$\Lambda_b(5912)^0$

$J^P = \frac{1}{2}^-$ Status: ***

Quantum numbers are based on quark model expectations.

$\Lambda_b(5912)^0$ MASS

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*COMMENT*
5912.19±0.17 OUR AVERAGE				
5912.19±0.03±0.17	[1] AAIJ	20Q	LHCB	pp at 7, 8, 13 TeV
5912.32±0.12±0.17	[2] SIRUNYAN	20K	CMS	pp at 13 TeV
• • • We do not use the following data for averages, fits, limits, etc. • • •				
5912.20±0.13±0.17	[3,4] AAIJ	12AL	LHCB	Repl. by AAIJ 20Q

[1] AAIJ 20Q measures $m(\Lambda_b(5912)^0) - m(\Lambda_b^0) = 292.589 \pm 0.029 \pm 0.010$ MeV. We have adjusted the measurement to our best value of $m(\Lambda_b^0) = 5619.60 \pm 0.17$ MeV. Our first error is their experiment's error and our second error is the systematic error from using our best values.

[2] SIRUNYAN 20K measures $m(\Lambda_b(5912)^0) - m(\Lambda_b^0) = 292.72 \pm 0.12 \pm 0.01$ MeV. We have adjusted the measurement to our best value of $m(\Lambda_b^0) = 5619.60 \pm 0.17$ MeV. Our first error is their experiment's error and our second error is the systematic error from using our best values.

[3] Observed in $\Lambda_b(5912)^0 \to \Lambda_b^0 \pi^+ \pi^-$ decays with 17.6 ± 4.8 candidates with a significance of 5.2 sigma.

[4] AAIJ 12AL measures $m(\Lambda_b(5912)^0) - m(\Lambda_b^0) = 292.60 \pm 0.12 \pm 0.04$ MeV. We have adjusted the measurement to our best value of $m(\Lambda_b^0) = 5619.60 \pm 0.17$ MeV. Our first error is their experiment's error and our second error is the systematic error from using our best values.

$\Lambda_b(5912)^0$ WIDTH

VALUE (MeV)	*CL%*	*DOCUMENT ID*		*TECN*	*COMMENT*
<0.25	90	AAIJ	20Q	LHCB	pp at 7, 8, 13 TeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.66	90	AAIJ	12AL	LHCB	Repl. by AAIJ 20Q

$\Lambda_b(5912)^0$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$\Lambda_b^0 \pi^+ \pi^-$	seen

$\Lambda_b(5912)^0$ BRANCHING RATIOS

$\Gamma(\Lambda_b^0 \pi^+ \pi^-)/\Gamma_{\text{total}}$ Γ_1/Γ

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
seen	AAIJ	20Q	LHCB	pp at 7, 8, 13 TeV
seen	SIRUNYAN	20K	CMS	pp at 13 TeV
seen	AAIJ	12AL	LHCB	pp at 7 TeV

$\Lambda_b(5912)^0$ REFERENCES

AAIJ	20Q	JHEP 2006 136	R. Aaij *et al.*	(LHCb Collab.)
SIRUNYAN	20K	PL B803 135345	A.M. Sirunyan *et al.*	(CMS Collab.)
AAIJ	12AL	PRL 109 172003	R. Aaij *et al.*	(LHCb Collab.)