

# 1 By process

## 1.1 $\gamma\gamma \rightarrow \bar{t}t$

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
ctW	0.7607	0.7607	$-1.577 \cdot 10^{-7}$	1.041	1.041	$-3.842 \cdot 10^{-7}$
ctWI	$-5.337 \cdot 10^{-17}$	0	1	0.9642	0	1
ctZ	-0.6659	-0.6659	$-6.007 \cdot 10^{-8}$	0.7978	0.7978	$-1.379 \cdot 10^{-7}$
ctZI	$1.346 \cdot 10^{-17}$	0	1	0.7389	0	1
sm	0	0	0	0.3044	0.3044	$3.286 \cdot 10^{-8}$

## 1.2 $\gamma b \rightarrow W^- t$

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
cbW	0	0	0	0.6775	0	1
cbWI	0	0	0	0.6775	0	1
cpQ3	0.217	0.217	0	0.006577	0.006577	$1.52 \cdot 10^{-8}$
cptb	0	0	0	0.001644	0	1
cptbI	0	0	0	0.001644	0	1
ctW	0.1259	0.1259	$-2.384 \cdot 10^{-7}$	2.165	2.165	$-6.004 \cdot 10^{-7}$
ctWI	$4.385 \cdot 10^{-17}$	0	1	2.168	0	1
ctZ	-0.1533	-0.1533	$-6.523 \cdot 10^{-8}$	5.245	5.245	$-1.525 \cdot 10^{-7}$
ctZI	$-8.789 \cdot 10^{-17}$	0	1	5.245	0	1
sm	0	0	0	1.789	1.789	0

### 1.3 $\gamma t \rightarrow Ht$

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
ctW	-0.03758	-0.03758	$-1.863 \cdot 10^{-7}$	4.716	4.716	$-3.392 \cdot 10^{-7}$
ctWI	$-6.478 \cdot 10^{-18}$	0	1	4.716	0	1
ctZ	0.03289	0.03289	$-6.08 \cdot 10^{-8}$	3.614	3.614	$-1.383 \cdot 10^{-7}$
ctZI	$5.638 \cdot 10^{-18}$	0	1	3.614	0	1
ctp	-0.001533	-0.001533	0	$4.703 \cdot 10^{-5}$	$4.703 \cdot 10^{-5}$	$2.126 \cdot 10^{-8}$
ctpI	$-6.22 \cdot 10^{-21}$	0	1	$3.118 \cdot 10^{-5}$	0	1
sm	0	0	0	0.01249	0.01249	$8.007 \cdot 10^{-8}$

### 1.4 $\gamma t \rightarrow zt$

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
cpQM	-0.00107	-0.00107	0	$4.622 \cdot 10^{-5}$	$4.622 \cdot 10^{-5}$	$2.164 \cdot 10^{-8}$
cpt	0.000519	0.000519	$1.927 \cdot 10^{-8}$	$4.622 \cdot 10^{-5}$	$4.622 \cdot 10^{-5}$	$2.164 \cdot 10^{-8}$
ctW	0.02216	0.02216	$-1.805 \cdot 10^{-7}$	7.218	7.218	$-3.464 \cdot 10^{-7}$
ctWI	$5.617 \cdot 10^{-18}$	0	1	7.218	0	1
ctZ	-0.01939	-0.01939	$-5.158 \cdot 10^{-8}$	5.532	5.532	$-1.627 \cdot 10^{-7}$
ctZI	$-4.446 \cdot 10^{-18}$	0	1	5.532	0	1
sm	0	0	0	0.007406	0.007406	0

## 1.5 $\mu^- \mu^+ \rightarrow \bar{t} t$

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
cQe2	-0.04978	-0.04978	$2.009 \cdot 10^{-8}$	0.8234	0.8234	0
cQ1M2	-0.1656	-0.1656	0	0.68	0.68	0
cpQM	-0.0005444	-0.0005444	$-3.674 \cdot 10^{-8}$	$2.621 \cdot 10^{-5}$	$2.621 \cdot 10^{-5}$	0
cpt	$6.605 \cdot 10^{-5}$	$6.605 \cdot 10^{-5}$	$3.179 \cdot 10^{-7}$	$2.687 \cdot 10^{-5}$	$2.687 \cdot 10^{-5}$	0
ctW	0.0603	0.0603	$-1.493 \cdot 10^{-7}$	0.1707	0.1707	$-2.93 \cdot 10^{-7}$
ctWI	$-2.315 \cdot 10^{-18}$	0	1	0.1345	0	1
ctZ	-0.04818	-0.04818	$-4.151 \cdot 10^{-8}$	0.1394	0.1394	$-1.435 \cdot 10^{-7}$
ctZI	$2.221 \cdot 10^{-18}$	0	1	0.1098	0	1
cte2	-0.1202	-0.1202	0	0.68	0.68	0
ct12	-0.0907	-0.0907	$2.205 \cdot 10^{-8}$	0.8234	0.8234	0
ct1S2	0	0	0	1.411	0	1
ct1SI2	0	0	0	1.411	0	1
ct1T2	0	0	0	1.475	0	1
ct1TI2	0	0	0	1.475	0	1
sm	0	0	0	0.01722	0.01722	0

## 1.6 $\nu_\mu \bar{\nu}_\mu \rightarrow \bar{t}t$

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
cQ132	0.2623	0.2623	0	2.916	2.916	0
cQ1M2	0.1311	0.1311	0	0.7289	0.7289	0
cpQM	-0.0011	-0.0011	0	$5.125 \cdot 10^{-5}$	$5.125 \cdot 10^{-5}$	0
cpt	0.0004158	0.0004158	$2.405 \cdot 10^{-8}$	$5.424 \cdot 10^{-5}$	$5.424 \cdot 10^{-5}$	0
ctW	0	$-1.249 \cdot 10^{-9}$	$\infty$	0	$9.769 \cdot 10^{-16}$	$\infty$
ctZ	0.006731	0.006731	$-1.04 \cdot 10^{-7}$	0.02836	0.02836	$-1.41 \cdot 10^{-7}$
ctZI	$-7.919 \cdot 10^{-20}$	0	1	0.02236	0	1
ct12	-0.04959	-0.04959	$4.033 \cdot 10^{-8}$	0.7714	0.7714	0
sm	0	0	0	0.007312	0.007312	$-1.368 \cdot 10^{-8}$

### 1.7 $\nu_\mu\mu^+ \rightarrow \bar{b}t$

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
cQ132	0.1687	0.1687	0	0.7974	0.7974	0
cbW	0	0	0	0.03074	0	1
cbWI	0	0	0	0.03074	0	1
cb1S2	0	0	0	0.7278	0	1
cb1SI2	0	0	0	0.7278	0	1
cpQ3	0.001082	0.001082	0	$3.279 \cdot 10^{-5}$	$3.279 \cdot 10^{-5}$	$-3.049 \cdot 10^{-8}$
cptb	0	0	0	$6.786 \cdot 10^{-5}$	0	1
cptbI	0	0	0	$6.786 \cdot 10^{-5}$	0	1
ctW	0.01208	0.01208	0	0.02853	0.02853	0
ctWI	$1.084 \cdot 10^{-19}$	0	1	0.02853	0	1
ct1S2	0	0	0	0.7278	0	1
ct1SI2	0	0	0	0.7278	0	1
ct1T2	0	0	0	3.151	0	1
ct1TI2	0	0	0	3.151	0	1
sm	0	0	0	0.008923	0.008923	$-1.121 \cdot 10^{-8}$

## 1.8 $\nu_\tau \bar{\nu}_\tau \rightarrow \bar{t}t$

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
cQ133	0.0824	0.0824	$-1.214 \cdot 10^{-8}$	1.026	1.026	0
cQ1M3	0.0412	0.0412	0	0.2565	0.2565	0
cpQM	-0.0003455	-0.0003455	0	$1.804 \cdot 10^{-5}$	$1.804 \cdot 10^{-5}$	0
cpt	0.0009438	0.0009438	$2.119 \cdot 10^{-8}$	0.0001056	0.0001056	0
ctW	0	$1.321 \cdot 10^{-10}$	$\infty$	0	$8.265 \cdot 10^{-16}$	$\infty$
ctZ	-0.0007116	-0.0007116	$2.811 \cdot 10^{-7}$	0.024	0.024	$-1.25 \cdot 10^{-7}$
ctZI	$6.48 \cdot 10^{-20}$	0	1	0.01799	0	1
ctl3	-0.1126	-0.1126	0	1.502	1.502	0
sm	0	0	0	0.004387	0.004387	0

### 1.9 $\nu_\tau b \rightarrow \tau^- t$

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
cQ133	-3.273	-3.273	0	3.882	3.882	0
cbW	0	0	0	0.1406	0	1
cbWI	0	0	0	0.1406	0	1
cb1S3	0	0	0	0.01655	0	1
cb1SI3	0	0	0	0.01655	0	1
cpQ3	0.08364	0.08364	$-1.196 \cdot 10^{-8}$	0.002535	0.002535	0
cptb	0	0	0	0.0003597	0	1
cptbI	0	0	0	0.0003597	0	1
ctW	0.06381	0.06381	$-1.567 \cdot 10^{-8}$	0.1508	0.1508	0
ctWI	$6.822 \cdot 10^{-18}$	0	1	0.1508	0	1
ct1S3	0	0	0	0.01655	0	1
ct1SI3	0	0	0	0.01655	0	1
ct1T3	0	0	0	11.9	0	1
ct1TI3	0	0	0	11.9	0	1
sm	0	0	0	0.6898	0.6898	$-1.45 \cdot 10^{-8}$

### 1.10 $\nu_e \bar{\nu}_e \rightarrow \bar{t} t$

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
cQ131	0.00535	0.00535	$-9.346 \cdot 10^{-8}$	0.2169	0.2169	0
cQ1M1	0.002675	0.002675	$-7.477 \cdot 10^{-8}$	0.05422	0.05422	0
cpQM	$-2.243 \cdot 10^{-5}$	$-2.243 \cdot 10^{-5}$	$-8.917 \cdot 10^{-8}$	$3.812 \cdot 10^{-6}$	$3.812 \cdot 10^{-6}$	0
cpt	0.001483	0.001483	$6.745 \cdot 10^{-8}$	0.000158	0.000158	0
ctW	0	$1.221 \cdot 10^{-9}$	$\infty$	0	$5.101 \cdot 10^{-16}$	$\infty$
ctZ	-0.006577	-0.006577	$-1.521 \cdot 10^{-8}$	0.01481	0.01481	$-1.351 \cdot 10^{-7}$
ctZI	$3.334 \cdot 10^{-19}$	0	1	0.008805	0	1
ctl1	-0.1768	-0.1768	0	2.248	2.248	0
sm	0	0	0	0.003938	0.003938	$2.54 \cdot 10^{-8}$



### 1.11 $\nu_e e^+ \rightarrow \bar{b} t$

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
cQ131	0.7017	0.7017	0	3.317	3.317	0
cbW	0	0	0	0.03847	0	1
cbWI	0	0	0	0.03847	0	1
cb1S1	0	0	0	0.7278	0	1
cb1SI1	0	0	0	0.7278	0	1
cpQ3	0.0045	0.0045	0	0.0001364	0.0001364	$-7.332 \cdot 10^{-8}$
cptb	0	0	0	$2.77 \cdot 10^{-5}$	0	1
cptbI	0	0	0	$2.77 \cdot 10^{-5}$	0	1
ctW	0.02536	0.02536	0	0.0387	0.0387	0
ctWI	$-4.337 \cdot 10^{-19}$	0	1	0.0387	0	1
ct1S1	0	0	0	0.7278	0	1
ct1SI1	0	0	0	0.7278	0	1
ct1T1	0	0	0	0.3768	0	1
ct1TI1	0	0	0	0.3768	0	1
sm	0	0	0	0.03711	0.03711	$-2.695 \cdot 10^{-8}$

### 1.12 $bW^+ \rightarrow Ht$

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
cbW	0	0	0	0.3834	0	1
cbWI	0	0	0	0.3834	0	1
cpQ3	0.08588	0.08588	$1.164 \cdot 10^{-8}$	0.267	0.267	0
cptb	0	0	0	0.06676	0	1
cptbI	0	0	0	0.06676	0	1
ctW	0.04947	0.04947	0	0.3834	0.3834	0
ctWI	$6.095 \cdot 10^{-18}$	0	1	0.3834	0	1
ctp	-0.01183	-0.01183	0	0.009616	0.009616	0
ctpI	$-7.703 \cdot 10^{-18}$	0	1	0.00833	0	1
sm	0	0	0	0.01388	0.01388	0

