CHARMED BARYONS
$(C = +1)$

$\Lambda_c^+ = udc, \quad \Sigma_c^{++} = uuc, \quad \Sigma_c^+ = udc, \quad \Sigma_c^0 = ddc,$
$\Xi_c^+ = usc, \quad \Xi_c^0 = dsc, \quad \Omega_c^0 = ssc$

$\boxed{\Lambda_c^+}$ $\qquad\qquad\qquad I(J^P) = 0(\tfrac{1}{2}^+)$

Mass $m = 2286.46 \pm 0.14$ MeV
Mean life $\tau = (202.6 \pm 1.0) \times 10^{-15}$ s
$\quad c\tau = 60.75\ \mu$m

Decay asymmetry parameters

$\Lambda\pi^+$	$\alpha = -0.755 \pm 0.006$

α FOR $\Lambda_c^+ \to \Lambda\rho^+ = -0.76 \pm 0.07$

$\Sigma^+\pi^0 \qquad \alpha = -0.484 \pm 0.027$

α FOR $\Lambda_c^+ \to \Sigma^+\eta = -0.99 \pm 0.06$

α FOR $\Lambda_c^+ \to \Sigma^+\eta' = -0.46 \pm 0.07$

α FOR $\Lambda_c^+ \to \Sigma^0\pi^+ = -0.466 \pm 0.018$

α FOR $\Lambda_c^+ \to \Sigma(1385)^+\pi^0 = -0.92 \pm 0.09$

α FOR $\Lambda_c^+ \to \Sigma(1385)^0\pi^+ = -0.79 \pm 0.11$

$\Lambda\ell^+\nu_\ell \qquad \alpha = -0.875 \pm 0.033$

α FOR $\Lambda_c^+ \to pK_S^0 = 0.2 \pm 0.5$

α FOR $\Lambda_c^+ \to \Lambda K^+ = -0.58 \pm 0.05$

α FOR $\Lambda_c^+ \to \Sigma^0 K^+ = -0.54 \pm 0.20$

α FOR $\Lambda_c^+ \to \Lambda(1405)\pi^+ = 0.58 \pm 0.28$

α FOR $\Lambda_c^+ \to \Lambda(1520)\pi^+ = 0.93 \pm 0.09$

α FOR $\Lambda_c^+ \to \Lambda(1600)\pi^+ = 0.2 \pm 0.5$

α FOR $\Lambda_c^+ \to \Lambda(1670)\pi^+ = 0.82 \pm 0.08$

α FOR $\Lambda_c^+ \to \Lambda(1690)\pi^+ = 0.958 \pm 0.034$

α FOR $\Lambda_c^+ \to \Lambda(2000)\pi^+ = -0.57 \pm 0.19$

α FOR $\Lambda_c^+ \to \Delta(1232)^{++}K^- = 0.55 \pm 0.04$

α FOR $\Lambda_c^+ \to \Delta(1600)^{++}K^- = -0.50 \pm 0.18$

α FOR $\Lambda_c^+ \to \Delta(1700)^{++}K^- = 0.22 \pm 0.08$

α FOR $\Lambda_c^+ \to \overline{K}_0^*(700)^0 p = -0.1 \pm 0.7$

α FOR $\Lambda_c^+ \to \overline{K}_0^*(1430)^0 p = 0.34 \pm 0.14$

$(\alpha + \overline{\alpha})/(\alpha - \overline{\alpha})$ in $\Lambda_c^+ \to \Lambda\pi^+, \overline{\Lambda}_c^- \to \overline{\Lambda}\pi^- = 0.020 \pm 0.016$

$(\alpha + \overline{\alpha})/(\alpha - \overline{\alpha})$ in $\Lambda_c^+ \to \Sigma^0 \pi^+, \overline{\Lambda}_c^- \to \overline{\Sigma}^0 \pi^- = -0.02 \pm 0.05$

$(\alpha + \overline{\alpha})/(\alpha - \overline{\alpha})$ in $\Lambda_c^+ \to \Lambda e^+ \nu_e, \overline{\Lambda}_c^- \to \overline{\Lambda} e^- \overline{\nu}_e = 0.00 \pm 0.04$

$(\alpha + \overline{\alpha})/(\alpha - \overline{\alpha})$ in $\Lambda_c^+ \to \Lambda K^+, \overline{\Lambda}_c^- \to \overline{\Lambda} K^- = -0.23 \pm 0.11$

$(\alpha + \overline{\alpha})/(\alpha - \overline{\alpha})$ in $\Lambda_c^+ \to \Sigma^0 K^+, \overline{\Lambda}_c^- \to \overline{\Sigma}^0 K^- = 0.1 \pm 0.4$

$A_{CP}(\Lambda X)$ in $\Lambda_c \to \Lambda X, \overline{\Lambda}_c \to \overline{\Lambda} X = (2 \pm 7)\%$

$A_{CP}(\Lambda K^+)$ in $\Lambda_c \to \Lambda K^+, \overline{\Lambda}_c \to \overline{\Lambda} K^- = 0.021 \pm 0.026$

$A_{CP}(\Sigma^0 K^+)$ in $\Lambda_c \to \Sigma^0 K^+, \overline{\Lambda}_c \to \overline{\Sigma}^0 K^- = 0.03 \pm 0.05$

$\Delta A_{CP} = A_{CP}(\Lambda_c^+ \to p K^+ K^-) - A_{CP}(\Lambda_c^+ \to p \pi^+ \pi^-) = (0.3 \pm 1.1)\%$

Branching fractions marked with a footnote, e.g. [a], have been corrected for decay modes not observed in the experiments. For example, the sub-mode fraction $\Lambda_c^+ \to p \overline{K}^*(892)^0$ seen in $\Lambda_c^+ \to p K^- \pi^+$ has been multiplied up to include $\overline{K}^*(892)^0 \to \overline{K}^0 \pi^0$ decays.

Λ_c^+ DECAY MODES

		Fraction (Γ_i/Γ)	Scale factor/ Confidence level	p (MeV/c)
Hadronic modes with a p or n: $S = -1$ final states				
$p K_S^0$		$(1.59 \pm 0.07)\ \%$	S=1.1	873
$p K^- \pi^+$		$(6.24 \pm 0.28)\ \%$	S=1.4	823
$\quad p \overline{K}_0^*(700)^0$		$(1.9 \pm 0.6) \times 10^{-3}$		715
$\quad p \overline{K}^*(892)^0$	[a]	$(1.39 \pm 0.07)\ \%$		685
$\quad p \overline{K}_0^*(1430)$		$(9.2 \pm 1.8) \times 10^{-3}$		†
$\quad \Delta(1232)^{++} K^-$		$(1.76 \pm 0.09)\ \%$		710
$\quad \Delta(1600)^{++} K^-$		$(2.8 \pm 1.0) \times 10^{-3}$		–
$\quad \Delta(1700)^{++} K^-$		$(2.4 \pm 0.6) \times 10^{-3}$		–
$\quad \Lambda(1405)^0 \pi^+$		$(4.8 \pm 1.9) \times 10^{-3}$		–
$\quad \Lambda(1520) \pi^+$	[a]	$(1.16 \pm 0.16) \times 10^{-3}$		628
$\quad \Lambda(1600) \pi^+$		$(3.2 \pm 1.2) \times 10^{-3}$		571
$\quad \Lambda(1670) \pi^+$		$(7.4 \pm 2.1) \times 10^{-4}$		516
$\quad \Lambda(1690) \pi^+$		$(7.4 \pm 2.2) \times 10^{-4}$		504
$\quad \Lambda(2000) \pi^+$		$(6.0 \pm 0.7) \times 10^{-3}$		234
$\quad p K^- \pi^+$ nonresonant		$(3.5 \pm 0.4)\ \%$		823
$p K_S^0 \pi^0$		$(1.96 \pm 0.12)\ \%$		823
$n K_S^0 \pi^+$		$(1.82 \pm 0.25)\ \%$		821
$n K^- \pi^+ \pi^+$		$(1.90 \pm 0.12)\ \%$		756
$p \overline{K}^0 \eta$		$(8.8 \pm 0.6) \times 10^{-3}$	S=1.1	568
$p K_S^0 \pi^+ \pi^-$		$(1.59 \pm 0.11)\ \%$	S=1.1	754
$p K^- \pi^+ \pi^0$		$(4.43 \pm 0.28)\ \%$	S=1.5	759
$\quad p K^*(892)^- \pi^+$	[a]	$(1.4 \pm 0.5)\ \%$		580
$\quad p (K^- \pi^+)_{\text{nonresonant}} \pi^0$		$(4.6 \pm 0.8)\ \%$		759
$\quad \Delta(1232) \overline{K}^*(892)$		seen		419
$p K^- 2\pi^+ \pi^-$		$(1.4 \pm 0.9) \times 10^{-3}$		671
$p K^- \pi^+ 2\pi^0$		$(10 \pm 5) \times 10^{-3}$		678

Hadronic modes with a p or n: $S = 0$ final states

Mode		Fraction			
$p\pi^0$		$<\ 8\qquad \times 10^{-5}$	CL=90%		945
$n\pi^+$		$(\ 6.6\ \pm\ 1.3\ )\times 10^{-4}$			944
$p\eta$		$(\ 1.57\pm\ 0.12)\times 10^{-3}$			856
$p\eta'$		$(\ 4.8\ \pm\ 0.9\ )\times 10^{-4}$			639
$p\omega(782)^0$		$(\ 1.11\pm\ 0.21)\times 10^{-3}$			751
$p\pi^+\pi^-$		$(\ 4.59\pm\ 0.25)\times 10^{-3}$			927
$p f_0(980)$	[a]	$(\ 3.4\ \pm\ 2.3\ )\times 10^{-3}$			614
$n\pi^+\pi^0$		$(\ 6.4\ \pm\ 0.9\ )\times 10^{-3}$			927
$n\pi^+\pi^-\pi^+$		$(\ 4.5\ \pm\ 0.8\ )\times 10^{-3}$			895
$p2\pi^+2\pi^-$		$(\ 2.2\ \pm\ 1.4\ )\times 10^{-3}$			852
pK^+K^-		$(\ 1.06\pm\ 0.05)\times 10^{-3}$			616
$p\phi$	[a]	$(\ 1.06\pm\ 0.14)\times 10^{-3}$			590
pK^+K^- non-ϕ		$(\ 5.2\ \pm\ 1.1\ )\times 10^{-4}$			616
$pK^0_S K^0_S$		$(\ 2.35\pm\ 0.18)\times 10^{-4}$			610
$p\phi\pi^0$		$(10\quad\pm\ 4\quad)\times 10^{-5}$			460
$pK^+K^-\pi^0$ nonresonant		$<\ 6.3\qquad \times 10^{-5}$	CL=90%		494

Hadronic modes with a hyperon: $S = -1$ final states

Mode		Fraction	Scale		
$\Lambda\pi^+$		$(\ 1.29\pm\ 0.05)\ \%$	S=1.1		864
$\Lambda(1670)\pi^+,\ \Lambda(1670)\to\ \eta\Lambda$		$(\ 3.5\ \pm\ 0.5\ )\times 10^{-3}$			–
$\Lambda\pi^+\pi^0$		$(\ 7.02\pm\ 0.35)\ \%$	S=1.1		844
$\Lambda\rho^+$		$(\ 4.0\ \pm\ 0.5\ )\ \%$			636
$\Sigma(1385)^+\pi^0,\ \Sigma^+\to\ \Lambda\pi^+$		$(\ 5.0\ \pm\ 0.7\ )\times 10^{-3}$			–
$\Sigma(1385)^0\pi^+,\ \Sigma^0\to\ \Lambda\pi^0$		$(\ 5.6\ \pm\ 0.8\ )\times 10^{-3}$			–
$\Lambda\pi^-2\pi^+$		$(\ 3.61\pm\ 0.26)\ \%$	S=1.4		807
$\Sigma(1385)^+\pi^+\pi^-,\ \Sigma^{*+}\to$ $\Lambda\pi^+$		$(\ 1.0\ \pm\ 0.5\ )\ \%$			688
$\Sigma(1385)^-2\pi^+,\ \Sigma^{*-}\to$ $\Lambda\pi^-$		$(\ 7.6\ \pm\ 1.4\ )\times 10^{-3}$			688
$\Lambda\pi^+\rho^0$		$(\ 1.4\ \pm\ 0.6\ )\ \%$			524
$\Sigma(1385)^+\rho^0,\ \Sigma^{*+}\to\ \Lambda\pi^+$		$(\ 5\quad\pm\ 4\quad)\times 10^{-3}$			363
$\Lambda\pi^-2\pi^+$ nonresonant		$<\ 1.1\qquad \%$	CL=90%		807
$\Lambda\pi^-\pi^02\pi^+$ total		$(\ 2.2\ \pm\ 0.8\ )\ \%$			757
$\Lambda\pi^+\eta$	[a]	$(\ 1.84\pm\ 0.11)\ \%$	S=1.1		691
$\Sigma(1385)^+\eta$	[a]	$(\ 9.1\ \pm\ 2.0\ )\times 10^{-3}$			570
$\Lambda\pi^+\omega$	[a]	$(\ 1.5\ \pm\ 0.5\ )\ \%$			517
$\Lambda\pi^-\pi^02\pi^+$, no η or ω		$<\ 8\qquad \times 10^{-3}$	CL=90%		757
$\Lambda K^+\overline{K}{}^0$		$(\ 5.6\ \pm\ 1.1\ )\times 10^{-3}$	S=1.9		443
$\Xi(1690)^0 K^+,\ \Xi^{*0}\to\ \Lambda\overline{K}{}^0$		$(\ 1.6\ \pm\ 0.5\ )\times 10^{-3}$			286
$\Sigma^0\pi^+$		$(\ 1.27\pm\ 0.06)\ \%$	S=1.1		825
$\Sigma^0\pi^+\eta$		$(\ 7.5\ \pm\ 0.8\ )\times 10^{-3}$			635
$\Sigma^+\pi^0$		$(\ 1.24\pm\ 0.09)\ \%$			827
$\Sigma^+\eta$		$(\ 3.2\ \pm\ 0.5\ )\times 10^{-3}$			713
$\Sigma^+\eta'$		$(\ 4.1\ \pm\ 0.8\ )\times 10^{-3}$			391

$\Sigma^+\pi^+\pi^-$		(4.47± 0.22) %	S=1.2	804
$\Sigma^+\rho^0$		< 1.7 %	CL=95%	575
$\Sigma^-2\pi^+$		(1.86± 0.18) %		799
$\Sigma^0\pi^+\pi^0$		(3.5 ± 0.4) %		803
$\Sigma^+\pi^0\pi^0$		(1.54± 0.14) %		806
$\Sigma^0\pi^-2\pi^+$		(1.10± 0.30) %		763
$\Sigma^+\omega$		(1.69± 0.20) %		569
$\Sigma^-\pi^02\pi^+$		(2.1 ± 0.4) %		762
$\Sigma^+K^+K^-$		(3.59± 0.35) $\times 10^{-3}$	S=1.1	349
$\Sigma^+\phi$	[a]	(3.9 ± 0.5) $\times 10^{-3}$	S=1.1	295
$\Xi(1690)^0 K^+,\ \Xi^{*0}\to$ Σ^+K^-		(1.01± 0.25) $\times 10^{-3}$		286
$\Sigma^+K^+K^-$ nonresonant		< 8 $\times 10^{-4}$	CL=90%	349
$\Xi^0 K^+$		(5.5 ± 0.7) $\times 10^{-3}$		653
$\Xi^- K^+\pi^+$		(6.2 ± 0.5) $\times 10^{-3}$	S=1.1	565
$\Xi(1530)^0 K^+$		(4.3 ± 0.9) $\times 10^{-3}$	S=1.1	473

Hadronic modes with a hyperon: $S = 0$ final states

ΛK^+		(6.42± 0.31) $\times 10^{-4}$		781
$\Lambda K^+\pi^+\pi^-$		< 5 $\times 10^{-4}$	CL=90%	637
$\Sigma^0 K^+$		(3.70± 0.31) $\times 10^{-4}$		735
$\Sigma^+ K^0_S$		(4.7 ± 1.4) $\times 10^{-4}$		736
$\Sigma^0 K^+\pi^+\pi^-$		< 2.5 $\times 10^{-4}$	CL=90%	574
$\Sigma^+ K^+\pi^-$		(2.00± 0.26) $\times 10^{-3}$		670
$\Sigma^+ K^*(892)^0$	[a]	(3.5 ± 1.0) $\times 10^{-3}$		470
$\Sigma^+ K^+\pi^-\pi^0$		< 1.1 $\times 10^{-3}$	CL=90%	581
$\Sigma^- K^+\pi^+$		< 1.2 $\times 10^{-3}$	CL=90%	664

Doubly Cabibbo-suppressed modes

$pK^+\pi^-$	(1.11± 0.17) $\times 10^{-4}$		823

Semileptonic modes

$\Lambda e^+\nu_e$	(3.56± 0.13) %		871
$\Lambda\pi^+\pi^- e^+\nu_e$	< 3.9 $\times 10^{-4}$	CL=90%	843
$pK^- e^+\nu_e$	(8.8 ± 1.8) $\times 10^{-4}$		874
$pK^0_S\pi^- e^+\nu_e$	< 3.3 $\times 10^{-4}$	CL=90%	821
$\Lambda(1520) e^+\nu_e$	(1.0 ± 0.5) $\times 10^{-3}$		639
$\Lambda(1405)^0 e^+\nu_e,\ \Lambda^0\to pK^-$	(4.2 ± 1.9) $\times 10^{-4}$		—
$\Lambda\mu^+\nu_\mu$	(3.48± 0.17) %		867

Inclusive modes

e^+ anything	(4.06± 0.13) %	—
p anything	(50 ±16) %	—
n anything	(32.6 ± 1.6) %	—
Λ anything	(38.2 $^{+\ 2.9}_{-\ 2.4}$) %	—

K^0_S anything		(9.9 $\pm$ 0.7) %			–
3prongs		(24 $\pm$ 8) %			–

$\Delta C = 1$ weak neutral current ($C1$) modes, or Lepton Family number (LF), or Lepton number (L), or Baryon number (B) violating modes

$p e^+ e^-$	$C1$	< 5.5	$\times 10^{-6}$	CL=90%	951
$p \mu^+ \mu^-$ non-resonant	$C1$	< 7.7	$\times 10^{-8}$	CL=90%	937
$p e^+ \mu^-$	LF	< 9.9	$\times 10^{-6}$	CL=90%	947
$p e^- \mu^+$	LF	< 1.9	$\times 10^{-5}$	CL=90%	947
$\overline{p} 2 e^+$	L,B	< 2.7	$\times 10^{-6}$	CL=90%	951
$\overline{p} 2 \mu^+$	L,B	< 9.4	$\times 10^{-6}$	CL=90%	937
$\overline{p} e^+ \mu^+$	L,B	< 1.6	$\times 10^{-5}$	CL=90%	947
$\Sigma^- \mu^+ \mu^+$	L	< 7.0	$\times 10^{-4}$	CL=90%	812

