

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

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>70.7<sup>+0.8</sup><sub>-0.9</sub> OUR FIT</b>				
<b>70.7<sup>+0.8</sup><sub>-1.0</sub> OUR AVERAGE</b>				
70.7 ± 0.9 <sup>+0.1</sup> <sub>-0.9</sub>	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 ( $\Gamma_i/\Gamma$ )
$\Gamma_1 \quad \Omega_c^0 \gamma$	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.)