



$$I(J^P) = 0(\frac{1}{2}^+) \text{ Status: } ***$$

The quantum numbers have not been measured, but are simply assigned in accord with the quark model, in which the Ω_c^0 is the ssc ground state.

Ω_c^0 MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
2697.5 ± 2.6 OUR AVERAGE		Error includes scale factor of 1.2.		
2694.6 ± 2.6 ± 1.9	40	¹ CRONIN-HEN..01	CLE2	$e^+ e^- \approx 10.6$ GeV
2699.9 ± 1.5 ± 2.5	42	² FRABETTI	94H E687	γ Be, $\bar{E}_\gamma = 221$ GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •				
2705.9 ± 3.3 ± 2.0	10	³ FRABETTI	93 E687	γ Be, $\bar{E}_\gamma = 221$ GeV
2719.0 ± 7.0 ± 2.5	11	⁴ ALBRECHT	92H ARG	$e^+ e^- \approx 10.6$ GeV
2740 ± 20	3	BIAGI	85B SPEC	Σ^- Be 135 GeV/c

¹ CRONIN-HENNESSY 01 sees 40.4 ± 9.0 events in a sum over five channels.

² FRABETTI 94H claims a signal of 42.5 ± 8.8 $\Sigma^+ K^- K^- \pi^+$ events. The background is about 24 events.

³ FRABETTI 93 claims a signal of 10.3 ± 3.9 $\Omega^- \pi^+$ events above a background of 5.8 events.

⁴ ALBRECHT 92H claims a signal of 11.5 ± 4.3 $\Xi^- K^- \pi^+ \pi^+$ events. The background is about 5 events.

Ω_c^0 MEAN LIFE

VALUE (10^{-15} s)	EVTS	DOCUMENT ID	TECN	COMMENT
64 ± 20 OUR AVERAGE				
55^{+13+18}_{-11-23}	86	ADAMOVICH	95B WA89	$\Omega^- \pi^- \pi^+ \pi^+$, $\Xi^- K^- \pi^+ \pi^+$
$86^{+27}_{-20} \pm 28$	25	FRABETTI	95D E687	$\Sigma^+ K^- K^- \pi^+$

Ω_c^0 DECAY MODES

No absolute branching fractions have been measured.

Mode	Fraction (Γ_i/Γ)
Γ_1 $\Sigma^+ K^- K^- \pi^+$	seen
Γ_2 $\Xi^0 K^- \pi^+$	seen
Γ_3 $\Xi^- K^- \pi^+ \pi^+$	seen
Γ_4 $\Omega^- \pi^+$	seen
Γ_5 $\Omega^- \pi^+ \pi^0$	seen
Γ_6 $\Omega^- \pi^- \pi^+ \pi^+$	seen

Ω_c^0 BRANCHING RATIOS

$\Gamma(\Sigma^+ K^- K^- \pi^+)/\Gamma_{\text{total}}$ Γ_1/Γ

<u>VALUE</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
seen	42	FRABETTI	94H E687	γBe , $\bar{E}_\gamma = 221$ GeV

$\Gamma(\Sigma^+ K^- K^- \pi^+)/\Gamma(\Omega^- \pi^+)$ Γ_1/Γ_4

<u>VALUE</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<4.8	90	CRONIN-HEN..01	CLE2	$e^+ e^- \approx 10.6$ GeV

$\Gamma(\Xi^0 K^- \pi^+)/\Gamma(\Omega^- \pi^+)$ Γ_2/Γ_4

<u>VALUE</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
4.0±2.5±0.4	9	CRONIN-HEN..01	CLE2	$e^+ e^- \approx 10.6$ GeV

$\Gamma(\Xi^- K^- \pi^+ \pi^+)/\Gamma_{\text{total}}$ Γ_3/Γ

<u>VALUE</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
seen	11	ALBRECHT	92H ARG	$e^+ e^- \approx 10.6$ GeV
seen	3	BIAGI	85B SPEC	$\Sigma^- \text{Be}$ 135 GeV/c

$\Gamma(\Xi^- K^- \pi^+ \pi^+)/\Gamma(\Omega^- \pi^+)$ Γ_3/Γ_4

<u>VALUE</u>	<u>CL%</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
1.6±1.1±0.4		7	CRONIN-HEN..01	CLE2	$e^+ e^- \approx 10.6$ GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<2.8	90	FRABETTI	93 E687	γBe , $\bar{E}_\gamma = 221$ GeV	

$\Gamma(\Omega^- \pi^+)/\Gamma_{\text{total}}$ Γ_4/Γ

<u>VALUE</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
seen	13	CRONIN-HEN..01	CLE2	$e^+ e^- \approx 10.6$ GeV
seen	10	FRABETTI	93 E687	γBe , $\bar{E}_\gamma = 221$ GeV

$\Gamma(\Omega^- \pi^+ \pi^0)/\Gamma(\Omega^- \pi^+)$ Γ_5/Γ_4

<u>VALUE</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
4.2±2.2±0.9	12	CRONIN-HEN..01	CLE2	$e^+ e^- \approx 10.6$ GeV

$\Gamma(\Omega^- \pi^- \pi^+ \pi^+)/\Gamma(\Omega^- \pi^+)$ Γ_6/Γ_4

<u>VALUE</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
seen		ADAMOVIICH	95B WA89	Σ^- 340 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<0.56	90	CRONIN-HEN..01	CLE2	$e^+ e^- \approx 10.6$ GeV
<1.6	90	FRABETTI	93 E687	γBe , $\bar{E}_\gamma = 221$ GeV

Ω_c^0 REFERENCES

CRONIN-HEN...01	PRL 86 3730	D. Cronin-Hennessy <i>et al.</i>	(CLEO Collab.)
ADAMOVIICH 95B	PL B358 151	M.I. Adamovich <i>et al.</i>	(CERN WA89 Collab.)
FRABETTI 95D	PL B357 678	P.L. Frabetti <i>et al.</i>	(FNAL E687 Collab.)
FRABETTI 94H	PL B338 106	P.L. Frabetti <i>et al.</i>	(FNAL E687 Collab.)
FRABETTI 93	PL B300 190	P.L. Frabetti <i>et al.</i>	(FNAL E687 Collab.)
ALBRECHT 92H	PL B288 367	H. Albrecht <i>et al.</i>	(ARGUS Collab.)
BIAGI 85B	ZPHY C28 175	S.F. Biagi <i>et al.</i>	(CERN WA62 Collab.)