

# Topology Analysis <sup>\*</sup>

(v1.6.0)

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November 29, 2018

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<sup>\*</sup>This package is implemented with reference to a program called TOPO, which is developed by Prof. Shuxian Du from Zhengzhou University in China and has been widely used by people in BESIII collaboration. Several years ago, when I was a PhD student working on BESIII experiment, I learned the idea of topology analysis and a lot of programming techniques from the TOPO program. So, I really appreciate Prof. Du's original work very much. To meet my own needs and to practice developing analysis tools with C++, ROOT and LaTeX, I wrote the package from scratch. At that time, the package functioned well but was relatively simple. At the end of last year (2017), my co-supervisor, Prof. Chengping Shen reminded me that it could be a useful tool for Belle II experiment as well. So, I revised and extended it, making it more well-rounded and suitable for Belle II experiment. Here, I would like to thank Prof. Du for his original work, Prof. Shen for his suggestion and encouragement, and Wencheng Yan, Sen Jia, Yubo Li, Suxian Li, Longke Li, Guanda Gong, Junhao Yin, Xiaoping Qin, Xiqing Hao, HongPeng Wang, JiaWei Zhang for their efforts in helping me test the program.

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index	event tree (event initial-final states)	iEvtTr	iEvtIFSts	nEvts	nCmltEvts
12	$e^+e^- \rightarrow \rho^0 \rho^0 \pi^+ \pi^- \omega D^{*+} \bar{D}^{*-}, \rho^0 \rightarrow \pi^+ \pi^-, \rho^0 \rightarrow \pi^+ \pi^-, \omega \rightarrow \pi^0 \pi^+ \pi^-, D^{*+} \rightarrow \pi^+ D^0, \bar{D}^{*-} \rightarrow \pi^0 D^-,$ $D^0 \rightarrow \pi^0 \pi^+ \pi^- K_S, D^- \rightarrow \pi^- \pi^- K^+, K_S \rightarrow \pi^0 \pi^0$ $(e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- \pi^- K^+ \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma)$	105	100	4	105
13	$e^+e^- \rightarrow \pi^0 \pi^+ \pi^- K^- D^{*+} \bar{D}^{*-} \Delta^0 \bar{\Sigma}^{*+}, D^{*+} \rightarrow \pi^0 D^+, \bar{D}^{*-} \rightarrow \pi^- \bar{D}^0, \Delta^0 \rightarrow \pi^0 n, \bar{\Sigma}^{*+} \rightarrow \pi^+ \bar{\Lambda}, D^+ \rightarrow \mu^+ \nu_\mu \pi^+ K^-,$ $\bar{D}^0 \rightarrow \pi^0 \pi^+ \pi^- K^+ K^-, \bar{\Lambda} \rightarrow \pi^+ \bar{p}$ $(e^+e^- \rightarrow \mu^+ \nu_\mu \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- K^+ K^- K^- K^- n \bar{p} \gamma \gamma \gamma \gamma \gamma \gamma \gamma)$	17	17	3	108
14	$e^+e^- \rightarrow \pi^+ \pi^- \rho^- D^{*+} \bar{D}^0, \rho^- \rightarrow \pi^0 \pi^-, D^{*+} \rightarrow \pi^+ D^0, \bar{D}^0 \rightarrow \pi^0 \pi^+ \pi^- K_S, D^0 \rightarrow \pi^+ \pi^- K_S, K_S \rightarrow \pi^+ \pi^-,$ $K_S \rightarrow \pi^+ \pi^-$ $(e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- \pi^- \gamma \gamma \gamma \gamma)$	34	34	3	111
15	$e^+e^- \rightarrow K^* D^{*+} D_s^{*-}, K^* \rightarrow \pi^- K^+, D^{*+} \rightarrow \pi^0 D^+, D_s^{*-} \rightarrow D_s^- \gamma, D^+ \rightarrow e^+ \nu_e \bar{K}^*, D_s^- \rightarrow \rho^- \phi,$ $\bar{K}^* \rightarrow \pi^+ K^-, \rho^- \rightarrow \pi^0 \pi^-, \phi \rightarrow \pi^0 \rho^0, \rho^0 \rightarrow \pi^+ \pi^-$ $(e^+e^- \rightarrow e^+ \nu_e \pi^+ \pi^+ \pi^- \pi^- \pi^- K^+ K^- \gamma \gamma \gamma \gamma \gamma \gamma)$	35	35	3	114
16	$e^+e^- \rightarrow \pi^0 \rho^0 \pi^+ \pi^- K^+ K^- D^{*+} \bar{D}^{*-}, \rho^0 \rightarrow \pi^+ \pi^-, D^{*+} \rightarrow \pi^+ D^0, \bar{D}^{*-} \rightarrow \pi^0 D^-, D^0 \rightarrow \pi^0 \pi^+ K^-, D^- \rightarrow K_L a_1^-,$ $a_1^- \rightarrow \pi^0 \rho^-, \rho^- \rightarrow \pi^0 \pi^-$ $(e^+e^- \rightarrow K_L \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- K^+ K^- K^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma)$	1	1	3	117