### 1.13 $bz \rightarrow W^-t$

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
cbW	0	0	0	0.7328	0	1
cbWI	0	0	0	0.7328	0	1
cpQ3	-0.252	-0.252	$-3.969 \cdot 10^{-8}$	0.2808	0.2808	0
cpQM	-0.2453	-0.2453	0	0.007377	0.007377	0
cpt	0.2299	0.2299	0	0.007431	0.007431	0
cptb	0	0	0	0.07097	0	1
cptbI	0	0	0	0.07097	0	1
ctW	-0.3156	-0.3156	$-3.169 \cdot 10^{-8}$	1.251	1.251	$-7.995 \cdot 10^{-8}$
ctWI	$-3.559 \cdot 10^{-15}$	0	1	1.251	0	1
ctZ	0.08488	0.08488	$-7.069 \cdot 10^{-8}$	0.2873	0.2873	$-1.044 \cdot 10^{-7}$
ctZI	$-1.032 \cdot 10^{-16}$	0	1	0.2873	0	1
sm	0	0	0	2.046	2.046	0

### 1.14 $c\bar{c} \rightarrow t\bar{t}$

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
cQq11	0.1884	0.1884	0	0.8589	0.8589	0
cQq13	0.1884	0.1884	0	0.8589	0.8589	0
cQq81	0.5875	0.5875	0	0.1909	0.1909	0
cQq83	0.5875	0.5875	0	0.1909	0.1909	0
cQu1	0.003528	0.003528	$2.834 \cdot 10^{-8}$	0.005363	0.005363	0
cQu8	0.02311	0.02311	0	0.001192	0.001192	0
cpQM	-0.001078	-0.001078	0	$2.865 \cdot 10^{-5}$	$2.865 \cdot 10^{-5}$	0
cpt	0.0002203	0.0002203	$4.54 \cdot 10^{-8}$	$6.042 \cdot 10^{-6}$	$6.042 \cdot 10^{-6}$	$3.31 \cdot 10^{-8}$
ctG	0.1932	0.1932	0	0.01563	0.01563	$1.28 \cdot 10^{-7}$
ctGI	$-3.113 \cdot 10^{-18}$	0	1	0.006139	0	1
ctQqu1	0	0	0	0.4704	0	1
ctQqu1I	0	0	0	0.4704	0	1
ctQqu8	0	0	0	0.1045	0	1
ctQqu8I	0	0	0	0.1045	0	1
ctW	0.01617	0.01617	$-6.183 \cdot 10^{-8}$	0.008831	0.008831	$-2.718 \cdot 10^{-7}$
ctWI	$4.488 \cdot 10^{-20}$	0	1	0.003469	0	1
ctZ	-0.009365	-0.009365	$-5.339 \cdot 10^{-8}$	0.006133	0.006133	$-1.304 \cdot 10^{-7}$
ctZI	$-1.631 \cdot 10^{-19}$	0	1	0.002409	0	1
ctq1	0.006612	0.006612	0	0.005363	0.005363	0
ctq8	0.02311	0.02311	0	0.001192	0.001192	0
ctu1	0.09891	0.09891	$2.022 \cdot 10^{-8}$	0.8589	0.8589	0
ctu8	0.5875	0.5875	0	0.1909	0.1909	0
sm	0	0	0	0.9217	0.9217	0

### 1.15 $c\bar{s} \rightarrow \bar{b}t$

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
cQbqu1	0	0	0	0.2426	0	1
cQbqu1I	0	0	0	0.2426	0	1
cQbqu1T	0	0	0	1.719	0	1
cQbqu1TI	0	0	0	1.719	0	1
cQbqu8	0	0	0	0.05391	0	1
cQbqu8I	0	0	0	0.05391	0	1
cQbqu8T	0	0	0	0.382	0	1
cQbqu8TI	0	0	0	0.382	0	1
cQq13	0.5641	0.5641	$-1.773 \cdot 10^{-8}$	2.667	2.667	0
cQq83	$-6.168 \cdot 10^{-18}$	0	1	0.5926	0.5926	0
cQtqd1	0	0	0	0.2426	0	1
cQtqd1I	0	0	0	0.2426	0	1
cQtqd1T	0	0	0	1.719	0	1
cQtqd1TI	0	0	0	1.719	0	1
cQtqd8	0	0	0	0.05391	0	1
cQtqd8I	0	0	0	0.05391	0	1
cQtqd8T	0	0	0	0.382	0	1
cQtqd8TI	0	0	0	0.382	0	1
cbQqd1	0	0	0	0.2426	0	1
cbQqd1I	0	0	0	0.2426	0	1
cbQqd8	0	0	0	0.05391	0	1
cbQqd8I	0	0	0	0.05391	0	1
cbW	0	0	0	0.007237	0	1
cbWI	0	0	0	0.007237	0	1
cbtud1	0	0	0	0.6667	0	1
cbtud1I	0	0	0	0.6667	0	1
cbtud8	0	0	0	0.1481	0	1
cbtud8I	0	0	0	0.1481	0	1
cpQ3	0.003618	0.003618	$-2.764 \cdot 10^{-8}$	0.0001097	0.0001097	0
cptb	0	0	0	$1.374 \cdot 10^{-6}$	0	1
cptbI	0	0	0	$1.374 \cdot 10^{-6}$	0	1
ctQqu1	0	0	0	0.2426	0	1
ctQqu1I	0	0	0	0.2426	0	1
ctQqu8	0	0	0	0.05391	0	1

## 1.16 $d\bar{d} \rightarrow t\bar{t}$

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
cQd1	-0.002009	-0.002009	$4.979 \cdot 10^{-8}$	0.02282	0.02282	0
cQd8	0.03465	0.03465	0	0.00507	0.00507	0
cQq11	-0.1465	-0.1465	0	0.7207	0.7207	0
cQq13	0.1465	0.1465	0	0.7207	0.7207	0
cQq81	0.4962	0.4962	0	0.1602	0.1602	0
cQq83	-0.4962	-0.4962	0	0.1602	0.1602	0
cQtqd1	0	0	0	0.4704	0	1
cQtqd1I	0	0	0	0.4704	0	1
cQtqd1T	0	0	0	4.37	0	1
cQtqd1TI	0	0	0	4.37	0	1
cQtqd8	0	0	0	0.1045	0	1
cQtqd8I	0	0	0	0.1045	0	1
cQtqd8T	0	0	0	0.9711	0	1
cQtqd8TI	0	0	0	0.9711	0	1
cpQM	-0.001034	-0.001034	0	$3.615 \cdot 10^{-5}$	$3.615 \cdot 10^{-5}$	0
cpt	$1.619 \cdot 10^{-5}$	$1.619 \cdot 10^{-5}$	$1.853 \cdot 10^{-7}$	$2.373 \cdot 10^{-6}$	$2.373 \cdot 10^{-6}$	0
ctG	0.1932	0.1932	$5.175 \cdot 10^{-8}$	0.02531	0.02531	$7.903 \cdot 10^{-8}$
ctGI	$2.763 \cdot 10^{-18}$	0	1	0.01582	0	1
ctW	0.005689	0.005689	$1.758 \cdot 10^{-8}$	0.003575	0.003575	$-1.119 \cdot 10^{-7}$
ctWI	$2.786 \cdot 10^{-20}$	0	1	0.002235	0	1
ctZ	0.001055	0.001055	$-1.895 \cdot 10^{-7}$	0.00295	0.00295	$-1.356 \cdot 10^{-7}$
ctZI	$9.391 \cdot 10^{-21}$	0	1	0.001844	0	1
ctd1	-0.04156	-0.04156	$2.406 \cdot 10^{-8}$	0.7207	0.7207	0
ctd8	0.4962	0.4962	0	0.1602	0.1602	0
ctq1	-0.005384	-0.005384	$-1.857 \cdot 10^{-8}$	0.02282	0.02282	0
ctq8	0.03465	0.03465	0	0.00507	0.00507	0
sm	0	0	0	0.7978	0.7978	0

### 1.17 $e^-e^+ \rightarrow t\bar{t}$

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
cQe1	-0.02305	-0.02305	$4.339 \cdot 10^{-8}$	0.1868	0.1868	0
cQ1M1	-0.4003	-0.4003	0	1.69	1.69	0
cpQM	-0.001697	-0.001697	$-5.892 \cdot 10^{-8}$	$3.657 \cdot 10^{-5}$	$3.657 \cdot 10^{-5}$	$-2.735 \cdot 10^{-8}$
cpt	0.0009858	0.0009858	$5.072 \cdot 10^{-8}$	$2.968 \cdot 10^{-5}$	$2.968 \cdot 10^{-5}$	$3.37 \cdot 10^{-8}$
ctW	0.07798	0.07798	$-1.411 \cdot 10^{-7}$	0.1326	0.1326	$-3.016 \cdot 10^{-7}$
ctWI	$2.174 \cdot 10^{-18}$	0	1	0.09645	0	1
ctZ	-0.063	-0.063	$-4.762 \cdot 10^{-8}$	0.1083	0.1083	$-9.231 \cdot 10^{-8}$
ctZI	$-1.81 \cdot 10^{-18}$	0	1	0.07877	0	1
cte1	-0.2932	-0.2932	$3.411 \cdot 10^{-8}$	1.69	1.69	0
ctl1	-0.03652	-0.03652	$2.738 \cdot 10^{-8}$	0.1868	0.1868	0
ctlS1	0	0	0	1.411	0	1
ctlSI1	0	0	0	1.411	0	1
ctlT1	0	0	0	7.444	0	1
ctlTI1	0	0	0	7.444	0	1
sm	0	0	0	0.03683	0.03683	$2.715 \cdot 10^{-8}$

### 1.18 $g\gamma \rightarrow t\bar{t}$

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
ctG	0.0297	0.0297	$6.733 \cdot 10^{-8}$	0.01059	0.01059	$9.444 \cdot 10^{-8}$
ctGI	$9.954 \cdot 10^{-19}$	0	1	0.01059	0	1
ctW	0.3587	0.3587	$-1.394 \cdot 10^{-7}$	1.544	1.544	$-3.239 \cdot 10^{-7}$
ctWI	$-8.389 \cdot 10^{-18}$	0	1	1.544	0	1
ctZ	-0.314	-0.314	$-6.37 \cdot 10^{-8}$	1.183	1.183	$-1.691 \cdot 10^{-7}$
ctZI	$3.682 \cdot 10^{-18}$	0	1	1.183	0	1
sm	0	0	0	0.2034	0.2034	$4.916 \cdot 10^{-8}$

### 1.19 $gb \rightarrow W^-t$

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
cbW	0	0	0	0.01642	0	1
cbWI	0	0	0	0.01642	0	1
cpQ3	0.01327	0.01327	0	0.0004023	0.0004023	$-2.485 \cdot 10^{-8}$
cptb	0	0	0	0.0001006	0	1
cptbI	0	0	0	0.0001006	0	1
ctG	0.008518	0.008518	$3.522 \cdot 10^{-8}$	0.269	0.269	$7.436 \cdot 10^{-8}$
ctGI	$-2.577 \cdot 10^{-18}$	0	1	0.269	0	1
ctW	-0.005449	-0.005449	0	0.01642	0.01642	0
ctWI	$2.127 \cdot 10^{-19}$	0	1	0.01642	0	1
sm	0	0	0	0.1095	0.1095	0

### 1.20 $gg \rightarrow \bar{t}t$

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
ctG	0.1391	0.1391	$7.191 \cdot 10^{-8}$	0.08771	0.08771	$9.121 \cdot 10^{-8}$
ctGI	$9.152 \cdot 10^{-19}$	0	1	0.08173	0	1
sm	0	0	0	0.4418	0.4418	0

