$\begin{array}{c} h_c \rightarrow \gamma \gamma \\ h_c \rightarrow \gamma \gamma \\ h_c \rightarrow \gamma \gamma \\ \chi_{C2} \rightarrow I \\ \chi_{C1} \rightarrow I \\ \chi_{C2} \rightarrow I \\ \chi$	$K^0 ightarrow K_S, K_S$ $K^0 ightarrow K_S, K_S$ $K^0 ightarrow K_S, K_S$ $K_S ightarrow \pi^- \pi^ K_S, K_S ightarrow \pi^- \pi^ K_S ightarrow K_S ightarrow \pi^- \pi^ K_S ightarrow K_S ightarrow \pi^- K_S$ $K_S ightarrow \pi^- K_S$	$ \begin{array}{c} \rightarrow \gamma \gamma \gamma \gamma K^{+} \pi^{+} \pi^{-} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma \gamma \pi^{+} \pi^{+} \pi^{-} K^{-} \\ \rightarrow \gamma \gamma \gamma K^{+} \pi^{+} \pi^{-} K^{-} \\ \rightarrow \gamma \gamma \gamma \pi^{+} \pi^{+} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma \gamma \pi^{+} \pi^{+} \pi^{-} K^{-} \\ \rightarrow \gamma \gamma \gamma \pi^{+} \pi^{+} \pi^{-} K^{-} \\ \rightarrow \gamma \gamma \gamma \pi^{+} \pi^{+} \pi^{-} K^{-} \\ \rightarrow \gamma \gamma \gamma K^{+} \pi^{+} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma \gamma \pi^{+} \pi^{+} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma \gamma \pi^{+} \pi^{+} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma \gamma \pi^{+} \pi^{+} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma \gamma \pi^{+} \pi^{+} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma \gamma \pi^{+} \pi^{+} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma \gamma \pi^{+} \pi^{+} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma \gamma \pi^{+} \pi^{+} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma \gamma \pi^{+} \pi^{+} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma \gamma \pi^{+} \pi^{+} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma \gamma \pi^{+} \pi^{+} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma \gamma \pi^{+} \pi^{+} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma \gamma \pi^{+} \pi^{+} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma \gamma \pi^{+} \pi^{+} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma \gamma \pi^{+} \pi^{+} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma \gamma \pi^{+} \pi^{+} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma \gamma \gamma \pi^{+} \pi^{+} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma \gamma \gamma \pi^{+} \pi^{+} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma \gamma \gamma \pi^{+} \pi^{+} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma \gamma \gamma \pi^{+} \pi^{+} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma \gamma \gamma \pi^{+} \pi^{+} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma \gamma \gamma \pi^{+} \pi^{+} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma \gamma \gamma \pi^{-} \pi^{+} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma \gamma \gamma \pi^{-} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma \gamma \gamma \gamma \pi^{-} \pi^{-} \pi^{-} \\ \rightarrow \gamma \gamma$	2 6 7 1 11 12 13 13 8 8	88 88 9 9 4 8 8 8 8 8 8 8 8 8 8 8 8 8 8	338 773 84 888 91 97 101 103
$\psi' \rightarrow \pi^{0}h_{c}, h_{c} \rightarrow \gamma'$ $\psi' \rightarrow \gamma Xc_{2}, Xc_{2} \rightarrow 1$ $\psi' \rightarrow K^{-}K^{*}\gamma\pi^{+}, F$ $\psi' \rightarrow \tau \gamma K^{*}K^{+}, F$ $\psi' \rightarrow \tau \chi c_{2}, \chi c_{2} \rightarrow 1$ $\psi' \rightarrow \gamma \chi c_{2}, \chi c_{2} \rightarrow 1$ $\psi' \rightarrow \gamma \chi c_{1}, \chi c_{1} \rightarrow 1$ $\psi' \rightarrow \gamma \chi c_{1}, \chi c_{1} \rightarrow 1$ $\psi' \rightarrow \gamma \chi c_{2}, \chi c_{2} \rightarrow 1$ $\psi' \rightarrow \gamma \chi c_{1}, \chi c_{1} \rightarrow 1$ $\psi' \rightarrow \gamma \chi c_{2}, \chi c_{2} \rightarrow 1$ $\psi' \rightarrow \gamma \chi c_{2}, \chi c_{2} \rightarrow 1$ $\psi' \rightarrow \gamma \chi c_{1}, \chi c_{1} \rightarrow 1$ $\psi' \rightarrow \gamma \chi c_{2}, \chi c_{2} \rightarrow 1$ $\psi' \rightarrow \gamma \chi c_{2}, \chi c_{2} \rightarrow 1$ $\psi' \rightarrow \gamma \chi c_{2}, \chi c_{2} \rightarrow 1$ $\psi' \rightarrow \gamma \chi c_{2}, \chi c_{2} \rightarrow 1$ $\psi' \rightarrow \gamma \chi c_{2}, \chi c_{2} \rightarrow 1$ $\psi' \rightarrow \gamma \chi c_{2}, \chi c_{2} \rightarrow 1$	$\begin{array}{l} \eta_{c} \to K^{-}\pi^{+}K^{0}, \ K^{0} \to K_{S}, \ K_{S} \to \pi^{-}\pi^{+}, \\ \rho^{-}K_{+}, \ \bar{K}^{0} \to K_{S}, \ \rho^{-} \to \pi^{-}\pi^{0}, \ K_{S} \to \pi^{-}\pi^{+}, \\ \to \bar{K}^{0}\pi^{0}, \ \bar{K}^{0} \to K_{S}, \ K_{S} \to \pi^{-}\pi^{+}, \\ \to \pi^{0}K^{0}, \ K^{0} \to K_{S}, \ K_{S} \to \pi^{-}\pi^{+}, \\ \rho^{+}K^{0}, \ \rho^{+} \to \pi^{0}\pi^{+}, \ K^{0} \to K_{S}, \ K_{S} \to \pi^{-}\pi^{+}, \\ K^{*}, \ \bar{K}^{*} \to K^{-}\pi^{+}, \ K^{*} \to \pi^{-}K^{+}, \ K_{S} \to \pi^{-}\pi^{+}, \\ \rho^{+}K^{0}, \ \rho^{+} \to \pi^{0}\pi^{+}, \ K^{0} \to K_{S}, \ K_{S} \to \pi^{-}\pi^{+}, \\ \rho^{+}K^{0}, \ \rho^{+} \to \pi^{0}\pi^{+}, \ K^{0} \to K_{S}, \ K_{S} \to \pi^{-}\pi^{+}, \\ K^{*+}, \ K^{*-} \to K^{-}\pi^{0}, \ K^{*+} \to \pi^{+}K^{0}, \ K^{0} \to K_{S}, \ K_{S} \to \pi^{-}\pi^{-}, \\ \rho^{-}K^{+}, \ K^{*-} \to K^{-}\pi^{0}, \ K^{*+} \to \pi^{+}K^{0}, \ K^{0} \to K_{S}, \ K_{S} \to \pi^{-}, \\ \rho^{-}K^{+}, \ \bar{K}^{0} \to K_{S}, \ \rho^{-} \to \pi^{-}\pi^{0}, \ K_{S} \to \pi^{-}\pi^{+}, \\ \rho^{-}K^{+}, \ \bar{K}^{0} \to K_{S}, \ \rho^{-} \to \pi^{-}\pi^{0}, \ K_{S} \to \pi^{-}\pi^{+}, \\ \rho^{-}K^{+}, \ \bar{K}^{0} \to K_{S}, \ \rho^{-} \to \pi^{-}\pi^{0}, \ K_{S} \to \pi^{-}\pi^{+}, \\ \rho^{-}K^{+}, \ \bar{K}^{0} \to K_{S}, \ \rho^{-} \to \pi^{-}\pi^{0}, \ K_{S} \to \pi^{-}\pi^{+}, \\ \rho^{-}K^{+}, \ \bar{K}^{0} \to K_{S}, \ \rho^{-} \to \pi^{-}\pi^{0}, \ K_{S} \to \pi^{-}\pi^{+}, \\ \rho^{-}K^{+}, \ \bar{K}^{0} \to K_{S}, \ \rho^{-} \to \pi^{-}\pi^{0}, \ K_{S} \to \pi^{-}\pi^{+}, \\ \rho^{-}K^{+}, \ \bar{K}^{0} \to K_{S}, \ \rho^{-} \to \pi^{-}\pi^{0}, \ K_{S} \to \pi^{-}\pi^{+}, \\ \rho^{-}K^{+}, \ \bar{K}^{0} \to K_{S}, \ \rho^{-} \to \pi^{-}\pi^{0}, \ K_{S} \to \pi^{-}\pi^{+}, \\ \rho^{-}K^{+}, \ \bar{K}^{0} \to K_{S}, \ \rho^{-} \to \pi^{-}\pi^{0}, \ K_{S} \to \pi^{-}\pi^{+}, \\ \rho^{-}K^{+}, \ \bar{K}^{0} \to K_{S}, \ \rho^{-} \to \pi^{-}\pi^{0}, \ K_{S} \to \pi^{-}\pi^{0}, \\ \rho^{-}K^{+}, \ \bar{K}^{0} \to K_{S}, \ K_{S} \to \pi^{-}\pi^{0}, \\ \rho^{-}K^{+}, \ \bar{K}^{0} \to K_{S}, \ \bar{K}^{0} \to \bar{K}^{0}, \ K$		6 24 1 1 11 11 11 13 16 0 8		73 884 888 991 995 1001 1003
$\psi' \rightarrow \gamma \chi_{c2}, \chi_{c2} \rightarrow \Gamma$ $\psi' \rightarrow K^{-}\bar{K}^{*}\gamma\pi^{+}, \bar{K}$ $\psi' \rightarrow \pi^{-}\gamma K^{*}K^{+}, \bar{K}^{+}, \bar{K}^{+},$	$\begin{array}{l} \rho^-K^+, \ \bar{K}^0 \to K_S, \ \rho^- \to \pi^-\pi^0, \ K_S \to \pi^-\pi^+, \\ \to \bar{K}^0\pi^0, \ \bar{K}^0 \to K_S, \ K_S \to \pi^-\pi^+, \\ \to \pi^0K^0, \ K^0 \to K_S, \ K_S \to \pi^-\pi^+, \\ \rho^+K^0, \ \rho^+ \to \pi^0\pi^+, \ K^0 \to K_S, \ K_S \to \pi^-\pi^+, \\ K^*, \ \bar{K}^* \to K^-\pi^+, \ K^* \to \pi^0K^0, \ K^0 \to K_S, \ K_S \to \pi^-\pi^+, \\ K^0K^*, \ K^0 \to K_S, \ K^* \to \pi^-K^+, \ K_S \to \pi^-\pi^+, \\ \rho^+K^0, \ \rho^+ \to \pi^0\pi^+, \ K^0 \to K_S, \ K_S \to \pi^-\pi^+, \\ -K^{*+}, \ K^{*-} \to \bar{K}^0\pi^-, \ K^{*+} \to \pi^0K^+, \ \bar{K}^0 \to K_S, \ K_S \to \pi^-\pi^-, \\ -K^{*+}, \ K^{*-} \to K^-\pi^0, \ K^{*+} \to \pi^+K^0, \ K^0 \to K_S, \ K_S \to \pi^-$		24 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		79 88 88 91 93 97 101 103
