$\Omega(2012)^-$

$I(J^P) = 0(?^-)$ Status: ***

Seen in $\Xi^0 K^-$ and $\Xi^- K^0_S$ decays with a combined significance of 8.3 standard deviations. BELLE results from JIA 19 and JIA 25 are incompatible. JIA 25 claims the older analysis was based on an inaccurate model for decays.

$\Omega(2012)^-$ MASS

VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
2012.9 ±0.4 OUR AVERAGE					
2013.35±0.57±0.27	7200	ACHARYA	25C	ALCE	$\Xi\overline{K}$ in pp at 13 TeV
2012.5 ±0.7 ±0.5	844	JIA	25	BELL	In $\Upsilon(1S, 2S, 3S)$
2012.4 ±0.7 ±0.6	520	YELTON	18A	BELL	In $\Upsilon(1S, 2S, 3S)$

$\Omega(2012)^-$ WIDTH

VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
6.3±2.0 OUR AVERAGE					
6.2±2.1±2.0	7200	ACHARYA	25C	ALCE	$\Xi\overline{K}$ in pp at 13 TeV
$6.4^{+2.5}_{-2.0}\pm1.6$	520	YELTON	18A	BELL	In $\Upsilon(1S)$, $\Upsilon(2S)$, $\Upsilon(3S)$

$\Omega(2012)^-$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	ΞK	
Γ_2	$\Xi^0 K^-$	(34^{+17}_{-12}) %
Γ_3	$\Xi^- \overline{K}^0$	(28^{+12}_{-7}) %
Γ_4	$(\Xi\pi)K$	
Γ_5	$\Xi^-\pi^+K^-$	seen

$\Omega(2012)^-$ BRANCHING RATIOS

$\Gamma((\Xi\pi)K)/\Gamma(\Xi K)$ Γ_4/Γ_1

VALUE	*CL%*	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
0.99 ±0.26±0.06		844	JIA	25	BELL	In $\Upsilon(1S, 2S, 3S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
<0.119	90		JIA	19	BELL	In $\Upsilon(1S, 2S, 3S)$

$\Gamma(\Xi^0 K^-)/\Gamma(\Xi^-\overline{K}^0)$ Γ_2/Γ_3

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
1.2±0.3	YELTON	18A	BELL	In $\Upsilon(1S, 2S, 3S)$

$\Gamma(\Xi^-\overline{K}^0)/\Gamma_{\text{total}}$ Γ_3/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
$0.28^{+0.12}_{-0.07}$	[1] ACHARYA	25C	ALCE	pp at 13 TeV

[1] ACHARYA 25C reports this value as an estimate based on the statistical model.

$\Gamma(\Xi^-\pi^+K^-)/\Gamma(\Xi^0K^-)$ Γ_5/Γ_2

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.078	90	JIA	19	BELL	In $\Upsilon(1S,2S,3S)$

$\Gamma(\Xi^-\pi^+K^-)/\Gamma(\Xi^-\overline{K}^0)$ Γ_5/Γ_3

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.093	90	JIA	19	BELL	In $\Upsilon(1S,2S,3S)$

$\Omega(2012)^-$ REFERENCES

ACHARYA	25C	PR D112 092002	S. Acharya *et al.*	(ALICE Collab.)
JIA	25	PL B860 139224	S. Jia *et al.*	(BELLE Collab.)
JIA	19	PR D100 032006	S. Jia *et al.*	(BELLE Collab.)
YELTON	18A	PRL 121 052003	J. Yelton *et al.*	(BELLE Collab.)