17	$e^+e^- \rightarrow K^- K^{*+} \bar{D}^0 D_1^{*0}, K^{*+} \rightarrow \pi^0 K^+, \bar{D}^0 \rightarrow K_S \eta', D_1^{*0} \rightarrow \pi^- D^{*+}, K_S \rightarrow \pi^+ \pi^-, \eta' \rightarrow \pi^+ \pi^- \eta,$ $D^{*+} \rightarrow \pi^+ D^0, \eta \rightarrow \pi^0 \pi^0 \pi^0, D^0 \rightarrow K^- a_1^+, a_1^+ \rightarrow \rho^0 \pi^+, \rho^0 \rightarrow \pi^+ \pi^-$ $(e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^+ K^- K^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma)$	68	66	3	120
18	$e^+e^- \rightarrow \pi^- \rho^+ K^0 \bar{K}^0 \eta' D^0 \bar{D}_0^{*0}, \rho^+ \rightarrow \pi^0 \pi^+, K^0 \rightarrow K_L, \bar{K}^0 \rightarrow K_S, \eta' \rightarrow \pi^0 \pi^0 \eta, D^0 \rightarrow \pi^0 \pi^0 \pi^+ \pi^-,$ $\bar{D}_0^{*0} \rightarrow \pi^+ D^-, K_S \rightarrow \pi^+ \pi^-, \eta \rightarrow \pi^0 \pi^0 \pi^0, D^- \rightarrow e^- \bar{\nu}_e \pi^- K^+$ $(e^+e^- \rightarrow e^- \bar{\nu}_e K_L \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^+ \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma)$	71	69	3	123
19	$e^+e^- \rightarrow \rho^0 \rho^0 \rho^- D^{*+} \bar{D}_1^0, \rho^0 \rightarrow \pi^+ \pi^-, \rho^0 \rightarrow \pi^+ \pi^-, \rho^- \rightarrow \pi^0 \pi^-, D^{*+} \rightarrow \pi^+ D^0, \bar{D}_1^0 \rightarrow \pi^+ \bar{D}^{*-},$ $D^0 \rightarrow \rho^+ K^{*-}, \bar{D}^{*-} \rightarrow \pi^- \bar{D}^0, \rho^+ \rightarrow \pi^0 \pi^+, K^{*-} \rightarrow \pi^- \bar{K}^0, \bar{D}^0 \rightarrow \rho^- K^{*+}, \bar{K}^0 \rightarrow K_S,$ $\rho^- \rightarrow \pi^0 \pi^-, K^{*+} \rightarrow \pi^+ K^0, K_S \rightarrow \pi^0 \pi^0, K^0 \rightarrow K_L$ $(e^+e^- \rightarrow K_L \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- \pi^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma)$	73	71	3	126
20	$e^+e^- \rightarrow \rho^0 \pi^+ \pi^- K^0 D^{*+} D_s^{*-}, \rho^0 \rightarrow \pi^+ \pi^-, K^0 \rightarrow K_L, D^{*+} \rightarrow \pi^+ D^0, D_s^{*-} \rightarrow D_s^- \gamma, D^0 \rightarrow K_S \phi,$ $D_s^- \rightarrow K^0 K^{*-}, K_S \rightarrow \pi^+ \pi^-, \phi \rightarrow \pi^0 \rho^0, K^0 \rightarrow K_S, K^{*-} \rightarrow \pi^0 K^-, \rho^0 \rightarrow \pi^+ \pi^-,$ $K_S \rightarrow \pi^+ \pi^-$ $(e^+e^- \rightarrow K_L \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- K^- \gamma \gamma \gamma \gamma \gamma)$	77	75	3	129
21	$e^+e^- \rightarrow \pi^- D^{*+} D_s^{*-} p \bar{\Lambda}, D^{*+} \rightarrow \pi^+ D^0, D_s^{*-} \rightarrow D_s^- \gamma, \bar{\Lambda} \rightarrow \pi^0 \bar{n}, D^0 \rightarrow \pi^+ \omega K^-, D_s^- \rightarrow \rho^- \eta,$ $\omega \rightarrow \pi^0 \pi^+ \pi^-, \rho^- \rightarrow \pi^0 \pi^-, \eta \rightarrow \pi^0 \pi^+ \pi^-$ $(e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^- \bar{n} p \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma)$	83	81	3	132
22	$e^+e^- \rightarrow \rho^- \bar{K}^0 K^+ \bar{D}^{*-} \bar{\Sigma}^0 \Xi_c^+, \rho^- \rightarrow \pi^0 \pi^-, \bar{K}^0 \rightarrow K_S, \bar{D}^{*-} \rightarrow \pi^- \bar{D}^0, \bar{\Sigma}^0 \rightarrow \Lambda \gamma, \Xi_c^+ \rightarrow e^+ \nu_e \Xi^0,$ $K_S \rightarrow \pi^+ \pi^-, \bar{D}^0 \rightarrow \pi^+ \pi^- K_S, \bar{\Lambda} \rightarrow \pi^0 \bar{n}, \Xi^0 \rightarrow \pi^0 \Lambda, K_S \rightarrow \pi^+ \pi^-, \Lambda \rightarrow \pi^- p$ $(e^+e^- \rightarrow e^+ \nu_e \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- K^+ \bar{n} p \gamma \gamma \gamma \gamma \gamma \gamma \gamma)$	42	42	3	135

index	event tree (event initial-final states)	iEvtTr	iEvtIFSts	nEvts	nCmltEvts
23	$e^+e^- \rightarrow \pi^0 \rho^0 \pi^- D^{*+} \bar{D}^0, \rho^0 \rightarrow \pi^+ \pi^-, D^{*+} \rightarrow \pi^+ D^0, \bar{D}^0 \rightarrow \mu^- \bar{\nu}_\mu K^+, D^0 \rightarrow \pi^+ \eta K^-, \eta \rightarrow \pi^0 \pi^+ \pi^-$ ( $e^+e^- \rightarrow \mu^- \bar{\nu}_\mu \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- K^+ K^- \gamma \gamma \gamma \gamma$ )	90	87	3	138
24	$e^+e^- \rightarrow \rho^0 \pi^+ K^0 \bar{K}^* \bar{D}^{*-} D_1^0, \rho^0 \rightarrow \pi^+ \pi^-, K^0 \rightarrow K_S, K^* \rightarrow \pi^+ K^-, \bar{D}^{*-} \rightarrow \pi^0 D^-, D_1^0 \rightarrow \pi^- D^{*+},$ $K_S \rightarrow \pi^+ \pi^-, D^- \rightarrow \pi^0 \pi^- K_S, D^{*+} \rightarrow \pi^+ D^0, K_S \rightarrow \pi^+ \pi^-, D^0 \rightarrow \pi^+ \pi^+ \pi^- K^-$ ( $e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- \pi^- K^- K^- \gamma \gamma \gamma \gamma$ )	100	95	3	141
25	$e^+e^- \rightarrow \pi^0 \pi^0 \pi^+ \rho^- \omega K^0 D^{*+} D_s^{*-}, \rho^- \rightarrow \pi^0 \pi^-, \omega \rightarrow \pi^0 \pi^+ \pi^-, K^0 \rightarrow K_S, D^{*+} \rightarrow \pi^+ D^0, D_s^{*-} \rightarrow \pi^0 D_s^-,$ $K_S \rightarrow \pi^+ \pi^-, D^0 \rightarrow \pi^0 \pi^+ K^-, D_s^- \rightarrow \rho^- \eta', \rho^- \rightarrow \pi^0 \pi^-, \eta' \rightarrow \rho^0 \gamma, \rho^0 \rightarrow \pi^+ \pi^-$ ( $e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- \pi^- K^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma$ )	43	43	3	144
26	$e^+e^- \rightarrow \pi^0 \rho^- \omega \bar{K}^0 K^{*+} D^{*+} \bar{D}^{*-}, \rho^- \rightarrow \pi^0 \pi^-, \omega \rightarrow \pi^0 \pi^+ \pi^-, K^0 \rightarrow K_S, K^{*+} \rightarrow \pi^+ K^0, D^{*+} \rightarrow \pi^+ D^0,$ $\bar{D}^{*-} \rightarrow \pi^- \bar{D}^0, K_S \rightarrow \pi^0 \pi^0, K^0 \rightarrow K_L, D^0 \rightarrow \pi^0 \pi^+ \pi^- K_S, \bar{D}^0 \rightarrow \pi^+ \pi^- K_S, K_L \rightarrow \pi^0 \pi^+ \pi^-,$ $K_S \rightarrow \pi^0 \pi^0, K_S \rightarrow \pi^0 \pi^0$ ( $e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- \pi^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma$ )	49	49	3	147
27	$e^+e^- \rightarrow \pi^0 \pi^+ D^- D_1^0, D^- \rightarrow \mu^- \bar{\nu}_\mu K^*, D_1^0 \rightarrow \pi^- D^{*+}, K^* \rightarrow \pi^0 K^0, D^{*+} \rightarrow \pi^+ D^0, K^0 \rightarrow K_S,$ $D^0 \rightarrow e^+ \nu_e K^-, K_S \rightarrow \pi^+ \pi^-$ ( $e^+e^- \rightarrow e^+ \nu_e \mu^- \bar{\nu}_\mu \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- K^- \gamma \gamma \gamma \gamma$ )	36	36	2	149
28	$e^+e^- \rightarrow \pi^0 \pi^+ \rho^- D^{*+} \bar{D}^{*-}, \rho^- \rightarrow \pi^0 \pi^-, D^{*+} \rightarrow \pi^+ D^0, \bar{D}^{*-} \rightarrow \pi^- \bar{D}^0, D^0 \rightarrow \pi^+ \eta K^-, \bar{D}^0 \rightarrow \pi^0 \pi^+ \pi^- K_S,$ $\eta \rightarrow \pi^0 \pi^0 \pi^0, K_S \rightarrow \pi^+ \pi^-$ ( $e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- K^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma$ )	72	70	2	151
29	$e^+e^- \rightarrow \pi^+ \pi^+ \pi^- \pi^- \rho^+ D^{*-} D^0, \rho^+ \rightarrow \pi^0 \pi^+, D^{*-} \rightarrow \pi^- \bar{D}^0, D^0 \rightarrow \pi^0 \pi^+ K^-, D^0 \rightarrow \pi^0 \pi^+ \pi^- K_S, K_S \rightarrow \pi^0 \pi^0$ ( $e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- K^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma$ )	19	19	2	153
30	$e^+e^- \rightarrow \pi^+ \pi^- \rho^+ \omega \bar{D}^{*-} D^0, \rho^+ \rightarrow \pi^0 \pi^+, \omega \rightarrow \pi^0 \pi^+ \pi^-, \bar{D}^{*-} \rightarrow \pi^- \bar{D}^0, D^0 \rightarrow \pi^+ \pi^- \bar{K}^*, \bar{D}^0 \rightarrow K^+ a_1^-,$ $\bar{K}^* \rightarrow \pi^+ K^-, a_1^- \rightarrow \pi^0 \rho^-, \rho^- \rightarrow \pi^0 \pi^-$ ( $e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- K^+ K^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma$ )	74	72	2	155
31	$e^+e^- \rightarrow \pi^0 \pi^- \eta K^+ D^{*+} D_s^{*-}, \eta \rightarrow e^+ e^- \pi^+ \pi^-, D^{*+} \rightarrow \pi^+ D^0, D_s^{*-} \rightarrow D_s^- \gamma, D^0 \rightarrow \omega \bar{K}^*, D_s^- \rightarrow \pi^- \eta',$ $\omega \rightarrow \pi^0 \pi^+ \pi^-, \bar{K}^* \rightarrow \pi^+ K^-, \eta' \rightarrow \pi^+ \pi^- \eta, \eta \rightarrow \pi^0 \pi^0 \pi^0$ ( $e^+e^- \rightarrow e^+ e^- \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- K^+ K^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma$ )	76	74	2	157
32	$e^+e^- \rightarrow \pi^0 \pi^+ \bar{K}^0 K^* K^+ K^- K^- \bar{D}^{*-} D_s^{*+}, \bar{K}^0 \rightarrow K_S, K^* \rightarrow \pi^- K^+, \bar{D}^{*-} \rightarrow \pi^0 D^-, D_s^{*+} \rightarrow D_s^+ \gamma, K_S \rightarrow \pi^+ \pi^-,$ $D^- \rightarrow \pi^- \pi^- K^+, D_s^+ \rightarrow \rho^+ \eta', \rho^+ \rightarrow \pi^0 \pi^+, \eta' \rightarrow \pi^+ \pi^- \eta, \eta \rightarrow \pi^0 \pi^0 \pi^0$ ( $e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- \pi^- K^+ K^+ K^+ K^- K^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma$ )	54	54	2	159
33	$e^+e^- \rightarrow \pi^+ \rho^- D^- D^{*0} \bar{n} p, \rho^- \rightarrow \pi^0 \pi^-, D^- \rightarrow \pi^- \omega K^*, D^{*0} \rightarrow \pi^0 D^0, \omega \rightarrow \pi^0 \pi^+ \pi^-, K^* \rightarrow \pi^- K^+,$ $D^0 \rightarrow \pi^+ \omega K^-, \omega \rightarrow \pi^0 \pi^+ \pi^-$ ( $e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- \pi^- K^+ K^- \bar{n} p \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma$ )	80	78	2	161
34	$e^+e^- \rightarrow \pi^0 \pi^+ \pi^- \bar{K}^0 \bar{D}^{*0} D_s^+ p \Delta^{++}, \bar{K}^0 \rightarrow K_S, \bar{D}^{*0} \rightarrow \pi^0 \bar{D}^0, D_s^+ \rightarrow e^+ \nu_e \eta, \Delta^{++} \rightarrow \pi^- \bar{p}, K_S \rightarrow \pi^+ \pi^-,$ $\bar{D}^0 \rightarrow \pi^0 \pi^+ \pi^- K_S, \eta \rightarrow \pi^0 \pi^+ \pi^-, K_S \rightarrow \pi^0 \pi^0, \pi^0 \rightarrow e^+ e^-$ ( $e^+e^- \rightarrow e^+ e^- e^- \nu_e \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- p \bar{p} \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma$ )	82	80	2	163

