

No.	decay chain	final states	iTopo	nEvt	nTot
0	$\psi' \rightarrow \pi^0 \pi^0 J/\psi, J/\psi \rightarrow \pi^- \pi^- \pi^0 \pi^+ \pi^+$	$\psi' \rightarrow \pi^+ \pi^+ \pi^0 \pi^0 \pi^- \pi^-$	54	153	153
1	$\psi' \rightarrow \pi^0 h_c, h_c \rightarrow \gamma \eta_c, \eta_c \rightarrow K^- K_L \pi^+$	$\psi' \rightarrow \gamma \pi^+ K_L \pi^0 K^-$	391	84	237
2	$\psi' \rightarrow \pi^0 h_c, h_c \rightarrow \gamma \eta_c, \eta_c \rightarrow K^- \pi^- \pi^0 \pi^+ K^+$	$\psi' \rightarrow \gamma K^+ \pi^+ \pi^0 \pi^- K^-$	218	80	317
3	$\psi' \rightarrow \pi^0 h_c, h_c \rightarrow \gamma \eta_c, \eta_c \rightarrow \pi^- K_L K^+$	$\psi' \rightarrow \gamma K^+ K_L \pi^0 \pi^-$	309	77	394
4	$\psi' \rightarrow \pi^0 \pi^0 J/\psi, J/\psi \rightarrow K^- \pi^- \pi^0 \pi^+ K^+$	$\psi' \rightarrow K^+ \pi^+ \pi^0 \pi^0 \pi^- K^-$	210	73	467
5	$\psi' \rightarrow \pi^0 \pi^0 J/\psi, J/\psi \rightarrow \pi^- \pi^- \pi^0 \pi^0 \pi^+ \pi^+$	$\psi' \rightarrow \pi^+ \pi^+ \pi^0 \pi^0 \pi^- \pi^-$	69	63	530
6	$\psi' \rightarrow \bar{p} \pi^0 \pi^+ n$	$\psi' \rightarrow n \pi^+ \pi^0 \bar{p}$	172	61	591
7	$\psi' \rightarrow \pi^0 h_c, h_c \rightarrow \gamma \eta_c, \eta_c \rightarrow \pi^- \pi^- \pi^+ \pi^+$	$\psi' \rightarrow \gamma \pi^+ \pi^+ \pi^0 \pi^- \pi^-$	617	58	649
8	$\psi' \rightarrow \pi^0 h_c, h_c \rightarrow \gamma \eta_c, \eta_c \rightarrow \bar{p} \pi^+ n$	$\psi' \rightarrow \gamma n \pi^+ \pi^0 \bar{p}$	519	57	706
9	$\psi' \rightarrow \pi^0 \pi^0 J/\psi, J/\psi \rightarrow \pi^- \pi^- \pi^0 \pi^+ \pi^+ \pi^+$	$\psi' \rightarrow \pi^+ \pi^+ \pi^+ \pi^0 \pi^0 \pi^- \pi^-$	185	53	759
10	$\psi' \rightarrow \pi^0 \pi^0 J/\psi, J/\psi \rightarrow e^- e^+$	$\psi' \rightarrow \pi^0 \pi^0 e^+ e^-$	196	52	811
11	$\psi' \rightarrow \pi^0 \pi^0 J/\psi, J/\psi \rightarrow b_1^- \pi^0 \pi^+ \pi^+, b_1^- \rightarrow \pi^- \omega, \omega \rightarrow \pi^- \pi^0 \pi^+$	$\psi' \rightarrow \pi^+ \pi^+ \pi^0 \pi^0 \pi^- \pi^-$	124	51	862
12	$\psi' \rightarrow \gamma \chi_{c0}, \chi_{c0} \rightarrow b_1^- \pi^0 \pi^+, b_1^- \rightarrow \pi^- \omega, \omega \rightarrow \pi^- \pi^0 \pi^+$	$\psi' \rightarrow \gamma \pi^+ \pi^+ \pi^0 \pi^- \pi^-$	718	51	913
13	$\psi' \rightarrow \eta J/\psi, \eta \rightarrow \pi^0 \pi^0 \pi^0, J/\psi \rightarrow \pi^- \pi^- \pi^0 \pi^+ \pi^+$	$\psi' \rightarrow \pi^+ \pi^+ \pi^0 \pi^0 \pi^- \pi^-$	645	49	962
14	$\psi' \rightarrow \pi^0 \pi^0 J/\psi, J/\psi \rightarrow \pi^- \eta b_1^+, \eta \rightarrow \gamma \gamma, b_1^+ \rightarrow \pi^+ \omega, \omega \rightarrow \pi^- \pi^0 \pi^+$	$\psi' \rightarrow \gamma \gamma \pi^+ \pi^+ \pi^0 \pi^0 \pi^- \pi^-$	173	49	1011
15	$\psi' \rightarrow \pi^0 \pi^0 J/\psi, J/\psi \rightarrow \pi^- \gamma \pi^0 \pi^+$	$\psi' \rightarrow \gamma \pi^+ \pi^0 \pi^0 \pi^- \pi^-$	215	48	1059
16	$\psi' \rightarrow \pi^0 h_c, h_c \rightarrow \gamma \eta_c, \eta_c \rightarrow \pi^- \pi^- \pi^+ \pi^+$	$\psi' \rightarrow \gamma \pi^+ \pi^+ \pi^+ \pi^0 \pi^- \pi^-$	98	47	1106
17	$\psi' \rightarrow \gamma \chi_{c0}, \chi_{c0} \rightarrow \pi^- \pi^+ b_1^0, b_1^0 \rightarrow \pi^0 \omega, \omega \rightarrow \pi^- \pi^0 \pi^+$	$\psi' \rightarrow \gamma \pi^+ \pi^+ \pi^0 \pi^- \pi^-$	342	44	1150
18	$\psi' \rightarrow \pi^0 \pi^0 J/\psi, J/\psi \rightarrow b_1^- \pi^+ \eta, b_1^- \rightarrow \pi^- \omega, \eta \rightarrow \gamma \gamma, \omega \rightarrow \pi^- \pi^0 \pi^+$	$\psi' \rightarrow \gamma \gamma \pi^+ \pi^+ \pi^0 \pi^0 \pi^- \pi^-$	582	43	1193
19	$\psi' \rightarrow \pi^0 h_c, h_c \rightarrow \gamma \eta_c, \eta_c \rightarrow K^- \pi^+ K_S, K_S \rightarrow \pi^- \pi^+$	$\psi' \rightarrow \gamma \pi^+ \pi^+ \pi^0 \pi^- K^-$	475	43	1236
20	$\psi' \rightarrow \pi^- \pi^0 \pi^0 b_1^+, b_1^+ \rightarrow \pi^+ \omega, \omega \rightarrow \pi^- \pi^0 \pi^+$	$\psi' \rightarrow \pi^+ \pi^+ \pi^0 \pi^0 \pi^- \pi^-$	205	42	1278
21	$\psi' \rightarrow \pi^0 \pi^0 J/\psi, J/\psi \rightarrow \bar{n} \pi^+ \Delta^-, \Delta^- \rightarrow \pi^- n$	$\psi' \rightarrow n \pi^+ \pi^0 \pi^- \bar{n}$	756	41	1319
22	$\psi' \rightarrow \pi^0 h_c, h_c \rightarrow \gamma \eta_c, \eta_c \rightarrow K^{*-} \pi^+ K^*, K^{*-} \rightarrow \pi^- K_L, K^* \rightarrow \pi^- K^+$	$\psi' \rightarrow \gamma K^+ \pi^+ K_L \pi^0 \pi^- \pi^-$	200	39	1358
23	$\psi' \rightarrow \pi^0 h_c, h_c \rightarrow \gamma \eta_c, \eta_c \rightarrow \pi^- K_S K^+, K_S \rightarrow \pi^- \pi^+$	$\psi' \rightarrow \gamma K^+ \pi^+ \pi^0 \pi^- \pi^-$	123	38	1396
24	$\psi' \rightarrow \bar{n} K^* \Lambda, K^* \rightarrow \pi^- K^+, \Lambda \rightarrow \pi^0 n$	$\psi' \rightarrow n K^+ \pi^0 \pi^- \bar{n}$	104	37	1433
25	$\psi' \rightarrow \pi^0 h_c, h_c \rightarrow \gamma \eta_c, \eta_c \rightarrow \bar{K}^* \pi^- K^{*+}, \bar{K}^* \rightarrow K^- \pi^+, K^{*+} \rightarrow K_L \pi^+$	$\psi' \rightarrow \gamma \pi^+ \pi^+ K_L \pi^0 \pi^- K^-$	134	35	1468
26	$\psi' \rightarrow \pi^0 \pi^0 J/\psi, J/\psi \rightarrow \bar{n} \pi^- \pi^+ n$	$\psi' \rightarrow n \pi^+ \pi^0 \pi^- \bar{n}$	369	35	1503
27	$\psi' \rightarrow \gamma \chi_{c2}, \chi_{c2} \rightarrow \pi^- \pi^+ b_1^0, b_1^0 \rightarrow \pi^0 \omega, \omega \rightarrow \pi^- \pi^0 \pi^+$	$\psi' \rightarrow \gamma \pi^+ \pi^+ \pi^0 \pi^- \pi^-$	151	35	1538
28	$\psi' \rightarrow \pi^0 h_c, h_c \rightarrow \gamma \eta_c, \eta_c \rightarrow \rho^0 \rho^0, \rho^0 \rightarrow \pi^- \pi^+, \rho^0 \rightarrow \pi^- \pi^+$	$\psi' \rightarrow \gamma \pi^+ \pi^+ \pi^0 \pi^- \pi^-$	250	35	1573
29	$\psi' \rightarrow \pi^0 h_c, h_c \rightarrow \gamma \eta_c, \eta_c \rightarrow \bar{K}^* \pi^- K^+, \bar{K}^* \rightarrow K^- \pi^+$	$\psi' \rightarrow \gamma K^+ \pi^+ \pi^0 \pi^- K^-$	79	35	1608

Table 1: