NODE=M184

$B_2^*(5747)^0$

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

Quantum numbers shown are quark-model predictions. NODE=M184

$B_2^*(5747)^0$ MASS

NODE=M184M

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. NODE=M184M

VALUE (MeV)	DOCUMENT ID
5743±5 OUR FIT Error includes scale factor of 2.9.	

NODE=M184M

$B_2^*(5747)^0$ WIDTH

NODE=M184W

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

NODE=M184W

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

NODE=M184DM

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	$p\overline{p}$ at 1.96 TeV
$26.2\pm3.1\pm0.9$	[1] ABAZOV	07T	D0	$p\overline{p}$ at 1.96 TeV

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

NODE=M184DM

NODE=M184DM;LINKAGE=AB

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

NODE=M184215;NODE=M184

	Mode	Fraction (Γ_i/Γ)	
Γ_1	$B^+\pi^-$	dominant	DESIG=1
Γ_2	$B^{*+}\pi^-$	dominant	DESIG=2

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

NODE=M184220

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

NODE=M184R01

VALUE	DOCUMENT ID		TECN	COMMENT
dominant	AALTONEN	09D	CDF	$p\overline{p}$ at 1.96 TeV
dominant	ABAZOV	07T	D0	$p\overline{p}$ at 1.96 TeV

NODE=M184R01

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

NODE=M184R02

VALUE	DOCUMENT ID		TECN	COMMENT
dominant	AALTONEN	09D	CDF	$p\overline{p}$ at 1.96 TeV
dominant	ABAZOV	07T	D0	$p\overline{p}$ at 1.96 TeV

NODE=M184R02

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

NODE=M184R03

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

NODE=M184R03

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

NODE=M184R03;LINKAGE=AB

$B_2^*(5747)^0$ REFERENCES

NODE=M184

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

REFID=52700
REFID=52014