

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

The natural assignment is that this goes with the $\Sigma_c(2520)$ and $\Xi_c(2645)$ to complete the lowest mass $J^P = \frac{3}{2}^+$ SU(3) sextet, part of the SU(4) 20-plet that includes the $\Delta(1232)$. But J and P have not been measured.

 $\Omega_c(2770)^0$ MASS

The mass is obtained from the mass-difference measurement that follows.

VALUE (MeV)	DOCUMENT ID
2765.9 ± 2.0 OUR FIT	Error includes scale factor of 1.2.

 $\Omega_c(2770)^0 - \Omega_c^0$ MASS DIFFERENCE

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
70.7^{+0.8}_{-0.9} OUR FIT				
70.7^{+0.8}_{-1.0} OUR AVERAGE				
70.7 ± 0.9 ^{+0.1} _{-0.9}	54 ± 9	SOLOVIEVA	09 BELLE	$\Omega_c^0 \gamma$ in $e^+ e^- \rightarrow \Upsilon(4S)$
70.8 ± 1.0 ± 1.1	105 ± 22	AUBERT,BE	06i BABR	$e^+ e^- \approx \Upsilon(4S)$

 $\Omega_c(2770)^0$ DECAY MODES

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

Mode	Fraction (Γ_i/Γ)
$\Gamma_1 \quad \Omega_c^0 \gamma$	presumably 100%

 $\Omega_c(2770)^0$ REFERENCES

SOLOVIEVA	09	PL B672 1	E. Solovieva <i>et al.</i>	(BELLE Collab.)
AUBERT,BE	06i	PRL 97 232001	B. Aubert <i>et al.</i>	(BABAR Collab.)