$\Xi_b(6100)^-$

$J^P = \frac{3}{2}^-$ Status: ***
J, P need confirmation.

$\Xi_b(6100)^-$ MASS

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
6099.8±0.4 OUR AVERAGE				
6099.7±0.1±0.4	[1,2] AAIJ	23AU	LHCB	pp at 7, 8, 13 TeV
6100.3±0.2±0.4	[3,4] SIRUNYAN	21F	CMS	pp at 13 TeV

[1] Observed in $\Xi_b^- \pi^+ \pi^-$ channel with $\Xi_b^- \to \Xi_c^0 \pi^-$ and $\Xi_b^- \to \Xi_c^0 \pi^- \pi^+ \pi^-$ and $\Xi_c^0 \to p K^- K^- \pi^+$.

[2] AAIJ 23AU measures $m(\Xi_b(6100)^-) - m(\Xi_b^-) - 2m(\pi^\pm) = 23.60 \pm 0.11 \pm 0.12$ MeV. We have adjusted the measurement to our best values of $m(\Xi_b^-) = 5797.0 \pm 0.4$ MeV, $m(\pi^\pm) = 139.57039 \pm 0.00018$ 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 $\Xi_b(6100)^- \to \Xi_b^- \pi^+ \pi^-$ decays.

[4] SIRUNYAN 21F measures $m(\Xi_b(6100)^-) - m(\Xi_b^-) - 2m(\pi^\pm) = 24.14 \pm 0.22 \pm 0.09$ MeV. We have adjusted the measurement to our best values of $m(\Xi_b^-) = 5797.0 \pm 0.4$ MeV, $m(\pi^\pm) = 139.57039 \pm 0.00018$ MeV. Our first error is their experiment's error and our second error is the systematic error from using our best values.

$\Xi_b(6100)^-$ WIDTH

VALUE (MeV)	CL%	DOCUMENT ID		TECN	COMMENT
0.94±0.30±0.08		[1] AAIJ	23AU	LHCB	pp at 7, 8, 13 TeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<1.9	95	[2] SIRUNYAN	21F	CMS	pp at 13 TeV

[1] Observed in $\Xi_b^- \pi^+ \pi^-$ channel with $\Xi_b^- \to \Xi_c^0 \pi^-$ and $\Xi_b^- \to \Xi_c^0 \pi^- \pi^+ \pi^-$ and $\Xi_c^0 \to p K^- K^- \pi^+$

[2] Observed in $\Xi_b(6100)^- \to \Xi_b^- \pi^+ \pi^-$ decays.

$\Xi_b(6100)^-$ DECAY MODES

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

$\Xi_b(6100)^-$ BRANCHING RATIOS

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

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
seen		AAIJ	23AU	LHCB	pp at 7, 8, 13 TeV
seen	60	SIRUNYAN	21F	CMS	pp at 13 TeV

$\Xi_b(6100)^-$ REFERENCES

AAIJ	23AU	PRL 131 171901	R. Aaij *et al.*	(LHCb Collab.)
SIRUNYAN	21F	PRL 126 252003	A.M. Sirunyan *et al.*	(CMS Collab.)