### 1.21 $gt \rightarrow Ht$

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
ctG	-0.009187	-0.009187	$4.354 \cdot 10^{-8}$	0.275	0.275	$7.273 \cdot 10^{-8}$
ctGI	$3.32 \cdot 10^{-19}$	0	1	0.275	0	1
ctp	-0.00124	-0.00124	0	$3.803 \cdot 10^{-5}$	$3.803 \cdot 10^{-5}$	0
ctpI	$6.212 \cdot 10^{-21}$	0	1	$1.598 \cdot 10^{-5}$	0	1
sm	0	0	0	0.0101	0.0101	0

### 1.22 $gt \rightarrow zt$

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
cpQM	-0.07748	-0.07748	0	0.002558	0.002558	0
cpt	0.06912	0.06912	0	0.002558	0.002558	0
ctG	0.06659	0.06659	$4.505 \cdot 10^{-8}$	0.04428	0.04428	$9.033 \cdot 10^{-8}$
ctGI	$-8.842 \cdot 10^{-19}$	0	1	0.04428	0	1
ctW	0	$-2.731 \cdot 10^{-9}$	$\infty$	0	$3.354 \cdot 10^{-15}$	$\infty$
ctZ	0.01472	0.01472	$-6.795 \cdot 10^{-8}$	0.09738	0.09738	$-1.335 \cdot 10^{-7}$
ctZI	$8.729 \cdot 10^{-19}$	0	1	0.09808	0	1
sm	0	0	0	0.6175	0.6175	0



### 1.23 $s\bar{s} \rightarrow t\bar{t}$

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
cQd1	-0.01371	-0.01371	0	0.8586	0.8586	0
cQd8	0.5873	0.5873	0	0.1908	0.1908	0
cQq11	-0.0002408	-0.0002408	$-1.246 \cdot 10^{-7}$	0.005389	0.005389	0
cQq13	0.0002408	0.0002408	$-1.246 \cdot 10^{-7}$	0.005389	0.005389	0
cQq81	0.02313	0.02313	0	0.001198	0.001198	0
cQq83	-0.02313	-0.02313	0	0.001198	0.001198	0
cQtqd1	0	0	0	0.4704	0	1
cQtqd1I	0	0	0	0.4704	0	1
cQtqd1T	0	0	0	6.297	0	1
cQtqd1TI	0	0	0	6.297	0	1
cQtqd8	0	0	0	0.1045	0	1
cQtqd8I	0	0	0	0.1045	0	1
cQtqd8T	0	0	0	1.399	0	1
cQtqd8TI	0	0	0	1.399	0	1
cpQM	$1.62 \cdot 10^{-5}$	$1.62 \cdot 10^{-5}$	$6.171 \cdot 10^{-8}$	$1.735 \cdot 10^{-6}$	$1.735 \cdot 10^{-6}$	0
cpt	0.000135	0.000135	0	$4.303 \cdot 10^{-5}$	$4.303 \cdot 10^{-5}$	0
ctG	0.1932	0.1932	$5.175 \cdot 10^{-8}$	0.01565	0.01565	$1.278 \cdot 10^{-7}$
ctGI	$-5.11 \cdot 10^{-18}$	0	1	0.006164	0	1
ctW	0.0001348	0.0001348	$-1.038 \cdot 10^{-6}$	0.002211	0.002211	$-9.044 \cdot 10^{-8}$
ctWI	$-6.023 \cdot 10^{-21}$	0	1	0.0008708	0	1
ctZ	-0.0006891	-0.0006891	$-2.902 \cdot 10^{-8}$	0.001825	0.001825	$-1.644 \cdot 10^{-7}$
ctZI	$-1.052 \cdot 10^{-20}$	0	1	0.0007186	0	1
ctd1	-0.0007218	-0.0007218	$2.771 \cdot 10^{-8}$	0.005389	0.005389	0
ctd8	0.02313	0.02313	0	0.001198	0.001198	0
ctq1	0.01893	0.01893	$5.281 \cdot 10^{-8}$	0.8586	0.8586	0
ctq8	0.5873	0.5873	0	0.1908	0.1908	0
sm	0	0	0	0.9085	0.9085	0

### 1.24 $tH \rightarrow Ht$

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
ctp	-0.3478	-0.3478	0	0.297	0.297	0
ctpI	$-3.783 \cdot 10^{-20}$	0	1	0.21	0	1
sm	0	0	0	1.013	1.013	0

### 1.25 $tW^+ \rightarrow W^+t$

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
cpQ3	-0.1134	-0.1134	$8.816 \cdot 10^{-8}$	1.917	1.917	0
cpQM	-0.2282	-0.2282	$4.381 \cdot 10^{-8}$	0.444	0.444	0
cpt	-0.6789	-0.6789	0	0.444	0.444	0
ctW	0.159	0.159	$-6.288 \cdot 10^{-8}$	4.123	4.123	$-2.425 \cdot 10^{-8}$
ctWI	$-3.012 \cdot 10^{-16}$	0	1	4.101	0	1
ctZ	-0.04736	-0.04736	$-6.335 \cdot 10^{-8}$	0.04814	0.04814	$-1.246 \cdot 10^{-7}$
ctZI	$2.114 \cdot 10^{-16}$	0	1	0.04858	0	1
ctp	-0.03083	-0.03083	0	0.004297	0.004297	0
ctpI	$-6.078 \cdot 10^{-17}$	0	1	0.003107	0	1
sm	0	0	0	1.755	1.755	0

## 1.26 $t\tau^- \rightarrow \tau^- t$

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
cQe3	0.03707	0.03707	$2.698 \cdot 10^{-8}$	0.365	0.365	0
cQ1M3	0.5733	0.5733	0	0.9704	0.9704	0
cpQM	-0.006063	-0.006063	$-3.299 \cdot 10^{-8}$	0.0001573	0.0001573	0
cpt	0.003349	0.003349	$2.986 \cdot 10^{-8}$	0.0001398	0.0001398	0
ctW	0.06317	0.06317	$-1.425 \cdot 10^{-7}$	0.32	0.32	$-3.437 \cdot 10^{-7}$
ctWI	$5.157 \cdot 10^{-17}$	0	1	0.3079	0	1
ctZ	-0.05228	-0.05228	$-5.738 \cdot 10^{-8}$	0.2601	0.2601	$-1.153 \cdot 10^{-7}$
ctZI	$-4.298 \cdot 10^{-17}$	0	1	0.2503	0	1
cte3	0.4256	0.4256	$2.35 \cdot 10^{-8}$	0.9704	0.9704	0
ct13	0.0748	0.0748	$2.674 \cdot 10^{-8}$	0.365	0.365	0
ct1S3	0	0	0	0.08399	0	1
ct1SI3	0	0	0	0.08399	0	1
ct1T3	0	0	0	20.02	0	1
ct1TI3	0	0	0	20.02	0	1
sm	0	0	0	0.1371	0.1371	$7.294 \cdot 10^{-8}$

## 1.27 $tb \rightarrow bt$

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
cQQ1	-0.286	-0.286	0	0.9704	0.9704	0
cQQ8	-1.597	-1.597	0	0.2156	0.2156	0
cQb1	-0.0002848	0	1	0.07006	0	1
cQb8	-0.04379	0	1	0.01557	0	1
cQd1	0	-0.0002848	$\infty$	0	0.07006	$\infty$
cQd8	0	-0.04379	$\infty$	0	0.01557	$\infty$
cQt1	-0.0814	-0.0814	0	0.07006	0.07006	0
cQt8	-0.1409	-0.1409	0	0.01557	0.01557	0
cQtQb1	0	0	0	0.2598	0	1
cQtQb1I	0	0	0	0.2598	0	1
cQtQb8	0	0	0	0.08278	0	1
cQtQb8I	0	0	0	0.08278	0	1
cbW	0	0	0	0.3333	0	1
cbWI	0	0	0	0.3333	0	1
cpQ3	0.4273	0.4273	0	0.01346	0.01346	0
cpQM	0.0007857	0.0007857	$1.273 \cdot 10^{-8}$	$3.787 \cdot 10^{-6}$	$3.787 \cdot 10^{-6}$	$5.282 \cdot 10^{-8}$
cpt	0.0009039	0.0009039	0	$9.289 \cdot 10^{-6}$	$9.289 \cdot 10^{-6}$	$1.077 \cdot 10^{-8}$
cptb	0	0	0	0.001224	0	1
cptbI	0	0	0	0.001224	0	1
ctG	0.2691	0.2691	$7.433 \cdot 10^{-8}$	0.06195	0.06195	$8.071 \cdot 10^{-8}$
ctGI	$2.686 \cdot 10^{-17}$	0	1	0.05246	0	1
ctW	0.5328	0.5328	$-1.877 \cdot 10^{-8}$	0.347	0.347	0
ctWI	$2.313 \cdot 10^{-17}$	0	1	0.3208	0	1
ctZ	-0.003867	-0.003867	$-5.173 \cdot 10^{-8}$	0.007028	0.007028	$-1.281 \cdot 10^{-7}$
ctZI	$2.521 \cdot 10^{-18}$	0	1	0.005952	0	1
ctb1	0.07499	0	1	0.9704	0	1
ctb8	-0.8579	0	1	0.2156	0	1
ctd1	0	0.07499	$\infty$	0	0.9704	$\infty$
ctd8	0	-0.8579	$\infty$	0	0.2156	$\infty$
sm	0	0	0	4.445	4.445	0

## 1.28 $tt \rightarrow tt$

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
cQQ1	-19.37	-19.37	0	4.632	4.632	0
cQQ8	-6.456	-6.456	0	0.5146	0.5146	0
cQt1	1.454	1.454	0	2.912	2.912	0
cQt8	-13.71	-13.71	0	0.6798	0.6798	0
cpQM	-0.858	-0.858	$-1.166 \cdot 10^{-8}$	0.01435	0.01435	0
cpt	0.6139	0.6139	0	0.008922	0.008922	0
ctG	-1.042	-1.042	0	3.58	3.58	$1.117 \cdot 10^{-7}$
ctGI	$-8.387 \cdot 10^{-17}$	0	1	3.55	0	1
ctW	4.126	4.126	$-1.212 \cdot 10^{-7}$	1.812	1.812	$-2.759 \cdot 10^{-7}$
ctWI	$-4.386 \cdot 10^{-17}$	0	1	1.781	0	1
ctZ	-2.922	-2.922	$-6.844 \cdot 10^{-8}$	1.262	1.262	$-1.585 \cdot 10^{-7}$
ctZI	$-8.493 \cdot 10^{-16}$	0	1	1.222	0	1
ctp	-0.4875	-0.4875	0	0.006537	0.006537	0
ctpI	$-1.763 \cdot 10^{-17}$	0	1	0.002703	0	1
ctt1	-35.42	-35.42	0	18.53	18.53	0
sm	0	0	0	141.1	141.1	0

### 1.29 $tz \rightarrow Ht$

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
cpQM	0.8706	0.8706	$-1.149 \cdot 10^{-8}$	0.7582	0.7582	0
cpt	-0.4336	-0.4336	$2.306 \cdot 10^{-8}$	0.7582	0.7582	0
ctW	0	$7.317 \cdot 10^{-10}$	$\infty$	0	$6.06 \cdot 10^{-14}$	$\infty$
ctZ	-0.003943	-0.003943	$-1.015 \cdot 10^{-7}$	1.759	1.759	$-1.137 \cdot 10^{-7}$
ctZI	$-1.894 \cdot 10^{-17}$	0	1	1.765	0	1
ctp	0.001318	0.001318	0	0.0026	0.0026	0
ctpI	$1.191 \cdot 10^{-18}$	0	1	0.002601	0	1
sm	0	0	0	0.3628	0.3628	0

### 1.30 $tz \rightarrow zt$

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
cpQM	-0.04007	-0.04007	0	0.02368	0.02368	0
cpt	0.03024	0.03024	0	0.02331	0.02331	0
ctW	0	$-2.196 \cdot 10^{-9}$	$\infty$	0	$4.932 \cdot 10^{-14}$	$\infty$
ctZ	0.01183	0.01183	$-8.45 \cdot 10^{-8}$	1.432	1.432	$-1.397 \cdot 10^{-7}$
ctZI	$1.858 \cdot 10^{-18}$	0	1	1.425	0	1
ctp	-0.04736	-0.04736	0	0.006879	0.006879	0
ctpI	$-5.1 \cdot 10^{-18}$	0	1	0.005682	0	1
sm	0	0	0	0.5385	0.5385	0

### 1.31 $u\bar{d} \rightarrow \bar{b}t$

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
cQbqu1	0	0	0	0.2426	0	1
cQbqu1I	0	0	0	0.2426	0	1
cQbqu1T	0	0	0	0.7266	0	1
cQbqu1TI	0	0	0	0.7266	0	1
cQbqu8	0	0	0	0.05391	0	1
cQbqu8I	0	0	0	0.05391	0	1
cQbqu8T	0	0	0	0.1615	0	1
cQbqu8TI	0	0	0	0.1615	0	1
cQq13	0.07826	0.07826	$-1.278 \cdot 10^{-8}$	0.3699	0.3699	0
cQq83	$1.576 \cdot 10^{-18}$	$8.047 \cdot 10^{-19}$	0.4893	0.08221	0.08221	0
cQtqd1	0	0	0	0.2426	0	1
cQtqd1I	0	0	0	0.2426	0	1
cQtqd1T	0	0	0	0.7266	0	1
cQtqd1TI	0	0	0	0.7266	0	1
cQtqd8	0	0	0	0.05391	0	1
cQtqd8I	0	0	0	0.05391	0	1
cQtqd8T	0	0	0	0.1615	0	1
cQtqd8TI	0	0	0	0.1615	0	1
cbQqd1	0	0	0	0.2426	0	1
cbQqd1I	0	0	0	0.2426	0	1
cbQqd8	0	0	0	0.05391	0	1
cbQqd8I	0	0	0	0.05391	0	1
cbW	0	0	0	0.01122	0	1
cbWI	0	0	0	0.01122	0	1
cbtud1	0	0	0	0.09248	0	1
cbtud1I	0	0	0	0.09248	0	1
cbtud8	0	0	0	0.02055	0	1
cbtud8I	0	0	0	0.02055	0	1
cpQ3	0.0005019	0.0005019	$-1.993 \cdot 10^{-8}$	$1.521 \cdot 10^{-5}$	$1.521 \cdot 10^{-5}$	0
cptb	0	0	0	$1.989 \cdot 10^{-5}$	0	1
cptbI	0	0	0	$1.989 \cdot 10^{-5}$	0	1
ctQqu1	0	0	0	0.2426	0	1
ctQqu1I	0	0	0	0.2426	0	1
ctQqu8	0	0	0	0.05391	0	1

### 1.32 $u\bar{u} \rightarrow t\bar{t}$

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
cQq11	0.09078	0.09078	0	0.4118	0.4118	0
cQq13	0.09078	0.09078	0	0.4118	0.4118	0
cQq81	0.2919	0.2919	0	0.09151	0.09151	0
cQq83	0.2919	0.2919	0	0.09151	0.09151	0
cQu1	0.006972	0.006972	$2.868 \cdot 10^{-8}$	0.1284	0.1284	0
cQu8	0.1044	0.1044	0	0.02853	0.02853	0
cpQM	-0.0005058	-0.0005058	$-1.977 \cdot 10^{-8}$	$1.46 \cdot 10^{-5}$	$1.46 \cdot 10^{-5}$	0
cpt	$6.698 \cdot 10^{-5}$	$6.698 \cdot 10^{-5}$	$8.957 \cdot 10^{-8}$	$7.088 \cdot 10^{-6}$	$7.088 \cdot 10^{-6}$	$1.411 \cdot 10^{-8}$
ctG	0.1932	0.1932	0	0.04161	0.04161	$9.613 \cdot 10^{-8}$
ctGI	$3.489 \cdot 10^{-18}$	0	1	0.03212	0	1
ctQqu1	0	0	0	0.4704	0	1
ctQqu1I	0	0	0	0.4704	0	1
ctQqu8	0	0	0	0.1045	0	1
ctQqu8I	0	0	0	0.1045	0	1
ctW	0.01209	0.01209	$-8.271 \cdot 10^{-8}$	0.02352	0.02352	$-2.551 \cdot 10^{-7}$
ctWI	$3.52 \cdot 10^{-19}$	0	1	0.01815	0	1
ctZ	-0.00712	-0.00712	$-5.618 \cdot 10^{-8}$	0.01633	0.01633	$-1.225 \cdot 10^{-7}$
ctZI	$-3.355 \cdot 10^{-20}$	0	1	0.01261	0	1
ctq1	0.01006	0.01006	0	0.1284	0.1284	0
ctq8	0.1044	0.1044	0	0.02853	0.02853	0
ctu1	0.04785	0.04785	$2.09 \cdot 10^{-8}$	0.4118	0.4118	0
ctu8	0.2919	0.2919	0	0.09151	0.09151	0
sm	0	0	0	0.5961	0.5961	0



## 2 By parameter point

### 2.1 cQQ1

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$tb \rightarrow bt$	-0.286	-0.286	0	0.9704	0.9704	0
$tt \rightarrow tt$	-19.37	-19.37	0	4.632	4.632	0

### 2.2 cQQ8

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$tb \rightarrow bt$	-1.597	-1.597	0	0.2156	0.2156	0
$tt \rightarrow tt$	-6.456	-6.456	0	0.5146	0.5146	0

### 2.3 cQb1

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$tb \rightarrow bt$	-0.0002848	0	1	0.07006	0	1

### 2.4 cQb8

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$tb \rightarrow bt$	-0.04379	0	1	0.01557	0	1

## 2.5 cQbqu1

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	0.2426	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.2426	0	1

## 2.6 cQbqu1I

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	0.2426	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.2426	0	1

## 2.7 cQbqu1T

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	1.719	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.7266	0	1

## 2.8 cQbqu1TI

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	1.719	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.7266	0	1

## 2.9 cQbqu8

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	0.05391	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.05391	0	1

## 2.10 cQbqu8I

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	0.05391	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.05391	0	1

## 2.11 cQbqu8T

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	0.382	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.1615	0	1

## 2.12 cQbqu8TI

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	0.382	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.1615	0	1

### 2.13 cQd1

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$d\bar{d} \rightarrow \bar{t}t$	-0.002009	-0.002009	$4.979 \cdot 10^{-8}$	0.02282	0.02282	0
$s\bar{s} \rightarrow \bar{t}t$	-0.01371	-0.01371	0	0.8586	0.8586	0
$tb \rightarrow bt$	0	-0.0002848	$\infty$	0	0.07006	$\infty$

### 2.14 cQd8

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$d\bar{d} \rightarrow \bar{t}t$	0.03465	0.03465	0	0.00507	0.00507	0
$s\bar{s} \rightarrow \bar{t}t$	0.5873	0.5873	0	0.1908	0.1908	0
$tb \rightarrow bt$	0	-0.04379	$\infty$	0	0.01557	$\infty$

### 2.15 cQe1

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$e^-e^+ \rightarrow \bar{t}t$	-0.02305	-0.02305	$4.339 \cdot 10^{-8}$	0.1868	0.1868	0

### 2.16 cQe2

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$\mu^-\mu^+ \rightarrow \bar{t}t$	-0.04978	-0.04978	$2.009 \cdot 10^{-8}$	0.8234	0.8234	0

### 2.17 cQe3

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$t\tau^- \rightarrow \tau^-t$	0.03707	0.03707	$2.698 \cdot 10^{-8}$	0.365	0.365	0

### 2.18 cQl31

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\nu_e\bar{\nu}_e \rightarrow \bar{t}t$	0.00535	0.00535	$-9.346 \cdot 10^{-8}$	0.2169	0.2169	0
$\nu_e e^+ \rightarrow \bar{b}t$	0.7017	0.7017	0	3.317	3.317	0

### 2.19 cQl32

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\nu_\mu\bar{\nu}_\mu \rightarrow \bar{t}t$	0.2623	0.2623	0	2.916	2.916	0
$\nu_\mu\mu^+ \rightarrow \bar{b}t$	0.1687	0.1687	0	0.7974	0.7974	0

### 2.20 cQl33

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\nu_\tau\bar{\nu}_\tau \rightarrow \bar{t}t$	0.0824	0.0824	$-1.214 \cdot 10^{-8}$	1.026	1.026	0
$\nu_\tau b \rightarrow \tau^-t$	-3.273	-3.273	0	3.882	3.882	0

## 2.21 cQIM1

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\nu_e \bar{\nu}_e \rightarrow \bar{t}t$	0.002675	0.002675	$-7.477 \cdot 10^{-8}$	0.05422	0.05422	0
$e^- e^+ \rightarrow \bar{t}t$	-0.4003	-0.4003	0	1.69	1.69	0

## 2.22 cQIM2

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\mu^- \mu^+ \rightarrow \bar{t}t$	-0.1656	-0.1656	0	0.68	0.68	0
$\nu_\mu \bar{\nu}_\mu \rightarrow \bar{t}t$	0.1311	0.1311	0	0.7289	0.7289	0

## 2.23 cQIM3

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\nu_\tau \bar{\nu}_\tau \rightarrow \bar{t}t$	0.0412	0.0412	0	0.2565	0.2565	0
$t\tau^- \rightarrow \tau^- t$	0.5733	0.5733	0	0.9704	0.9704	0

## 2.24 cQq11

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{c} \rightarrow \bar{t}t$	0.1884	0.1884	0	0.8589	0.8589	0
$d\bar{d} \rightarrow \bar{t}t$	-0.1465	-0.1465	0	0.7207	0.7207	0
$s\bar{s} \rightarrow \bar{t}t$	-0.0002408	-0.0002408	$-1.246 \cdot 10^{-7}$	0.005389	0.005389	0
$u\bar{u} \rightarrow \bar{t}t$	0.09078	0.09078	0	0.4118	0.4118	0

## 2.25 cQq13

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{c} \rightarrow \bar{t}t$	0.1884	0.1884	0	0.8589	0.8589	0
$c\bar{s} \rightarrow \bar{b}t$	0.5641	0.5641	$-1.773 \cdot 10^{-8}$	2.667	2.667	0
$d\bar{d} \rightarrow \bar{t}t$	0.1465	0.1465	0	0.7207	0.7207	0
$s\bar{s} \rightarrow \bar{t}t$	0.0002408	0.0002408	$-1.246 \cdot 10^{-7}$	0.005389	0.005389	0
$u\bar{d} \rightarrow \bar{b}t$	0.07826	0.07826	$-1.278 \cdot 10^{-8}$	0.3699	0.3699	0
$u\bar{u} \rightarrow \bar{t}t$	0.09078	0.09078	0	0.4118	0.4118	0

## 2.26 cQq81

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{c} \rightarrow \bar{t}t$	0.5875	0.5875	0	0.1909	0.1909	0
$d\bar{d} \rightarrow \bar{t}t$	0.4962	0.4962	0	0.1602	0.1602	0
$s\bar{s} \rightarrow \bar{t}t$	0.02313	0.02313	0	0.001198	0.001198	0
$u\bar{u} \rightarrow \bar{t}t$	0.2919	0.2919	0	0.09151	0.09151	0

## 2.27 cQq83

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{c} \rightarrow \bar{t}t$	0.5875	0.5875	0	0.1909	0.1909	0
$c\bar{s} \rightarrow \bar{b}t$	$-6.168 \cdot 10^{-18}$	0	1	0.5926	0.5926	0
$d\bar{d} \rightarrow \bar{t}t$	-0.4962	-0.4962	0	0.1602	0.1602	0
$s\bar{s} \rightarrow \bar{t}t$	-0.02313	-0.02313	0	0.001198	0.001198	0
$u\bar{d} \rightarrow \bar{b}t$	$1.576 \cdot 10^{-18}$	$8.047 \cdot 10^{-19}$	0.4893	0.08221	0.08221	0
$u\bar{u} \rightarrow \bar{t}t$	0.2919	0.2919	0	0.09151	0.09151	0

## 2.28 cQt1

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$tb \rightarrow bt$	-0.0814	-0.0814	0	0.07006	0.07006	0
$tt \rightarrow tt$	1.454	1.454	0	2.912	2.912	0

## 2.29 cQt8

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$tb \rightarrow bt$	-0.1409	-0.1409	0	0.01557	0.01557	0
$tt \rightarrow tt$	-13.71	-13.71	0	0.6798	0.6798	0

## 2.30 cQtQb1

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$tb \rightarrow bt$	0	0	0	0.2598	0	1

## 2.31 cQtQb1I

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$tb \rightarrow bt$	0	0	0	0.2598	0	1