Radiative modes

$\Sigma^+ \gamma$		< 2.5	$\times 10^{-4}$	CL=90%	834

Exotic modes

$p \gamma_D$	[b]	< 8.0	$\times 10^{-5}$	CL=90%	–

$\Lambda_c(2595)^+$ $\qquad\qquad I(J^P) = 0(\tfrac{1}{2}^-)$

The spin-parity follows from the fact that $\Sigma_c(2455)\pi$ decays, with little available phase space, are dominant. This assumes that $J^P = 1/2^+$ for the $\Sigma_c(2455)$.

$$\text{Mass } m = 2592.25 \pm 0.28 \text{ MeV}$$
$$m - m_{\Lambda_c^+} = 305.79 \pm 0.24 \text{ MeV}$$
$$\text{Full width } \Gamma = 2.6 \pm 0.6 \text{ MeV}$$

$\Lambda_c^+ \pi\pi$ and its submode $\Sigma_c(2455)\pi$ — the latter just barely — are the only strong decays allowed to an excited Λ_c^+ having this mass; and the submode seems to dominate.

$\Lambda_c(2595)^+$ DECAY MODES		Fraction (Γ_i/Γ)	p (MeV/c)
$\Lambda_c^+ \pi^+ \pi^-$	[c]	—	117
$\quad \Sigma_c(2455)^{++} \pi^-$		24 $\pm$ 7 %	3
$\quad \Sigma_c(2455)^0 \pi^+$		24 $\pm$ 7 %	3
$\quad \Lambda_c^+ \pi^+ \pi^-$ 3-body		18 $\pm$ 10 %	117
$\Lambda_c^+ \pi^0$	[d]	not seen	258
$\Lambda_c^+ \gamma$		not seen	288

$\Lambda_c(2625)^+$ $\qquad\qquad I(J^P) = 0(\frac{3}{2}^-)$

J^P has not been measured; $\frac{3}{2}^-$ is the quark-model prediction.

Mass $m = 2628.00 \pm 0.15$ MeV
$m - m_{\Lambda_c^+} = 341.54 \pm 0.05$ MeV
Full width $\Gamma < 0.52$ MeV, CL = 90%

$\Lambda_c^+ \pi\pi$ and its submode $\Sigma(2455)\pi$ are the only strong decays allowed to an excited Λ_c^+ having this mass.

$\Lambda_c(2625)^+$ DECAY MODES		Fraction (Γ_i/Γ)	Confidence level	p (MeV/c)
$\Lambda_c^+ \pi^+ \pi^-$	[e]	66.67 %		184
$\quad \Sigma_c(2455)^{++} \pi^-$		(3.42$\pm$0.27) %		103
$\quad \Sigma_c(2455)^0 \pi^+$		(3.46$\pm$0.31) %		103
$\quad \Lambda_c^+ \pi^+ \pi^-$ 3-body		large		184
$\Lambda_c^+ \pi^0$	[d]	< 60 %	90%	293
$\Lambda_c^+ \gamma$		< 35 %	90%	319

$\Lambda_c(2860)^+$ $\qquad\qquad I(J^P) = 0(\frac{3}{2}^+)$

Mass $m = 2856.1^{+2.3}_{-6.0}$ MeV
Full width $\Gamma = 68^{+12}_{-22}$ MeV

$\Lambda_c(2860)^+$ DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$D^0 p$	seen	259

$\Lambda_c(2880)^+$ $\qquad\qquad I(J^P) = 0(\frac{5}{2}^+)$

Mass $m = 2881.63 \pm 0.24$ MeV
$m - m_{\Lambda_c^+} = 595.17 \pm 0.28$ MeV
Full width $\Gamma = 5.6^{+0.8}_{-0.6}$ MeV

$\Lambda_c(2880)^+$ DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$\Lambda_c^+ \pi^+ \pi^-$	seen	471
$\quad \Sigma_c(2455)^{0,++} \pi^\pm$	seen	376
$\quad \Sigma_c(2520)^{0,++} \pi^\pm$	seen	317
$p D^0$	seen	316

$\Lambda_c(2940)^+$ $I(J^P) = 0(\frac{3}{2}^-)$

$J^P = 3/2^-$ is favored, but is not certain

Mass $m = 2939.6^{+1.3}_{-1.5}$ MeV
Full width $\Gamma = 20^{+6}_{-5}$ MeV

$\Lambda_c(2940)^+$ DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
pD^0	seen	420
$\Sigma_c(2455)^{0,++}\pi^{\pm}$	seen	−

$\Sigma_c(2455)$ $I(J^P) = 1(\frac{1}{2}^+)$

$\Sigma_c(2455)^{++}$ mass $m = 2453.97 \pm 0.14$ MeV
$\Sigma_c(2455)^+$ mass $m = 2452.65^{+0.22}_{-0.16}$ MeV
$\Sigma_c(2455)^0$ mass $m = 2453.75 \pm 0.14$ MeV
$m_{\Sigma_c(2455)^{++}} - m_{\Lambda_c^+} = 167.510 \pm 0.017$ MeV
$m_{\Sigma_c(2455)^+} - m_{\Lambda_c^+} = 166.19^{+0.16}_{-0.08}$ MeV
$m_{\Sigma_{c2455}^0} - m_{\Lambda_c^+} = 167.290 \pm 0.017$ MeV
$m_{\Sigma_c(2455)^{++}} - m_{\Sigma_c(2455)^0} = 0.220 \pm 0.013$ MeV
$m_{\Sigma_c(2455)^+} - m_{\Sigma_c(2455)^0} = -1.10^{+0.16}_{-0.08}$ MeV
$\Sigma_c(2455)^{++}$ full width $\Gamma = 1.89^{+0.09}_{-0.18}$ MeV (S = 1.1)
$\Sigma_c(2455)^+$ full width $\Gamma = 2.3 \pm 0.4$ MeV
$\Sigma_c(2455)^0$ full width $\Gamma = 1.83^{+0.11}_{-0.19}$ MeV (S = 1.2)

$\Lambda_c^+ \pi$ is the only strong decay allowed to a Σ_c having this mass.

$\Sigma_c(2455)$ DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$\Lambda_c^+ \pi$	≈ 100 %	94

$\Sigma_c(2520)$ $I(J^P) = 1(\frac{3}{2}^+)$

J^P has not been measured; $\frac{3}{2}^+$ is the quark-model prediction.

