

$B_2^*(5747)^+$

$I(J^P) = \frac{1}{2}(2^+)$ Status: **
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 $m_{B_2^*(5747)^+}$.

VALUE (MeV) DOCUMENT ID
5737.2±0.7 OUR FIT

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

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

¹ 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 π^+ mass. The masses inside the square brackets were measured for each candidate event.

² AALTONEN 14i reports $m_{B_2^*(5747)^+} - m_{B^0} - m_{\pi^+} = 317.7 \pm 1.2^{+0.3}_{-0.9}$ MeV which we adjusted by the π^+ mass.

$B_2^*(5747)^+$ WIDTH

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
20 ±5 OUR AVERAGE				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 ⁺⁴ / ₋₃ ⁺³ / ₋₄		AALTONEN	14i CDF	$p\bar{p}$ at 1.96 TeV

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

Mode	Fraction (Γ_i/Γ)
Γ_1 $B^0 \pi^+$	seen
Γ_2 $B^{*0} \pi^+$	seen

$B_2^*(5747)^+$ BRANCHING RATIOS

$\Gamma(B^0 \pi^+)/\Gamma_{total}$	Γ_1/Γ			
<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
seen		AALTONEN	14i CDF	$p\bar{p}$ at 1.96 TeV

$\Gamma(B^{*0}\pi^+)/\Gamma_{\text{total}}$					Γ_2/Γ
<u>VALUE</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
seen	4k	AAIJ	15AB LHCB	<i>pp</i> at 7, 8 TeV	

$\Gamma(B^{*0}\pi^+)/\Gamma(B^0\pi^+)$					Γ_2/Γ_1
<u>VALUE</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
$1.0 \pm 0.5 \pm 0.8$	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.)