

**$B_1(5721)^+$**  $I(J^P) = \frac{1}{2}(1^+)$  Status: \*\*  
 $I, J, P$  need confirmation.

Quantum numbers shown are quark-model predictions.

 **$B_1(5721)^+$  MASS**OUR FIT uses  $m_{B^{*0}}$  and  $m_{B_1^+} - m_{B^{*0}}$  to determine  $m_{B_1(5721)^+}$ .

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>
<b><math>5725.9^{+2.5}_{-2.7}</math> OUR FIT</b>	

 **$m_{B_1^+} - m_{B^{*0}}$** 

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
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 **$401.2^{+2.4}_{-2.7}$  OUR FIT** **$401.2^{+2.4}_{-2.7}$  OUR AVERAGE**

$400.5 \pm 1.8 \pm 3.1$	8K	<sup>1</sup> AAIJ	15AB	LHCB $p\bar{p}$ at 7, 8 TeV
$402 \pm 3 \pm 1_{-3}$		<sup>2</sup> AALTONEN	14I	CDF $p\bar{p}$ at 1.96 TeV

<sup>1</sup> AAIJ 15AB reports  $[m_{B_1^+} - m_{B^0}] - (m_{B^{*0}} - m_{B^0}) - m_{\pi^+} = 260.9 \pm 1.8 \pm 3.1$ MeV which we adjust by the  $\pi^+$  mass and assume  $(m_{B^{*0}} - m_{B^0}) = (m_{B^{*+}} - m_{B^+}) = 45.01 \pm 0.30 \pm 0.23$  MeV. The masses inside the square brackets were measured for each candidate event.<sup>2</sup> AALTONEN 14I reports  $m_{B_1(5721)^+} - m_{B^{*0}} - m_{\pi^+} = 262 \pm 3^{+1}_{-3}$  MeV which we adjusted by the  $\pi^+$  mass. **$B_1(5721)^+$  WIDTH**

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
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 **$31 \pm 6$  OUR AVERAGE** Error includes scale factor of 1.1.

$29.1 \pm 3.6 \pm 4.3$	8K	AAIJ	15AB	LHCB $p\bar{p}$ at 7, 8 TeV
$49 \pm 12 \pm 2_{-10 \ -13}$		AALTONEN	14I	CDF $p\bar{p}$ at 1.96 TeV

 **$B_1(5721)^+$  DECAY MODES**

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1 \quad B^{*0} \pi^+$	seen

## $B_1(5721)^+$ BRANCHING RATIOS

$\Gamma(B^{*0}\pi^+)/\Gamma_{\text{total}}$					$\Gamma_1/\Gamma$
<u>VALUE</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
seen	8K	AAIJ	15AB LHCb	$p\bar{p}$ at 7, 8 TeV	
<b>seen</b>		AALTONEN	14i CDF	$p\bar{p}$ at 1.96 TeV	

## $B_1(5721)^+$ REFERENCES

AAIJ	15AB	JHEP 1504 024	R. Aaij <i>et al.</i>	(LHCb Collab.)
AALTONEN	14i	PR D90 012013	T. Aaltonen <i>et al.</i>	(CDF Collab.)