index	event tree (event initial-final states)	iEvtTr	iEvtIFSts	nEvts	nCmltEvts
35	$e^+e^- \rightarrow K^0 D^{*+} D_s^{*-}, K^0 \rightarrow K_L, D^{*+} \rightarrow \pi^+ D^0, D_s^{*-} \rightarrow \pi^0 D_s^-, D^0 \rightarrow \pi^+ \pi^- K_S, D_s^- \rightarrow K^0 K^{*-},$ $K_S \rightarrow \pi^+ \pi^-, K^0 \rightarrow K_L, K^{*-} \rightarrow \pi^- \bar{K}^0, K_L \rightarrow e^+ \nu_e \pi^-, \bar{K}^0 \rightarrow K_S, K_S \rightarrow \pi^0 \pi^0$ $(e^+e^- \rightarrow e^+ \nu_e K_L \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \gamma \gamma \gamma \gamma \gamma)$	55	55	2	165
36	$e^+e^- \rightarrow \pi^+ \pi^- D^{*0} \bar{D}_1^{*0}, D^{*0} \rightarrow \pi^0 D^0, \bar{D}_1^{*0} \rightarrow \pi^+ \bar{D}^{*-}, D^0 \rightarrow K_L \pi^- K^+, \bar{D}^{*-} \rightarrow \pi^- \bar{D}^0, \bar{D}^0 \rightarrow K_L \pi^+ \pi^-$ $(e^+e^- \rightarrow K_L K_L \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^+ \gamma \gamma)$	33	33	2	167
37	$e^+e^- \rightarrow \pi^+ K^- D_s^{*+} D_1^-, D_s^{*+} \rightarrow D_s^+ \gamma, D_1^- \rightarrow \pi^0 \bar{D}^{*-}, D_s^+ \rightarrow K^* K^{*+}, \bar{D}^{*-} \rightarrow \pi^- \bar{D}^0, K^* \rightarrow \pi^+ K^-,$ $K^{*+} \rightarrow \pi^+ K^0, \bar{D}^0 \rightarrow \pi^+ \pi^- K^*, K^0 \rightarrow K_S, K^* \rightarrow \pi^- K^+, K_S \rightarrow \pi^0 \pi^0$ $(e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^+ K^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma)$	24	24	2	169
38	$e^+e^- \rightarrow \pi^0 \rho^0 \pi^+ \pi^+ \pi^+ \pi^- \rho^- D^{*-} D^{*0}, \rho^0 \rightarrow \pi^+ \pi^-, \rho^- \rightarrow \pi^0 \pi^-, D^{*-} \rightarrow \pi^- \bar{D}^0, D^{*0} \rightarrow \pi^0 D^0, \bar{D}^0 \rightarrow e^- \bar{\nu}_e K^+,$ $D^0 \rightarrow \pi^0 \bar{K}_1^0, \bar{K}_1^0 \rightarrow \pi^0 \pi^+ K^-$ $(e^+e^- \rightarrow e^- \bar{\nu}_e \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^+ K^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma)$	94	22	2	171
39	$e^+e^- \rightarrow \pi^0 \rho^0 \pi^+ \pi^- \pi^- D^{*+} \bar{D}^{*0}, \rho^0 \rightarrow \pi^+ \pi^-, D^{*+} \rightarrow \pi^+ D^0, \bar{D}^{*0} \rightarrow \bar{D}^0 \gamma, D^0 \rightarrow \pi^+ \pi^+ \pi^- K^-, \bar{D}^0 \rightarrow \pi^- K_1^+,$ $K_1^+ \rightarrow \pi^+ \pi^- K^+$ $(e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- \pi^- K^+ K^- \gamma \gamma \gamma)$	98	93	2	173
40	$e^+e^- \rightarrow \rho^0 \pi^+ \pi^- \bar{K}^0 K^* D^{*+} \bar{D}^{*-}, \rho^0 \rightarrow \pi^+ \pi^-, \bar{K}^0 \rightarrow K_S, K^* \rightarrow \pi^0 K^0, D^{*+} \rightarrow \pi^+ D^0, \bar{D}^{*-} \rightarrow \pi^- \bar{D}^0,$ $K_S \rightarrow \pi^+ \pi^-, K^0 \rightarrow K_L, D^0 \rightarrow \pi^- K^{*+}, \bar{D}^0 \rightarrow e^- \bar{\nu}_e \pi^0 K^+, K_L \rightarrow e^- \nu_e \pi^+, K^{*+} \rightarrow \pi^0 K^+$ $(e^+e^- \rightarrow e^- e^- \nu_e \nu_e \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- K^+ K^+ \gamma \gamma \gamma \gamma \gamma \gamma)$	64	63	2	175
41	$e^+e^- \rightarrow \pi^- \pi^- D^{*+} \bar{D}^{*0} \bar{p} \Delta^{++}, D^{*+} \rightarrow \pi^+ D^0, \bar{D}^{*0} \rightarrow \pi^0 \bar{D}^0, \Delta^{++} \rightarrow \pi^+ p, D^0 \rightarrow \pi^0 \pi^0 \pi^0 \pi^+ \pi^-, \bar{D}^0 \rightarrow \pi^0 \pi^- K^+$ $(e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^+ p \bar{p} \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma)$	102	97	2	177
42	$e^+e^- \rightarrow \pi^- \omega \bar{D}^{*0} \Delta^+ \Sigma_c^{*++}, \omega \rightarrow \pi^0 \pi^+ \pi^-, \bar{D}^{*0} \rightarrow \bar{D}^0 \gamma, \Delta^+ \rightarrow \bar{p}, \Sigma_c^{*++} \rightarrow \pi^+ \Lambda_c^+, \bar{D}^0 \rightarrow K^+ a_1^-,$ $\Lambda_c^+ \rightarrow \pi^+ \pi^+ \pi^- \Sigma^0, a_1^- \rightarrow \rho^0 \pi^-, \Sigma^0 \rightarrow \Lambda \gamma, \rho^0 \rightarrow \pi^+ \pi^-, \Lambda \rightarrow \pi^- p$ $(e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- \pi^- K^+ p \bar{p} \gamma \gamma \gamma \gamma)$	25	25	2	179
43	$e^+e^- \rightarrow \rho^+ \omega \bar{D}^{*-} D^{*0}, \rho^+ \rightarrow \pi^0 \pi^+, \omega \rightarrow \pi^0 \pi^+ \pi^-, \bar{D}^{*-} \rightarrow \pi^- \bar{D}^0, D^{*0} \rightarrow \pi^0 D^0, \bar{D}^0 \rightarrow K^+ a_1^-,$ $D^0 \rightarrow \pi^0 K_S, a_1^- \rightarrow \rho^0 \pi^-, K_S \rightarrow \pi^0 \pi^0, \rho^0 \rightarrow \pi^+ \pi^-$ $(e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^+ \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma)$	69	67	2	181
44	$e^+e^- \rightarrow \pi^0 \pi^0 \pi^- D^{*+} \bar{D}^{*0}, D^{*+} \rightarrow \pi^+ D^0, \bar{D}^{*0} \rightarrow \pi^0 \bar{D}^0, D^0 \rightarrow e^+ \nu_e K^-, \bar{D}^0 \rightarrow K^+ a_1^-, a_1^- \rightarrow \rho^0 \pi^-,$ $\rho^0 \rightarrow \pi^+ \pi^-$ $(e^+e^- \rightarrow e^+ \nu_e \pi^+ \pi^+ \pi^- \pi^- \pi^- K^+ K^- \gamma \gamma \gamma \gamma \gamma \gamma)$	15	15	1	182
45	$e^+e^- \rightarrow \pi^+ D^0 \bar{D}^{*0} n \bar{p}, D^0 \rightarrow \omega K^*, \bar{D}^{*0} \rightarrow \pi^0 \bar{D}^0, \omega \rightarrow \pi^0 \pi^+ \pi^-, K^* \rightarrow \pi^+ K^-, \bar{D}^0 \rightarrow \pi^+ \pi^- K_S,$ $K_S \rightarrow \pi^+ \pi^-$ $(e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^- n \bar{p} \gamma \gamma \gamma \gamma)$	44	44	1	183
46	$e^+e^- \rightarrow \pi^0 \pi^+ \pi^+ \pi^- \pi^- \rho^- D^{*+} \bar{D}^{*0}, \rho^- \rightarrow \pi^0 \pi^-, D^{*+} \rightarrow \pi^+ D^0, \bar{D}^{*0} \rightarrow \bar{D}^0 \gamma, D^0 \rightarrow \pi^+ \pi^- K^*, \bar{D}^0 \rightarrow K_S \eta',$ $\bar{K}^* \rightarrow \pi^+ K^-, K_S \rightarrow \pi^+ \pi^-, \eta' \rightarrow \pi^+ \pi^- \eta, \eta \rightarrow \pi^0 \pi^+ \pi^-$ $(e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- \pi^- K^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma)$	45	45	1	184
47	$e^+e^- \rightarrow K^+ D^{*+} D_s^- n \bar{p}, D^{*+} \rightarrow \pi^0 D^+, D_s^- \rightarrow \rho^- \eta', \pi^0 \rightarrow e^+ e^-, D^+ \rightarrow K_S K^{*+}, \rho^- \rightarrow \pi^0 \pi^-,$ $\eta' \rightarrow \rho^0 \gamma, K_S \rightarrow \pi^+ \pi^-, K^{*+} \rightarrow \pi^+ K^0, \rho^0 \rightarrow \pi^+ \pi^-, K^0 \rightarrow K_L$ $(e^+e^- \rightarrow e^+ e^- K_L \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- K^+ n \bar{p} \gamma \gamma \gamma)$	46	46	1	185







index	event tree (event initial-final states)	iEvtTr	iEvtIFSts	nEvts	nCmltEvts
73	$e^+e^- \rightarrow \pi^0 \rho^0 \pi^+ \bar{D}^{*-} D^{*0}, \rho^0 \rightarrow \pi^+ \pi^-, \bar{D}^{*-} \rightarrow \pi^0 D^-, D^{*0} \rightarrow \pi^0 D^0, D^- \rightarrow \rho^0 \pi^- K^*, D^0 \rightarrow \mu^+ \nu_\mu K^-,$ $\rho^0 \rightarrow \pi^+ \pi^-, K^* \rightarrow \pi^0 K^0, K^0 \rightarrow K_S, K_S \rightarrow \pi^+ \pi^-$ $(e^+e^- \rightarrow \mu^+ \nu_\mu \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^- \gamma \gamma \gamma \gamma \gamma \gamma)$	27	27	1	211
74	$e^+e^- \rightarrow \pi^0 \rho^0 \pi^+ \bar{D}^{*-} D^{*0}, \pi^0 \rightarrow e^+ e^-, \rho^0 \rightarrow \pi^+ \pi^-, \bar{D}^{*-} \rightarrow \pi^- \bar{D}^0, D^{*0} \rightarrow D^0 \gamma, \bar{D}^0 \rightarrow \pi^- K^+ \eta',$ $D^0 \rightarrow \pi^0 \pi^0 K^0 \bar{K}^0, \eta' \rightarrow \rho^0 \gamma, K^0 \rightarrow K_L, \bar{K}^0 \rightarrow K_S, \rho^0 \rightarrow \pi^+ \pi^-, K_S \rightarrow \pi^0 \pi^0$ $(e^+e^- \rightarrow e^+ e^- K_L \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^+ \gamma \gamma \gamma \gamma \gamma \gamma \gamma)$	8	8	1	212
75	$e^+e^- \rightarrow \pi^0 \rho^0 \pi^- \rho^+ K^- \bar{D}^{*0} D_s^+, \rho^0 \rightarrow \pi^+ \pi^-, \rho^+ \rightarrow \pi^0 \pi^+, \bar{D}^{*0} \rightarrow \pi^0 \bar{D}^0, D_s^+ \rightarrow \rho^+ \eta', \bar{D}^0 \rightarrow \pi^- K_1^+,$ $\rho^+ \rightarrow \pi^0 \pi^+, \eta' \rightarrow \pi^+ \pi^- \eta, K_1^+ \rightarrow \pi^+ \pi^- K^+, \eta \rightarrow \pi^+ \pi^-$ $(e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^+ K^- \gamma \gamma \gamma \gamma \gamma \gamma)$	29	29	1	213
76	$e^+e^- \rightarrow \pi^0 \pi^+ \pi^+ \pi^+ \pi^- D^- \bar{p} \Sigma_c^{*0}, D^- \rightarrow \pi^0 \pi^- K^*, \Sigma_c^{*0} \rightarrow \pi^- \Lambda_c^+, K^* \rightarrow \pi^- K^+, \Lambda_c^+ \rightarrow \pi^+ \omega \Sigma^0, \omega \rightarrow \pi^0 \pi^+ \pi^-,$ $\Sigma^0 \rightarrow \Lambda \gamma, \Lambda \rightarrow \pi^- p$ $(e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- K^+ p \bar{p} \gamma \gamma \gamma \gamma \gamma \gamma)$	75	73	1	214
77	$e^+e^- \rightarrow \pi^0 \pi^0 \rho^0 \pi^+ \pi^+ \pi^- \rho^- \bar{D}^0 D^{*0}, \rho^0 \rightarrow \pi^+ \pi^-, \rho^- \rightarrow \pi^0 \pi^-, \bar{D}^0 \rightarrow \rho^- K^{*+}, D^{*0} \rightarrow D^0 \gamma, \rho^- \rightarrow \pi^0 \pi^-,$ $K^{*+} \rightarrow \pi^+ K^0, D^0 \rightarrow K_L \eta', \pi^0 \rightarrow e^+ e^-, K^0 \rightarrow K_L, \eta' \rightarrow \pi^0 \pi^0 \eta, K_L \rightarrow \mu^+ \nu_\mu \pi^-,$ $\eta \rightarrow \pi^0 \pi^+ \pi^-$ $(e^+e^- \rightarrow e^+ e^- \mu^+ \nu_\mu K_L \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma)$	30	30	1	215
78	$e^+e^- \rightarrow \pi^+ \pi^+ \pi^- \pi^- \eta' D^0 \bar{D}^{*0}, \eta' \rightarrow \pi^+ \pi^- \eta, D^0 \rightarrow \pi^0 \pi^0 \bar{K}^*, \bar{D}^{*0} \rightarrow \pi^0 \bar{D}^0, \eta \rightarrow \pi^0 \pi^+ \pi^-, K^* \rightarrow \pi^0 \bar{K}^0,$ $\bar{D}^0 \rightarrow \pi^0 \pi^- K^+, \bar{K}^0 \rightarrow K_S, K_S \rightarrow \pi^+ \pi^-$ $(e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- \pi^- K^+ \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma)$	31	31	1	216
79	$e^+e^- \rightarrow \pi^+ \rho^- \omega D^{*+} \bar{D}^{*-}, \rho^- \rightarrow \pi^0 \pi^-, \omega \rightarrow \pi^0 \pi^+ \pi^-, D^{*+} \rightarrow \pi^0 D^+, \bar{D}^{*-} \rightarrow \pi^- \bar{D}^0, D^+ \rightarrow \mu^+ \nu_\mu \pi^+ K^-,$ $\bar{D}^0 \rightarrow e^- \bar{\nu}_e \pi^0 K^+$ $(e^+e^- \rightarrow e^- \bar{\nu}_e \mu^+ \nu_\mu \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- K^+ K^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma)$	78	76	1	217
80	$e^+e^- \rightarrow \rho^- \bar{D}^{*-} \bar{\Delta}^- \Sigma_c^{*+}, \rho^- \rightarrow \pi^0 \pi^-, \bar{D}^{*-} \rightarrow \pi^- \bar{D}^0, \bar{\Delta}^- \rightarrow \pi^+ \bar{n}, \Sigma_c^{*+} \rightarrow \pi^0 \Lambda_c^+, \bar{D}^0 \rightarrow \pi^0 \pi^+ \pi^- K_S,$ $\Lambda_c^+ \rightarrow \bar{K}^0 p, K_S \rightarrow \pi^+ \pi^-, \bar{K}^0 \rightarrow K_L$ $(e^+e^- \rightarrow K_L \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \bar{n} p \gamma \gamma \gamma \gamma \gamma)$	79	77	1	218
81	$e^+e^- \rightarrow \rho^0 \pi^- \rho^+ D^{*+} \bar{D}^{*-}, \rho^0 \rightarrow \pi^+ \pi^-, \rho^+ \rightarrow \pi^0 \pi^+, D^{*+} \rightarrow \pi^+ D^0, \bar{D}^{*-} \rightarrow \pi^- \bar{D}^0, D^0 \rightarrow \pi^0 K_1^0,$ $\bar{D}^0 \rightarrow \rho^0 \pi^- K^+, \bar{K}_1^0 \rightarrow \rho^+ K^-, \rho^0 \rightarrow \pi^+ \pi^-, \rho^+ \rightarrow \pi^0 \pi^+$ $(e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- K^+ K^- \gamma \gamma \gamma \gamma \gamma \gamma)$	32	32	1	219
82	$e^+e^- \rightarrow \pi^0 \pi^+ \rho^- D^{*+} \bar{D}^{*-}, \rho^- \rightarrow \pi^0 \pi^-, D^{*+} \rightarrow \pi^+ D^0, \bar{D}^{*-} \rightarrow \pi^- \bar{D}^0, D^0 \rightarrow \pi^+ \pi^- \bar{K}^*, \bar{D}^0 \rightarrow \eta K_S,$ $\bar{K}^* \rightarrow \pi^+ K^-, \eta \rightarrow \gamma \gamma, K_S \rightarrow \pi^+ \pi^-$ $(e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^- \gamma \gamma \gamma \gamma \gamma)$	81	79	1	220
83	$e^+e^- \rightarrow \pi^0 \pi^0 \rho^0 \rho^- \bar{D}^{*0} D_1^{'+}, \rho^0 \rightarrow \pi^+ \pi^-, \rho^- \rightarrow \pi^0 \pi^-, \bar{D}^{*0} \rightarrow D^0 \gamma, D_1^{'+} \rightarrow \pi^0 D^{*+}, \bar{D}^0 \rightarrow \pi^- K^+,$ $D^{*+} \rightarrow \pi^+ D^0, D^0 \rightarrow K_L \pi^+ \pi^-$ $(e^+e^- \rightarrow K_L \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^+ \gamma \gamma \gamma \gamma \gamma \gamma \gamma)$	9	9	1	221
84	$e^+e^- \rightarrow \rho^0 \pi^+ \pi^- \rho^- D^{*+} \bar{D}^{*0}, \rho^0 \rightarrow \pi^+ \pi^-, \rho^- \rightarrow \pi^0 \pi^-, D^{*+} \rightarrow \pi^+ D^0, \bar{D}^{*0} \rightarrow \pi^0 \bar{D}^0, D^0 \rightarrow \pi^0 \pi^- K^+,$ $\bar{D}^0 \rightarrow \eta \eta', \eta \rightarrow \pi^0 \pi^+ \pi^-, \eta' \rightarrow \pi^+ \pi^- \eta, \eta \rightarrow \pi^0 \pi^0 \pi^0$ $(e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- K^+ \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma)$	10	10	1	222



index	event tree (event initial-final states)	iEvtTr	iEvtIFSts	nEvts	nCmltEvts
98	$e^+e^- \rightarrow \pi^0 \rho^0 \pi^+ \pi^- \eta K^0 D_s^{*-} D_0^{*+}, \rho^0 \rightarrow \pi^+ \pi^-, \eta \rightarrow \pi^0 \pi^0 \pi^0, K^0 \rightarrow K_S, D_s^{*-} \rightarrow D_s^- \gamma, D_0^{*+} \rightarrow \pi^+ D^0,$ $K_S \rightarrow \pi^+ \pi^-, D_s^- \rightarrow K^* K^{*-}, D^0 \rightarrow \pi^0 K_L \pi^+ \pi^-, K^* \rightarrow \pi^- K^+, K^{*-} \rightarrow \pi^0 K^-$ $(e^+e^- \rightarrow K_L \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- K^+ K^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma)$	97	92	1	236
99	$e^+e^- \rightarrow \omega \omega D^{*+} \bar{D}^{*-}, \omega \rightarrow \pi^0 \pi^+ \pi^-, \omega \rightarrow \pi^0 \pi^+ \pi^-, D^{*+} \rightarrow \pi^0 D^+, \bar{D}^{*-} \rightarrow \pi^- \bar{D}^0, D^+ \rightarrow e^+ \nu_e \bar{K}^*,$ $\bar{D}^0 \rightarrow \pi^0 \pi^- K^+, \bar{K}^* \rightarrow \pi^+ K^-$ $(e^+e^- \rightarrow e^+ \nu_e \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^+ K^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma)$	38	38	1	237
100	$e^+e^- \rightarrow \pi^+ K^0 K^- D^{*+} \bar{D}^{*-}, K^0 \rightarrow K_L, D^{*+} \rightarrow \pi^+ D^0, \bar{D}^{*-} \rightarrow \pi^0 D^-, D^0 \rightarrow \pi^0 \pi^0 \pi^0 \pi^+ K^-, D^- \rightarrow \mu^- \bar{\nu}_\mu K^0,$ $K^0 \rightarrow K_L$ $(e^+e^- \rightarrow \mu^- \bar{\nu}_\mu K_L K_L \pi^+ \pi^+ \pi^- K^- K^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma)$	99	94	1	238
101	$e^+e^- \rightarrow \pi^- \rho^+ K^- K^{*+} D^{*+} \bar{D}^{*-}, \rho^+ \rightarrow \pi^0 \pi^+, K^{*+} \rightarrow \pi^0 K^+, D^{*+} \rightarrow \pi^+ D^0, \bar{D}^{*-} \rightarrow \pi^- \bar{D}^0, D^0 \rightarrow K^+ K^-,$ $\bar{D}^0 \rightarrow \pi^- \omega K^+, \omega \rightarrow \pi^0 \pi^+ \pi^-$ $(e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^+ K^+ K^+ K^- K^- \gamma \gamma \gamma \gamma \gamma)$	39	39	1	239
102	$e^+e^- \rightarrow \pi^0 \pi^+ \pi^+ \pi^- \rho^- \omega D^{*+} \bar{D}^{*-}, \rho^- \rightarrow \pi^0 \pi^-, \omega \rightarrow \pi^0 \pi^+ \pi^-, D^{*+} \rightarrow \pi^+ D^0, \bar{D}^{*-} \rightarrow \pi^- \bar{D}^0, D^0 \rightarrow \rho^0 \bar{K}^*,$ $\bar{D}^0 \rightarrow K^+ a_1^-, \rho^0 \rightarrow \pi^+ \pi^-, \bar{K}^* \rightarrow \pi^0 \bar{K}^0, a_1^- \rightarrow \rho^0 \pi^-, \bar{K}^0 \rightarrow K_S, \rho^0 \rightarrow \pi^+ \pi^-,$ $K_S \rightarrow \pi^+ \pi^-$ $(e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- \pi^- \pi^- K^+ \gamma \gamma \gamma \gamma \gamma \gamma \gamma)$	101	96	1	240
103	$e^+e^- \rightarrow \pi^+ \pi^- D^- D^{*+} n \bar{n}, D^- \rightarrow e^- \bar{\nu}_e \pi^- K^+, D^{*+} \rightarrow \pi^+ D^0, D^0 \rightarrow \pi^+ \pi^+ \pi^- K^-$ $(e^+e^- \rightarrow e^- \bar{\nu}_e \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- K^+ K^- n \bar{n})$	13	13	1	241
104	$e^+e^- \rightarrow \pi^0 \pi^0 \rho^+ \rho^- \bar{D}^{*-} D^0, \rho^+ \rightarrow \pi^0 \pi^+, \rho^- \rightarrow \pi^0 \pi^+, \rho^- \rightarrow \pi^0 \pi^-, \bar{D}^{*-} \rightarrow \pi^- \bar{D}^0, D^0 \rightarrow K^+ K^-,$ $\bar{D}^0 \rightarrow \rho^0 \pi^- K^+, \rho^0 \rightarrow \pi^+ \pi^-$ $(e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^+ K^+ K^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma)$	41	41	1	242
105	$e^+e^- \rightarrow \pi^0 \pi^0 \pi^- K^- K^{*+} D^{*+} D_s^{*-}, K^{*+} \rightarrow \pi^0 K^+, K^{*+} \rightarrow \pi^+ K^0, D^{*+} \rightarrow \pi^+ D^0, D_s^{*-} \rightarrow D_s^- \gamma, K^0 \rightarrow K_L,$ $D^0 \rightarrow \pi^0 K_L \pi^+ \pi^-, D_s^- \rightarrow K^0 K^{*-}, K^0 \rightarrow K_L, K^{*-} \rightarrow \pi^- \bar{K}^0, \bar{K}^0 \rightarrow K_S, K_S \rightarrow \pi^0 \pi^0$ $(e^+e^- \rightarrow K_L K_L K_L \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- K^+ K^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma)$	104	99	1	243
106	$e^+e^- \rightarrow \pi^+ K^+ K^- \bar{D}^{*-} D^{*0}, \bar{D}^{*-} \rightarrow \pi^- \bar{D}^0, D^{*0} \rightarrow \pi^0 D^0, \bar{D}^0 \rightarrow \pi^0 K_L \pi^+ \pi^-, D^0 \rightarrow \pi^0 \pi^0 \pi^+ \pi^-$ $(e^+e^- \rightarrow K_L \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- K^+ K^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma)$	14	14	1	244

Table 2: Event initial-final states.

index	event initial-final states	iEvtIFSts	nEvts	nCmltEvts
1	$e^+e^- \rightarrow e^+e^+e^-e^-K_LK_L\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-K^+\gamma\gamma\gamma$	28	25	25
2	$e^+e^- \rightarrow e^+e^-\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-K^+K^+K^-K^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	57	14	39
3	$e^+e^- \rightarrow e^-\bar{\nu}_e\pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-K^+K^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	22	13	52
4	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-K^+K^-\gamma\gamma\gamma$	48	10	62
5	$e^+e^- \rightarrow \mu^-\bar{\nu}_\mu\pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	40	10	72
6	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-\pi^-\pi^-K^+K^+K^-\gamma\gamma\gamma$	0	8	80
7	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-\pi^-K^+K^-\gamma\gamma\gamma\gamma$	50	6	86
8	$e^+e^- \rightarrow e^-\bar{\nu}_eK_L\pi^+\pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-\gamma\gamma\gamma\gamma\gamma\gamma$	98	6	92
9	$e^+e^- \rightarrow e^+e^+e^-\nu_eK_LK_L\pi^+\pi^-\pi^-\pi^-\gamma\gamma$	11	4	96
10	$e^+e^- \rightarrow \mu^+\nu_\mu\pi^+\pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-\pi^-\pi^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	85	4	100
11	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-\pi^-K^+K^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	53	4	104
12	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-\pi^-K^+\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	100	4	108
13	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-\pi^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	49	3	111
14	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-\pi^-\pi^-\gamma\gamma\gamma$	34	3	114
15	$e^+e^- \rightarrow e^+\nu_e\pi^+\pi^+\pi^-\pi^-\pi^-K^+K^-\gamma\gamma\gamma\gamma\gamma\gamma$	35	3	117
16	$e^+e^- \rightarrow K_L\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-K^+K^-K^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	1	3	120
17	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-K^+K^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	62	3	123
18	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-K^+K^-K^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	66	3	126
19	$e^+e^- \rightarrow e^-\bar{\nu}_eK_L\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-K^+\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	69	3	129
20	$e^+e^- \rightarrow K_L\pi^+\pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-\pi^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	71	3	132
21	$e^+e^- \rightarrow K_L\pi^+\pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-K^-\gamma\gamma\gamma\gamma\gamma$	75	3	135
22	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-K^-\bar{n}p\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	81	3	138
23	$e^+e^- \rightarrow e^+\nu_e\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-\pi^-\pi^-K^+\bar{n}p\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	42	3	141
24	$e^+e^- \rightarrow \mu^-\bar{\nu}_\mu\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-K^+K^-\gamma\gamma\gamma\gamma$	87	3	144
25	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-\pi^-K^-K^-\gamma\gamma\gamma\gamma$	95	3	147
26	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-\pi^-K^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	43	3	150
27	$e^+e^- \rightarrow \mu^+\nu_\mu\pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-K^+K^-K^-K^-\bar{n}p\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	17	3	153
28	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-K^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	19	2	155
29	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-K^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	70	2	157
30	$e^+e^- \rightarrow K_LK_L\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-K^+\gamma\gamma$	33	2	159
31	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-K^+K^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	72	2	161
32	$e^+e^- \rightarrow e^+e^-\pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-K^+K^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	74	2	163
33	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-K^+K^+K^+K^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	54	2	165
34	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-K^+K^-\bar{n}p\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	78	2	167
35	$e^+e^- \rightarrow e^+e^+e^-\nu_e\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-\pi^-p\bar{p}\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	80	2	169
36	$e^+e^- \rightarrow e^+\nu_eK_L\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-\gamma\gamma\gamma\gamma\gamma\gamma$	55	2	171
37	$e^+e^- \rightarrow K_L\pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	82	2	173
38	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-K^+K^-K^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	24	2	175
39	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-\pi^-K^+p\bar{p}\gamma\gamma\gamma\gamma\gamma$	25	2	177
40	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-\pi^-K^+K^-\gamma\gamma\gamma$	93	2	179

index	event initial-final states	iEvtIFSts	nEvts	nCmltEvts
41	$e^+e^- \rightarrow e^-e^- \nu_e \bar{\nu}_e \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- K^+ K^+ \gamma \gamma \gamma \gamma \gamma$	63	2	181
42	$e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^+ p \bar{p} \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma$	97	2	183
43	$e^+e^- \rightarrow e^+ \nu_e \mu^- \bar{\nu}_\mu \pi^+ \pi^+ \pi^- \pi^- K^- \gamma \gamma \gamma$	36	2	185
44	$e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^+ \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma$	67	2	187
45	$e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- K^- n \bar{p} \gamma \gamma \gamma$	44	1	188
46	$e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- \pi^- K^- \gamma \gamma \gamma \gamma \gamma$	45	1	189
47	$e^+e^- \rightarrow e^+e^- K_L \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- K^+ n \bar{p} \gamma \gamma \gamma$	46	1	190
48	$e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^- K^- \gamma \gamma \gamma$	47	1	191
49	$e^+e^- \rightarrow \mu^+ \nu_\mu \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^+ K^+ K^- K^- \gamma \gamma \gamma$	16	1	192
50	$e^+e^- \rightarrow \mu^+ \nu_\mu K_L \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^+ \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma$	3	1	193
51	$e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^+ K^- \gamma \gamma \gamma \gamma \gamma \gamma$	18	1	194
52	$e^+e^- \rightarrow e^+ \nu_e \pi^+ \pi^- \pi^- K^+ K^- p \bar{p} \gamma \gamma \gamma$	51	1	195
53	$e^+e^- \rightarrow K_L \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma$	52	1	196
54	$e^+e^- \rightarrow e^+e^- \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma$	4	1	197
55	$e^+e^- \rightarrow K_L \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- K^+ p \bar{p} \gamma \gamma \gamma \gamma \gamma \gamma$	20	1	198
56	$e^+e^- \rightarrow \mu^+ \nu_\mu \pi^+ \pi^+ \pi^- \pi^- \pi^- K^- \bar{n} p \gamma \gamma$	21	1	199
57	$e^+e^- \rightarrow K_L \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- K^+ \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma$	56	1	200
58	$e^+e^- \rightarrow K_L \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- K^+ \gamma \gamma \gamma \gamma$	5	1	201
59	$e^+e^- \rightarrow e^+e^- K_L K_L \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma$	58	1	202
60	$e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- K^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma$	59	1	203
61	$e^+e^- \rightarrow e^- \bar{\nu}_e \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- K^+ \gamma \gamma \gamma \gamma$	60	1	204
62	$e^+e^- \rightarrow K_L \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^+ \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma$	61	1	205
63	$e^+e^- \rightarrow K_L \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^- \gamma \gamma \gamma \gamma \gamma$	23	1	206
64	$e^+e^- \rightarrow e^- \bar{\nu}_e \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma$	6	1	207
65	$e^+e^- \rightarrow e^- \bar{\nu}_e K_L \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \gamma \gamma \gamma \gamma \gamma$	64	1	208
66	$e^+e^- \rightarrow e^+ \nu_e K_L \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma$	65	1	209
67	$e^+e^- \rightarrow e^+ \nu_e \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- \bar{n} p \gamma \gamma \gamma \gamma \gamma$	7	1	210
68	$e^+e^- \rightarrow e^+e^- \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- K^+ K^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma$	26	1	211
69	$e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- K^- \bar{n} p \gamma \gamma \gamma \gamma \gamma \gamma$	68	1	212
70	$e^+e^- \rightarrow \mu^+ \nu_\mu \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma$	27	1	213
71	$e^+e^- \rightarrow e^+e^- K_L \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^+ \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma$	8	1	214
72	$e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- K^+ K^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma$	29	1	215
73	$e^+e^- \rightarrow e^+e^- \mu^+ \nu_\mu K_L \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma$	30	1	216
74	$e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- \pi^- K^+ p \bar{p} \gamma \gamma \gamma \gamma \gamma \gamma \gamma$	73	1	217
75	$e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- \pi^- K^+ \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma$	31	1	218
76	$e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \pi^- K^+ K^- \gamma \gamma \gamma \gamma \gamma$	32	1	219
77	$e^+e^- \rightarrow e^- \bar{\nu}_e \mu^+ \nu_\mu \pi^+ \pi^+ \pi^- \pi^- \pi^- K^+ K^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma$	76	1	220
78	$e^+e^- \rightarrow K_L \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- \bar{n} p \gamma \gamma \gamma \gamma \gamma \gamma \gamma$	77	1	221
79	$e^+e^- \rightarrow K_L \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^+ \gamma \gamma \gamma \gamma \gamma \gamma \gamma \gamma$	9	1	222
80	$e^+e^- \rightarrow \pi^+ \pi^+ \pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^- \pi^- K^- \gamma \gamma \gamma \gamma \gamma \gamma \gamma$	79	1	223

index	event initial-final states	iEvtIFSts	nEvts	nCmItEvts
81	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-\pi^-K^+\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	10	1	224
82	$e^+e^- \rightarrow K_L\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-\pi^-K^+n\bar{n}\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	2	1	225
83	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-\pi^-K^+\gamma\gamma\gamma\gamma$	12	1	226
84	$e^+e^- \rightarrow e^-\bar{\nu}_e K_L\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-\gamma\gamma\gamma\gamma$	83	1	227
85	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-K^-n\bar{n}\gamma\gamma\gamma\gamma\gamma\gamma$	84	1	228
86	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^-\pi^-\pi^-K^+K^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	37	1	229
87	$e^+e^- \rightarrow K_L\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-K^+K^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	86	1	230
88	$e^+e^- \rightarrow e^+\nu_e\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-K^+K^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	38	1	231
89	$e^+e^- \rightarrow e^-\bar{\nu}_e\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-K^+\gamma\gamma\gamma\gamma\gamma\gamma$	88	1	232
90	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^-\pi^-\pi^-K^+K^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	89	1	233
91	$e^+e^- \rightarrow e^+\nu_e K_L\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	90	1	234
92	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-\pi^-K^+\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	91	1	235
93	$e^+e^- \rightarrow K_L\pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-\pi^-K^+K^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	92	1	236
94	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-K^+K^+K^+K^-K^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	39	1	237
95	$e^+e^- \rightarrow \mu^-\bar{\nu}_\mu K_L K_L\pi^+\pi^+K^-K^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	94	1	238
96	$e^+e^- \rightarrow e^-\bar{\nu}_e\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-K^+K^-n\bar{n}$	13	1	239
97	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-K^+\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	96	1	240
98	$e^+e^- \rightarrow \pi^+\pi^+\pi^+\pi^-\pi^-\pi^-\pi^-K^+K^+K^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	41	1	241
99	$e^+e^- \rightarrow K_L\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-K^+K^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	14	1	242
100	$e^+e^- \rightarrow K_L K_L K_L\pi^+\pi^+\pi^+\pi^-\pi^-\pi^-K^+K^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	99	1	243
101	$e^+e^- \rightarrow e^+\nu_e\pi^+\pi^+\pi^-\pi^-\pi^-K^+K^-\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma\gamma$	15	1	244

Table 3: Signal inclusive sequential event branches.

index	signal inclusive sequential event branches	iSigIncSeqEvtBrs	nEtrs	nCmltEtrs
1	$D^{*+} \rightarrow D^0 + \text{anything}, D^0 \rightarrow \pi^+ \pi^- K_S, K_S \rightarrow \pi^+ \pi^-$	0	5	5