$\Sigma_c(2520)^{++}$ mass $m = 2518.41 \pm 0.22$ MeV (S = 1.3)
$\Sigma_c(2520)^+$ mass $m = 2517.4^{+0.7}_{-0.5}$ MeV
$\Sigma_c(2520)^0$ mass $m = 2518.48 \pm 0.21$ MeV (S = 1.2)
$m_{\Sigma_c(2520)^{++}} - m_{\Lambda_c^+} = 231.95 \pm 0.18$ MeV (S = 1.8)

$$m_{\Sigma_c(2520)^+} - m_{\Lambda_c^+} = 230.9^{+0.7}_{-0.5} \text{ MeV}$$

$$m_{\Sigma_c(2520)^0} - m_{\Lambda_c^+} = 232.02 \pm 0.15 \text{ MeV} \quad (S = 1.4)$$

$$m_{\Sigma_c(2520)^{++}} - m_{\Sigma_c(2520)^0} = 0.01 \pm 0.15 \text{ MeV}$$

$$\Sigma_c(2520)^{++} \text{ full width } \Gamma = 14.78^{+0.30}_{-0.40} \text{ MeV}$$

$$\Sigma_c(2520)^+ \text{ full width } \Gamma = 17.2^{+4.0}_{-2.2} \text{ MeV}$$

$$\Sigma_c(2520)^0 \text{ full width } \Gamma = 15.3^{+0.4}_{-0.5} \text{ MeV}$$

$\Lambda_c^+ \pi$ is the only strong decay allowed to a Σ_c having this mass.

Σ_c(2520) DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$\Lambda_c^+ \pi$	$\approx 100 \%$	179

$\Sigma_c(2800)$ $\qquad\qquad I(J^P) = 1(?^?)$

$$\Sigma_c(2800)^{++} \text{ mass } m = 2801^{+4}_{-6} \text{ MeV}$$

$$\Sigma_c(2800)^+ \text{ mass } m = 2792^{+14}_{-5} \text{ MeV}$$

$$\Sigma_c(2800)^0 \text{ mass } m = 2806^{+5}_{-7} \text{ MeV} \quad (S = 1.3)$$

$$m_{\Sigma_c(2800)^{++}} - m_{\Lambda_c^+} = 514^{+4}_{-6} \text{ MeV}$$

$$m_{\Sigma_c(2800)^+} - m_{\Lambda_c^+} = 505^{+14}_{-5} \text{ MeV}$$

$$m_{\Sigma_c(2800)^0} - m_{\Lambda_c^+} = 519^{+5}_{-7} \text{ MeV} \quad (S = 1.3)$$

$$\Sigma_c(2800)^{++} \text{ full width } \Gamma = 75^{+22}_{-17} \text{ MeV}$$

$$\Sigma_c(2800)^+ \text{ full width } \Gamma = 60^{+60}_{-40} \text{ MeV}$$

$$\Sigma_c(2800)^0 \text{ full width } \Gamma = 72^{+22}_{-15} \text{ MeV}$$

Σ_c(2800) DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$\Lambda_c^+ \pi$	seen	443

Ξ_c^+ $\qquad\qquad I(J^P) = \frac{1}{2}(\frac{1}{2}^+)$

J^P has not been measured; $\frac{1}{2}^+$ is the quark-model prediction.

Mass $m = 2467.71 \pm 0.23$ MeV $\quad (S = 1.3)$
Mean life $\tau = (453 \pm 5) \times 10^{-15}$ s
$\qquad c\tau = 135.8 \ \mu$m

Branching fractions marked with a footnote, e.g. [a], have been corrected for decay modes not observed in the experiments. For example, the sub-mode fraction $\Xi_c^+ \to \Sigma^+ \overline{K}^*(892)^0$ seen in $\Xi_c^+ \to \Sigma^+ K^- \pi^+$ has been multiplied up to include $\overline{K}^*(892)^0 \to \overline{K}^0 \pi^0$ decays.

Ξ_c^+ DECAY MODES		Fraction (Γ_i/Γ)	Scale factor/ Confidence level	p (MeV/c)
Cabibbo-favored ($S = -2$) decays				
$p2K_S^0$		$(2.5\pm1.3) \times 10^{-3}$		766
$\Lambda \overline{K}^0 \pi^+$		—		852
$\quad \Sigma(1385)^+ \overline{K}^0$	[a]	(2.9 ± 2.0) %		746
$\Lambda K^- 2\pi^+$		$(9\ \pm4\ ) \times 10^{-3}$		787
$\quad \Lambda \overline{K}^*(892)^0 \pi^+$	[a]	$< 5 \qquad \times 10^{-3}$	CL=90%	608
$\quad \Sigma(1385)^+ K^- \pi^+$	[a]	$< 6 \qquad \times 10^{-3}$	CL=90%	678
$\Sigma^+ K^- \pi^+$		(2.7 ± 1.2) %		810
$\quad \Sigma^+ \overline{K}^*(892)^0$	[a]	(2.3 ± 1.1) %		658
$\Sigma^0 K^- 2\pi^+$		$(8\ \pm5\ ) \times 10^{-3}$		735
$\Xi^0 \pi^+$		(1.6 ± 0.8) %		876
$\Xi^- 2\pi^+$		(2.9 ± 1.3) %		851
$\quad \Xi(1530)^0 \pi^+$	[a]	$< 2.9 \qquad \times 10^{-3}$	CL=90%	749
$\quad \Xi(1620)^0 \pi^+$		seen		—
$\quad \Xi(1690)^0 \pi^+$		seen		644
$\Xi^0 \pi^+ \pi^0$		(6.7 ± 3.5) %		856
$\Xi^0 \pi^- 2\pi^+$		(5.0 ± 2.6) %		818
$\Xi^0 e^+ \nu_e$		$(7\ \pm4\ )$ %		884
$\Omega^- K^+ \pi^+$		$(2.0\pm1.5) \times 10^{-3}$		399
Cabibbo-suppressed decays				
$p K^- \pi^+$		$(6.2\pm3.0) \times 10^{-3}$	S=1.5	944
$\quad p \overline{K}^*(892)^0$	[a]	$(3.3\pm1.7) \times 10^{-3}$		828
$\Sigma^+ \pi^+ \pi^-$		(1.4 ± 0.8) %		922
$\Sigma^- 2\pi^+$		$(5.1\pm3.4) \times 10^{-3}$		918
$\Sigma^+ K^+ K^-$		$(4.3\pm2.5) \times 10^{-3}$		579
$\quad \Sigma^+ \phi$	[a]	$< 3.2 \qquad \times 10^{-3}$	CL=90%	549
$\quad \Xi(1690)^0 K^+, \Xi^0 \to$		$< 1.3 \qquad \times 10^{-3}$	CL=90%	501
$\qquad \Sigma^+ K^-$				
$p \phi(1020)$		$(1.2\pm0.6) \times 10^{-4}$		751

Ξ_c^0

$$I(J^P) = \tfrac{1}{2}(\tfrac{1}{2}^+)$$

J^P has not been measured; $\tfrac{1}{2}^+$ is the quark-model prediction.

Mass $m = 2470.44 \pm 0.28$ MeV $\quad$ (S = 1.2)

$$m_{\Xi_c^0} - m_{\Xi_c^+} = 2.72 \pm 0.23 \text{ MeV} \quad (S = 1.1)$$
$$\text{Mean life } \tau = (150.4 \pm 2.8) \times 10^{-15} \text{ s} \quad (S = 1.4)$$
$$c\tau = 45.1 \ \mu\text{m}$$

Decay asymmetry parameters

$\Xi^- \pi^+ \qquad \alpha = -0.64 \pm 0.05$

$\alpha \text{ FOR } \overline{\Xi}_c^0 \to \overline{\Xi}^+ \pi^- = 0.61 \pm 0.05$

$\alpha \text{ FOR } \Xi_c^0 \to \Lambda \overline{K}^*(892)^0 = 0.15 \pm 0.22$

$\alpha \text{ FOR } \Xi_c^0 \to \Sigma^+ K^*(892)^- = -0.52 \pm 0.30$

Ξ_c^0 DECAY MODES	Fraction (Γ_i/Γ)	Confidence level	p (MeV/c)
Cabibbo-favored decays			
$pK^-K^-\pi^+$	$(4.9 \pm 1.0) \times 10^{-3}$		676
$\quad pK^-\overline{K}^*(892)^0, \ \overline{K}^{*0} \to K^-\pi^+$	$(2.0 \pm 0.6) \times 10^{-3}$		413
$\quad pK^-K^-\pi^+ (\text{no } \overline{K}^{*0})$	$(3.0 \pm 0.8) \times 10^{-3}$		676
ΛK_S^0	$(3.2 \pm 0.6) \times 10^{-3}$		906
$\Lambda K^-\pi^+$	$(1.45 \pm 0.28)\ \%$		856
$\Lambda \overline{K}^*(892)^0$	$(2.6 \pm 0.6) \times 10^{-3}$		717
$\Lambda \overline{K}^0 \pi^+ \pi^-$	seen		786
$\Lambda K^-\pi^+\pi^+\pi^-$	seen		703
$\Sigma^0 K_S^0$	$(5.4 \pm 1.4) \times 10^{-4}$		864
$\Sigma^+ K^-$	$(1.8 \pm 0.4) \times 10^{-3}$		868
$\Sigma^0 \overline{K}^*(892)^0$	$(9.9 \pm 1.9) \times 10^{-3}$		658
$\Sigma^+ K^*(892)^-$	$(4.9 \pm 1.3) \times 10^{-3}$		661
$\Xi^-\pi^+$	$(1.43 \pm 0.27)\ \%$		875
$\Xi^-\pi^+\pi^+\pi^-$	$(4.8 \pm 2.3)\ \%$		816
$\quad \Xi^0 \phi, \ \phi \to K^+K^-$	$(5.2 \pm 1.2) \times 10^{-4}$		–
$\quad \Xi^0 K^+K^- \text{ nonresonant}$	$(5.6 \pm 1.2) \times 10^{-4}$		444
$\Omega^- K^+$	$(4.2 \pm 0.9) \times 10^{-3}$		522
$\Xi^- e^+ \nu_e$	$(1.05 \pm 0.20)\ \%$		882
$\Xi^- \mu^+ \nu_\mu$	$(1.01 \pm 0.21)\ \%$		878
$\Xi^0 \gamma$	$< 1.7 \times 10^{-4}$	90%	885
Cabibbo-suppressed decays			
$\Lambda_c^+ \pi^-$	$(5.5 \pm 1.1) \times 10^{-3}$		115
$\Xi^- K^+$	$(3.9 \pm 1.1) \times 10^{-4}$		789
$\Lambda K^+ K^- (\text{no } \phi)$	$(4.1 \pm 1.3) \times 10^{-4}$		648
$\Lambda \phi$	$(4.9 \pm 1.3) \times 10^{-4}$		621
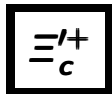
$$\boxed{\Xi_c'^+} \qquad\qquad I(J^P) = \tfrac{1}{2}(\tfrac{1}{2}^+)$$

J^P has not been measured; $\tfrac{1}{2}^+$ is the quark-model prediction.

Mass $m = 2578.2 \pm 0.5$ MeV $\quad (S = 1.1)$

$m_{\Xi_c'^+} - m_{\Xi_c^+} = 110.5 \pm 0.4$ MeV

$m_{\Xi_c'^+} - m_{\Xi_c'^0} = -0.5 \pm 0.6$ MeV

The $\Xi_c'^+ - \Xi_c^+$ mass difference is too small for any strong decay to occur.

$\Xi_c'^+$ DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$\Xi_c^+ \gamma$	seen	108
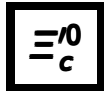
$$\boxed{\Xi_c'^0} \qquad\qquad I(J^P) = \tfrac{1}{2}(\tfrac{1}{2}^+)$$

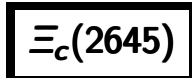J^P has not been measured; $\tfrac{1}{2}^+$ is the quark-model prediction.

Mass $m = 2578.7 \pm 0.5$ MeV

$m_{\Xi_c'^0} - m_{\Xi_c^0} = 108.3 \pm 0.4$ MeV

The $\Xi_c'^0 - \Xi_c^0$ mass difference is too small for any strong decay to occur.

$\Xi_c'^0$ DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$\Xi_c^0 \gamma$	seen	106

$$\boxed{\Xi_c(2645)} \qquad\qquad I(J^P) = \tfrac{1}{2}(\tfrac{3}{2}^+)$$

J^P has not been measured; $\tfrac{3}{2}^+$ is the quark-model prediction.

$\Xi_c(2645)^+$ mass $m = 2645.10 \pm 0.30$ MeV $\quad (S = 1.2)$

$\Xi_c(2645)^0$ mass $m = 2646.16 \pm 0.25$ MeV $\quad (S = 1.3)$

$m_{\Xi_c(2645)^+} - m_{\Xi_c^0} = 174.67 \pm 0.09$ MeV

$m_{\Xi_c(2645)^0} - m_{\Xi_c^+} = 178.45 \pm 0.10$ MeV

$m_{\Xi_c(2645)^+} - m_{\Xi_c(2645)^0} = -1.06 \pm 0.27$ MeV $\quad (S = 1.1)$

$\Xi_c(2645)^+$ full width $\Gamma = 2.14 \pm 0.19$ MeV $\quad (S = 1.1)$

$\Xi_c(2645)^0$ full width $\Gamma = 2.35 \pm 0.22$ MeV

$\Xi_c \pi$ is the only strong decay allowed to a Ξ_c resonance having this mass.

$\Xi_c(2645)$ DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$\Xi_c^0 \pi^+$	seen	102
$\Xi_c^+ \pi^-$	seen	106

$\Xi_c(2790)$ $I(J^P) = \frac{1}{2}(\frac{1}{2}^-)$

J^P has not been measured; $\frac{1}{2}^-$ is the quark-model prediction.

$\Xi_c(2790)^+$ mass $= 2791.9 \pm 0.5$ MeV
$\Xi_c(2790)^0$ mass $= 2793.9 \pm 0.5$ MeV
$m_{\Xi_c(2790)^+} - m_{\Xi_c'^0} = 213.20 \pm 0.22$ MeV
$m_{\Xi_c(2790)^0} - m_{\Xi_c'^+} = 215.70 \pm 0.22$ MeV
$m_{\Xi_c(2790)^+} - m_{\Xi_c(2790)^0} = -2.0 \pm 0.7$ MeV
$\Xi_c(2790)^+$ width $= 8.9 \pm 1.0$ MeV
$\Xi_c(2790)^0$ width $= 10.0 \pm 1.1$ MeV

$\Xi_c(2790)$ DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$\Xi_c' \pi$	seen	159
$\Lambda_c^+ K^-$	seen	98

$\Xi_c(2815)$ $I(J^P) = \frac{1}{2}(\frac{3}{2}^-)$

J^P has not been measured; $\frac{3}{2}^-$ is the quark-model prediction.

$\Xi_c(2815)^+$ mass $m = 2816.51 \pm 0.25$ MeV   ($S = 1.2$)
$\Xi_c(2815)^0$ mass $m = 2819.79 \pm 0.30$ MeV   ($S = 1.1$)
$m_{\Xi_c(2815)^+} - m_{\Xi_c^+} = 348.80 \pm 0.10$ MeV
$m_{\Xi_c(2815)^0} - m_{\Xi_c^0} = 349.35 \pm 0.11$ MeV
$m_{\Xi_c(2815)^+} - m_{\Xi_c(2815)^0} = -3.27 \pm 0.27$ MeV
$\Xi_c(2815)^+$ full width $\Gamma = 2.43 \pm 0.26$ MeV
$\Xi_c(2815)^0$ full width $\Gamma = 2.54 \pm 0.25$ MeV

The $\Xi_c \pi \pi$ modes are consistent with being entirely via $\Xi_c(2645)\pi$.

$\Xi_c(2815)$ DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$\Xi_c' \pi$	seen	188
$\Xi_c(2645)\pi$	seen	102
$\Xi_c^0 \gamma$	seen	325

$\Xi_c(2970)$ $I(J^P) = \frac{1}{2}(\frac{1}{2}^+)$

was $\Xi_c(2980)$

$$\Xi_c(2970)^+ \; m = 2964.3 \pm 1.5 \text{ MeV} \quad (S = 3.9)$$
$$\Xi_c(2970)^0 \; m = 2967.1 \pm 1.7 \text{ MeV} \quad (S = 6.7)$$
$$m_{\Xi_c(2970)^+} - m_{\Xi_c^+} = 496.6 \pm 1.5 \text{ MeV} \quad (S = 3.7)$$
$$m_{\Xi_c(2970)^0} - m_{\Xi_c^0} = 496.7 \pm 1.8 \text{ MeV} \quad (S = 5.3)$$
$$m_{\Xi_c(2970)^+} - m_{\Xi_c(2970)^0} = -2.8 \pm 1.9 \text{ MeV} \quad (S = 4.8)$$
$$\Xi_c(2970)^+ \text{ width } \Gamma = 20.9^{+2.4}_{-3.5} \text{ MeV} \quad (S = 1.2)$$

$\Xi_c(2970)$ DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$\Lambda_c^+ \overline{K} \pi$	seen	223
$\quad \Sigma_c(2455)\overline{K}$	seen	122
$\Lambda_c^+ \overline{K}$	not seen	410
$\Lambda_c^+ K^-$	seen	410
$\Xi_c 2\pi$	seen	381
$\quad \Xi_c' \pi$	seen	−
$\quad \Xi_c(2645)\pi$	seen	274

$\Xi_c(3055)$ $I(J^P) = ?(?^?)$

$$\text{Mass } m = 3055.9 \pm 0.4 \text{ MeV}$$
$$\text{Full width } \Gamma = 7.8 \pm 1.9 \text{ MeV}$$

$\Xi_c(3055)$ DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$\Sigma^{++} K^-$	seen	−
ΛD^+	seen	316

$\Xi_c(3080)$ $I(J^P) = \frac{1}{2}(?^?)$

$$\Xi_c(3080)^+ \; m = 3077.2 \pm 0.4 \text{ MeV}$$
$$\Xi_c(3080)^0 \; m = 3079.9 \pm 1.4 \text{ MeV} \quad (S = 1.3)$$
$$\Xi_c(3080)^+ \text{ width } \Gamma = 3.6 \pm 1.1 \text{ MeV} \quad (S = 1.5)$$
$$\Xi_c(3080)^0 \text{ width } \Gamma = 5.6 \pm 2.2 \text{ MeV}$$

$\Xi_c(3080)$ DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$\Lambda_c^+ \overline{K} \pi$	seen	415
$\quad \Sigma_c(2455)\overline{K}$	seen	342
$\Sigma_c(2455)^{++} K^-$	seen	342

$\Sigma_c(2520)^{++}K^-$	seen	239
$\Sigma_c(2455)\overline{K} + \Sigma_c(2520)\overline{K}$	seen	–
$\Lambda_c^+\overline{K}$	not seen	536
$\Lambda_c^+\overline{K}\pi^+\pi^-$	not seen	144
ΛD^+	seen	362

$\boxed{\Omega_c^0}$ $\qquad\qquad I(J^P) = 0(\frac{1}{2}^+)$

J^P has not been measured; $\frac{1}{2}^+$ is the quark-model prediction.