## 2.32 cQtQb8

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$tb \rightarrow bt$	0	0	0	0.08278	0	1



### 2.33 cQtQb8I

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$tb \rightarrow bt$	0	0	0	0.08278	0	1

### 2.34 cQtqd1

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	0.2426	0	1
$d\bar{d} \rightarrow \bar{t}t$	0	0	0	0.4704	0	1
$s\bar{s} \rightarrow \bar{t}t$	0	0	0	0.4704	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.2426	0	1

### 2.35 cQtqd1I

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	0.2426	0	1
$d\bar{d} \rightarrow \bar{t}t$	0	0	0	0.4704	0	1
$s\bar{s} \rightarrow \bar{t}t$	0	0	0	0.4704	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.2426	0	1

### 2.36 cQtqd1T

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	1.719	0	1
$d\bar{d} \rightarrow \bar{t}t$	0	0	0	4.37	0	1
$s\bar{s} \rightarrow \bar{t}t$	0	0	0	6.297	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.7266	0	1

### 2.37 cQtqd1TI

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	1.719	0	1
$d\bar{d} \rightarrow \bar{t}t$	0	0	0	4.37	0	1
$s\bar{s} \rightarrow \bar{t}t$	0	0	0	6.297	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.7266	0	1

### 2.38 cQtqd8

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	0.05391	0	1
$d\bar{d} \rightarrow \bar{t}t$	0	0	0	0.1045	0	1
$s\bar{s} \rightarrow \bar{t}t$	0	0	0	0.1045	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.05391	0	1

### 2.39 cQtqd8I

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	0.05391	0	1
$d\bar{d} \rightarrow \bar{t}t$	0	0	0	0.1045	0	1
$s\bar{s} \rightarrow \bar{t}t$	0	0	0	0.1045	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.05391	0	1

### 2.40 cQtqd8T

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	0.382	0	1
$d\bar{d} \rightarrow \bar{t}t$	0	0	0	0.9711	0	1
$s\bar{s} \rightarrow \bar{t}t$	0	0	0	1.399	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.1615	0	1

### 2.41 cQtqd8TI

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	0.382	0	1
$d\bar{d} \rightarrow \bar{t}t$	0	0	0	0.9711	0	1
$s\bar{s} \rightarrow \bar{t}t$	0	0	0	1.399	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.1615	0	1

## 2.42 cQu1

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{c} \rightarrow \bar{t}t$	0.003528	0.003528	$2.834 \cdot 10^{-8}$	0.005363	0.005363	0
$u\bar{u} \rightarrow \bar{t}t$	0.006972	0.006972	$2.868 \cdot 10^{-8}$	0.1284	0.1284	0

## 2.43 cQu8

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{c} \rightarrow \bar{t}t$	0.02311	0.02311	0	0.001192	0.001192	0
$u\bar{u} \rightarrow \bar{t}t$	0.1044	0.1044	0	0.02853	0.02853	0

## 2.44 cbQqd1

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	0.2426	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.2426	0	1

## 2.45 cbQqd1I

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	0.2426	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.2426	0	1

## 2.46 cbQqd8

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	0.05391	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.05391	0	1

## 2.47 cbQqd8I

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	0.05391	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.05391	0	1

## 2.48 cbW

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\gamma b \rightarrow W^- t$	0	0	0	0.6775	0	1
$\nu_\mu \mu^+ \rightarrow \bar{b}t$	0	0	0	0.03074	0	1
$\nu_\tau b \rightarrow \tau^- t$	0	0	0	0.1406	0	1
$\nu_e e^+ \rightarrow \bar{b}t$	0	0	0	0.03847	0	1
$bW^+ \rightarrow Ht$	0	0	0	0.3834	0	1
$bz \rightarrow W^- t$	0	0	0	0.7328	0	1
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	0.007237	0	1
$gb \rightarrow W^- t$	0	0	0	0.01642	0	1
$tb \rightarrow bt$	0	0	0	0.3333	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.01122	0	1

## 2.49 cbWI

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\gamma b \rightarrow W^- t$	0	0	0	0.6775	0	1
$\nu_\mu \mu^+ \rightarrow \bar{b} t$	0	0	0	0.03074	0	1
$\nu_\tau b \rightarrow \tau^- t$	0	0	0	0.1406	0	1
$\nu_e e^+ \rightarrow \bar{b} t$	0	0	0	0.03847	0	1
$bW^+ \rightarrow H t$	0	0	0	0.3834	0	1
$bz \rightarrow W^- t$	0	0	0	0.7328	0	1
$c\bar{s} \rightarrow \bar{b} t$	0	0	0	0.007237	0	1
$gb \rightarrow W^- t$	0	0	0	0.01642	0	1
$tb \rightarrow bt$	0	0	0	0.3333	0	1
$ud\bar{d} \rightarrow \bar{b} t$	0	0	0	0.01122	0	1

## 2.50 cblS1

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\nu_e e^+ \rightarrow \bar{b} t$	0	0	0	0.7278	0	1

## 2.51 cblS2

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\nu_\mu \mu^+ \rightarrow \bar{b} t$	0	0	0	0.7278	0	1

## 2.52 cblS3

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\nu_\tau b \rightarrow \tau^- t$	0	0	0	0.01655	0	1

### 2.53 cblSI1

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\nu_e e^+ \rightarrow \bar{b} t$	0	0	0	0.7278	0	1

### 2.54 cblSI2

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\nu_\mu \mu^+ \rightarrow \bar{b} t$	0	0	0	0.7278	0	1

### 2.55 cblSI3

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\nu_\tau b \rightarrow \tau^- t$	0	0	0	0.01655	0	1

### 2.56 cbtud1

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{s} \rightarrow \bar{b} t$	0	0	0	0.6667	0	1
$u\bar{d} \rightarrow \bar{b} t$	0	0	0	0.09248	0	1

### 2.57 cbtud1I

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{s} \rightarrow \bar{b} t$	0	0	0	0.6667	0	1
$u\bar{d} \rightarrow \bar{b} t$	0	0	0	0.09248	0	1

## 2.58 cbtud8

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	0.1481	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.02055	0	1

## 2.59 cbtud8I

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	0.1481	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.02055	0	1

## 2.60 cpQ3

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\gamma b \rightarrow W^- t$	0.217	0.217	0	0.006577	0.006577	$1.52 \cdot 10^{-8}$
$\nu_\mu \mu^+ \rightarrow \bar{b}t$	0.001082	0.001082	0	$3.279 \cdot 10^{-5}$	$3.279 \cdot 10^{-5}$	$-3.049 \cdot 10^{-8}$
$\nu_\tau b \rightarrow \tau^- t$	0.08364	0.08364	$-1.196 \cdot 10^{-8}$	0.002535	0.002535	0
$\nu_e e^+ \rightarrow \bar{b}t$	0.0045	0.0045	0	0.0001364	0.0001364	$-7.332 \cdot 10^{-8}$
$bW^+ \rightarrow Ht$	0.08588	0.08588	$1.164 \cdot 10^{-8}$	0.267	0.267	0
$bz \rightarrow W^- t$	-0.252	-0.252	$-3.969 \cdot 10^{-8}$	0.2808	0.2808	0
$c\bar{s} \rightarrow \bar{b}t$	0.003618	0.003618	$-2.764 \cdot 10^{-8}$	0.0001097	0.0001097	0
$gb \rightarrow W^- t$	0.01327	0.01327	0	0.0004023	0.0004023	$-2.485 \cdot 10^{-8}$
$tW^+ \rightarrow W^+ t$	-0.1134	-0.1134	$8.816 \cdot 10^{-8}$	1.917	1.917	0
$tb \rightarrow bt$	0.4273	0.4273	0	0.01346	0.01346	0
$u\bar{d} \rightarrow \bar{b}t$	0.0005019	0.0005019	$-1.993 \cdot 10^{-8}$	$1.521 \cdot 10^{-5}$	$1.521 \cdot 10^{-5}$	0



## 2.61 cpQM

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\gamma t \rightarrow zt$	-0.00107	-0.00107	0	$4.622 \cdot 10^{-5}$	$4.622 \cdot 10^{-5}$	$2.164 \cdot 10^{-8}$
$\mu^- \mu^+ \rightarrow \bar{t}t$	-0.0005444	-0.0005444	$-3.674 \cdot 10^{-8}$	$2.621 \cdot 10^{-5}$	$2.621 \cdot 10^{-5}$	0
$\nu_\mu \bar{\nu}_\mu \rightarrow \bar{t}t$	-0.0011	-0.0011	0	$5.125 \cdot 10^{-5}$	$5.125 \cdot 10^{-5}$	0
$\nu_\tau \bar{\nu}_\tau \rightarrow \bar{t}t$	-0.0003455	-0.0003455	0	$1.804 \cdot 10^{-5}$	$1.804 \cdot 10^{-5}$	0
$\nu_e \bar{\nu}_e \rightarrow \bar{t}t$	$-2.243 \cdot 10^{-5}$	$-2.243 \cdot 10^{-5}$	$-8.917 \cdot 10^{-8}$	$3.812 \cdot 10^{-6}$	$3.812 \cdot 10^{-6}$	0
$bz \rightarrow W^-t$	-0.2453	-0.2453	0	0.007377	0.007377	0
$c\bar{c} \rightarrow \bar{t}t$	-0.001078	-0.001078	0	$2.865 \cdot 10^{-5}$	$2.865 \cdot 10^{-5}$	0
$d\bar{d} \rightarrow \bar{t}t$	-0.001034	-0.001034	0	$3.615 \cdot 10^{-5}$	$3.615 \cdot 10^{-5}$	0
$e^- e^+ \rightarrow \bar{t}t$	-0.001697	-0.001697	$-5.892 \cdot 10^{-8}$	$3.657 \cdot 10^{-5}$	$3.657 \cdot 10^{-5}$	$-2.735 \cdot 10^{-8}$
$gt \rightarrow zt$	-0.07748	-0.07748	0	0.002558	0.002558	0
$s\bar{s} \rightarrow \bar{t}t$	$1.62 \cdot 10^{-5}$	$1.62 \cdot 10^{-5}$	$6.171 \cdot 10^{-8}$	$1.735 \cdot 10^{-6}$	$1.735 \cdot 10^{-6}$	0
$tW^+ \rightarrow W^+t$	-0.2282	-0.2282	$4.381 \cdot 10^{-8}$	0.444	0.444	0
$t\tau^- \rightarrow \tau^-t$	-0.006063	-0.006063	$-3.299 \cdot 10^{-8}$	0.0001573	0.0001573	0
$tb \rightarrow bt$	0.0007857	0.0007857	$1.273 \cdot 10^{-8}$	$3.787 \cdot 10^{-6}$	$3.787 \cdot 10^{-6}$	$5.282 \cdot 10^{-8}$
$tt \rightarrow tt$	-0.858	-0.858	$-1.166 \cdot 10^{-8}$	0.01435	0.01435	0
$tz \rightarrow Ht$	0.8706	0.8706	$-1.149 \cdot 10^{-8}$	0.7582	0.7582	0
$tz \rightarrow zt$	-0.04007	-0.04007	0	0.02368	0.02368	0
$u\bar{u} \rightarrow \bar{t}t$	-0.0005058	-0.0005058	$-1.977 \cdot 10^{-8}$	$1.46 \cdot 10^{-5}$	$1.46 \cdot 10^{-5}$	0

## 2.62 cpt

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\gamma t \rightarrow zt$	0.000519	0.000519	$1.927 \cdot 10^{-8}$	$4.622 \cdot 10^{-5}$	$4.622 \cdot 10^{-5}$	$2.164 \cdot 10^{-8}$
$\mu^- \mu^+ \rightarrow \bar{t}t$	$6.605 \cdot 10^{-5}$	$6.605 \cdot 10^{-5}$	$3.179 \cdot 10^{-7}$	$2.687 \cdot 10^{-5}$	$2.687 \cdot 10^{-5}$	0
$\nu_\mu \bar{\nu}_\mu \rightarrow \bar{t}t$	0.0004158	0.0004158	$2.405 \cdot 10^{-8}$	$5.424 \cdot 10^{-5}$	$5.424 \cdot 10^{-5}$	0
$\nu_\tau \bar{\nu}_\tau \rightarrow \bar{t}t$	0.0009438	0.0009438	$2.119 \cdot 10^{-8}$	0.0001056	0.0001056	0
$\nu_e \bar{\nu}_e \rightarrow \bar{t}t$	0.001483	0.001483	$6.745 \cdot 10^{-8}$	0.000158	0.000158	0
$bz \rightarrow W^-t$	0.2299	0.2299	0	0.007431	0.007431	0
$c\bar{c} \rightarrow \bar{t}t$	0.0002203	0.0002203	$4.54 \cdot 10^{-8}$	$6.042 \cdot 10^{-6}$	$6.042 \cdot 10^{-6}$	$3.31 \cdot 10^{-8}$
$d\bar{d} \rightarrow \bar{t}t$	$1.619 \cdot 10^{-5}$	$1.619 \cdot 10^{-5}$	$1.853 \cdot 10^{-7}$	$2.373 \cdot 10^{-6}$	$2.373 \cdot 10^{-6}$	0
$e^- e^+ \rightarrow \bar{t}t$	0.0009858	0.0009858	$5.072 \cdot 10^{-8}$	$2.968 \cdot 10^{-5}$	$2.968 \cdot 10^{-5}$	$3.37 \cdot 10^{-8}$
$gt \rightarrow zt$	0.06912	0.06912	0	0.002558	0.002558	0
$s\bar{s} \rightarrow \bar{t}t$	0.000135	0.000135	0	$4.303 \cdot 10^{-5}$	$4.303 \cdot 10^{-5}$	0
$tW^+ \rightarrow W^+t$	-0.6789	-0.6789	0	0.444	0.444	0
$t\tau^- \rightarrow \tau^-t$	0.003349	0.003349	$2.986 \cdot 10^{-8}$	0.0001398	0.0001398	0
$tb \rightarrow bt$	0.0009039	0.0009039	0	$9.289 \cdot 10^{-6}$	$9.289 \cdot 10^{-6}$	$1.077 \cdot 10^{-8}$
$tt \rightarrow tt$	0.6139	0.6139	0	0.008922	0.008922	0
$tz \rightarrow Ht$	-0.4336	-0.4336	$2.306 \cdot 10^{-8}$	0.7582	0.7582	0
$tz \rightarrow zt$	0.03024	0.03024	0	0.02331	0.02331	0
$u\bar{u} \rightarrow \bar{t}t$	$6.698 \cdot 10^{-5}$	$6.698 \cdot 10^{-5}$	$8.957 \cdot 10^{-8}$	$7.088 \cdot 10^{-6}$	$7.088 \cdot 10^{-6}$	$1.411 \cdot 10^{-8}$

## 2.63 cptb

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\gamma b \rightarrow W^- t$	0	0	0	0.001644	0	1
$\nu_\mu \mu^+ \rightarrow \bar{b} t$	0	0	0	$6.786 \cdot 10^{-5}$	0	1
$\nu_\tau b \rightarrow \tau^- t$	0	0	0	0.0003597	0	1
$\nu_e e^+ \rightarrow \bar{b} t$	0	0	0	$2.77 \cdot 10^{-5}$	0	1
$bW^+ \rightarrow H t$	0	0	0	0.06676	0	1
$bz \rightarrow W^- t$	0	0	0	0.07097	0	1
$c\bar{s} \rightarrow \bar{b} t$	0	0	0	$1.374 \cdot 10^{-6}$	0	1
$gb \rightarrow W^- t$	0	0	0	0.0001006	0	1
$tb \rightarrow bt$	0	0	0	0.001224	0	1
$u\bar{d} \rightarrow \bar{b} t$	0	0	0	$1.989 \cdot 10^{-5}$	0	1

## 2.64 cptbI

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\gamma b \rightarrow W^- t$	0	0	0	0.001644	0	1
$\nu_\mu \mu^+ \rightarrow \bar{b} t$	0	0	0	$6.786 \cdot 10^{-5}$	0	1
$\nu_\tau b \rightarrow \tau^- t$	0	0	0	0.0003597	0	1
$\nu_e e^+ \rightarrow \bar{b} t$	0	0	0	$2.77 \cdot 10^{-5}$	0	1
$bW^+ \rightarrow H t$	0	0	0	0.06676	0	1
$bz \rightarrow W^- t$	0	0	0	0.07097	0	1
$c\bar{s} \rightarrow \bar{b} t$	0	0	0	$1.374 \cdot 10^{-6}$	0	1
$gb \rightarrow W^- t$	0	0	0	0.0001006	0	1
$tb \rightarrow bt$	0	0	0	0.001224	0	1
$u\bar{d} \rightarrow \bar{b} t$	0	0	0	$1.989 \cdot 10^{-5}$	0	1

## 2.65 ctG

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{c} \rightarrow \bar{t}t$	0.1932	0.1932	0	0.01563	0.01563	$1.28 \cdot 10^{-7}$
$d\bar{d} \rightarrow \bar{t}t$	0.1932	0.1932	$5.175 \cdot 10^{-8}$	0.02531	0.02531	$7.903 \cdot 10^{-8}$
$g\gamma \rightarrow \bar{t}t$	0.0297	0.0297	$6.733 \cdot 10^{-8}$	0.01059	0.01059	$9.444 \cdot 10^{-8}$
$gb \rightarrow W^-t$	0.008518	0.008518	$3.522 \cdot 10^{-8}$	0.269	0.269	$7.436 \cdot 10^{-8}$
$gg \rightarrow \bar{t}t$	0.1391	0.1391	$7.191 \cdot 10^{-8}$	0.08771	0.08771	$9.121 \cdot 10^{-8}$
$gt \rightarrow Ht$	-0.009187	-0.009187	$4.354 \cdot 10^{-8}$	0.275	0.275	$7.273 \cdot 10^{-8}$
$gt \rightarrow zt$	0.06659	0.06659	$4.505 \cdot 10^{-8}$	0.04428	0.04428	$9.033 \cdot 10^{-8}$
$s\bar{s} \rightarrow \bar{t}t$	0.1932	0.1932	$5.175 \cdot 10^{-8}$	0.01565	0.01565	$1.278 \cdot 10^{-7}$
$tb \rightarrow bt$	0.2691	0.2691	$7.433 \cdot 10^{-8}$	0.06195	0.06195	$8.071 \cdot 10^{-8}$
$tt \rightarrow tt$	-1.042	-1.042	0	3.58	3.58	$1.117 \cdot 10^{-7}$
$u\bar{u} \rightarrow \bar{t}t$	0.1932	0.1932	0	0.04161	0.04161	$9.613 \cdot 10^{-8}$

## 2.66 ctGI

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{c} \rightarrow \bar{t}t$	$-3.113 \cdot 10^{-18}$	0	1	0.006139	0	1
$d\bar{d} \rightarrow \bar{t}t$	$2.763 \cdot 10^{-18}$	0	1	0.01582	0	1
$g\gamma \rightarrow \bar{t}t$	$9.954 \cdot 10^{-19}$	0	1	0.01059	0	1
$gb \rightarrow W^-t$	$-2.577 \cdot 10^{-18}$	0	1	0.269	0	1
$gg \rightarrow \bar{t}t$	$9.152 \cdot 10^{-19}$	0	1	0.08173	0	1
$gt \rightarrow Ht$	$3.32 \cdot 10^{-19}$	0	1	0.275	0	1
$gt \rightarrow zt$	$-8.842 \cdot 10^{-19}$	0	1	0.04428	0	1
$s\bar{s} \rightarrow \bar{t}t$	$-5.11 \cdot 10^{-18}$	0	1	0.006164	0	1
$tb \rightarrow bt$	$2.686 \cdot 10^{-17}$	0	1	0.05246	0	1
$tt \rightarrow tt$	$-8.387 \cdot 10^{-17}$	0	1	3.55	0	1
$u\bar{u} \rightarrow \bar{t}t$	$3.489 \cdot 10^{-18}$	0	1	0.03212	0	1

## 2.67 ctQqu1

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{c} \rightarrow \bar{t}t$	0	0	0	0.4704	0	1
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	0.2426	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.2426	0	1
$u\bar{u} \rightarrow \bar{t}t$	0	0	0	0.4704	0	1

## 2.68 ctQqu1I

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{c} \rightarrow \bar{t}t$	0	0	0	0.4704	0	1
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	0.2426	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.2426	0	1
$u\bar{u} \rightarrow \bar{t}t$	0	0	0	0.4704	0	1

## 2.69 ctQqu8

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{c} \rightarrow \bar{t}t$	0	0	0	0.1045	0	1
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	0.05391	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.05391	0	1
$u\bar{u} \rightarrow \bar{t}t$	0	0	0	0.1045	0	1

## 2.70 ctQqu8I

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{c} \rightarrow \bar{t}t$	0	0	0	0.1045	0	1
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	0.05391	0	1
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.05391	0	1
$u\bar{u} \rightarrow \bar{t}t$	0	0	0	0.1045	0	1

## 2.71 ctW

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\gamma\gamma \rightarrow \bar{t}t$	0.7607	0.7607	$-1.577 \cdot 10^{-7}$	1.041	1.041	$-3.842 \cdot 10^{-7}$
$\gamma b \rightarrow W^-t$	0.1259	0.1259	$-2.384 \cdot 10^{-7}$	2.165	2.165	$-6.004 \cdot 10^{-7}$
$\gamma t \rightarrow Ht$	-0.03758	-0.03758	$-1.863 \cdot 10^{-7}$	4.716	4.716	$-3.392 \cdot 10^{-7}$
$\gamma t \rightarrow zt$	0.02216	0.02216	$-1.805 \cdot 10^{-7}$	7.218	7.218	$-3.464 \cdot 10^{-7}$
$\mu^- \mu^+ \rightarrow \bar{t}t$	0.0603	0.0603	$-1.493 \cdot 10^{-7}$	0.1707	0.1707	$-2.93 \cdot 10^{-7}$
$\nu_\mu \bar{\nu}_\mu \rightarrow \bar{t}t$	0	$-1.249 \cdot 10^{-9}$	$\infty$	0	$9.769 \cdot 10^{-16}$	$\infty$
$\nu_\mu \mu^+ \rightarrow \bar{b}t$	0.01208	0.01208	0	0.02853	0.02853	0
$\nu_\tau \bar{\nu}_\tau \rightarrow \bar{t}t$	0	$1.321 \cdot 10^{-10}$	$\infty$	0	$8.265 \cdot 10^{-16}$	$\infty$
$\nu_\tau b \rightarrow \tau^-t$	0.06381	0.06381	$-1.567 \cdot 10^{-8}$	0.1508	0.1508	0
$\nu_e \bar{\nu}_e \rightarrow \bar{t}t$	0	$1.221 \cdot 10^{-9}$	$\infty$	0	$5.101 \cdot 10^{-16}$	$\infty$
$\nu_e e^+ \rightarrow \bar{b}t$	0.02536	0.02536	0	0.0387	0.0387	0
$bW^+ \rightarrow Ht$	0.04947	0.04947	0	0.3834	0.3834	0
$bz \rightarrow W^-t$	-0.3156	-0.3156	$-3.169 \cdot 10^{-8}$	1.251	1.251	$-7.995 \cdot 10^{-8}$
$c\bar{c} \rightarrow \bar{t}t$	0.01617	0.01617	$-6.183 \cdot 10^{-8}$	0.008831	0.008831	$-2.718 \cdot 10^{-7}$
$c\bar{s} \rightarrow \bar{b}t$	0.01326	0.01326	0	0.008204	0.008204	$-1.219 \cdot 10^{-8}$
$d\bar{d} \rightarrow \bar{t}t$	0.005689	0.005689	$1.758 \cdot 10^{-8}$	0.003575	0.003575	$-1.119 \cdot 10^{-7}$
$e^- e^+ \rightarrow \bar{t}t$	0.07798	0.07798	$-1.411 \cdot 10^{-7}$	0.1326	0.1326	$-3.016 \cdot 10^{-7}$
$g\gamma \rightarrow \bar{t}t$	0.3587	0.3587	$-1.394 \cdot 10^{-7}$	1.544	1.544	$-3.239 \cdot 10^{-7}$
$gb \rightarrow W^-t$	-0.005449	-0.005449	0	0.01642	0.01642	0
$gt \rightarrow zt$	0	$-2.731 \cdot 10^{-9}$	$\infty$	0	$3.354 \cdot 10^{-15}$	$\infty$
$s\bar{s} \rightarrow \bar{t}t$	0.0001348	0.0001348	$-1.038 \cdot 10^{-6}$	0.002211	0.002211	$-9.044 \cdot 10^{-8}$
$tW^+ \rightarrow W^+t$	0.159	0.159	$-6.288 \cdot 10^{-8}$	4.123	4.123	$-2.425 \cdot 10^{-8}$
$t\tau^- \rightarrow \tau^-t$	0.06317	0.06317	$-1.425 \cdot 10^{-7}$	0.32	0.32	$-3.437 \cdot 10^{-7}$
$tb \rightarrow bt$	0.5328	0.5328	$-1.877 \cdot 10^{-8}$	0.347	0.347	0
$tt \rightarrow tt$	4.126	4.126	$-1.212 \cdot 10^{-7}$	1.812	1.812	$-2.759 \cdot 10^{-7}$
$tz \rightarrow Ht$	0	$7.317 \cdot 10^{-10}$	$\infty$	0	$6.06 \cdot 10^{-14}$	$\infty$
$tz \rightarrow zt$	0	$-2.196 \cdot 10^{-9}$	$\infty$	0	$4.932 \cdot 10^{-14}$	$\infty$
$u\bar{d} \rightarrow \bar{b}t$	0.00479	0.00479	$-2.088 \cdot 10^{-8}$	0.01062	0.01062	0
$u\bar{u} \rightarrow \bar{t}t$	0.01209	0.01209	$-8.271 \cdot 10^{-8}$	0.02352	0.02352	$-2.551 \cdot 10^{-7}$

## 2.72 ctWI

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\gamma\gamma \rightarrow \bar{t}t$	$-5.337 \cdot 10^{-17}$	0	1	0.9642	0	1
$\gamma b \rightarrow W^-t$	$4.385 \cdot 10^{-17}$	0	1	2.168	0	1
$\gamma t \rightarrow Ht$	$-6.478 \cdot 10^{-18}$	0	1	4.716	0	1
$\gamma t \rightarrow zt$	$5.617 \cdot 10^{-18}$	0	1	7.218	0	1
$\mu^- \mu^+ \rightarrow \bar{t}t$	$-2.315 \cdot 10^{-18}$	0	1	0.1345	0	1
$\nu_\mu \mu^+ \rightarrow \bar{b}t$	$1.084 \cdot 10^{-19}$	0	1	0.02853	0	1
$\nu_\tau b \rightarrow \tau^-t$	$6.822 \cdot 10^{-18}$	0	1	0.1508	0	1
$\nu_e e^+ \rightarrow \bar{b}t$	$-4.337 \cdot 10^{-19}$	0	1	0.0387	0	1
$bW^+ \rightarrow Ht$	$6.095 \cdot 10^{-18}$	0	1	0.3834	0	1
$bz \rightarrow W^-t$	$-3.559 \cdot 10^{-15}$	0	1	1.251	0	1
$c\bar{c} \rightarrow \bar{t}t$	$4.488 \cdot 10^{-20}$	0	1	0.003469	0	1
$c\bar{s} \rightarrow \bar{b}t$	$-9.637 \cdot 10^{-20}$	0	1	0.008204	0	1
$d\bar{d} \rightarrow \bar{t}t$	$2.786 \cdot 10^{-20}$	0	1	0.002235	0	1
$e^- e^+ \rightarrow \bar{t}t$	$2.174 \cdot 10^{-18}$	0	1	0.09645	0	1
$g\gamma \rightarrow \bar{t}t$	$-8.389 \cdot 10^{-18}$	0	1	1.544	0	1
$gb \rightarrow W^-t$	$2.127 \cdot 10^{-19}$	0	1	0.01642	0	1
$s\bar{s} \rightarrow \bar{t}t$	$-6.023 \cdot 10^{-21}$	0	1	0.0008708	0	1
$tW^+ \rightarrow W^+t$	$-3.012 \cdot 10^{-16}$	0	1	4.101	0	1
$t\tau^- \rightarrow \tau^-t$	$5.157 \cdot 10^{-17}$	0	1	0.3079	0	1
$tb \rightarrow bt$	$2.313 \cdot 10^{-17}$	0	1	0.3208	0	1
$tt \rightarrow tt$	$-4.386 \cdot 10^{-17}$	0	1	1.781	0	1
$u\bar{d} \rightarrow \bar{b}t$	$-6.023 \cdot 10^{-19}$	0	1	0.01062	0	1
$u\bar{u} \rightarrow \bar{t}t$	$3.52 \cdot 10^{-19}$	0	1	0.01815	0	1



## 2.73 ctZ

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\gamma\gamma \rightarrow \bar{t}t$	-0.6659	-0.6659	$-6.007 \cdot 10^{-8}$	0.7978	0.7978	$-1.379 \cdot 10^{-7}$
$\gamma b \rightarrow W^-t$	-0.1533	-0.1533	$-6.523 \cdot 10^{-8}$	5.245	5.245	$-1.525 \cdot 10^{-7}$
$\gamma t \rightarrow Ht$	0.03289	0.03289	$-6.08 \cdot 10^{-8}$	3.614	3.614	$-1.383 \cdot 10^{-7}$
$\gamma t \rightarrow zt$	-0.01939	-0.01939	$-5.158 \cdot 10^{-8}$	5.532	5.532	$-1.627 \cdot 10^{-7}$
$\mu^- \mu^+ \rightarrow \bar{t}t$	-0.04818	-0.04818	$-4.151 \cdot 10^{-8}$	0.1394	0.1394	$-1.435 \cdot 10^{-7}$
$\nu_\mu \bar{\nu}_\mu \rightarrow \bar{t}t$	0.006731	0.006731	$-1.04 \cdot 10^{-7}$	0.02836	0.02836	$-1.41 \cdot 10^{-7}$
$\nu_\tau \bar{\nu}_\tau \rightarrow \bar{t}t$	-0.0007116	-0.0007116	$2.811 \cdot 10^{-7}$	0.024	0.024	$-1.25 \cdot 10^{-7}$
$\nu_e \bar{\nu}_e \rightarrow \bar{t}t$	-0.006577	-0.006577	$-1.521 \cdot 10^{-8}$	0.01481	0.01481	$-1.351 \cdot 10^{-7}$
$bz \rightarrow W^-t$	0.08488	0.08488	$-7.069 \cdot 10^{-8}$	0.2873	0.2873	$-1.044 \cdot 10^{-7}$
$c\bar{c} \rightarrow \bar{t}t$	-0.009365	-0.009365	$-5.339 \cdot 10^{-8}$	0.006133	0.006133	$-1.304 \cdot 10^{-7}$
$d\bar{d} \rightarrow \bar{t}t$	0.001055	0.001055	$-1.895 \cdot 10^{-7}$	0.00295	0.00295	$-1.356 \cdot 10^{-7}$
$e^- e^+ \rightarrow \bar{t}t$	-0.063	-0.063	$-4.762 \cdot 10^{-8}$	0.1083	0.1083	$-9.231 \cdot 10^{-8}$
$g\gamma \rightarrow \bar{t}t$	-0.314	-0.314	$-6.37 \cdot 10^{-8}$	1.183	1.183	$-1.691 \cdot 10^{-7}$
$gt \rightarrow zt$	0.01472	0.01472	$-6.795 \cdot 10^{-8}$	0.09738	0.09738	$-1.335 \cdot 10^{-7}$
$s\bar{s} \rightarrow \bar{t}t$	-0.0006891	-0.0006891	$-2.902 \cdot 10^{-8}$	0.001825	0.001825	$-1.644 \cdot 10^{-7}$
$tW^+ \rightarrow W^+t$	-0.04736	-0.04736	$-6.335 \cdot 10^{-8}$	0.04814	0.04814	$-1.246 \cdot 10^{-7}$
$t\tau^- \rightarrow \tau^-t$	-0.05228	-0.05228	$-5.738 \cdot 10^{-8}$	0.2601	0.2601	$-1.153 \cdot 10^{-7}$
$tb \rightarrow bt$	-0.003867	-0.003867	$-5.173 \cdot 10^{-8}$	0.007028	0.007028	$-1.281 \cdot 10^{-7}$
$tt \rightarrow tt$	-2.922	-2.922	$-6.844 \cdot 10^{-8}$	1.262	1.262	$-1.585 \cdot 10^{-7}$
$tz \rightarrow Ht$	-0.003943	-0.003943	$-1.015 \cdot 10^{-7}$	1.759	1.759	$-1.137 \cdot 10^{-7}$
$tz \rightarrow zt$	0.01183	0.01183	$-8.45 \cdot 10^{-8}$	1.432	1.432	$-1.397 \cdot 10^{-7}$
$u\bar{u} \rightarrow \bar{t}t$	-0.00712	-0.00712	$-5.618 \cdot 10^{-8}$	0.01633	0.01633	$-1.225 \cdot 10^{-7}$

## 2.74 ctZI

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\gamma\gamma \rightarrow \bar{t}t$	$1.346 \cdot 10^{-17}$	0	1	0.7389	0	1
$\gamma b \rightarrow W^- t$	$-8.789 \cdot 10^{-17}$	0	1	5.245	0	1
$\gamma t \rightarrow Ht$	$5.638 \cdot 10^{-18}$	0	1	3.614	0	1
$\gamma t \rightarrow zt$	$-4.446 \cdot 10^{-18}$	0	1	5.532	0	1
$\mu^- \mu^+ \rightarrow \bar{t}t$	$2.221 \cdot 10^{-18}$	0	1	0.1098	0	1
$\nu_\mu \bar{\nu}_\mu \rightarrow \bar{t}t$	$-7.919 \cdot 10^{-20}$	0	1	0.02236	0	1
$\nu_\tau \bar{\nu}_\tau \rightarrow \bar{t}t$	$6.48 \cdot 10^{-20}$	0	1	0.01799	0	1
$\nu_e \bar{\nu}_e \rightarrow \bar{t}t$	$3.334 \cdot 10^{-19}$	0	1	0.008805	0	1
$bz \rightarrow W^- t$	$-1.032 \cdot 10^{-16}$	0	1	0.2873	0	1
$c\bar{c} \rightarrow \bar{t}t$	$-1.631 \cdot 10^{-19}$	0	1	0.002409	0	1
$d\bar{d} \rightarrow \bar{t}t$	$9.391 \cdot 10^{-21}$	0	1	0.001844	0	1
$e^- e^+ \rightarrow \bar{t}t$	$-1.81 \cdot 10^{-18}$	0	1	0.07877	0	1
$g\gamma \rightarrow \bar{t}t$	$3.682 \cdot 10^{-18}$	0	1	1.183	0	1
$gt \rightarrow zt$	$8.729 \cdot 10^{-19}$	0	1	0.09808	0	1
$s\bar{s} \rightarrow \bar{t}t$	$-1.052 \cdot 10^{-20}$	0	1	0.0007186	0	1
$tW^+ \rightarrow W^+ t$	$2.114 \cdot 10^{-16}$	0	1	0.04858	0	1
$t\tau^- \rightarrow \tau^- t$	$-4.298 \cdot 10^{-17}$	0	1	0.2503	0	1
$tb \rightarrow bt$	$2.521 \cdot 10^{-18}$	0	1	0.005952	0	1
$tt \rightarrow tt$	$-8.493 \cdot 10^{-16}$	0	1	1.222	0	1
$tz \rightarrow Ht$	$-1.894 \cdot 10^{-17}$	0	1	1.765	0	1
$tz \rightarrow zt$	$1.858 \cdot 10^{-18}$	0	1	1.425	0	1
$u\bar{u} \rightarrow \bar{t}t$	$-3.355 \cdot 10^{-20}$	0	1	0.01261	0	1

## 2.75 ctb1

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$tb \rightarrow bt$	0.07499	0	1	0.9704	0	1

## 2.76 ctb8

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$tb \rightarrow bt$	-0.8579	0	1	0.2156	0	1

## 2.77 ctd1

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$d\bar{d} \rightarrow \bar{t}t$	-0.04156	-0.04156	$2.406 \cdot 10^{-8}$	0.7207	0.7207	0
$s\bar{s} \rightarrow \bar{t}t$	-0.0007218	-0.0007218	$2.771 \cdot 10^{-8}$	0.005389	0.005389	0
$tb \rightarrow bt$	0	0.07499	$\infty$	0	0.9704	$\infty$

## 2.78 ctd8

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$d\bar{d} \rightarrow \bar{t}t$	0.4962	0.4962	0	0.1602	0.1602	0
$s\bar{s} \rightarrow \bar{t}t$	0.02313	0.02313	0	0.001198	0.001198	0
$tb \rightarrow bt$	0	-0.8579	$\infty$	0	0.2156	$\infty$

## 2.79 cte1

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$e^-e^+ \rightarrow \bar{t}t$	-0.2932	-0.2932	$3.411 \cdot 10^{-8}$	1.69	1.69	0

## 2.80 cte2

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\mu^-\mu^+ \rightarrow \bar{t}t$	-0.1202	-0.1202	0	0.68	0.68	0

## 2.81 cte3

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$t\tau^- \rightarrow \tau^-t$	0.4256	0.4256	$2.35 \cdot 10^{-8}$	0.9704	0.9704	0

## 2.82 ctl1

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\nu_e\bar{\nu}_e \rightarrow \bar{t}t$	-0.1768	-0.1768	0	2.248	2.248	0
$e^-e^+ \rightarrow \bar{t}t$	-0.03652	-0.03652	$2.738 \cdot 10^{-8}$	0.1868	0.1868	0

## 2.83 ctl2

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\mu^-\mu^+ \rightarrow \bar{t}t$	-0.0907	-0.0907	$2.205 \cdot 10^{-8}$	0.8234	0.8234	0
$\nu_\mu\bar{\nu}_\mu \rightarrow \bar{t}t$	-0.04959	-0.04959	$4.033 \cdot 10^{-8}$	0.7714	0.7714	0

## 2.84 ctl3

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\nu_\tau \bar{\nu}_\tau \rightarrow \bar{t}t$	-0.1126	-0.1126	0	1.502	1.502	0
$t\tau^- \rightarrow \tau^-t$	0.0748	0.0748	$2.674 \cdot 10^{-8}$	0.365	0.365	0

## 2.85 ctIS1

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\nu_e e^+ \rightarrow \bar{b}t$	0	0	0	0.7278	0	1
$e^- e^+ \rightarrow \bar{t}t$	0	0	0	1.411	0	1

## 2.86 ctIS2

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\mu^- \mu^+ \rightarrow \bar{t}t$	0	0	0	1.411	0	1
$\nu_\mu \mu^+ \rightarrow \bar{b}t$	0	0	0	0.7278	0	1

## 2.87 ctIS3

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\nu_\tau b \rightarrow \tau^-t$	0	0	0	0.01655	0	1
$t\tau^- \rightarrow \tau^-t$	0	0	0	0.08399	0	1

## 2.88 ctISI1

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\nu_e e^+ \rightarrow \bar{b} t$	0	0	0	0.7278	0	1
$e^- e^+ \rightarrow \bar{t} t$	0	0	0	1.411	0	1

## 2.89 ctISI2

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\mu^- \mu^+ \rightarrow \bar{t} t$	0	0	0	1.411	0	1
$\nu_\mu \mu^+ \rightarrow \bar{b} t$	0	0	0	0.7278	0	1

## 2.90 ctISI3

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\nu_\tau b \rightarrow \tau^- t$	0	0	0	0.01655	0	1
$t \tau^- \rightarrow \tau^- t$	0	0	0	0.08399	0	1

## 2.91 ctIT1

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\nu_e e^+ \rightarrow \bar{b} t$	0	0	0	0.3768	0	1
$e^- e^+ \rightarrow \bar{t} t$	0	0	0	7.444	0	1

## 2.92 ctIT2

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\mu^- \mu^+ \rightarrow \bar{t}t$	0	0	0	1.475	0	1
$\nu_\mu \mu^+ \rightarrow \bar{b}t$	0	0	0	3.151	0	1

## 2.93 ctIT3

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\nu_\tau b \rightarrow \tau^- t$	0	0	0	11.9	0	1
$t\tau^- \rightarrow \tau^- t$	0	0	0	20.02	0	1

## 2.94 ctITI1

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\nu_e e^+ \rightarrow \bar{b}t$	0	0	0	0.3768	0	1
$e^- e^+ \rightarrow \bar{t}t$	0	0	0	7.444	0	1

## 2.95 ctITI2

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\mu^- \mu^+ \rightarrow \bar{t}t$	0	0	0	1.475	0	1
$\nu_\mu \mu^+ \rightarrow \bar{b}t$	0	0	0	3.151	0	1

## 2.96 cttI3

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$\nu_\tau b \rightarrow \tau^- t$	0	0	0	11.9	0	1
$t\tau^- \rightarrow \tau^- t$	0	0	0	20.02	0	1

## 2.97 ctp

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$\gamma t \rightarrow Ht$	-0.001533	-0.001533	0	$4.703 \cdot 10^{-5}$	$4.703 \cdot 10^{-5}$	$2.126 \cdot 10^{-8}$
$bW^+ \rightarrow Ht$	-0.01183	-0.01183	0	0.009616	0.009616	0
$gt \rightarrow Ht$	-0.00124	-0.00124	0	$3.803 \cdot 10^{-5}$	$3.803 \cdot 10^{-5}$	0
$tH \rightarrow Ht$	-0.3478	-0.3478	0	0.297	0.297	0
$tW^+ \rightarrow W^+ t$	-0.03083	-0.03083	0	0.004297	0.004297	0
$tt \rightarrow tt$	-0.4875	-0.4875	0	0.006537	0.006537	0
$tz \rightarrow Ht$	0.001318	0.001318	0	0.0026	0.0026	0
$tz \rightarrow zt$	-0.04736	-0.04736	0	0.006879	0.006879	0



## 2.98 ctpI

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\gamma t \rightarrow Ht$	$-6.22 \cdot 10^{-21}$	0	1	$3.118 \cdot 10^{-5}$	0	1
$bW^+ \rightarrow Ht$	$-7.703 \cdot 10^{-18}$	0	1	0.00833	0	1
$gt \rightarrow Ht$	$6.212 \cdot 10^{-21}$	0	1	$1.598 \cdot 10^{-5}$	0	1
$tH \rightarrow Ht$	$-3.783 \cdot 10^{-20}$	0	1	0.21	0	1
$tW^+ \rightarrow W^+t$	$-6.078 \cdot 10^{-17}$	0	1	0.003107	0	1
$tt \rightarrow tt$	$-1.763 \cdot 10^{-17}$	0	1	0.002703	0	1
$tz \rightarrow Ht$	$1.191 \cdot 10^{-18}$	0	1	0.002601	0	1
$tz \rightarrow zt$	$-5.1 \cdot 10^{-18}$	0	1	0.005682	0	1

## 2.99 ctq1

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{c} \rightarrow \bar{t}t$	0.006612	0.006612	0	0.005363	0.005363	0
$d\bar{d} \rightarrow \bar{t}t$	-0.005384	-0.005384	$-1.857 \cdot 10^{-8}$	0.02282	0.02282	0
$s\bar{s} \rightarrow \bar{t}t$	0.01893	0.01893	$5.281 \cdot 10^{-8}$	0.8586	0.8586	0
$u\bar{u} \rightarrow \bar{t}t$	0.01006	0.01006	0	0.1284	0.1284	0

## 2.100 ctq8

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$c\bar{c} \rightarrow \bar{t}t$	0.02311	0.02311	0	0.001192	0.001192	0
$d\bar{d} \rightarrow \bar{t}t$	0.03465	0.03465	0	0.00507	0.00507	0
$s\bar{s} \rightarrow \bar{t}t$	0.5873	0.5873	0	0.1908	0.1908	0
$u\bar{u} \rightarrow \bar{t}t$	0.1044	0.1044	0	0.02853	0.02853	0

### 2.101 ctt1

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$tt \rightarrow tt$	-35.42	-35.42	0	18.53	18.53	0

### 2.102 ctu1

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$c\bar{c} \rightarrow \bar{t}t$	0.09891	0.09891	$2.022 \cdot 10^{-8}$	0.8589	0.8589	0
$u\bar{u} \rightarrow \bar{t}t$	0.04785	0.04785	$2.09 \cdot 10^{-8}$	0.4118	0.4118	0

### 2.103 ctu8

	interference			square		
	mod1	mod2	$1 - \text{mod2}/\text{mod1}$	mod1	mod2	$1 - \text{mod2}/\text{mod1}$
$c\bar{c} \rightarrow \bar{t}t$	0.5875	0.5875	0	0.1909	0.1909	0
$u\bar{u} \rightarrow \bar{t}t$	0.2919	0.2919	0	0.09151	0.09151	0

## 2.104 sm

	interference			square		
	mod1	mod2	1 - mod2/mod1	mod1	mod2	1 - mod2/mod1
$\gamma\gamma \rightarrow \bar{t}t$	0	0	0	0.3044	0.3044	$3.286 \cdot 10^{-8}$
$\gamma b \rightarrow W^-t$	0	0	0	1.789	1.789	0
$\gamma t \rightarrow Ht$	0	0	0	0.01249	0.01249	$8.007 \cdot 10^{-8}$
$\gamma t \rightarrow zt$	0	0	0	0.007406	0.007406	0
$\mu^- \mu^+ \rightarrow \bar{t}t$	0	0	0	0.01722	0.01722	0
$\nu_\mu \bar{\nu}_\mu \rightarrow \bar{t}t$	0	0	0	0.007312	0.007312	$-1.368 \cdot 10^{-8}$
$\nu_\mu \mu^+ \rightarrow \bar{b}t$	0	0	0	0.008923	0.008923	$-1.121 \cdot 10^{-8}$
$\nu_\tau \bar{\nu}_\tau \rightarrow \bar{t}t$	0	0	0	0.004387	0.004387	0
$\nu_\tau b \rightarrow \tau^-t$	0	0	0	0.6898	0.6898	$-1.45 \cdot 10^{-8}$
$\nu_e \bar{\nu}_e \rightarrow \bar{t}t$	0	0	0	0.003938	0.003938	$2.54 \cdot 10^{-8}$
$\nu_e e^+ \rightarrow \bar{b}t$	0	0	0	0.03711	0.03711	$-2.695 \cdot 10^{-8}$
$bW^+ \rightarrow Ht$	0	0	0	0.01388	0.01388	0
$bz \rightarrow W^-t$	0	0	0	2.046	2.046	0
$c\bar{c} \rightarrow \bar{t}t$	0	0	0	0.9217	0.9217	0
$c\bar{s} \rightarrow \bar{b}t$	0	0	0	0.02984	0.02984	0
$d\bar{d} \rightarrow \bar{t}t$	0	0	0	0.7978	0.7978	0
$e^- e^+ \rightarrow \bar{t}t$	0	0	0	0.03683	0.03683	$2.715 \cdot 10^{-8}$
$g\gamma \rightarrow \bar{t}t$	0	0	0	0.2034	0.2034	$4.916 \cdot 10^{-8}$
$gb \rightarrow W^-t$	0	0	0	0.1095	0.1095	0
$gg \rightarrow \bar{t}t$	0	0	0	0.4418	0.4418	0
$gt \rightarrow Ht$	0	0	0	0.0101	0.0101	0
$gt \rightarrow zt$	0	0	0	0.6175	0.6175	0
$s\bar{s} \rightarrow \bar{t}t$	0	0	0	0.9085	0.9085	0
$tH \rightarrow Ht$	0	0	0	1.013	1.013	0
$tW^+ \rightarrow W^+t$	0	0	0	1.755	1.755	0
$t\tau^- \rightarrow \tau^-t$	0	0	0	0.1371	0.1371	$7.294 \cdot 10^{-8}$
$tb \rightarrow bt$	0	0	0	4.445	4.445	0
$tt \rightarrow tt$	0	0	0	141.1	141.1	0
$tz \rightarrow Ht$	0	0	0	0.3628	0.3628	0
$tz \rightarrow zt$	0	0	0	0.5385	0.5385	0
$u\bar{d} \rightarrow \bar{b}t$	0	0	0	0.004139	0.004139	$-2.416 \cdot 10^{-8}$
$u\bar{u} \rightarrow \bar{t}t$	0	0	0	0.5961	0.5961	0