$\psi' \rightarrow K^{-}\bar{K}^{*}\gamma\pi^{+}, \ F$ $\psi' \rightarrow \pi^{-}\gamma K^{*}K^{+}, \ F$ $\psi' \rightarrow \gamma \chi_{c2}, \chi_{c2} \rightarrow I$ $\psi' \rightarrow \gamma \chi_{c1}, \chi_{c1} \rightarrow I$ $\psi' \rightarrow \gamma \chi_{c1}, \chi_{c1} \rightarrow I$ $\psi' \rightarrow \gamma \chi_{c1}, \chi_{c1} \rightarrow I$ $\psi' \rightarrow \gamma \chi_{c2}, \chi_{c2} \rightarrow I$ $\psi' \rightarrow \gamma \chi_{c2}, \chi_{c2} \rightarrow I$ $\psi' \rightarrow \gamma \chi_{c2}, \chi_{c2} \rightarrow I$ $\psi' \rightarrow \gamma \chi_{c1}, \chi_{c1} \rightarrow I$ $\psi' \rightarrow \gamma \chi_{c2}, \chi_{c2} \rightarrow I$	$ \begin{split} & \to \bar{K}^0 \pi^0, \ \bar{K}^0 \to K_S, \ K_S \to \pi^- \pi^+, \\ & \to \pi^0 K^0, \ K^0 \to K_S, \ K_S \to \pi^- \pi^+, \\ & \rho^+ K^0, \ \rho^+ \to \pi^0 \pi^+, \ K^0 \to K_S, \ K_S \to \pi^- \pi^+, \\ & K^*, \ \bar{K}^* \to K^- \pi^+, \ K^* \to \pi^0 K^0, \ K^0 \to K_S, \ K_S \to \pi^- \pi^+, \\ & K^0 K^*, \ K^0 \to K_S, \ K^* \to \pi^- K^+, \ K_S \to \pi^- \pi^+, \\ & \rho^+ K^0, \ \rho^+ \to \pi^0 \pi^+, \ K^0 \to K_S, \ K_S \to \pi^- \pi^+, \\ & -K^{*+}, \ K^{*-} \to \bar{K}^0 \pi^-, \ K^{*+} \to \pi^0 K^+, \ \bar{K}^0 \to K_S, \ K_S \to \pi^- \pi^- K^-, \\ & \rho^- K^+, \ \bar{K}^0 \to K_S, \ \rho^- \to \pi^- \pi^0, \ K_S \to \pi^- \pi^+, \\ & \rho^- K^+, \ \bar{K}^0 \to K_S, \ \rho^- \to \pi^- \pi^0, \ K_S \to \pi^- \pi^+, \end{split}$		1 11 11 11 13 16 8 8		84 88 991 995 997 101 103
$\begin{matrix} *^*K^+, & F \\ X^C & Y \\ X^C & Y \\ X^C & Y \\ Y$	$ \begin{array}{l} \rightarrow \pi^{0}K^{0}, \ K^{0} \rightarrow K_{S}, \ K_{S} \rightarrow \pi^{-}\pi^{+}, \\ \rho^{+}K^{0}, \ \rho^{+} \rightarrow \pi^{0}\pi^{+}, \ K^{0} \rightarrow K_{S}, \ K_{S} \rightarrow \pi^{-}\pi^{+}, \\ K^{*}, \ \bar{K}^{*} \rightarrow K^{-}\pi^{+}, \ K^{*} \rightarrow \pi^{-}K^{+}, \ K^{0} \rightarrow K_{S}, \ K_{S} \rightarrow \pi^{-}\pi^{+}, \\ \kappa^{0}K_{*}, \ K^{0} \rightarrow K_{S}, \ K^{*} \rightarrow \pi^{-}K^{+}, \ K_{S} \rightarrow \pi^{-}\pi^{+}, \\ \rho^{+}K^{0}, \ \rho^{+} \rightarrow \pi^{0}\pi^{+}, \ K^{0} \rightarrow K_{S}, \ K_{S} \rightarrow \pi^{-}\pi^{+}, \\ -K^{*+}, \ K^{*-} \rightarrow \bar{K}^{0}\pi^{-}, \ K^{*+} \rightarrow \pi^{+}K^{0}, \ K^{0} \rightarrow K_{S}, \ K_{S} \rightarrow \pi^{-}\pi^{-}K^{+}, \\ \rho^{-}K^{*+}, \ \bar{K}^{0} \rightarrow K_{S}, \ \rho^{-} \rightarrow \pi^{-}\pi^{0}, \ K_{S} \rightarrow \pi^{-}\pi^{+}, \\ \rho^{-}K^{+}, \ \bar{K}^{0} \rightarrow K_{S}, \ \rho^{-} \rightarrow \pi^{-}\pi^{0}, \ K_{S} \rightarrow \pi^{-}\pi^{+}, \end{array}$		5 11 11 13 16 8 8	4 % % % % % % % % % % % % % % % % % % %	88 91 93 95 99 101 103
