | 0.02242 | 0.02242 | $4.46 \cdot 10^{-8}$ | 0.1139 | 0.1139 | 0 |

2.24 cQq81

| | interference | | | square | | |
|---------------------------------|--------------|---------|-------------------------------|---------|---------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $b\bar{b} \rightarrow d\bar{d}$ | 0.2012 | 0.2012 | 0 | 0.06789 | 0.06789 | 0 |
| $b\bar{b} \rightarrow u\bar{u}$ | 0.04661 | 0.04661 | 0 | 0.01573 | 0.01573 | 0 |
| $t\bar{t} \rightarrow c\bar{c}$ | 0.221 | 0.221 | 0 | 0.06801 | 0.06801 | 0 |
| $t\bar{t} \rightarrow d\bar{d}$ | 0.06406 | 0.06406 | 0 | 0.01504 | 0.01504 | 0 |
| $t\bar{t} \rightarrow s\bar{s}$ | 0.4362 | 0.4362 | 0 | 0.1406 | 0.1406 | 0 |

2.25 cQq83

interference square

| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
|---------------------------------------|------------------------|------------------------|-------------------------------|---------|---------|-------------------------------|
| $\bar{b}t \rightarrow \bar{d}u$ | $9.411 \cdot 10^{-23}$ | $9.633 \cdot 10^{-20}$ | -1022 | 0.3123 | 0.3123 | 0 |
| $\bar{b}\bar{b} \rightarrow d\bar{d}$ | 0.2012 | 0.2012 | 0 | 0.06789 | 0.06789 | 0 |
| $\bar{b}\bar{b} \rightarrow u\bar{u}$ | -0.04661 | -0.04661 | 0 | 0.01573 | 0.01573 | 0 |
| $t\bar{t} \rightarrow c\bar{c}$ | 0.221 | 0.221 | 0 | 0.06801 | 0.06801 | 0 |
| $t\bar{t} \rightarrow d\bar{d}$ | -0.06406 | -0.06406 | 0 | 0.01504 | 0.01504 | 0 |
| $t\bar{t} \rightarrow s\bar{s}$ | -0.4362 | -0.4362 | 0 | 0.1406 | 0.1406 | 0 |

2.26 cQt1

| | interference | | | square | | |
|---------------------------------|--------------|---------|-------------------------------|--------|--------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $b\bar{b} \rightarrow t\bar{t}$ | -0.1905 | -0.1905 | $5.25 \cdot 10^{-8}$ | 0.2962 | 0.2962 | 0 |
| $t\bar{t} \rightarrow t\bar{t}$ | -0.1744 | -0.1744 | $-5.733 \cdot 10^{-8}$ | 8.883 | 8.883 | 0 |

2.27 cQt8

| | interference | | | square | | |
|---------------------------------|--------------|----------|-------------------------------|---------|---------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $b\bar{b} \rightarrow t\bar{t}$ | -0.03459 | -0.03459 | 0 | 0.07219 | 0.07219 | 0 |
| $t\bar{t} \rightarrow t\bar{t}$ | -0.284 | -0.284 | 0 | 2.949 | 2.949 | 0 |

2.28 cQtQb1

| | interference | | | square | | |
|---------------------------------|--------------|----------|-------------------------------|--------|-------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $b\bar{b} \rightarrow t\bar{t}$ | -0.00868 | -0.00868 | 0 | 0.648 | 0.648 | 0 |

2.29 cQtQb1I

| | interference | | | square | | |
|---------------------------------|------------------------|------------------------|---------------|--------|--------|---------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| $b\bar{b} \rightarrow t\bar{t}$ | $-8.67 \cdot 10^{-19}$ | $1.179 \cdot 10^{-21}$ | 1.001 | 0.8126 | 0.8126 | 0 |

2.30 cQtQb8

| | interference | | | square | | |
|---------------------------------|--------------|----------|---------------|--------|--------|---------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| $b\bar{b} \rightarrow t\bar{t}$ | 0.004542 | 0.004542 | 0 | 0.1006 | 0.1006 | 0 |

2.31 cQtQb8I

| | interference | | | square | | |
|---------------------------------|-------------------------|-------------------------|---------------|---------|---------|---------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| $b\bar{b} \rightarrow t\bar{t}$ | $-1.202 \cdot 10^{-18}$ | $-5.181 \cdot 10^{-19}$ | 0.5689 | 0.09664 | 0.09664 | 0 |

2.32 cQtqd1

| | interference | | | square | | |
|---------------------------------|--------------|------|---------------|--------|--------|-----------------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 0.25 | 0.25 | $3.04 \cdot 10^{-6}$ |
| $t\bar{t} \rightarrow d\bar{d}$ | -0.4725 | 0 | 1 | 0.5004 | 0.5004 | $3.057 \cdot 10^{-6}$ |
| $t\bar{t} \rightarrow s\bar{s}$ | -0.4725 | 0 | 1 | 0.5004 | 0.5004 | $3.057 \cdot 10^{-6}$ |

2.33 cQtqd1I

| | interference | | | square | | |
|---------------------------------|-------------------------|------|-------------------------------|--------|--------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 0.25 | 0.25 | $3.08 \cdot 10^{-6}$ |
| $t\bar{t} \rightarrow d\bar{d}$ | $3.701 \cdot 10^{-17}$ | 0 | 1 | 0.5004 | 0.5004 | $3.037 \cdot 10^{-6}$ |
| $t\bar{t} \rightarrow s\bar{s}$ | $-1.542 \cdot 10^{-17}$ | 0 | 1 | 0.5004 | 0.5004 | $3.037 \cdot 10^{-6}$ |

2.34 cQtqd1T

| | interference | | | square | | |
|---------------------------------|--------------|------|-------------------------------|--------|--------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 20.39 | 0.3639 | 0.9821 |
| $t\bar{t} \rightarrow d\bar{d}$ | 2.424 | 0 | 1 | 14.33 | 3.918 | 0.7266 |
| $t\bar{t} \rightarrow s\bar{s}$ | 4.513 | 0 | 1 | 45.19 | 1.479 | 0.9673 |

2.35 cQtqd1TI

| | interference | | | square | | |
|---------------------------------|-------------------------|------|-------------------------------|--------|--------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 13.46 | 0.2351 | 0.9825 |
| $t\bar{t} \rightarrow d\bar{d}$ | $-1.87 \cdot 10^{-16}$ | 0 | 1 | 51.35 | 2.548 | 0.9504 |
| $t\bar{t} \rightarrow s\bar{s}$ | $-2.756 \cdot 10^{-17}$ | 0 | 1 | 16.53 | 2.995 | 0.8188 |

2.36 cQtqd8

| | interference | | | square | | |
|---------------------------------|-------------------------|------|-------------------------------|---------|---------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 0.05556 | 0.05556 | $3.042 \cdot 10^{-6}$ |
| $t\bar{t} \rightarrow d\bar{d}$ | $-2.846 \cdot 10^{-18}$ | 0 | 1 | 0.1112 | 0.1112 | $3.057 \cdot 10^{-6}$ |
| $t\bar{t} \rightarrow s\bar{s}$ | $-2.826 \cdot 10^{-18}$ | 0 | 1 | 0.1112 | 0.1112 | $3.057 \cdot 10^{-6}$ |

2.37 cQtqd8I

| | interference | | | square | | |
|---------------------------------|-------------------------|------|---------------|---------|---------|-----------------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 0.05556 | 0.05556 | $3.042 \cdot 10^{-6}$ |
| $t\bar{t} \rightarrow d\bar{d}$ | $1.371 \cdot 10^{-18}$ | 0 | 1 | 0.1112 | 0.1112 | $3.057 \cdot 10^{-6}$ |
| $t\bar{t} \rightarrow s\bar{s}$ | $-1.733 \cdot 10^{-18}$ | 0 | 1 | 0.1112 | 0.1112 | $3.057 \cdot 10^{-6}$ |

2.38 cQtqd8T

| | interference | | | square | | |
|---------------------------------|-------------------------|------|---------------|--------|--------|---------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 7.086 | 0.6086 | 0.9141 |
| $t\bar{t} \rightarrow d\bar{d}$ | $1.419 \cdot 10^{-17}$ | 0 | 1 | 3.148 | 0.8874 | 0.7181 |
| $t\bar{t} \rightarrow s\bar{s}$ | $-7.271 \cdot 10^{-17}$ | 0 | 1 | 4.508 | 0.4069 | 0.9097 |

2.39 cQtqd8TI

| | interference | | | square | | |
|---------------------------------|-------------------------|------|---------------|--------|---------|---------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 2.991 | 0.05224 | 0.9825 |
| $t\bar{t} \rightarrow d\bar{d}$ | $-3.356 \cdot 10^{-17}$ | 0 | 1 | 11.41 | 0.5661 | 0.9504 |
| $t\bar{t} \rightarrow s\bar{s}$ | 0 | 0 | 0 | 3.672 | 0.6655 | 0.8188 |

2.40 cQu1

| | interference | | | square | | |
|--|--------------|------|---------------|--------|------|---------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |

| | | | | | | |
|---------------------------------|----------|----------|------------------------|--------|--------|---|
| $b\bar{b} \rightarrow u\bar{u}$ | 0.01568 | 0.01568 | $-6.38 \cdot 10^{-8}$ | 0.5388 | 0.5388 | 0 |
| $t\bar{t} \rightarrow c\bar{c}$ | 0.009732 | 0.009732 | $-5.138 \cdot 10^{-8}$ | 0.2269 | 0.2269 | 0 |

2.41 cQu8

| | interference | | | square | | |
|---------------------------------|--------------|--------|-------------------------------|---------|---------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $b\bar{b} \rightarrow u\bar{u}$ | 0.1975 | 0.1975 | 0 | 0.06665 | 0.06665 | 0 |
| $t\bar{t} \rightarrow c\bar{c}$ | 0.4803 | 0.4803 | 0 | 0.1555 | 0.1555 | 0 |

2.42 cbQqd1

| | interference | | | square | | |
|---------------------------------|--------------|------|-------------------------------|--------|------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 0.25 | 0.25 | $3.12 \cdot 10^{-6}$ |
| $b\bar{b} \rightarrow d\bar{d}$ | -0.01371 | 0 | 1 | 0.5 | 0.5 | $3.1 \cdot 10^{-6}$ |

2.43 cbQqd1I

| | interference | | | square | | |
|---------------------------------|-----------------------|------|-------------------------------|--------|------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 0.25 | 0.25 | $3.12 \cdot 10^{-6}$ |
| $b\bar{b} \rightarrow d\bar{d}$ | $3.58 \cdot 10^{-19}$ | 0 | 1 | 0.5 | 0.5 | $3.1 \cdot 10^{-6}$ |

2.44 cbQqd8

| | interference | | | square | | |
|--|--------------|------|-------------------------------|--------|------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |

| | | | | | | |
|---------------------------------|------------------------|---|---|---------|---------|-----------------------|
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 0.05556 | 0.05556 | $2.916 \cdot 10^{-6}$ |
| $b\bar{b} \rightarrow d\bar{d}$ | $6.094 \cdot 10^{-10}$ | 0 | 1 | 0.1111 | 0.1111 | $2.97 \cdot 10^{-6}$ |

2.45 cbQqd8I

| | interference | | | square | | |
|---------------------------------|------------------------|------|-------------------------------|---------|---------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 0.05556 | 0.05556 | $2.916 \cdot 10^{-6}$ |
| $b\bar{b} \rightarrow d\bar{d}$ | $2.146 \cdot 10^{-19}$ | 0 | 1 | 0.1111 | 0.1111 | $2.97 \cdot 10^{-6}$ |

