

NODE=B200

 **$\Xi_b(6100)^-$** 
 $J^P = \frac{3}{2}^-$  Status: \*\*\*  
 $J, P$  need confirmation.
 **$\Xi_b(6100)^-$  MASS**

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
<b><math>6099.8 \pm 0.6</math> OUR AVERAGE</b>			
[ $6100.3 \pm 0.6$ MeV OUR 2023 AVERAGE]			
$6099.7 \pm 0.1 \pm 0.6$	<sup>1,2</sup> AAIJ	23AU LHCb	$p\bar{p}$ at 7, 8, 13 TeV
$6100.3 \pm 0.2 \pm 0.6$	<sup>3,4</sup> SIRUNYAN	21F CMS	$p\bar{p}$ at 13 TeV
<sup>1</sup> Observed in $\Xi_b^- \pi^+ \pi^-$ channel with $\Xi_b^- \rightarrow \Xi_c^0 \pi^-$ and $\Xi_b^- \rightarrow \Xi_c^0 \pi^- \pi^+ \pi^-$ and $\Xi_c^0 \rightarrow p K^- K^- \pi^+$ . <sup>2</sup> 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 $m(\Xi_b^-) = 5797.0 \pm 0.6$ 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.			
<sup>3</sup> Observed in $\Xi_b(6100)^- \rightarrow \Xi_b^- \pi^+ \pi^-$ decays. <sup>4</sup> 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 $m(\Xi_b^-) = 5797.0 \pm 0.6$ 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.			

NODE=B200M

NODE=B200M  
NEWOCCUR=2;SYCLP=A  
SYCLP=A

NODE=B200M;LINKAGE=B

NODE=B200M;LINKAGE=E

NODE=B200M;LINKAGE=A  
NODE=B200M;LINKAGE=F **$\Xi_b(6100)^-$  WIDTH**

VALUE (MeV)	CL%	DOCUMENT ID	TECN	COMMENT
<b><math>0.94 \pm 0.30 \pm 0.08</math></b>		<sup>1</sup> AAIJ	23AU LHCb	$p\bar{p}$ at 7, 8, 13 TeV
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<1.9	95	<sup>2</sup> SIRUNYAN	21F CMS	$p\bar{p}$ at 13 TeV
<sup>1</sup> Observed in $\Xi_b^- \pi^+ \pi^-$ channel with $\Xi_b^- \rightarrow \Xi_c^0 \pi^-$ and $\Xi_b^- \rightarrow \Xi_c^0 \pi^- \pi^+ \pi^-$ and $\Xi_c^0 \rightarrow p K^- K^- \pi^+$ . <sup>2</sup> Observed in $\Xi_b(6100)^- \rightarrow \Xi_b^- \pi^+ \pi^-$ decays.				

NODE=B200W

NODE=B200W

NODE=B200W;LINKAGE=B

NODE=B200W;LINKAGE=A

NODE=B200215;NODE=B200

 **$\Xi_b(6100)^-$  DECAY MODES**

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1 \quad \Xi_b^- \pi^+ \pi^-$	seen

DESIG=1

 **$\Xi_b(6100)^-$  BRANCHING RATIOS**

$\Gamma(\Xi_b^- \pi^+ \pi^-)/\Gamma_{\text{total}}$	$\Gamma_1/\Gamma$
seen	AIIJ
seen	SIRUNYAN

NODE=B200220

NODE=B200R01  
NODE=B200R01 **$\Xi_b(6100)^-$  REFERENCES**

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

NODE=B200

REFID=62459  
REFID=61090