$B_2^*(5747)^0$

$I(J^P) = \frac{1}{2}(2^+)$ 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*
5746.9±2.9 OUR FIT	

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

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*COMMENT*
26.2±3.2 OUR FIT				
26.2±3.1±0.9	[1] ABAZOV	07T	D0	$p\overline{p}$ at 1.96 TeV

[1] Observed in $B_2^{*0} \to B^{*+}\pi^-$ and $B_2^{*0} \to B^+\pi^-$ with $B^{*+} \to B^+\gamma$ and $B^+ \to J/\psi\pi^+$.

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

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

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

$\Gamma(B^+\pi^-)/\Gamma_{total}$ Γ_1/Γ

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
dominant	ABAZOV	07T	D0	$p\overline{p}$ at 1.96 TeV

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

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
dominant	ABAZOV	07T	D0	$p\overline{p}$ at 1.96 TeV

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

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
1.10±0.42±0.31	[2] ABAZOV	07T	D0	$p\overline{p}$ at 1.96 TeV

[2] Converted from measured ratio of R = B($B_2^{*0} \to B^{*+}\pi^-$) / B($B_2^{*0} \to B^{(*)+}\pi^-$) = 0.475 ± 0.095 ± 0.069.

$B_2^*(5747)^0$ REFERENCES

ABAZOV 07T PRL 99 172001 V.M. Abazov *et al.* (D0 Collab.)