

$B_2^*(5747)^0$

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

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

$B_2^*(5747)^0$ WIDTH

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

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

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
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

$\Gamma(B^+ \pi^-)/\Gamma_{\text{total}}$	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	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	

$\Gamma(B^{*+} \pi^-) / \Gamma_{\text{total}}$				Γ_2 / Γ
<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
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
<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
$1.10 \pm 0.42 \pm 0.31$	² ABAZOV	07T	D0	$\rho \bar{p}$ 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.)