$\begin{array}{c} X \\ X \\ X \\ C \\$	$\begin{array}{l} \rho^{+}K^{0}, \; \rho^{+} \rightarrow \pi^{0}\pi^{+}, \; K^{0} \rightarrow K_{S}, \; K_{S} \rightarrow \pi^{-}\pi^{+}, \\ K^{*}, \; \bar{K}^{*} \rightarrow K^{-}\pi^{+}, \; K^{*} \rightarrow \pi^{0}K^{0}, \; K^{0} \rightarrow K_{S}, \; K_{S} \rightarrow \pi^{-}\pi^{+}, \\ K^{0}K^{*}, \; K^{0} \rightarrow K_{S}, \; K^{*} \rightarrow \pi^{-}K^{+}, \; K_{S} \rightarrow \pi^{-}\pi^{+}, \\ \rho^{+}K^{0}, \; \rho^{+} \rightarrow \pi^{0}\pi^{+}, \; K^{0} \rightarrow K_{S}, \; K_{S} \rightarrow \pi^{-}\pi^{+}, \\ -K^{*+}, \; K^{*-} \rightarrow \bar{K}^{0}\pi^{-}, \; K^{*+} \rightarrow \pi^{0}K^{+}, \; \bar{K}^{0} \rightarrow K_{S}, \; K_{S} \rightarrow \pi^{-}K^{*+}, \\ -K^{*+}, \; K^{*-} \rightarrow K^{-}\pi^{0}, \; K^{*+} \rightarrow \pi^{+}K^{0}, \; K^{0} \rightarrow K_{S}, \; K_{S} \rightarrow \pi^{-}K^{-}, \\ \rho^{-}K^{+}, \; \bar{K}^{0} \rightarrow K_{S}, \; \rho^{-} \rightarrow \pi^{-}\pi^{0}, \; K_{S} \rightarrow \pi^{-}\pi^{+}, \end{array}$		14 11 12 13 0 0 16 8		91 93 95 99 101 103
$\begin{array}{c} \chi_{C2} \\ \chi_{C1} \\ \chi_{C2} \\ \chi_{C2} \\ \chi_{C2} \\ \chi_{C2} \\ \chi_{C1} \\ \chi_{C2} \\ \chi_{C2$	$K^*, \ \bar{K}^* \to K^- \pi^+, \ K^* \to \pi^0 K^0, \ K^0 \to K_S, \ K_S \to \pi^- \pi^+, \\ F^0 K^*, \ K^0 \to K_S, \ K^* \to \pi^- K^+, \ K_S \to \pi^- \pi^+, \\ \rho^+ K^0, \ \rho^+ \to \pi^0 \pi^+, \ K^0 \to K_S, \ K_S \to \pi^- \pi^+, \\ -K^{*+}, \ K^{*-} \to \bar{K}^0 \pi^-, \ K^{*+} \to \pi^0 K^+, \ K^0 \to K_S, \ K_S \to \pi^- K^- K^+, \ K^0 \to K_S, \ K^0 \to \pi^- K^- K^0, \ K^0 \to K_S, \ K_S \to \pi^- K^- K^0, \ K^0 \to K_S, \ K_S \to \pi^- K^- K^0, \ K^0 \to K_S, \ K_S \to \pi^- K^- K^0, \ K^0 \to K_S, \ K_S \to \pi^- K^- K^0, \ K^0 \to K_S, \ K_S \to \pi^- K^- K^0 \to K_S, \ K_S \to K^- K^- K^- K^- K^- K^- K^- K^- K^- K^-$		111 122 13 0 16 3 26 8		93 95 97 101 103 105
$\begin{array}{c} \chi_{C1} \\ \chi_{C2} \\ \chi_{C2} \\ \chi_{C2} \\ \chi_{C1} \\ \chi_{C2} \\ \chi_{C2} \\ \chi_{C2} \\ \chi_{C2} \\ \chi_{C2} \\ \chi_{C3} \\ \chi_{C2} \\ \chi_{C4} \\ \chi_{C5} \\ \chi_{C5$	$ \begin{array}{l} K^0K^*, \ K^0 \to K_S, \ K^* \to \pi^-K^+, \ K_S \to \pi^-\pi^+, \\ \rho^+K^0, \ \rho^+ \to \pi^0\pi^+, \ K^0 \to K_S, \ K_S \to \pi^-\pi^+, \\ -K^{*+}, \ K^{*-} \to \bar{K}^0\pi^-, \ K^{*+} \to \pi^0K^+, \ \bar{K}^0 \to K_S, \ K_S \to \pi^-\\ -K^{*+}, \ K^{*-} \to K^-\pi^0, \ K^{*+} \to \pi^+K^0, \ K^0 \to K_S, \ K_S \to \pi^-\\ \rho^-K^+, \ \bar{K}^0 \to K_S, \ \rho^- \to \pi^-\pi^0, \ K_S \to \pi^-\pi^+, \end{array} $		12 13 0 16 8 8	122222	95 97 99 101 103
