

$B_2^*(5747)^+$ 

$$I(J^P) = \frac{1}{2}(2^+)$$

$I, J, P$  need confirmation.

Quantum numbers shown are quark-model predictions.

 **$B_2^*(5747)^+$  MASS**OUR FIT uses  $m_{B^0}$  and  $m_{B_2^{*+}} - m_{B^0}$  to determine  $m_{B_2^*(5747)^+}$ .

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>
<b>5737.2±0.7 OUR FIT</b>	

 **$m_{B_2^{*+}} - m_{B^0}$** 

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>457.5 ±0.7 OUR FIT</b>				
<b>457.5 ±0.7 OUR AVERAGE</b>				
457.62±0.72±0.40	4K	<sup>1</sup> AAIJ	15AB LHCB	$p\bar{p}$ at 7, 8 TeV
457.3 ±1.3 $\begin{smallmatrix} +0.3 \\ -0.9 \end{smallmatrix}$		<sup>2</sup> AALTONEN	14i CDF	$p\bar{p}$ at 1.96 TeV

<sup>1</sup> AAIJ 15AB reports  $[m_{B_2^{*+}} - m_{B^0}] - m_{\pi^+} = 318.1 \pm 0.7 \pm 0.4$  MeV which we adjust by the  $\pi^+$  mass. The masses inside the square brackets were measured for each candidate event.

<sup>2</sup> AALTONEN 14i reports  $m_{B_2^*(5747)^+} - m_{B^0} - m_{\pi^+} = 317.7 \pm 1.2 \begin{smallmatrix} +0.3 \\ -0.9 \end{smallmatrix}$  MeV which we adjusted by the  $\pi^+$  mass.

 **$B_2^*(5747)^+$  WIDTH**

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>20 ±5 OUR AVERAGE</b>				Error includes scale factor of 2.2.
23.6±2.0±2.1	4K	AAIJ	15AB LHCB	$p\bar{p}$ at 7, 8 TeV
11 $\begin{smallmatrix} +4 & +3 \\ -3 & -4 \end{smallmatrix}$		AALTONEN	14i CDF	$p\bar{p}$ at 1.96 TeV

 **$B_2^*(5747)^+$  DECAY MODES**

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1$ $B^0\pi^+$	seen
$\Gamma_2$ $B^{*0}\pi^+$	seen

 **$B_2^*(5747)^+$  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	4K	AAIJ	15AB LHCB	$p\bar{p}$ at 7, 8 TeV
<b>seen</b>		AALTONEN	14i CDF	$p\bar{p}$ at 1.96 TeV

$\Gamma(B^{*0}\pi^+)/\Gamma_{\text{total}}$					$\Gamma_2/\Gamma$
<u>VALUE</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<b>seen</b>	4k	AAIJ	15AB LHCB	<i>pp</i> at 7, 8 TeV	

  

$\Gamma(B^{*0}\pi^+)/\Gamma(B^0\pi^+)$					$\Gamma_2/\Gamma_1$
<u>VALUE</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<b>1.0±0.5±0.8</b>	4k	AAIJ	15AB LHCB	<i>pp</i> at 7, 8 TeV	

### $B_2^*(5747)^+$ 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.)