Mass $m = 2695.2 \pm 1.7$ MeV $\quad(S = 1.3)$
Mean life $\tau = (273 \pm 12) \times 10^{-15}$ s
$c\tau = 82\ \mu$m

No absolute branching fractions have been measured. The following are branching *ratios* relative to $\Omega^-\pi^+$.

Ω_c^0 DECAY MODES	Fraction (Γ_i/Γ)	Confidence level	p (MeV/c)
Cabibbo-favored ($S = -3$) decays — relative to $\Omega^-\pi^+$			
$\Omega^-\pi^+$	DEFINED AS 1		821
$\Omega^-\pi^+\pi^0$	1.80 ± 0.33		797
$\quad\Omega^-\rho^+$	>1.3	90%	532
$\Omega^-\pi^-2\pi^+$	0.31 ± 0.05		753
$\Omega^-e^+\nu_e$	1.98 ± 0.15		829
$\Omega^-\mu^+\nu_\mu$	1.94 ± 0.21		824
$\Xi^0\overline{K}^0$	1.64 ± 0.29		950
$\Xi^0 K^-\pi^+$	1.20 ± 0.18		901
$\quad\Xi^0\overline{K}^{*0},\ \overline{K}^{*0}\to K^-\pi^+$	0.68 ± 0.16		764
$\quad\Omega(2012)^-\pi^+,\ \Omega(2012)^-\to \Xi^0 K^-$	0.12 ± 0.05		–
$\Xi^-\overline{K}^0\pi^+$	2.12 ± 0.28		895
$\quad\Omega(2012)^-\pi^+,\ \Omega(2012)^-\to \Xi^-\overline{K}^0$	0.12 ± 0.06		–
$\Xi^- K^-2\pi^+$	0.63 ± 0.09		830
$\quad\Xi(1530)^0 K^-\pi^+,\ \Xi^{*0}\to \Xi^-\pi^+$	0.21 ± 0.06		757
$\quad\Xi^-\overline{K}^{*0}\pi^+$	0.34 ± 0.11		653
$p K^- K^-\pi^+$	seen		864
$\Sigma^+ K^- K^-\pi^+$	<0.32	90%	689
$\Lambda\overline{K}^0\overline{K}^0$	1.72 ± 0.35		837
Singly Cabibbo-suppressed modes — relative to $\Omega^-\pi^+$			
$\Xi^-\pi^+$	0.25 ± 0.06		–
$\Omega^- K^+$	<0.29	90%	–

Doubly Cabibbo-suppressed modes — relative to $\Omega^- \pi^+$

$\Xi^- K^+$	<0.07	90%	$-$

$\Omega_c(2770)^0$ $\qquad\qquad I(J^P) = 0(\frac{3}{2}^+)$

J^P has not been measured; $\frac{3}{2}^+$ is the quark-model prediction.

Mass $m = 2765.9 \pm 2.0$ MeV $\quad$ (S = 1.2)
$$m_{\Omega_c(2770)^0} - m_{\Omega_c^0} = 70.7^{+0.8}_{-0.9} \text{ MeV}$$

The $\Omega_c(2770)^0$–Ω_c^0 mass difference is too small for any strong decay to occur.

$\Omega_c(2770)^0$ DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$\Omega_c^0 \gamma$	presumably 100%	70

$\Omega_c(3000)^0$ $\qquad\qquad I(J^P) = ?(?^?)$

Mass $m = 3000.46 \pm 0.25$ MeV
Full width $\Gamma = 3.8^{+1.6}_{-0.4}$ MeV

$\Omega_c(3000)^0$ DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$\Xi_c^+ K^-$	seen	182

$\Omega_c(3050)^0$ $\qquad\qquad I(J^P) = ?(?^?)$

Mass $m = 3050.17 \pm 0.19$ MeV
Full width $\Gamma < 1.8$ MeV, CL = 95%

$\Omega_c(3050)^0$ DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$\Xi_c^+ K^-$	seen	278

$\Omega_c(3065)^0$ $\qquad\qquad I(J^P) = ?(?^?)$

Mass $m = 3065.58 \pm 0.21$ MeV
Full width $\Gamma = 3.4^{+0.7}_{-0.8}$ MeV $\quad$ (S = 1.7)

$\Omega_c(3065)^0$ DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$\Xi_c^+ K^-$	seen	303

$\Omega_c(3090)^0$ $I(J^P) = ?(?^?)$

Mass $m = 3090.15 \pm 0.26$ MeV
Full width $\Gamma = 8.5^{+0.8}_{-1.7}$ MeV

$\Omega_c(3090)^0$ DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$\Xi_c^+ K^-$	seen	340

$\Omega_c(3120)^0$ $I(J^P) = ?(?^?)$

Mass $m = 3118.98^{+0.27}_{-0.35}$ MeV
Full width $\Gamma < 2.5$ MeV, CL = 95%

$\Omega_c(3120)^0$ DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$\Xi_c^+ K^-$	seen	379

$\Omega_c(3185)^0$ $I(J^P) = ?(?^?)$

Mass $m = 3185^{+7.6}_{-1.9}$ MeV
Full width $\Gamma = 50^{+12}_{-21}$ MeV

$\Omega_c(3185)^0$ DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$\Xi_c^+ K^-$	seen	460

$\Omega_c(3327)^0$ $I(J^P) = ?(?^?)$

Mass $m = 3327.1^{+1.2}_{-1.8}$ MeV
Full width $\Gamma = 20^{+14}_{-5}$ MeV

$\Omega_c(3327)^0$ DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$\Xi_c^+ K^-$	seen	610

NOTES

[a] This branching fraction includes all the decay modes of the final-state resonance.

[b] Here γ_D stands for a dark photon.

[c] See AALTONEN 11H, Fig. 8, for the calculated ratio of $\Lambda_c^+ \pi^0 \pi^0$ and $\Lambda_c^+ \pi^+ \pi^-$ partial widths as a function of the $\Lambda_c(2595)^+ - \Lambda_c^+$ mass difference. At our value of the mass difference, the ratio is about 4.

[d] A test that the isospin is indeed 0, so that the particle is indeed a Λ_c^+.

[e] Assuming isospin conservation, so that the other third is $\Lambda_c^+ \pi^0 \pi^0$.