$B_2^*(5747)^+$

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

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

VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
457.5 ±0.7 OUR FIT					
457.5 ±0.7 OUR AVERAGE					
457.62±0.72±0.40	4K	[1] AAIJ	15AB	LHCB	pp at 7, 8 TeV
457.3 ±1.3 $^{+0.3}_{-0.9}$		[2] AALTONEN	14I	CDF	$p\overline{p}$ 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

VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
20 ±5 OUR AVERAGE Error includes scale factor of 2.2.					
23.6±2.0±2.1	4K	AAIJ	15AB	LHCB	pp at 7, 8 TeV
11 $^{+4}_{-3}$ $^{+3}_{-4}$		AALTONEN	14I	CDF	$p\overline{p}$ 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

VALUE	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
seen	4K	AAIJ	15AB	LHCB	pp at 7, 8 TeV
seen		AALTONEN	14I	CDF	$p\overline{p}$ at 1.96 TeV

$\Gamma(B^{*0}\pi^+)/\Gamma_{\text{total}}$ Γ_2/Γ

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
seen	4k	AAIJ	15AB	LHCB	pp at 7, 8 TeV

$\Gamma(B^{*0}\pi^+)/\Gamma(B^0\pi^+)$ Γ_2/Γ_1

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
1.0±0.5±0.8	4k	AAIJ	15AB	LHCB	pp at 7, 8 TeV

$B_2^*(5747)^+$ REFERENCES

AAIJ	15AB	JHEP 1504 024	R. Aaij *et al.*	(LHCb Collab.)
AALTONEN	14I	PR D90 012013	T. Aaltonen *et al.*	(CDF Collab.)