$\Lambda_b(5920)^0$

$J^P = \frac{3}{2}^-$ Status: ***

Quantum numbers are based on quark model expectations.

$\Lambda_b(5920)^0$ MASS

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*COMMENT*
5919.73±0.32 OUR AVERAGE				
5919.3 ±0.5 ±0.4	[1,2] AALTONEN	13V	CDF	$p\overline{p}$ at 1.96 TeV
5919.9 ±0.1 ±0.4	[3,4] AAIJ	12AL	LHCB	pp at 7 TeV

[1] Measured in $\Lambda_b(5920)^0 \rightarrow \Lambda_b^0\pi^+\pi^-$ decays with $17.3^{+5.3}_{-4.6}$ events, with a significance of 3.5 sigma.

[2] AALTONEN 13V measures $m(\Lambda_b(5920)^0) - m(\Lambda_b^0) - 2m(\pi) = 20.68 \pm 0.35 \pm 0.30$ MeV. We have adjusted the measurement to our best values of $m(\Lambda_b^0) = 5619.5 \pm 0.4$ MeV and $m(\pi) = 139.57018 \pm 0.00035$ 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 $\Lambda_b(5920)^0 \rightarrow \Lambda_b^0\pi^+\pi^-$ decays with 52.5 ± 8.1 candidates with a significance of 10.2 sigma.

[4] AAIJ 12AL measures $m(\Lambda_b(5920)^0) - m(\Lambda_b^0) = 300.40 \pm 0.08 \pm 0.04$ MeV. We have adjusted the measurement to our best value of $m(\Lambda_b^0) = 5619.5 \pm 0.4$ MeV. Our first error is their experiment's error and our second error is the systematic error from using our best values.

$\Lambda_b(5920)^0$ WIDTH

VALUE (MeV)	*CL%*	*DOCUMENT ID*		*TECN*	*COMMENT*
<0.63	90	AAIJ	12AL	LHCB	pp at 7 TeV

$\Lambda_b(5920)^0$ DECAY MODES

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

$\Lambda_b(5920)^0$ BRANCHING RATIOS

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

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
seen	AAIJ	12AL	LHCB	pp at 7 TeV

$\Lambda_b(5920)^0$ REFERENCES

AALTONEN	13V	PR D88 071101	T. Aaltonen *et al.*	(CDF Collab.)
AAIJ	12AL	PRL 109 172003	R. Aaij *et al.*	(LHCb Collab.)