



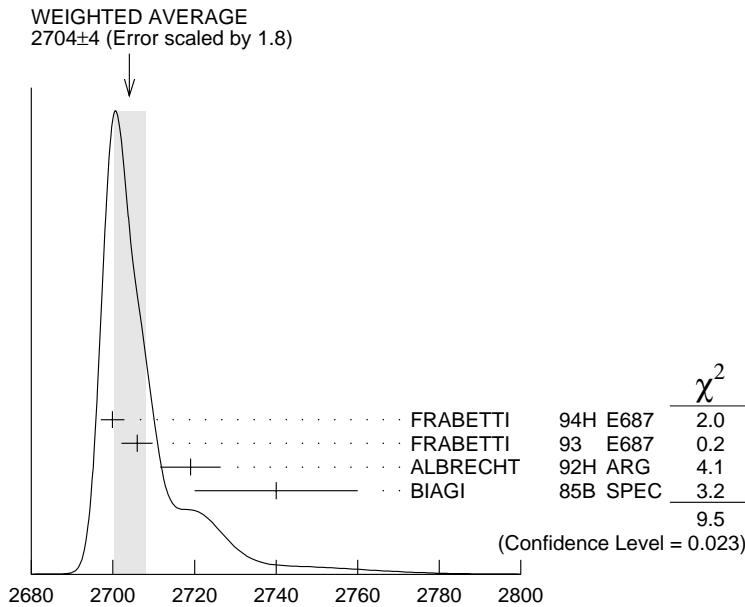
$$I(J^P) = 0(\frac{1}{2}^+) \text{ Status: } ***$$

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 |
|-----------------------------|------|---|----------|---|
| 2704 ± 4 OUR AVERAGE | | Error includes scale factor of 1.8. See the ideogram below. | | |
| 2699.9 ± 1.5 ± 2.5 | 42 | ¹ FRABETTI | 94H E687 | γ Be, $\bar{E}_\gamma = 221$ GeV |
| 2705.9 ± 3.3 ± 2.0 | 10 | ² FRABETTI | 93 E687 | γ Be, $\bar{E}_\gamma = 221$ GeV |
| 2719.0 ± 7.0 ± 2.5 | 11 | ³ ALBRECHT | 92H ARG | $e^+ e^- \approx 10.6$ GeV |
| 2740 ± 20 | 3 | BIAGI | 85B SPEC | Σ^- Be 135 GeV/ <i>c</i> |

- ¹ FRABETTI 94H claims a signal of $42.5 \pm 8.8 \Sigma^+ K^- K^- \pi^+$ events. The background is about 24 events.
² FRABETTI 93 claims a signal of $10.3 \pm 3.9 \Omega^- \pi^+$ events above a background of 5.8 events.
³ ALBRECHT 92H claims a signal of $11.5 \pm 4.3 \Xi^- K^- \pi^+ \pi^+$ events. The background is about 5 events.



Ω_c^0 mass (MeV)

Ω_c^0 MEAN LIFE

| VALUE (10^{-12} s) | EVTS | DOCUMENT ID | TECN | COMMENT |
|---|------|-------------|----------|---|
| 0.064 ± 0.020 OUR AVERAGE | | | | |
| $0.055^{+0.013}_{-0.011} +0.018_{-0.023}$ | 86 | ADAMOVICH | 95B WA89 | $\Omega^- \pi^- \pi^+ \pi^+$, $\Xi^- K^- \pi^+ \pi^+$ |
| $0.086^{+0.027}_{-0.020} \pm 0.028$ | 25 | FRABETTI | 95D E687 | $\Sigma^+ K^- K^- \pi^+$ |

Ω_c^0 DECAY MODES

| Mode | Fraction (Γ_i/Γ) |
|---|--------------------------------|
| $\Gamma_1 \quad \Sigma^+ K^- K^- \pi^+$ | seen |
| $\Gamma_2 \quad \Xi^- K^- \pi^+ \pi^+$ | seen |
| $\Gamma_3 \quad \Omega^- \pi^+$ | seen |
| $\Gamma_4 \quad \Omega^- \pi^- \pi^+ \pi^+$ | seen |

Ω_c^0 BRANCHING RATIOS

| $\Gamma(\Sigma^+ K^- K^- \pi^+)/\Gamma_{\text{total}}$ | Γ_1/Γ | | | |
|--|-------------------|-------------|----------|---|
| VALUE | EVTS | DOCUMENT ID | TECN | COMMENT |
| seen | 42 | FRABETTI | 94H E687 | γ Be, $\bar{E}_\gamma = 221$ GeV |

| $\Gamma(\Xi^- K^- \pi^+ \pi^+)/\Gamma_{\text{total}}$ | Γ_2/Γ | | | |
|---|-------------------|-------------|----------|----------------------------|
| VALUE | EVTS | DOCUMENT ID | TECN | COMMENT |
| seen | 11 | ALBRECHT | 92H ARG | $e^+ e^- \approx 10.6$ GeV |
| seen | 3 | BIAGI | 85B SPEC | Σ^- Be 135 GeV/c |

| $\Gamma(\Omega^- \pi^+)/\Gamma_{\text{total}}$ | Γ_3/Γ | | | |
|--|-------------------|-------------|---------|---|
| VALUE | EVTS | DOCUMENT ID | TECN | COMMENT |
| seen | 10 | FRABETTI | 93 E687 | γ Be, $\bar{E}_\gamma = 221$ GeV |

| $\Gamma(\Xi^- K^- \pi^+ \pi^+)/\Gamma(\Omega^- \pi^+)$ | Γ_2/Γ_3 | | | |
|---|---------------------|-------------|---------|---|
| VALUE | CL% | DOCUMENT ID | TECN | COMMENT |
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | |
| <2.8 | 90 | FRABETTI | 93 E687 | γ Be, $\bar{E}_\gamma = 221$ GeV |

| $\Gamma(\Omega^- \pi^- \pi^+ \pi^+)/\Gamma(\Omega^- \pi^+)$ | Γ_4/Γ_3 | | | |
|---|---------------------|-------------|----------|---|
| VALUE | CL% | DOCUMENT ID | TECN | COMMENT |
| seen | | ADAMOVICH | 95B WA89 | Σ^- 340 GeV |
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | |
| <1.6 | 90 | FRABETTI | 93 E687 | γ Be, $\bar{E}_\gamma = 221$ GeV |

Ω_c^0 REFERENCES

| | | | | | |
|-----------|-----|----------|-----|------------------------------|---------------------|
| ADAMOVICH | 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.) |