2.46 cbW

| | interference | | | square | | |
|--|------------------------|------------------------|-------------------------------|-----------------------|-----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $HH \rightarrow W^+ \bar{t}b$ | $1.722 \cdot 10^{-7}$ | $1.722 \cdot 10^{-7}$ | $5.809 \cdot 10^{-8}$ | $2.206 \cdot 10^{-5}$ | $2.206 \cdot 10^{-5}$ | 0 |
| $HH \rightarrow z \bar{b}b$ | $1.047 \cdot 10^{-7}$ | $1.047 \cdot 10^{-7}$ | 0 | $1.55 \cdot 10^{-6}$ | $1.55 \cdot 10^{-6}$ | 0 |
| $HW^+ \rightarrow \gamma t \bar{b}$ | $2.043 \cdot 10^{-7}$ | $2.043 \cdot 10^{-7}$ | $-4.896 \cdot 10^{-8}$ | $3.987 \cdot 10^{-5}$ | $3.987 \cdot 10^{-5}$ | $-5.016 \cdot 10^{-8}$ |
| $HW^- \rightarrow \bar{t}b$ | 0.007977 | 0.007977 | $1.254 \cdot 10^{-8}$ | 2.041 | 2.041 | 0 |
| $H\gamma \rightarrow b\bar{b}$ | $-1.257 \cdot 10^{-5}$ | $-1.257 \cdot 10^{-5}$ | $-7.959 \cdot 10^{-8}$ | 0.08031 | 0.08031 | $-4.98 \cdot 10^{-8}$ |
| $H z \rightarrow b\bar{b}$ | 0.001428 | 0.001428 | $7.005 \cdot 10^{-8}$ | 1.549 | 1.549 | $6.454 \cdot 10^{-8}$ |
| $W^+ W^- \rightarrow H b \bar{b}$ | $-5.144 \cdot 10^{-7}$ | $-5.144 \cdot 10^{-7}$ | $1.944 \cdot 10^{-8}$ | $1.015 \cdot 10^{-5}$ | $1.015 \cdot 10^{-5}$ | 0 |
| $W^+ W^- \rightarrow H t \bar{t}$ | $4.826 \cdot 10^{-7}$ | $4.826 \cdot 10^{-7}$ | 0 | $2.568 \cdot 10^{-8}$ | $2.568 \cdot 10^{-8}$ | 0 |
| $\bar{b}t \rightarrow \bar{d}u$ | 0.0001775 | 0.0001775 | $5.635 \cdot 10^{-8}$ | 0.01269 | 0.01269 | 0 |
| $b\bar{b} \rightarrow \gamma\gamma$ | $5.607 \cdot 10^{-6}$ | $5.607 \cdot 10^{-6}$ | $-8.917 \cdot 10^{-8}$ | 0.0006187 | 0.0006187 | $-8.082 \cdot 10^{-8}$ |
| $b\bar{b} \rightarrow \mu^+ \mu^-$ | $5.129 \cdot 10^{-5}$ | $5.129 \cdot 10^{-5}$ | $1.95 \cdot 10^{-8}$ | 0.001827 | 0.001827 | $5.474 \cdot 10^{-8}$ |
| $b\bar{b} \rightarrow \nu_e \bar{\nu}_e$ | $4.374 \cdot 10^{-5}$ | $4.374 \cdot 10^{-5}$ | $2.286 \cdot 10^{-8}$ | 0.002075 | 0.002075 | $4.819 \cdot 10^{-8}$ |
| $b\bar{b} \rightarrow b\bar{b}$ | 0.001342 | 0.001342 | 0 | 0.0605 | 0.0605 | 0 |
| $b\bar{b} \rightarrow d\bar{d}$ | 0.0001396 | 0.0001396 | 0 | 0.006081 | 0.006081 | $1.644 \cdot 10^{-8}$ |
| $b\bar{b} \rightarrow t\bar{t}$ | 0.01159 | 0.01159 | 0 | 0.4547 | 0.4547 | 0 |

| | | | | | | |
|---------------------------------------|-----------------------|-----------------------|-----------------------|----------|----------|-----------------------|
| $b\bar{b} \rightarrow u\bar{u}$ | 0.0001069 | 0.0001069 | $9.359 \cdot 10^{-8}$ | 0.006388 | 0.006388 | $1.565 \cdot 10^{-8}$ |
| $b\bar{t} \rightarrow e^-\bar{\nu}_e$ | $3.064 \cdot 10^{-5}$ | $3.064 \cdot 10^{-5}$ | $3.264 \cdot 10^{-8}$ | 0.002874 | 0.002874 | $3.48 \cdot 10^{-8}$ |

2.47 cbWI

| | interference | | | square | | |
|---|-------------------------|-------------------------|-------------------------------|-----------------------|-----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $HH \rightarrow W^+\bar{t}b$ | $-5.713 \cdot 10^{-9}$ | $-5.713 \cdot 10^{-9}$ | $-2.276 \cdot 10^{-7}$ | $2.206 \cdot 10^{-5}$ | $2.206 \cdot 10^{-5}$ | 0 |
| $HH \rightarrow z\bar{b}b$ | $1.495 \cdot 10^{-7}$ | $1.495 \cdot 10^{-7}$ | 0 | $1.541 \cdot 10^{-6}$ | $1.541 \cdot 10^{-6}$ | $6.487 \cdot 10^{-8}$ |
| $HW^+ \rightarrow \gamma t\bar{b}$ | $4.517 \cdot 10^{-8}$ | $4.517 \cdot 10^{-8}$ | $-4.428 \cdot 10^{-8}$ | $3.987 \cdot 10^{-5}$ | $3.987 \cdot 10^{-5}$ | $-2.508 \cdot 10^{-8}$ |
| $HW^- \rightarrow \bar{t}b$ | $1.52 \cdot 10^{-6}$ | $1.52 \cdot 10^{-6}$ | 0 | 2.041 | 2.041 | 0 |
| $H\gamma \rightarrow b\bar{b}$ | $4.071 \cdot 10^{-20}$ | $4.091 \cdot 10^{-20}$ | -0.00504 | 0.08031 | 0.08031 | $-4.98 \cdot 10^{-8}$ |
| $H z \rightarrow b\bar{b}$ | $1.164 \cdot 10^{-6}$ | $1.164 \cdot 10^{-6}$ | $8.588 \cdot 10^{-8}$ | 1.549 | 1.549 | $6.454 \cdot 10^{-8}$ |
| $W^+W^- \rightarrow Hb\bar{b}$ | $-4.635 \cdot 10^{-7}$ | $-4.635 \cdot 10^{-7}$ | $2.157 \cdot 10^{-8}$ | $1.015 \cdot 10^{-5}$ | $1.015 \cdot 10^{-5}$ | 0 |
| $W^+W^- \rightarrow Ht\bar{t}$ | $3.833 \cdot 10^{-8}$ | $3.833 \cdot 10^{-8}$ | $2.609 \cdot 10^{-8}$ | $2.665 \cdot 10^{-8}$ | $2.665 \cdot 10^{-8}$ | 0 |
| $\bar{b}t \rightarrow \bar{d}u$ | $1.881 \cdot 10^{-20}$ | $-1.213 \cdot 10^{-20}$ | 1.645 | 0.01269 | 0.01269 | 0 |
| $b\bar{b} \rightarrow \gamma\gamma$ | $1.842 \cdot 10^{-22}$ | $2.577 \cdot 10^{-22}$ | -0.3987 | 0.0006186 | 0.0006186 | $-9.699 \cdot 10^{-8}$ |
| $b\bar{b} \rightarrow \mu^+\mu^-$ | $4.554 \cdot 10^{-16}$ | $4.554 \cdot 10^{-16}$ | $-2.558 \cdot 10^{-5}$ | 0.001826 | 0.001826 | $5.475 \cdot 10^{-8}$ |
| $b\bar{b} \rightarrow \nu_e\bar{\nu}_e$ | $-1.455 \cdot 10^{-19}$ | $-4.99 \cdot 10^{-20}$ | 0.657 | 0.002075 | 0.002075 | 0 |
| $b\bar{b} \rightarrow b\bar{b}$ | $1.931 \cdot 10^{-18}$ | $6.707 \cdot 10^{-19}$ | 0.6526 | 0.0605 | 0.0605 | $1.653 \cdot 10^{-8}$ |
| $b\bar{b} \rightarrow d\bar{d}$ | $9.755 \cdot 10^{-18}$ | $9.756 \cdot 10^{-18}$ | $-2.63 \cdot 10^{-5}$ | 0.00608 | 0.00608 | $1.645 \cdot 10^{-8}$ |
| $b\bar{b} \rightarrow t\bar{t}$ | $-2.623 \cdot 10^{-18}$ | $-3.662 \cdot 10^{-18}$ | -0.3961 | 0.4548 | 0.4548 | 0 |
| $b\bar{b} \rightarrow u\bar{u}$ | $2.751 \cdot 10^{-18}$ | $2.851 \cdot 10^{-18}$ | -0.03653 | 0.006387 | 0.006387 | $1.566 \cdot 10^{-8}$ |
| $b\bar{t} \rightarrow e^-\bar{\nu}_e$ | $-1.35 \cdot 10^{-20}$ | $-5.41 \cdot 10^{-20}$ | -3.008 | 0.002874 | 0.002874 | $3.48 \cdot 10^{-8}$ |

2.48 cbIS1

| | interference | | | square | | |
|--|--------------|------|-------------------------------|--------|------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |

| | | | | | | |
|--|---|---|---|---------|---------|---|
| $b\bar{t} \rightarrow e^- \bar{\nu}_e$ | 0 | 0 | 0 | 0.08333 | 0.08333 | 0 |
|--|---|---|---|---------|---------|---|

2.49 cblS2

| | | | | | | |
|------------------------------------|------|------|-------------------------------|--------|--------|-------------------------------|
| | | | interference | | | square |
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $b\bar{b} \rightarrow \mu^+ \mu^-$ | 0 | 0 | 0 | 0.1667 | 0.1667 | 0 |

2.50 cblSI1

| | | | | | | |
|--|------|------|-------------------------------|---------|---------|-------------------------------|
| | | | interference | | | square |
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $b\bar{t} \rightarrow e^- \bar{\nu}_e$ | 0 | 0 | 0 | 0.08333 | 0.08333 | 0 |

2.51 cblSI2

| | | | | | | |
|------------------------------------|------|------|-------------------------------|--------|--------|-------------------------------|
| | | | interference | | | square |
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $b\bar{b} \rightarrow \mu^+ \mu^-$ | 0 | 0 | 0 | 0.1667 | 0.1667 | 0 |

2.52 cbtud1

| | | | | | | |
|---------------------------------|------|------|-------------------------------|-------|-------|-------------------------------|
| | | | interference | | | square |
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 0.147 | 0.147 | $6.122 \cdot 10^{-6}$ |

2.53 cbtud1I

| | interference | | | square | | |
|---------------------------------|--------------|------|-------------------------------|--------|--------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 0.3514 | 0.3514 | $6.09 \cdot 10^{-6}$ |

2.54 cbtud8

| | interference | | | square | | |
|---------------------------------|--------------|------|-------------------------------|--------|--------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 0.1702 | 0.1702 | $5.934 \cdot 10^{-6}$ |

2.55 cbtud8I

| | interference | | | square | | |
|---------------------------------|--------------|------|-------------------------------|----------|----------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 0.002302 | 0.002302 | $5.909 \cdot 10^{-6}$ |

2.56 cpQ3

| | interference | | | square | | |
|-------------------------------------|------------------------|------------------------|-------------------------------|-----------------------|-----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $HH \rightarrow W^+ \bar{t}b$ | $-3.825 \cdot 10^{-5}$ | $-3.825 \cdot 10^{-5}$ | $-2.614 \cdot 10^{-8}$ | 0.0001068 | 0.0001068 | 0 |
| $HH \rightarrow z \bar{b}b$ | $7.001 \cdot 10^{-6}$ | $7.001 \cdot 10^{-6}$ | $1.428 \cdot 10^{-8}$ | $1.613 \cdot 10^{-5}$ | $1.613 \cdot 10^{-5}$ | 0 |
| $HW^+ \rightarrow \gamma t \bar{b}$ | $-1.537 \cdot 10^{-7}$ | $-1.537 \cdot 10^{-7}$ | $-6.508 \cdot 10^{-8}$ | $3.834 \cdot 10^{-7}$ | $3.834 \cdot 10^{-7}$ | $-2.608 \cdot 10^{-8}$ |
| $HW^- \rightarrow \bar{t}b$ | -1.505 | -1.505 | 0 | 1.957 | 1.957 | 0 |
| $H z \rightarrow b \bar{b}$ | 0.3527 | 0.3527 | $2.835 \cdot 10^{-8}$ | 3.072 | 3.072 | 0 |
| $W^+ W^- \rightarrow H b \bar{b}$ | $-1.179 \cdot 10^{-5}$ | $-1.179 \cdot 10^{-5}$ | 0 | $3.859 \cdot 10^{-6}$ | $3.859 \cdot 10^{-6}$ | 0 |
| $W^+ W^- \rightarrow H t \bar{t}$ | $5.267 \cdot 10^{-6}$ | $5.267 \cdot 10^{-6}$ | $-1.899 \cdot 10^{-8}$ | $2.129 \cdot 10^{-5}$ | $2.129 \cdot 10^{-5}$ | 0 |
| $\bar{b}t \rightarrow \bar{d}u$ | $5.621 \cdot 10^{-5}$ | $5.621 \cdot 10^{-5}$ | $3.558 \cdot 10^{-8}$ | $1.704 \cdot 10^{-6}$ | $1.704 \cdot 10^{-6}$ | 0 |

| | | | | | | |
|---|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|------------------------|
| $b\bar{b} \rightarrow \mu^+\mu^-$ | $9.791 \cdot 10^{-5}$ | $9.791 \cdot 10^{-5}$ | $-5.107 \cdot 10^{-8}$ | $1.346 \cdot 10^{-5}$ | $1.346 \cdot 10^{-5}$ | $-7.427 \cdot 10^{-8}$ |
| $b\bar{b} \rightarrow \nu_e\bar{\nu}_e$ | 0.001194 | 0.001194 | 0 | $8.578 \cdot 10^{-5}$ | $8.578 \cdot 10^{-5}$ | 0 |
| $b\bar{b} \rightarrow b\bar{b}$ | -0.1036 | -0.1036 | $-9.648 \cdot 10^{-8}$ | 0.08428 | 0.08428 | $1.186 \cdot 10^{-8}$ |
| $b\bar{b} \rightarrow d\bar{d}$ | 0.0006385 | 0.0006385 | $3.132 \cdot 10^{-8}$ | $4.261 \cdot 10^{-5}$ | $4.261 \cdot 10^{-5}$ | $2.347 \cdot 10^{-8}$ |
| $b\bar{b} \rightarrow t\bar{t}$ | 0.01367 | 0.01367 | 0 | 0.004674 | 0.004674 | 0 |
| $b\bar{b} \rightarrow u\bar{u}$ | 0.0001498 | 0.0001498 | $-6.675 \cdot 10^{-8}$ | $2.689 \cdot 10^{-5}$ | $2.689 \cdot 10^{-5}$ | $-1.116 \cdot 10^{-7}$ |
| $b\bar{t} \rightarrow e^-\bar{\nu}_e$ | 0.0007496 | 0.0007496 | $2.668 \cdot 10^{-8}$ | $2.272 \cdot 10^{-5}$ | $2.272 \cdot 10^{-5}$ | $4.401 \cdot 10^{-8}$ |

2.57 cpQM

| | interference | | | square | | |
|---|------------------------|------------------------|-------------------------------|-----------------------|-----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $HH \rightarrow z\bar{b}b$ | $9.826 \cdot 10^{-7}$ | $9.826 \cdot 10^{-7}$ | $1.018 \cdot 10^{-8}$ | $1.709 \cdot 10^{-6}$ | $1.709 \cdot 10^{-6}$ | 0 |
| $HH \rightarrow zt\bar{t}$ | $4.392 \cdot 10^{-5}$ | $4.392 \cdot 10^{-5}$ | 0 | $4.08 \cdot 10^{-5}$ | $4.08 \cdot 10^{-5}$ | 0 |
| $H z \rightarrow b\bar{b}$ | 0.2366 | 0.2366 | $4.227 \cdot 10^{-8}$ | 1.028 | 1.028 | 0 |
| $H z \rightarrow t\bar{t}$ | 1.673 | 1.673 | 0 | 0.3369 | 0.3369 | 0 |
| $W^+W^- \rightarrow Hb\bar{b}$ | $5.285 \cdot 10^{-6}$ | $5.285 \cdot 10^{-6}$ | $3.784 \cdot 10^{-8}$ | $2.679 \cdot 10^{-7}$ | $2.679 \cdot 10^{-7}$ | $3.733 \cdot 10^{-8}$ |
| $W^+W^- \rightarrow Ht\bar{t}$ | $-3.988 \cdot 10^{-5}$ | $-3.988 \cdot 10^{-5}$ | $2.508 \cdot 10^{-8}$ | $1.136 \cdot 10^{-6}$ | $1.136 \cdot 10^{-6}$ | 0 |
| $b\bar{b} \rightarrow \mu^+\mu^-$ | 0.0001408 | 0.0001408 | $7.101 \cdot 10^{-8}$ | $3.67 \cdot 10^{-6}$ | $3.67 \cdot 10^{-6}$ | $8.174 \cdot 10^{-8}$ |
| $b\bar{b} \rightarrow \nu_e\bar{\nu}_e$ | 0.0002343 | 0.0002343 | $4.268 \cdot 10^{-8}$ | $8.413 \cdot 10^{-6}$ | $8.413 \cdot 10^{-6}$ | 0 |
| $b\bar{b} \rightarrow b\bar{b}$ | -0.008997 | -0.008997 | $1.112 \cdot 10^{-8}$ | $9.788 \cdot 10^{-5}$ | $9.788 \cdot 10^{-5}$ | $1.022 \cdot 10^{-8}$ |
| $b\bar{b} \rightarrow d\bar{d}$ | 0.0006016 | 0.0006016 | $1.662 \cdot 10^{-8}$ | $1.961 \cdot 10^{-5}$ | $1.961 \cdot 10^{-5}$ | $5.101 \cdot 10^{-8}$ |
| $b\bar{b} \rightarrow t\bar{t}$ | -0.001237 | -0.001237 | $-8.083 \cdot 10^{-8}$ | $1.628 \cdot 10^{-6}$ | $1.628 \cdot 10^{-6}$ | $-1.228 \cdot 10^{-7}$ |
| $b\bar{b} \rightarrow u\bar{u}$ | 0.0002643 | 0.0002643 | $3.784 \cdot 10^{-8}$ | $8.866 \cdot 10^{-6}$ | $8.866 \cdot 10^{-6}$ | $1.128 \cdot 10^{-8}$ |
| $t\bar{t} \rightarrow \nu_\mu\bar{\nu}_\mu$ | $3.814 \cdot 10^{-6}$ | $3.814 \cdot 10^{-6}$ | $-1.311 \cdot 10^{-7}$ | $1.459 \cdot 10^{-7}$ | $1.459 \cdot 10^{-7}$ | 0 |
| $t\bar{t} \rightarrow \tau^+\tau^-$ | $-5.877 \cdot 10^{-5}$ | $-5.877 \cdot 10^{-5}$ | $1.191 \cdot 10^{-7}$ | $3.105 \cdot 10^{-6}$ | $3.105 \cdot 10^{-6}$ | 0 |
| $t\bar{t} \rightarrow c\bar{c}$ | $8.284 \cdot 10^{-6}$ | $8.284 \cdot 10^{-6}$ | $-9.657 \cdot 10^{-7}$ | $6.019 \cdot 10^{-6}$ | $6.019 \cdot 10^{-6}$ | $-8.308 \cdot 10^{-8}$ |
| $t\bar{t} \rightarrow d\bar{d}$ | -0.001019 | -0.001019 | $9.813 \cdot 10^{-8}$ | $3.566 \cdot 10^{-5}$ | $3.566 \cdot 10^{-5}$ | $2.805 \cdot 10^{-8}$ |
| $t\bar{t} \rightarrow s\bar{s}$ | -0.0001478 | -0.0001478 | $6.768 \cdot 10^{-8}$ | $6.525 \cdot 10^{-6}$ | $6.525 \cdot 10^{-6}$ | 0 |

| | | | | | | |
|---------------------------------|--------|--------|---|---------|---------|---|
| $t\bar{t} \rightarrow t\bar{t}$ | 0.3062 | 0.3062 | 0 | 0.01062 | 0.01062 | 0 |
|---------------------------------|--------|--------|---|---------|---------|---|

2.58 cpb

| | interference | | | square | | |
|---|------------------------|------------------------|------------------------|-----------------------|-----------------------|------------------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| $HH \rightarrow z\bar{b}b$ | $-1.078 \cdot 10^{-7}$ | $-1.078 \cdot 10^{-7}$ | 0 | $8.768 \cdot 10^{-7}$ | $8.768 \cdot 10^{-7}$ | 0 |
| $H z \rightarrow b\bar{b}$ | -0.0307 | -0.0307 | $-3.257 \cdot 10^{-8}$ | 0.7548 | 0.7548 | 0 |
| $W^+W^- \rightarrow Hb\bar{b}$ | $-2.355 \cdot 10^{-8}$ | $-2.355 \cdot 10^{-8}$ | $-4.247 \cdot 10^{-8}$ | $3.498 \cdot 10^{-8}$ | $3.498 \cdot 10^{-8}$ | 0 |
| $b\bar{b} \rightarrow \mu^+\mu^-$ | $-4.205 \cdot 10^{-5}$ | $-4.205 \cdot 10^{-5}$ | $-1.189 \cdot 10^{-7}$ | $3.006 \cdot 10^{-6}$ | $3.006 \cdot 10^{-6}$ | $-6.652 \cdot 10^{-8}$ |
| $b\bar{b} \rightarrow \nu_e\bar{\nu}_e$ | $-2.504 \cdot 10^{-6}$ | $-2.504 \cdot 10^{-6}$ | $-7.986 \cdot 10^{-8}$ | $4.9 \cdot 10^{-7}$ | $4.9 \cdot 10^{-7}$ | 0 |
| $b\bar{b} \rightarrow b\bar{b}$ | 0.05624 | 0.05624 | $-1.778 \cdot 10^{-8}$ | 0.05464 | 0.05464 | $1.83 \cdot 10^{-8}$ |
| $b\bar{b} \rightarrow d\bar{d}$ | $-3.196 \cdot 10^{-5}$ | $-3.196 \cdot 10^{-5}$ | $-6.257 \cdot 10^{-8}$ | $1.055 \cdot 10^{-5}$ | $1.055 \cdot 10^{-5}$ | $9.482 \cdot 10^{-8}$ |
| $b\bar{b} \rightarrow t\bar{t}$ | $-6.17 \cdot 10^{-6}$ | $-6.17 \cdot 10^{-6}$ | $-3.242 \cdot 10^{-7}$ | $1.185 \cdot 10^{-5}$ | $1.185 \cdot 10^{-5}$ | 0 |
| $b\bar{b} \rightarrow u\bar{u}$ | $3.301 \cdot 10^{-5}$ | $3.301 \cdot 10^{-5}$ | 0 | $1.843 \cdot 10^{-5}$ | $1.843 \cdot 10^{-5}$ | $5.425 \cdot 10^{-8}$ |

2.59 cpt

| | interference | | | square | | |
|---|------------------------|------------------------|------------------------|-----------------------|-----------------------|------------------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| $HH \rightarrow zt\bar{t}$ | $-5.892 \cdot 10^{-5}$ | $-5.892 \cdot 10^{-5}$ | 0 | $4.533 \cdot 10^{-5}$ | $4.533 \cdot 10^{-5}$ | 0 |
| $H z \rightarrow t\bar{t}$ | -2.217 | -2.217 | 0 | 1.446 | 1.446 | 0 |
| $W^+W^- \rightarrow Ht\bar{t}$ | $-2.833 \cdot 10^{-7}$ | $-2.833 \cdot 10^{-7}$ | $-3.53 \cdot 10^{-7}$ | $2.159 \cdot 10^{-6}$ | $2.159 \cdot 10^{-6}$ | 0 |
| $b\bar{b} \rightarrow t\bar{t}$ | -0.001318 | -0.001318 | 0 | $1.585 \cdot 10^{-5}$ | $1.585 \cdot 10^{-5}$ | 0 |
| $t\bar{t} \rightarrow \nu_\mu\bar{\nu}_\mu$ | $-6.266 \cdot 10^{-6}$ | $-6.266 \cdot 10^{-6}$ | $1.436 \cdot 10^{-7}$ | $9.222 \cdot 10^{-7}$ | $9.222 \cdot 10^{-7}$ | 0 |
| $t\bar{t} \rightarrow \tau^+\tau^-$ | $-2.934 \cdot 10^{-6}$ | $-2.934 \cdot 10^{-6}$ | $1.84 \cdot 10^{-6}$ | $3.285 \cdot 10^{-6}$ | $3.285 \cdot 10^{-6}$ | $3.045 \cdot 10^{-8}$ |
| $t\bar{t} \rightarrow c\bar{c}$ | -0.0001383 | -0.0001383 | 0 | $2.373 \cdot 10^{-5}$ | $2.373 \cdot 10^{-5}$ | $4.214 \cdot 10^{-8}$ |
| $t\bar{t} \rightarrow d\bar{d}$ | $1.808 \cdot 10^{-5}$ | $1.808 \cdot 10^{-5}$ | $-3.871 \cdot 10^{-7}$ | $2.903 \cdot 10^{-6}$ | $2.903 \cdot 10^{-6}$ | $-3.445 \cdot 10^{-8}$ |
| $t\bar{t} \rightarrow s\bar{s}$ | $1.612 \cdot 10^{-5}$ | $1.612 \cdot 10^{-5}$ | $-3.721 \cdot 10^{-7}$ | $5.665 \cdot 10^{-6}$ | $5.665 \cdot 10^{-6}$ | 0 |

| | | | | | | |
|---------------------------------|----------|----------|------------------------|----------|----------|---|
| $t\bar{t} \rightarrow t\bar{t}$ | -0.08684 | -0.08684 | $-1.152 \cdot 10^{-8}$ | 0.009137 | 0.009137 | 0 |
|---------------------------------|----------|----------|------------------------|----------|----------|---|

2.60 cptb

| | interference | | | square | | |
|--|------------------------|------------------------|-------------------------------|-----------------------|-----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $HH \rightarrow W^+ \bar{t}b$ | $1.862 \cdot 10^{-5}$ | $1.862 \cdot 10^{-5}$ | 0 | $7.726 \cdot 10^{-6}$ | $7.726 \cdot 10^{-6}$ | $1.294 \cdot 10^{-8}$ |
| $HW^+ \rightarrow \gamma t \bar{b}$ | $-2.29 \cdot 10^{-8}$ | $-2.29 \cdot 10^{-8}$ | $-4.367 \cdot 10^{-8}$ | $2.077 \cdot 10^{-7}$ | $2.077 \cdot 10^{-7}$ | $-4.815 \cdot 10^{-8}$ |
| $HW^- \rightarrow \bar{t}b$ | -0.03719 | -0.03719 | 0 | 0.09839 | 0.09839 | $1.016 \cdot 10^{-8}$ |
| $W^+W^- \rightarrow Hb\bar{b}$ | $-2.981 \cdot 10^{-7}$ | $-2.981 \cdot 10^{-7}$ | 0 | $8.424 \cdot 10^{-7}$ | $8.424 \cdot 10^{-7}$ | 0 |
| $W^+W^- \rightarrow Ht\bar{t}$ | $-7.08 \cdot 10^{-8}$ | $-7.08 \cdot 10^{-8}$ | $5.65 \cdot 10^{-8}$ | $9.712 \cdot 10^{-9}$ | $9.712 \cdot 10^{-9}$ | 0 |
| $\bar{b}t \rightarrow \bar{d}u$ | $-2.193 \cdot 10^{-6}$ | $-2.193 \cdot 10^{-6}$ | $4.559 \cdot 10^{-8}$ | $7.321 \cdot 10^{-6}$ | $7.321 \cdot 10^{-6}$ | $2.732 \cdot 10^{-8}$ |
| $b\bar{b} \rightarrow t\bar{t}$ | 0.0001943 | 0.0001943 | 0 | 0.0007713 | 0.0007713 | $1.296 \cdot 10^{-8}$ |
| $b\bar{t} \rightarrow e^- \bar{\nu}_e$ | $-7.312 \cdot 10^{-7}$ | $-7.312 \cdot 10^{-7}$ | $4.103 \cdot 10^{-8}$ | $9.885 \cdot 10^{-6}$ | $9.885 \cdot 10^{-6}$ | $3.035 \cdot 10^{-8}$ |

2.61 cptbI

| | interference | | | square | | |
|--|------------------------|------------------------|-------------------------------|-----------------------|-----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $HH \rightarrow W^+ \bar{t}b$ | $-1.602 \cdot 10^{-7}$ | $-1.602 \cdot 10^{-7}$ | 0 | $9.222 \cdot 10^{-6}$ | $9.222 \cdot 10^{-6}$ | $1.084 \cdot 10^{-8}$ |
| $HW^+ \rightarrow \gamma t \bar{b}$ | $-1.91 \cdot 10^{-9}$ | $-1.91 \cdot 10^{-9}$ | $-5.236 \cdot 10^{-8}$ | $6.36 \cdot 10^{-7}$ | $6.36 \cdot 10^{-7}$ | $-3.144 \cdot 10^{-8}$ |
| $HW^- \rightarrow \bar{t}b$ | $-8.819 \cdot 10^{-6}$ | $-8.819 \cdot 10^{-6}$ | $1.134 \cdot 10^{-8}$ | 0.2782 | 0.2782 | 0 |
| $W^+W^- \rightarrow Hb\bar{b}$ | $1.431 \cdot 10^{-7}$ | $1.431 \cdot 10^{-7}$ | 0 | $1.014 \cdot 10^{-6}$ | $1.014 \cdot 10^{-6}$ | 0 |
| $W^+W^- \rightarrow Ht\bar{t}$ | $-2.012 \cdot 10^{-9}$ | $-2.012 \cdot 10^{-9}$ | 0 | $1.16 \cdot 10^{-9}$ | $1.16 \cdot 10^{-9}$ | 0 |
| $\bar{b}t \rightarrow \bar{d}u$ | $1.714 \cdot 10^{-23}$ | $-2.38 \cdot 10^{-23}$ | 2.389 | $7.952 \cdot 10^{-7}$ | $7.952 \cdot 10^{-7}$ | $3.773 \cdot 10^{-8}$ |
| $b\bar{b} \rightarrow t\bar{t}$ | $2.433 \cdot 10^{-20}$ | $1.969 \cdot 10^{-19}$ | -7.095 | 0.001254 | 0.001254 | $7.977 \cdot 10^{-8}$ |
| $b\bar{t} \rightarrow e^- \bar{\nu}_e$ | $3.936 \cdot 10^{-22}$ | $-1.66 \cdot 10^{-22}$ | 1.422 | $1.358 \cdot 10^{-7}$ | $1.358 \cdot 10^{-7}$ | $7.363 \cdot 10^{-8}$ |

2.62 ctG

| | interference | | | square | | |
|---------------------------------|--------------|----------|-----------------------|---------|---------|---------------|
| | mod1 | mod2 | 1 − mod2/mod1 | mod1 | mod2 | 1 − mod2/mod1 |
| $b\bar{b} \rightarrow t\bar{t}$ | −0.01416 | −0.01416 | $1.412 \cdot 10^{-7}$ | 0.02918 | 0.02918 | 0 |
| $gg \rightarrow t\bar{t}$ | 0.6921 | 0.6921 | 0 | 0.1219 | 0.1219 | 0 |
| $t\bar{t} \rightarrow c\bar{c}$ | 0.1977 | 0.1977 | 0 | 0.03051 | 0.03051 | 0 |
| $t\bar{t} \rightarrow d\bar{d}$ | 0.1977 | 0.1977 | 0 | 0.02985 | 0.02985 | 0 |
| $t\bar{t} \rightarrow s\bar{s}$ | 0.1977 | 0.1977 | 0 | 0.04202 | 0.04202 | 0 |
| $t\bar{t} \rightarrow t\bar{t}$ | 0.4707 | 0.4707 | 0 | 1.981 | 1.981 | 0 |

2.63 ctGI

| | interference | | | square | | |
|---------------------------------|-------------------------|-------------------------|---------------------|---------|---------|---------------|
| | mod1 | mod2 | 1 − mod2/mod1 | mod1 | mod2 | 1 − mod2/mod1 |
| $b\bar{b} \rightarrow t\bar{t}$ | $-3.012 \cdot 10^{-20}$ | $-1.752 \cdot 10^{-17}$ | -580.8 | 0.01973 | 0.01973 | 0 |
| $gg \rightarrow t\bar{t}$ | $-4.807 \cdot 10^{-17}$ | $-4.295 \cdot 10^{-17}$ | 0.1066 | 0.09984 | 0.09984 | 0 |
| $t\bar{t} \rightarrow c\bar{c}$ | $-7.353 \cdot 10^{-25}$ | $3.676 \cdot 10^{-24}$ | 6 | 0.02106 | 0.02106 | 0 |
| $t\bar{t} \rightarrow d\bar{d}$ | $-8.534 \cdot 10^{-32}$ | $-6.617 \cdot 10^{-24}$ | $-7.754 \cdot 10^7$ | 0.02041 | 0.02041 | 0 |
| $t\bar{t} \rightarrow s\bar{s}$ | $-7.353 \cdot 10^{-25}$ | $2.941 \cdot 10^{-24}$ | 5 | 0.03257 | 0.03257 | 0 |
| $t\bar{t} \rightarrow t\bar{t}$ | $-2.59 \cdot 10^{-17}$ | $-3.288 \cdot 10^{-17}$ | -0.2694 | 1.914 | 1.914 | 0 |

2.64 ctQqu1

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

2.65 ctQqu1I

| | interference | | | square | | |
|---------------------------------|------------------------|------|---------------|--------|--------|-----------------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 0.25 | 0.25 | $3.12 \cdot 10^{-6}$ |
| $t\bar{t} \rightarrow c\bar{c}$ | $1.255 \cdot 10^{-17}$ | 0 | 1 | 0.5004 | 0.5004 | $3.097 \cdot 10^{-6}$ |

2.66 ctQqu8

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

2.67 ctQqu8I

| | interference | | | square | | |
|---------------------------------|-------------------------|------|---------------|---------|---------|-----------------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 0.05556 | 0.05556 | $2.916 \cdot 10^{-6}$ |
| $t\bar{t} \rightarrow c\bar{c}$ | $-1.905 \cdot 10^{-18}$ | 0 | 1 | 0.1112 | 0.1112 | $2.878 \cdot 10^{-6}$ |

2.68 ctW

| | interference | | | square | | |
|------------------------------------|------------------------|------------------------|-----------------------|------------------------|-----------------------|-----------------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| $HH \rightarrow W^+ \bar{t}b$ | -0.0001005 | -0.0001005 | 0 | $7.244 \cdot 10^{-5}$ | $7.244 \cdot 10^{-5}$ | $1.38 \cdot 10^{-8}$ |
| $HH \rightarrow zt\bar{t}$ | $9.499 \cdot 10^{-14}$ | 0 | 1 | $1.924 \cdot 10^{-17}$ | 0 | 1 |
| $HW^+ \rightarrow \gamma t\bar{b}$ | $-1.299 \cdot 10^{-6}$ | $-1.299 \cdot 10^{-6}$ | $4.618 \cdot 10^{-7}$ | $2.528 \cdot 10^{-5}$ | $2.528 \cdot 10^{-5}$ | $1.108 \cdot 10^{-6}$ |

| | | | | | | |
|--|------------------------|------------------------|------------------------|------------------------|-----------------------|-----------------------|
| $HW^- \rightarrow \bar{t}b$ | 0.2171 | 0.2171 | $4.606 \cdot 10^{-8}$ | 0.3497 | 0.3497 | 0 |
| $H\gamma \rightarrow t\bar{t}$ | -0.8016 | -0.8016 | $5.863 \cdot 10^{-7}$ | 12.29 | 12.29 | $1.221 \cdot 10^{-6}$ |
| $HZ \rightarrow t\bar{t}$ | $2.488 \cdot 10^{-8}$ | 0 | 1 | $1.577 \cdot 10^{-12}$ | 0 | 1 |
| $W^+W^- \rightarrow Hb\bar{b}$ | $-6.135 \cdot 10^{-7}$ | $-6.135 \cdot 10^{-7}$ | 0 | $2.219 \cdot 10^{-6}$ | $2.219 \cdot 10^{-6}$ | 0 |
| $W^+W^- \rightarrow Ht\bar{t}$ | $-2.32 \cdot 10^{-7}$ | $-2.32 \cdot 10^{-7}$ | $6.034 \cdot 10^{-7}$ | $5.683 \cdot 10^{-5}$ | $5.683 \cdot 10^{-5}$ | $-1.76 \cdot 10^{-8}$ |
| $\bar{b}t \rightarrow \bar{d}u$ | 0.009702 | 0.009702 | $2.061 \cdot 10^{-8}$ | 0.01305 | 0.01305 | 0 |
| $\bar{b}\bar{b} \rightarrow t\bar{t}$ | 0.004937 | 0.004937 | $-9.722 \cdot 10^{-7}$ | 0.06733 | 0.06733 | $1.04 \cdot 10^{-7}$ |
| $\bar{b}t \rightarrow e^- \bar{\nu}_e$ | 0.0008439 | 0.0008439 | $2.37 \cdot 10^{-8}$ | 0.002244 | 0.002244 | 0 |
| $t\bar{t} \rightarrow \nu_\mu \bar{\nu}_\mu$ | $6.427 \cdot 10^{-10}$ | 0 | 1 | $5.094 \cdot 10^{-16}$ | 0 | 1 |
| $t\bar{t} \rightarrow \tau^+ \tau^-$ | 0.004344 | 0.004344 | $4.604 \cdot 10^{-7}$ | 0.01012 | 0.01012 | $1.086 \cdot 10^{-6}$ |
| $t\bar{t} \rightarrow c\bar{c}$ | 0.01091 | 0.01091 | $3.667 \cdot 10^{-7}$ | 0.02656 | 0.02656 | $9.412 \cdot 10^{-7}$ |
| $t\bar{t} \rightarrow d\bar{d}$ | 0.001461 | 0.001461 | $2.054 \cdot 10^{-7}$ | 0.005206 | 0.005206 | $3.842 \cdot 10^{-7}$ |
| $t\bar{t} \rightarrow s\bar{s}$ | 0.005294 | 0.005294 | $-9.444 \cdot 10^{-8}$ | 0.004889 | 0.004889 | $3.886 \cdot 10^{-7}$ |
| $t\bar{t} \rightarrow t\bar{t}$ | -0.05627 | -0.05627 | $4.798 \cdot 10^{-7}$ | 0.1348 | 0.1348 | $9.647 \cdot 10^{-7}$ |

2.69 ctWI

| | interference | | | square | | |
|---------------------------------------|-------------------------|------------------------|-----------------------|------------------------|-----------------------|------------------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| $HH \rightarrow W^+ \bar{t}b$ | $1.235 \cdot 10^{-5}$ | $1.235 \cdot 10^{-5}$ | 0 | $8.782 \cdot 10^{-6}$ | $8.782 \cdot 10^{-6}$ | 0 |
| $HH \rightarrow zt\bar{t}$ | $5.259 \cdot 10^{-13}$ | 0 | 1 | $9.785 \cdot 10^{-18}$ | 0 | 1 |
| $HW^+ \rightarrow \gamma t\bar{b}$ | $-2.92 \cdot 10^{-6}$ | $-2.92 \cdot 10^{-6}$ | $7.192 \cdot 10^{-7}$ | $1.063 \cdot 10^{-5}$ | $1.063 \cdot 10^{-5}$ | $2.822 \cdot 10^{-7}$ |
| $HW^- \rightarrow \bar{t}b$ | 0.000336 | 0.000336 | $2.977 \cdot 10^{-8}$ | 1.63 | 1.63 | 0 |
| $H\gamma \rightarrow t\bar{t}$ | $8.647 \cdot 10^{-17}$ | $1.073 \cdot 10^{-16}$ | -0.2411 | 14.94 | 14.94 | $1.205 \cdot 10^{-6}$ |
| $HZ \rightarrow t\bar{t}$ | $1.97 \cdot 10^{-10}$ | 0 | 1 | $1.464 \cdot 10^{-12}$ | 0 | 1 |
| $W^+W^- \rightarrow Hb\bar{b}$ | $3.517 \cdot 10^{-6}$ | $3.517 \cdot 10^{-6}$ | 0 | $4.305 \cdot 10^{-6}$ | $4.305 \cdot 10^{-6}$ | 0 |
| $W^+W^- \rightarrow Ht\bar{t}$ | $1.33 \cdot 10^{-6}$ | $1.33 \cdot 10^{-6}$ | 0 | $5.85 \cdot 10^{-5}$ | $5.85 \cdot 10^{-5}$ | $-1.709 \cdot 10^{-8}$ |
| $\bar{b}t \rightarrow \bar{d}u$ | $4.504 \cdot 10^{-20}$ | $2.367 \cdot 10^{-20}$ | 0.4745 | 0.006879 | 0.006879 | $1.454 \cdot 10^{-8}$ |
| $\bar{b}\bar{b} \rightarrow t\bar{t}$ | $-1.244 \cdot 10^{-17}$ | $1.98 \cdot 10^{-17}$ | 2.592 | 0.1681 | 0.1681 | $5.95 \cdot 10^{-8}$ |

| | | | | | | |
|--|-------------------------|-------------------------|------------------------|------------------------|----------|-----------------------|
| $b\bar{t} \rightarrow e^- \bar{\nu}_e$ | $3.932 \cdot 10^{-19}$ | $3.292 \cdot 10^{-19}$ | 0.1629 | 0.001791 | 0.001791 | $5.585 \cdot 10^{-8}$ |
| $t\bar{t} \rightarrow \nu_\mu \bar{\nu}_\mu$ | $-5.758 \cdot 10^{-25}$ | 0 | 1 | $1.004 \cdot 10^{-15}$ | 0 | 1 |
| $t\bar{t} \rightarrow \tau^+ \tau^-$ | $1.224 \cdot 10^{-18}$ | $1.565 \cdot 10^{-18}$ | -0.2787 | 0.006715 | 0.006715 | $1.132 \cdot 10^{-6}$ |
| $t\bar{t} \rightarrow c\bar{c}$ | $1.156 \cdot 10^{-10}$ | $1.156 \cdot 10^{-10}$ | $6.922 \cdot 10^{-7}$ | 0.01219 | 0.01219 | $9.845 \cdot 10^{-7}$ |
| $t\bar{t} \rightarrow d\bar{d}$ | $1.214 \cdot 10^{-15}$ | $1.214 \cdot 10^{-15}$ | $-7.413 \cdot 10^{-7}$ | 0.003334 | 0.003334 | $3.899 \cdot 10^{-7}$ |
| $t\bar{t} \rightarrow s\bar{s}$ | $5.663 \cdot 10^{-13}$ | $5.663 \cdot 10^{-13}$ | $-5.827 \cdot 10^{-7}$ | 0.002183 | 0.002183 | $4.122 \cdot 10^{-7}$ |
| $t\bar{t} \rightarrow t\bar{t}$ | $-3.388 \cdot 10^{-17}$ | $-8.541 \cdot 10^{-17}$ | -1.521 | 0.5395 | 0.5395 | $9.453 \cdot 10^{-7}$ |

2.70 ctZ

| | interference | | | square | | |
|--|-----------------------|-----------------------|-------------------------------|-----------------------|-----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $HH \rightarrow zt\bar{t}$ | $2.47 \cdot 10^{-6}$ | $2.47 \cdot 10^{-6}$ | $6.072 \cdot 10^{-7}$ | $4.294 \cdot 10^{-5}$ | $4.294 \cdot 10^{-5}$ | $1.048 \cdot 10^{-6}$ |
| $HW^+ \rightarrow \gamma t\bar{b}$ | $1.08 \cdot 10^{-6}$ | $1.08 \cdot 10^{-6}$ | $5.558 \cdot 10^{-7}$ | $3.325 \cdot 10^{-5}$ | $3.325 \cdot 10^{-5}$ | $1.143 \cdot 10^{-6}$ |
| $H\gamma \rightarrow t\bar{t}$ | 2.224 | 2.224 | $5.846 \cdot 10^{-7}$ | 3.523 | 3.523 | $1.135 \cdot 10^{-6}$ |
| $HZ \rightarrow t\bar{t}$ | -0.03868 | -0.03868 | $6.205 \cdot 10^{-7}$ | 3.705 | 3.705 | $1.08 \cdot 10^{-6}$ |
| $W^+W^- \rightarrow Ht\bar{t}$ | $1.646 \cdot 10^{-8}$ | $1.646 \cdot 10^{-8}$ | $-3.037 \cdot 10^{-7}$ | $1.371 \cdot 10^{-7}$ | $1.371 \cdot 10^{-7}$ | $1.021 \cdot 10^{-6}$ |
| $b\bar{b} \rightarrow t\bar{t}$ | 0.007171 | 0.007171 | $5.439 \cdot 10^{-7}$ | 0.005187 | 0.005187 | $1.06 \cdot 10^{-6}$ |
| $t\bar{t} \rightarrow \nu_\mu \bar{\nu}_\mu$ | 0.002105 | 0.002105 | $5.7 \cdot 10^{-7}$ | 0.002192 | 0.002192 | $1.095 \cdot 10^{-6}$ |
| $t\bar{t} \rightarrow \tau^+ \tau^-$ | -0.005304 | -0.005304 | $4.902 \cdot 10^{-7}$ | 0.01616 | 0.01616 | $1.052 \cdot 10^{-6}$ |
| $t\bar{t} \rightarrow c\bar{c}$ | -0.003624 | -0.003624 | $4.968 \cdot 10^{-7}$ | 0.0119 | 0.0119 | $1.008 \cdot 10^{-6}$ |
| $t\bar{t} \rightarrow d\bar{d}$ | 0.001025 | 0.001025 | $6.833 \cdot 10^{-7}$ | 0.003451 | 0.003451 | $1.072 \cdot 10^{-6}$ |
| $t\bar{t} \rightarrow s\bar{s}$ | 0.0007418 | 0.0007418 | $7.01 \cdot 10^{-7}$ | 0.004714 | 0.004714 | $1.061 \cdot 10^{-6}$ |
| $t\bar{t} \rightarrow t\bar{t}$ | 0.3081 | 0.3081 | $5.517 \cdot 10^{-7}$ | 0.4268 | 0.4268 | $1.054 \cdot 10^{-6}$ |

2.71 ctZI

| interference | | | square | | |
|--------------|------|-------------------------------|--------|------|-------------------------------|
| mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |

| | | | | | | |
|--|-------------------------|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| $HH \rightarrow zt\bar{t}$ | $-5.213 \cdot 10^{-6}$ | $-5.213 \cdot 10^{-6}$ | $6.138 \cdot 10^{-7}$ | $5.829 \cdot 10^{-5}$ | $5.829 \cdot 10^{-5}$ | $1.064 \cdot 10^{-6}$ |
| $HW^+ \rightarrow \gamma t\bar{b}$ | $3.105 \cdot 10^{-6}$ | $3.105 \cdot 10^{-6}$ | $5.475 \cdot 10^{-7}$ | $2.949 \cdot 10^{-6}$ | $2.949 \cdot 10^{-6}$ | $1.119 \cdot 10^{-6}$ |
| $H\gamma \rightarrow t\bar{t}$ | $1.466 \cdot 10^{-16}$ | $5.979 \cdot 10^{-17}$ | 0.592 | 11.27 | 11.27 | $1.153 \cdot 10^{-6}$ |
| $HZ \rightarrow t\bar{t}$ | 0.001803 | 0.001803 | $5.547 \cdot 10^{-7}$ | 1.211 | 1.211 | $1.073 \cdot 10^{-6}$ |
| $W^+W^- \rightarrow Ht\bar{t}$ | $-7.823 \cdot 10^{-7}$ | $-7.823 \cdot 10^{-7}$ | $5.497 \cdot 10^{-7}$ | $1.655 \cdot 10^{-8}$ | $1.655 \cdot 10^{-8}$ | $1.027 \cdot 10^{-6}$ |
| $b\bar{b} \rightarrow t\bar{t}$ | $9.443 \cdot 10^{-19}$ | $2.175 \cdot 10^{-18}$ | -1.304 | 0.00231 | 0.00231 | $1.082 \cdot 10^{-6}$ |
| $t\bar{t} \rightarrow \nu_\mu \bar{\nu}_\mu$ | $1.605 \cdot 10^{-19}$ | $1.609 \cdot 10^{-19}$ | -0.002235 | 0.0005121 | 0.0005121 | $1.074 \cdot 10^{-6}$ |
| $t\bar{t} \rightarrow \tau^+ \tau^-$ | $5.383 \cdot 10^{-18}$ | $4.69 \cdot 10^{-18}$ | 0.1288 | 0.01297 | 0.01297 | $1.079 \cdot 10^{-6}$ |
| $t\bar{t} \rightarrow c\bar{c}$ | $-1.012 \cdot 10^{-10}$ | $-1.012 \cdot 10^{-10}$ | $5.931 \cdot 10^{-7}$ | 0.008299 | 0.008299 | $1.06 \cdot 10^{-6}$ |
| $t\bar{t} \rightarrow d\bar{d}$ | $-1.3 \cdot 10^{-15}$ | $-1.301 \cdot 10^{-15}$ | -0.0005302 | 0.002389 | 0.002389 | $1.088 \cdot 10^{-6}$ |
| $t\bar{t} \rightarrow s\bar{s}$ | $-4.957 \cdot 10^{-13}$ | $-4.957 \cdot 10^{-13}$ | $5.649 \cdot 10^{-7}$ | 0.003814 | 0.003814 | $1.075 \cdot 10^{-6}$ |
| $t\bar{t} \rightarrow t\bar{t}$ | $-2.584 \cdot 10^{-18}$ | $6.434 \cdot 10^{-17}$ | 25.9 | 0.9878 | 0.9878 | $1.063 \cdot 10^{-6}$ |

2.72 ctb1

| | interference | | | square | | |
|---------------------------------|--------------|----------|-------------------------------|--------|--------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $b\bar{b} \rightarrow t\bar{t}$ | -0.01225 | -0.01225 | $-8.16 \cdot 10^{-8}$ | 0.2075 | 0.2075 | 0 |

2.73 ctb8

| | interference | | | square | | |
|---------------------------------|--------------|--------|-------------------------------|---------|---------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $b\bar{b} \rightarrow t\bar{t}$ | 0.1411 | 0.1411 | 0 | 0.04105 | 0.04105 | 0 |

2.74 ctd1

| interference | square |
|--------------|--------|
|--------------|--------|

| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
|---------------------------------|----------|----------|------------------------|--------|--------|---------------|
| $t\bar{t} \rightarrow d\bar{d}$ | -0.00428 | -0.00428 | $-7.01 \cdot 10^{-8}$ | 0.0677 | 0.0677 | 0 |
| $t\bar{t} \rightarrow s\bar{s}$ | -0.03655 | -0.03655 | $-5.473 \cdot 10^{-8}$ | 0.6328 | 0.6328 | 0 |

2.75 ctd8

| | interference | | | square | | |
|---------------------------------|--------------|---------|---------------|---------|---------|---------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| $t\bar{t} \rightarrow d\bar{d}$ | 0.06406 | 0.06406 | 0 | 0.01504 | 0.01504 | 0 |
| $t\bar{t} \rightarrow s\bar{s}$ | 0.4362 | 0.4362 | 0 | 0.1406 | 0.1406 | 0 |

2.76 cte3

| | interference | | | square | | |
|-------------------------------------|--------------|----------|---------------|---------|---------|---------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| $t\bar{t} \rightarrow \tau^+\tau^-$ | -0.01226 | -0.01226 | 0 | 0.06914 | 0.06914 | 0 |

2.77 ctl2

| | interference | | | square | | |
|---|--------------|-----------|------------------------|---------|---------|---------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| $t\bar{t} \rightarrow \nu_\mu\bar{\nu}_\mu$ | -0.001767 | -0.001767 | $-1.697 \cdot 10^{-7}$ | 0.04229 | 0.04229 | 0 |

2.78 ctl3

| | interference | | | square | | |
|-------------------------------------|--------------|----------|------------------------|--------|--------|---------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| $t\bar{t} \rightarrow \tau^+\tau^-$ | -0.02509 | -0.02509 | $-3.986 \cdot 10^{-8}$ | 0.2678 | 0.2678 | 0 |

2.79 ctIS1

| | interference | | | square | | |
|--|--------------|------|---------------|---------|---------|---------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| $b\bar{t} \rightarrow e^- \bar{\nu}_e$ | 0 | 0 | 0 | 0.08333 | 0.08333 | 0 |

2.80 ctIS3

| | interference | | | square | | |
|--------------------------------------|--------------|----------|---------------|--------|--------|---------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| $t\bar{t} \rightarrow \tau^+ \tau^-$ | 0.003359 | 0.003359 | 0 | 0.1668 | 0.1668 | 0 |

2.81 ctISI1

| | interference | | | square | | |
|--|--------------|------|---------------|---------|---------|---------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| $b\bar{t} \rightarrow e^- \bar{\nu}_e$ | 0 | 0 | 0 | 0.08333 | 0.08333 | 0 |

2.82 ctISI3

| | interference | | | square | | |
|--------------------------------------|-----------------------|------------------------|---------------|--------|--------|---------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| $t\bar{t} \rightarrow \tau^+ \tau^-$ | $1.79 \cdot 10^{-20}$ | $4.788 \cdot 10^{-20}$ | -1.674 | 0.1668 | 0.1668 | 0 |

2.83 ctIT1

| | interference | | | square | | |
|--|--------------|------|---------------|--------|------|---------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |

| | | | | | | |
|--|---|---|---|--------|--------|---|
| $b\bar{t} \rightarrow e^- \bar{\nu}_e$ | 0 | 0 | 0 | 0.6623 | 0.6623 | 0 |
|--|---|---|---|--------|--------|---|

2.84 ctIT3

| | interference | | | square | | |
|--------------------------------------|--------------|---------|-------------------------------|--------|-------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $t\bar{t} \rightarrow \tau^+ \tau^-$ | 0.00146 | 0.00146 | 0 | 0.176 | 0.176 | 0 |

2.85 ctITI1

| | interference | | | square | | |
|--|--------------|------|-------------------------------|--------|--------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $b\bar{t} \rightarrow e^- \bar{\nu}_e$ | 0 | 0 | 0 | 0.9225 | 0.9225 | 0 |

2.86 ctITI3

| | interference | | | square | | |
|--------------------------------------|------------------------|------------------------|-------------------------------|--------|-------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $t\bar{t} \rightarrow \tau^+ \tau^-$ | $1.023 \cdot 10^{-18}$ | $3.636 \cdot 10^{-21}$ | 0.9964 | 0.176 | 0.176 | 0 |

2.87 ctp

| | interference | | | square | | |
|------------------------------------|------------------------|------------------------|-------------------------------|-----------------------|-----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $HH \rightarrow Ht\bar{t}$ | $-3.728 \cdot 10^{-5}$ | $-3.728 \cdot 10^{-5}$ | 0 | $1.235 \cdot 10^{-5}$ | $1.235 \cdot 10^{-5}$ | 0 |
| $HH \rightarrow W^+ t\bar{b}$ | $2.868 \cdot 10^{-5}$ | $2.868 \cdot 10^{-5}$ | $3.487 \cdot 10^{-8}$ | $1.242 \cdot 10^{-5}$ | $1.242 \cdot 10^{-5}$ | 0 |
| $HH \rightarrow zt\bar{t}$ | $4.028 \cdot 10^{-6}$ | $4.028 \cdot 10^{-6}$ | 0 | $8.287 \cdot 10^{-6}$ | $8.287 \cdot 10^{-6}$ | $1.207 \cdot 10^{-8}$ |
| $HW^+ \rightarrow \gamma t\bar{b}$ | $-1.916 \cdot 10^{-7}$ | $-1.916 \cdot 10^{-7}$ | 0 | $2.96 \cdot 10^{-8}$ | $2.96 \cdot 10^{-8}$ | $-3.379 \cdot 10^{-8}$ |

| | | | | | | |
|-------------------------------------|------------------------|------------------------|------------------------|-----------------------|-----------------------|------------------------|
| $HW^- \rightarrow t\bar{b}$ | 0.0871 | 0.0871 | $-1.148 \cdot 10^{-8}$ | 0.05153 | 0.05153 | 0 |
| $H\gamma \rightarrow t\bar{t}$ | -0.2313 | -0.2313 | $-4.323 \cdot 10^{-8}$ | 0.007097 | 0.007097 | $-4.227 \cdot 10^{-8}$ |
| $HZ \rightarrow t\bar{t}$ | 0.00448 | 0.00448 | $-1.562 \cdot 10^{-7}$ | 0.06917 | 0.06917 | 0 |
| $W^+W^- \rightarrow Hb\bar{b}$ | $9.844 \cdot 10^{-7}$ | $9.844 \cdot 10^{-7}$ | $1.016 \cdot 10^{-8}$ | $5.352 \cdot 10^{-8}$ | $5.352 \cdot 10^{-8}$ | 0 |
| $W^+W^- \rightarrow Ht\bar{t}$ | $-8.034 \cdot 10^{-7}$ | $-8.034 \cdot 10^{-7}$ | $-1.245 \cdot 10^{-8}$ | $5.599 \cdot 10^{-7}$ | $5.599 \cdot 10^{-7}$ | 0 |
| $b\bar{b} \rightarrow t\bar{t}$ | $-1.303 \cdot 10^{-5}$ | $-1.303 \cdot 10^{-5}$ | 0 | $6.089 \cdot 10^{-7}$ | $6.089 \cdot 10^{-7}$ | 0 |
| $t\bar{t} \rightarrow \tau^+\tau^-$ | $-1.013 \cdot 10^{-6}$ | $-1.013 \cdot 10^{-6}$ | 0 | $3.101 \cdot 10^{-8}$ | $3.101 \cdot 10^{-8}$ | 0 |
| $t\bar{t} \rightarrow t\bar{t}$ | 0.08418 | 0.08418 | 0 | 0.00874 | 0.00874 | 0 |

2.88 ctpI

| | interference | | | square | | |
|-------------------------------------|-------------------------|-------------------------|-------------------------------|-----------------------|-----------------------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $HH \rightarrow Ht\bar{t}$ | $5.783 \cdot 10^{-6}$ | $5.783 \cdot 10^{-6}$ | 0 | $5.133 \cdot 10^{-5}$ | $5.133 \cdot 10^{-5}$ | 0 |
| $HH \rightarrow W^+t\bar{b}$ | $-2.979 \cdot 10^{-6}$ | $-2.979 \cdot 10^{-6}$ | 0 | $1.949 \cdot 10^{-5}$ | $1.949 \cdot 10^{-5}$ | 0 |
| $HH \rightarrow Zt\bar{t}$ | $-1.834 \cdot 10^{-6}$ | $-1.834 \cdot 10^{-6}$ | $5.453 \cdot 10^{-8}$ | $8.533 \cdot 10^{-6}$ | $8.533 \cdot 10^{-6}$ | $1.172 \cdot 10^{-8}$ |
| $HW^+ \rightarrow \gamma t\bar{b}$ | $9.891 \cdot 10^{-8}$ | $9.891 \cdot 10^{-8}$ | $-5.055 \cdot 10^{-8}$ | $3.944 \cdot 10^{-8}$ | $3.944 \cdot 10^{-8}$ | $-2.536 \cdot 10^{-8}$ |
| $HW^- \rightarrow t\bar{b}$ | -0.001213 | -0.001213 | 0 | 0.05792 | 0.05792 | 0 |
| $H\gamma \rightarrow t\bar{t}$ | $2.603 \cdot 10^{-18}$ | $4.768 \cdot 10^{-18}$ | -0.8314 | 0.008063 | 0.008063 | $-3.721 \cdot 10^{-8}$ |
| $HZ \rightarrow t\bar{t}$ | $-7.3 \cdot 10^{-5}$ | $-7.3 \cdot 10^{-5}$ | $8.22 \cdot 10^{-8}$ | 0.06902 | 0.06902 | 0 |
| $W^+W^- \rightarrow Hb\bar{b}$ | $-1.467 \cdot 10^{-6}$ | $-1.467 \cdot 10^{-6}$ | 0 | $4.028 \cdot 10^{-8}$ | $4.028 \cdot 10^{-8}$ | $2.483 \cdot 10^{-8}$ |
| $W^+W^- \rightarrow Ht\bar{t}$ | $-4.996 \cdot 10^{-7}$ | $-4.996 \cdot 10^{-7}$ | $2.002 \cdot 10^{-8}$ | $7.919 \cdot 10^{-7}$ | $7.919 \cdot 10^{-7}$ | 0 |
| $b\bar{b} \rightarrow t\bar{t}$ | $6.854 \cdot 10^{-23}$ | $-1.931 \cdot 10^{-21}$ | 29.18 | $6.906 \cdot 10^{-7}$ | $6.906 \cdot 10^{-7}$ | 0 |
| $t\bar{t} \rightarrow \tau^+\tau^-$ | $-1.206 \cdot 10^{-24}$ | $3.527 \cdot 10^{-24}$ | 3.924 | $3.49 \cdot 10^{-8}$ | $3.49 \cdot 10^{-8}$ | 0 |
| $t\bar{t} \rightarrow t\bar{t}$ | $-7.384 \cdot 10^{-18}$ | $-3.075 \cdot 10^{-18}$ | 0.5836 | 0.004852 | 0.004852 | 0 |

2.89 ctq1

interference

square

| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
|---------------------------------|-----------|-----------|-------------------------------|--------|--------|-------------------------------|
| $t\bar{t} \rightarrow c\bar{c}$ | 0.01282 | 0.01282 | $-7.803 \cdot 10^{-8}$ | 0.2269 | 0.2269 | 0 |
| $t\bar{t} \rightarrow d\bar{d}$ | 0.01118 | 0.01118 | $-8.947 \cdot 10^{-8}$ | 0.592 | 0.592 | 0 |
| $t\bar{t} \rightarrow s\bar{s}$ | -0.004453 | -0.004453 | $4.491 \cdot 10^{-8}$ | 0.0548 | 0.0548 | 0 |

2.90 ctq8

| | interference | | | square | | |
|---------------------------------|--------------|---------|-------------------------------|----------|----------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $t\bar{t} \rightarrow c\bar{c}$ | 0.4758 | 0.4758 | 0 | 0.154 | 0.154 | 0 |
| $t\bar{t} \rightarrow d\bar{d}$ | 0.05069 | 0.05069 | 0 | 0.01053 | 0.01053 | 0 |
| $t\bar{t} \rightarrow s\bar{s}$ | 0.03274 | 0.03274 | 0 | 0.004474 | 0.004474 | 0 |

2.91 ctt1

| | interference | | | square | | |
|---------------------------------|--------------|--------|-------------------------------|--------|-------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $t\bar{t} \rightarrow t\bar{t}$ | -12.39 | -12.39 | 0 | 22.99 | 22.99 | 0 |

2.92 ctu1

| | interference | | | square | | |
|---------------------------------|--------------|----------|-------------------------------|---------|---------|-------------------------------|
| | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ | mod1 | mod2 | $1 - \text{mod2}/\text{mod1}$ |
| $t\bar{t} \rightarrow c\bar{c}$ | 0.005082 | 0.005082 | $-3.936 \cdot 10^{-8}$ | 0.03725 | 0.03725 | 0 |

2.93 ctu8

| interference | square |
|--------------|--------|
|--------------|--------|

| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
|---------------------------------|---------|---------|---------------|----------|----------|---------------|
| $t\bar{t} \rightarrow c\bar{c}$ | 0.04401 | 0.04401 | 0 | 0.008277 | 0.008277 | 0 |

2.94 sm

| | interference | | | square | | |
|------------------------------------|--------------|------|---------------|------------------------|------------------------|------------------------|
| | mod1 | mod2 | 1 - mod2/mod1 | mod1 | mod2 | 1 - mod2/mod1 |
| $HH \rightarrow HH$ | 0 | 0 | 0 | 0.2032 | 0.2032 | 0 |
| $HH \rightarrow HHH$ | 0 | 0 | 0 | $8.792 \cdot 10^{-7}$ | $8.792 \cdot 10^{-7}$ | 0 |
| $HH \rightarrow H\tau^+\tau^-$ | 0 | 0 | 0 | $1.922 \cdot 10^{-11}$ | $1.922 \cdot 10^{-11}$ | 0 |
| $HH \rightarrow Hb\bar{b}$ | 0 | 0 | 0 | $2.566 \cdot 10^{-7}$ | $2.566 \cdot 10^{-7}$ | 0 |
| $HH \rightarrow Ht\bar{t}$ | 0 | 0 | 0 | $1.768 \cdot 10^{-5}$ | $1.768 \cdot 10^{-5}$ | 0 |
| $HH \rightarrow Hzz$ | 0 | 0 | 0 | $8.273 \cdot 10^{-6}$ | $8.273 \cdot 10^{-6}$ | 0 |
| $HH \rightarrow W^+W^-$ | 0 | 0 | 0 | 799.4 | 799.4 | 0 |
| $HH \rightarrow W^+W^-\gamma$ | 0 | 0 | 0 | $1.481 \cdot 10^{-6}$ | $1.481 \cdot 10^{-6}$ | 0 |
| $HH \rightarrow W^+\bar{t}b$ | 0 | 0 | 0 | $2.886 \cdot 10^{-5}$ | $2.886 \cdot 10^{-5}$ | 0 |
| $HH \rightarrow W^+e^-\bar{\nu}_e$ | 0 | 0 | 0 | $1.085 \cdot 10^{-7}$ | $1.085 \cdot 10^{-7}$ | 0 |
| $HH \rightarrow W^-u\bar{d}$ | 0 | 0 | 0 | $6.589 \cdot 10^{-7}$ | $6.589 \cdot 10^{-7}$ | $4.553 \cdot 10^{-8}$ |
| $HH \rightarrow z\bar{b}b$ | 0 | 0 | 0 | $4.006 \cdot 10^{-7}$ | $4.006 \cdot 10^{-7}$ | $2.496 \cdot 10^{-8}$ |
| $HH \rightarrow z\nu_e\bar{\nu}_e$ | 0 | 0 | 0 | $9.71 \cdot 10^{-8}$ | $9.71 \cdot 10^{-8}$ | 0 |
| $HH \rightarrow zc\bar{c}$ | 0 | 0 | 0 | $1.39 \cdot 10^{-6}$ | $1.39 \cdot 10^{-6}$ | $7.194 \cdot 10^{-8}$ |
| $HH \rightarrow zd\bar{d}$ | 0 | 0 | 0 | $2.54 \cdot 10^{-7}$ | $2.54 \cdot 10^{-7}$ | 0 |
| $HH \rightarrow ze^+e^-$ | 0 | 0 | 0 | $2.551 \cdot 10^{-8}$ | $2.551 \cdot 10^{-8}$ | 0 |
| $HH \rightarrow zt\bar{t}$ | 0 | 0 | 0 | $3.125 \cdot 10^{-5}$ | $3.125 \cdot 10^{-5}$ | 0 |
| $HH \rightarrow zz$ | 0 | 0 | 0 | 0.8444 | 0.8444 | 0 |
| $HW^+ \rightarrow \gamma t\bar{b}$ | 0 | 0 | 0 | $6.799 \cdot 10^{-6}$ | $6.799 \cdot 10^{-6}$ | $-2.942 \cdot 10^{-8}$ |
| $HW^+ \rightarrow \gamma u\bar{d}$ | 0 | 0 | 0 | $5.76 \cdot 10^{-9}$ | $5.76 \cdot 10^{-9}$ | 0 |
| $HW^+ \rightarrow u\bar{d}$ | 0 | 0 | 0 | 0.01962 | 0.01962 | $5.096 \cdot 10^{-8}$ |
| $HW^- \rightarrow \bar{t}b$ | 0 | 0 | 0 | 0.1293 | 0.1293 | 0 |

| | | | | | | |
|---|---|---|---|-----------------------|-----------------------|------------------------|
| $HW^- \rightarrow \gamma e^- \bar{\nu}_e$ | 0 | 0 | 0 | $2.409 \cdot 10^{-9}$ | $2.409 \cdot 10^{-9}$ | 0 |
| $HW^- \rightarrow \mu^- \bar{\nu}_\mu$ | 0 | 0 | 0 | 0.006756 | 0.006756 | $2.96 \cdot 10^{-8}$ |
| $H\gamma \rightarrow b\bar{b}$ | 0 | 0 | 0 | 0.0003634 | 0.0003634 | $-2.752 \cdot 10^{-8}$ |
| $H\gamma \rightarrow t\bar{t}$ | 0 | 0 | 0 | 0.4237 | 0.4237 | $-4.72 \cdot 10^{-8}$ |
| $H z \rightarrow \mu^+ \mu^-$ | 0 | 0 | 0 | 0.003181 | 0.003181 | 0 |
| $H z \rightarrow \nu_\tau \bar{\nu}_\tau$ | 0 | 0 | 0 | 0.005713 | 0.005713 | 0 |
| $H z \rightarrow b\bar{b}$ | 0 | 0 | 0 | 0.01131 | 0.01131 | 0 |
| $H z \rightarrow s\bar{s}$ | 0 | 0 | 0 | 0.01182 | 0.01182 | 0 |
| $H z \rightarrow t\bar{t}$ | 0 | 0 | 0 | 1.977 | 1.977 | 0 |
| $H z \rightarrow u\bar{u}$ | 0 | 0 | 0 | 0.003022 | 0.003022 | $3.309 \cdot 10^{-8}$ |
| $W^+ W^- \rightarrow H b\bar{b}$ | 0 | 0 | 0 | $8.664 \cdot 10^{-6}$ | $8.664 \cdot 10^{-6}$ | $2.308 \cdot 10^{-8}$ |
| $W^+ W^- \rightarrow H c\bar{c}$ | 0 | 0 | 0 | $8.981 \cdot 10^{-7}$ | $8.981 \cdot 10^{-7}$ | $4.454 \cdot 10^{-8}$ |
| $W^+ W^- \rightarrow H d\bar{d}$ | 0 | 0 | 0 | $2.301 \cdot 10^{-6}$ | $2.301 \cdot 10^{-6}$ | $4.347 \cdot 10^{-8}$ |
| $W^+ W^- \rightarrow H t\bar{t}$ | 0 | 0 | 0 | $3.056 \cdot 10^{-6}$ | $3.056 \cdot 10^{-6}$ | 0 |
| $W^+ W^- \rightarrow W^+ W^-$ | 0 | 0 | 0 | 175.7 | 175.7 | $5.692 \cdot 10^{-8}$ |
| $W^+ W^- \rightarrow \gamma\gamma$ | 0 | 0 | 0 | 0.09113 | 0.09113 | $-7.681 \cdot 10^{-8}$ |
| $W^+ W^- \rightarrow \gamma\gamma\gamma$ | 0 | 0 | 0 | $4.285 \cdot 10^{-6}$ | $4.285 \cdot 10^{-6}$ | $-1.167 \cdot 10^{-7}$ |
| $\bar{b}t \rightarrow \bar{d}u$ | 0 | 0 | 0 | 0.03428 | 0.03428 | $2.917 \cdot 10^{-8}$ |
| $\gamma W^+ \rightarrow z W^+$ | 0 | 0 | 0 | 1.743 | 1.743 | 0 |
| $\mu^+ \mu^- \rightarrow \tau^+ \tau^-$ | 0 | 0 | 0 | 0.006635 | 0.006635 | $-1.055 \cdot 10^{-7}$ |
| $\nu_\tau \bar{\nu}_\tau \rightarrow \nu_\tau \bar{\nu}_\tau$ | 0 | 0 | 0 | $1.67 \cdot 10^{-5}$ | $1.67 \cdot 10^{-5}$ | 0 |
| $\nu_e \bar{\nu}_e \rightarrow \nu_\mu \bar{\nu}_\mu$ | 0 | 0 | 0 | 0.0002767 | 0.0002767 | 0 |
| $b\bar{b} \rightarrow \gamma\gamma$ | 0 | 0 | 0 | 0.0006201 | 0.0006201 | $-6.45 \cdot 10^{-8}$ |
| $b\bar{b} \rightarrow \mu^+ \mu^-$ | 0 | 0 | 0 | 0.001283 | 0.001283 | 0 |
| $b\bar{b} \rightarrow \nu_e \bar{\nu}_e$ | 0 | 0 | 0 | 0.003365 | 0.003365 | $2.972 \cdot 10^{-8}$ |
| $b\bar{b} \rightarrow b\bar{b}$ | 0 | 0 | 0 | 143.6 | 143.6 | 0 |
| $b\bar{b} \rightarrow d\bar{d}$ | 0 | 0 | 0 | 0.5087 | 0.5087 | 0 |
| $b\bar{b} \rightarrow t\bar{t}$ | 0 | 0 | 0 | 0.4239 | 0.4239 | 0 |
| $b\bar{b} \rightarrow u\bar{u}$ | 0 | 0 | 0 | 0.8203 | 0.8203 | 0 |

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|--|---|---|---|-----------|-----------|------------------------|
| $b\bar{t} \rightarrow e^- \bar{\nu}_e$ | 0 | 0 | 0 | 0.01247 | 0.01247 | 0 |
| $c\bar{c} \rightarrow \mu^+ \mu^-$ | 0 | 0 | 0 | 0.006227 | 0.006227 | $-1.606 \cdot 10^{-8}$ |
| $c\bar{s} \rightarrow \tau^+ \nu_\tau$ | 0 | 0 | 0 | 0.0003694 | 0.0003694 | $5.415 \cdot 10^{-8}$ |
| $d\bar{d} \rightarrow c\bar{c}$ | 0 | 0 | 0 | 0.788 | 0.788 | 0 |
| $d\bar{d} \rightarrow e^+ e^-$ | 0 | 0 | 0 | 0.002245 | 0.002245 | $4.455 \cdot 10^{-8}$ |
| $d\bar{d} \rightarrow s\bar{s}$ | 0 | 0 | 0 | 0.5283 | 0.5283 | 0 |
| $e^+ \nu_\mu \rightarrow e^+ \nu_\mu$ | 0 | 0 | 0 | 0.07807 | 0.07807 | $-2.562 \cdot 10^{-8}$ |
| $e^+ \nu_e \rightarrow \mu^+ \nu_\mu$ | 0 | 0 | 0 | 0.01355 | 0.01355 | $7.38 \cdot 10^{-8}$ |
| $e^+ \nu_e \rightarrow e^+ \nu_e$ | 0 | 0 | 0 | 0.005253 | 0.005253 | $-7.615 \cdot 10^{-8}$ |
| $e^+ \tau^- \rightarrow e^+ \tau^-$ | 0 | 0 | 0 | 0.5331 | 0.5331 | $-7.503 \cdot 10^{-8}$ |
| $e^+ e^- \rightarrow \mu^+ \mu^-$ | 0 | 0 | 0 | 0.006941 | 0.006941 | $-1.009 \cdot 10^{-7}$ |
| $e^+ e^- \rightarrow e^+ e^-$ | 0 | 0 | 0 | 0.2858 | 0.2858 | $-6.998 \cdot 10^{-8}$ |
| $gg \rightarrow gg$ | 0 | 0 | 0 | 59.62 | 59.62 | 0 |
| $gg \rightarrow ggg$ | 0 | 0 | 0 | 0.006263 | 0.006263 | 0 |
| $gg \rightarrow t\bar{t}$ | 0 | 0 | 0 | 0.7636 | 0.7636 | 0 |
| $gg \rightarrow u\bar{u}$ | 0 | 0 | 0 | 0.6311 | 0.6311 | 0 |
| $s\bar{s} \rightarrow \nu_\tau \bar{\nu}_\tau$ | 0 | 0 | 0 | 0.0001513 | 0.0001513 | $-1.322 \cdot 10^{-7}$ |
| $s\bar{s} \rightarrow s\bar{s}$ | 0 | 0 | 0 | 2.853 | 2.853 | 0 |
| $t\bar{t} \rightarrow \nu_\mu \bar{\nu}_\mu$ | 0 | 0 | 0 | 0.001368 | 0.001368 | $7.311 \cdot 10^{-8}$ |
| $t\bar{t} \rightarrow \tau^+ \tau^-$ | 0 | 0 | 0 | 0.0008833 | 0.0008833 | $-9.057 \cdot 10^{-8}$ |
| $t\bar{t} \rightarrow c\bar{c}$ | 0 | 0 | 0 | 0.7727 | 0.7727 | 0 |
| $t\bar{t} \rightarrow d\bar{d}$ | 0 | 0 | 0 | 0.7544 | 0.7544 | 0 |
| $t\bar{t} \rightarrow s\bar{s}$ | 0 | 0 | 0 | 0.8549 | 0.8549 | 0 |
| $t\bar{t} \rightarrow t\bar{t}$ | 0 | 0 | 0 | 3.275 | 3.275 | 0 |
| $u\bar{d} \rightarrow \mu^+ \nu_\mu$ | 0 | 0 | 0 | 0.005364 | 0.005364 | $3.729 \cdot 10^{-8}$ |
| $u\bar{d} \rightarrow c\bar{s}$ | 0 | 0 | 0 | 0.0007798 | 0.0007798 | $2.565 \cdot 10^{-8}$ |
| $u\bar{d} \rightarrow u\bar{d}$ | 0 | 0 | 0 | 39.42 | 39.42 | 0 |
| $u\bar{u} \rightarrow \nu_e \bar{\nu}_e$ | 0 | 0 | 0 | 0.0007665 | 0.0007665 | 0 |
| $u\bar{u} \rightarrow c\bar{c}$ | 0 | 0 | 0 | 0.8487 | 0.8487 | 0 |

| | | | | | | |
|---------------------------------|---|---|---|---------|---------|-----------------------|
| $u\bar{u} \rightarrow u\bar{u}$ | 0 | 0 | 0 | 6.63 | 6.63 | 0 |
| $zz \rightarrow W^+W^-$ | 0 | 0 | 0 | 40.26 | 40.26 | $7.451 \cdot 10^{-8}$ |
| $zz \rightarrow zz$ | 0 | 0 | 0 | 0.08114 | 0.08114 | 0 |