$\begin{array}{c} \chi_{c1} \\ \chi_{c2} \\ \chi_{c2} \\ \chi_{c1} \\ \chi_{c1} \\ \chi_{c2} \\ \chi_{c2} \\ \chi_{c2} \\ \chi_{c2} \\ \chi_{c3} \\ \chi_{c4} \\ \chi_{c5} \\ \chi_{c5$	$K^{0}, \ \rho^{+} \rightarrow \pi^{0}\pi^{+}, \ K^{0} \rightarrow K_{S}, \ K_{S} \rightarrow \pi^{-}\pi^{+},$ $K^{*+}, \ K^{*-} \rightarrow \bar{K}^{0}\pi^{-}, \ K^{*+} \rightarrow \pi^{0}K^{+}, \ \bar{K}^{0} \rightarrow K_{S}, \ K_{S} \rightarrow \pi^{-}$ $K^{*+}, \ K^{*-} \rightarrow K^{-}\pi^{0}, \ K^{*+} \rightarrow \pi^{+}K^{0}, \ K^{0} \rightarrow K_{S}, \ K_{S} \rightarrow \pi^{-}$ $K^{+}, \ \bar{K}^{0} \rightarrow K_{S}, \ \rho^{-} \rightarrow \pi^{-}\pi^{0}, \ K_{S} \rightarrow \pi^{-}\pi^{+},$		13 0 16 3 8	12222	97 99 101 103 105
$\begin{array}{c} \chi_{c,2} \\ \chi_{c,2} \\ \chi_{c,1} \\ \chi_{c,1} \\ \chi_{c,1} \\ \chi_{c,2} \\$	$ \begin{array}{c} ^{*+}, \ K^{*-} \to K^0 \pi^-, \ K^{*+} \to \pi^0 K^+, \ \bar{K}^0 \to K_S, \ K_S \to \pi^- \\ ^{*+}, \ \bar{K}^{*-} \to K^- \pi^0, \ K^{*+} \to \pi^+ K^0, \ K^0 \to K_S, \ K_S \to \pi^- \\ K^+, \ \bar{K}^0 \to K_S, \ \rho^- \to \pi^- \pi^0, \ K_S \to \pi^- \pi^+, \end{array} $		0 16 3 26 8	7 7 7 7 7	99 101 103 105
$ \begin{array}{c} \chi_{c2} \to I \\ \chi_{c1} \to I \\ \chi_{c1} \to I \\ \chi_{c2} \to I \\ \chi_{c2} \to I \\ \chi_{c2} \to I \end{array} $	$K^{*+}, K^{*-} \to K^{-}\pi^{0}, K^{*+} \to \pi^{+}K^{0}, K^{0} \to K_{S}, K_{S} \to \pi^{-}K^{+}, \bar{K}^{0} \to K_{S}, \rho^{-} \to \pi^{-}\pi^{0}, K_{S} \to \pi^{-}\pi^{+},$		16 3 26 8	7777	101 103 105
$ \begin{array}{c} \chi_{c1} \rightarrow I \\ \chi_{c1} \rightarrow I \\ \chi_{c2} \rightarrow I \\ \chi_{c2} \rightarrow I \end{array} $	$K^+,~ ar{K}^0 ightarrow K_S,~ ar{ ho}^- ightarrow \pi^- \pi^0,~ K_S ightarrow$		3 8 26	- 7 7	103 105 106
$ \begin{array}{c} \chi_{c1} \to I \\ \chi_{c2} \to I \\ \chi_{c2} \to I \end{array} $ $ \begin{array}{c} \chi_{c2} \to I \\ \chi_{c2} \to I \end{array} $			26 8	2 -	105 106
$\chi_{c2} \rightarrow I$ $\chi_{c2} \rightarrow I$ $\chi_{c2} \rightarrow I$ $\chi_{c2} \rightarrow I$	$^{+}K^{*},~K^{*} \to \pi^{0}K^{0}$		∞		106
$\chi_{c2} \rightarrow I$ $c \rightarrow K^-$	$\bar{K}^0\pi^-K^{*+}, \; \bar{K}^0 \to K_S, \; K^{*+} \to \pi^0K^+, \; K_S \to \pi^-\pi^+, \; \; \psi'$	$ ightarrow \gamma \gamma \gamma K^+ \pi^+ \pi^- \pi^-$	_		700
$_{c} \rightarrow K^{-}$	$\Gamma^+,\ K^0 o K$	$ ightarrow \gamma \gamma \gamma \pi^+ \pi^+ \pi^- K^-$	6		107
	$K^0 \to K$	$ ightarrow \gamma \gamma \gamma \pi^+ \pi^+ \pi^- K^-$	15		108
16 $\psi' \to \gamma \chi_{c1}, \chi_{c1} \to K$	$K^+,\ ar{K}^* oar{K}^0\pi^0,\ ar{K}^0 o K$	$ ightarrow \gamma \gamma \gamma K^+ \pi^+ \pi^- \pi^-$	10		109
$+$ $_{-}$	$ ightarrow ho^+ K^0, \ ho^+ ightarrow \pi^0 \pi^+, \ K^0 ightarrow K_S, \ K_S ightarrow \pi^- \pi^+, \ \left \ \psi' ight.$	$\rightarrow \gamma \gamma \pi^+ \pi^+ \pi^- K^-$	17	⊢	110
18 $\psi' \to \bar{K}^* \pi^0 K_2^{*0}, \bar{K}^*$	$K^0\pi^0, K_2^{*0} \to \pi^- K^+, I$	$ ightarrow \gamma \gamma \gamma \gamma K^+ \pi^+ \pi^- \pi^-$	18		111
19 $\psi' \to K^-K_1^+, K_1^+ -$	$K_{(}$	$\rightarrow \gamma \gamma \gamma \gamma_{FSR} \pi^+ \pi^+ \pi^- K^-$	19	.	112
$20 \psi' \to \gamma \chi_{c2}, \ \chi_{c2} \to \pi$	$^-K^*K^+,~K^* o\pi^0K^0,~K^0 o K_S,~K_S$ -	$ ightarrow \gamma \gamma \gamma K^+ \pi^+ \pi^- \pi^-$	20	⊢	113
$\psi' o \gamma \chi_{c1}, \ \chi_{c1} o F$	$K^{*+},~K^{*-} ightarrow K^-\pi^0,~K^{*+} ightarrow\pi^-$	$\rightarrow \gamma \gamma \gamma \pi^+ \pi^+ \pi^- K^-$	21		114
22 $\psi' \to \gamma \chi_{c2}, \ \chi_{c2} \to \bar{K}$	$K_S, K^* \rightarrow \pi^- K^+, K_S$	$\rightarrow \gamma \gamma \gamma K^+ \pi^+ \pi^- \pi^-$	22		115
$\psi' o \gamma \chi_{c2}, \ \chi_{c2} o$	$K^-\pi^0K^{*+}, \ K^{*+} \to \pi^+K^0, \ K^0 \to K_S, \ K_S \to \pi^-\pi^+, $	$ ightarrow \gamma \gamma \gamma \pi^+ \pi^+ \pi^- K^-$	23		116
$24 \psi' \to \bar{K}^* \gamma K^*, \ \bar{K}^* -$	$\to K^-\pi^+, K^* \to \pi^0 K^0, K^0 \to K_S, K_S \to \pi^-\pi^+,$	$ ightarrow \gamma \gamma \gamma \pi^+ \pi^+ \pi^- K^-$	4		117
25 $\psi' \to \gamma \chi_{c1}, \ \chi_{c1} \to K$	$K^{-}K^{0}\pi^{0}\pi^{+}, K^{0} \to K_{S}, K_{S} \to \pi^{-}\pi^{+},$ ψ'	$\rightarrow \gamma \gamma \gamma \pi^+ \pi^+ \pi^- K^-$	25	 	118
26 $\psi' \to \gamma \chi_{c1}, \ \chi_{c1} \to \bar{K}$	$K^*\pi^0K^0, \ K^* o K^-\pi^+, \ K^0 o K_S, \ K_S o \pi^-\pi^+, \ \ \psi'$	$\rightarrow \gamma \gamma \gamma \pi^+ \pi^+ \pi^- K^-$	2		119
$\psi' \to \gamma \chi_{c2}, \ \lambda$	$K^{*-}\pi^{0}K^{+}, K^{*-} \to K^{0}\pi^{-}, K^{0} \to K_{S}, K_{S} \to \pi^{-}\pi^{+}, $ $ \psi'$	$\rightarrow \gamma \gamma \gamma K^+ \pi^+ \pi^- \pi^-$	27	.	120
$28 \qquad \psi' \to \pi^- \pi^+ K_S K_S, $	$ ightarrow \pi^-\pi^+, \; K_S ightarrow \pi^0\pi^0,$	$-\mu_{\mu}^{+}\pi_{\mu}^{+}\pi_{\nu}$	28		121
$\psi' \to K_1^- K^+, K_1^$	$\to K^0 \rho^-, K^0 \to K_S, \rho^- \to \pi^- \pi^0, K_S \to \pi^- \pi^+,$	$\rightarrow \gamma \gamma K^+ \pi^+ \pi^- \pi^-$	29	1	122

Table 1: