

$B_2^*(5747)^0$

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

Quantum numbers shown are quark-model predictions.

$B_2^*(5747)^0$ MASS

OUR FIT uses m_{B^+} , $m_{B_1^0} - m_{B^+}$, and $m_{B_2^{*0}} - m_{B_1^0}$ to determine $m_{B_2^*(5747)^0}$.
 The -0.659 correlation between statistical uncertainties of $m_{B_1^0} - m_{B^+}$ and $m_{B_2^{*0}} - m_{B_1^0}$ measurements reported by ABAZOV 07T is taken into account.

VALUE (MeV)	DOCUMENT ID
5743 ± 5 OUR FIT	Error includes scale factor of 2.8.

$B_2^*(5747)^0$ WIDTH

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
22.7^{+3.8+3.2}_{-3.2-10.2}	AALTONEN	09D CDF	$\rho\bar{p}$ at 1.96 TeV

$m_{B_2^{*0}} - m_{B_1^0}$

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
19 ± 6 OUR FIT	Error includes scale factor of 3.0.		
19 ± 6 OUR AVERAGE	Error includes scale factor of 2.8.		
14.9 ^{+2.2+1.2} _{-2.5-1.4}	¹ AALTONEN	09D CDF	$\rho\bar{p}$ at 1.96 TeV
26.2 ± 3.1 ± 0.9	¹ ABAZOV	07T D0	$\rho\bar{p}$ at 1.96 TeV

¹ Observed in $B_2^{*0} \rightarrow B^{*+}\pi^-$ and $B_2^{*0} \rightarrow B^+\pi^-$.

$B_2^*(5747)^0$ DECAY MODES

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

$B_2^*(5747)^0$ BRANCHING RATIOS

$\Gamma(B^+\pi^-)/\Gamma_{\text{total}}$	DOCUMENT ID	TECN	COMMENT	Γ_1/Γ
dominant	AALTONEN	09D CDF	$\rho\bar{p}$ at 1.96 TeV	
dominant	ABAZOV	07T D0	$\rho\bar{p}$ at 1.96 TeV	

$\Gamma(B^{*+}\pi^-)/\Gamma_{\text{total}}$	DOCUMENT ID	TECN	COMMENT	Γ_2/Γ
dominant	AALTONEN	09D CDF	$\rho\bar{p}$ at 1.96 TeV	
dominant	ABAZOV	07T D0	$\rho\bar{p}$ at 1.96 TeV	

$\Gamma(B^{*+} \pi^-) / \Gamma(B^+ \pi^-)$				Γ_2 / Γ_1
<i>VALUE</i>	<i>DOCUMENT ID</i>	<i>TECN</i>	<i>COMMENT</i>	
1.10 ± 0.42 ± 0.31	² ABAZOV	07T D0	$p\bar{p}$ at 1.96 TeV	
² Converted from measured ratio of $R = B(B_2^{*0} \rightarrow B^{*+} \pi^-) / B(B_2^{*0} \rightarrow B^{(*)+} \pi^-)$ $= 0.475 \pm 0.095 \pm 0.069$.				

$B_2^*(5747)^0$ REFERENCES

AALTONEN	09D	PRL 102 102003	T. Aaltonen <i>et al.</i>	(CDF Collab.)
ABAZOV	07T	PRL 99 172001	V.M. Abazov <i>et al.</i>	(D0 Collab.)