NODE=M151

$B_J^*(5732)$

$I(J^P) = ?(?^?)$

OMITTED FROM SUMMARY TABLE

Signal can be interpreted as stemming from several narrow and broad resonances.

NODE=M151

$B_J^*(5732)$ MASS

NODE=M151M

NODE=M151M

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
5698± 8 OUR AVERAGE	Error includes scale factor of 1.2.				
5710±20		[1] AFFOLDER	01F	CDF	$p\overline{p}$ at 1.8 TeV
5695^{+17}_{-19}		[2] BARATE	98L	ALEP	$e^+e^- \to Z$
5704± 4±10	1944	[3] BUSKULIC	96D	ALEP	E^{ee}_{cm}= 88–94 GeV
5732± 5±20	2157	ABREU	95B	DLPH	E^{ee}_{cm}= 88–94 GeV
5681±11	1738	AKERS	95E	OPAL	E^{ee}_{cm}= 88–94 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
5713± 2		[4] ACCIARRI	99N	L3	$e^+e^- \to Z$

[1] AFFOLDER 01F uses the reconstructed B meson through semileptonic decay channels. The fraction of light B mesons that are produced at L=1 B^{**} states is measured to be 0.28 ± 0.06 ± 0.03. NODE=M151M;LINKAGE=MF

[2] BARATE 98L uses fully reconstructed B mesons to search for B^{**} production in the $B\pi^\pm$ system. In the framework of heavy quark symmetry (HQS), they also measured the mass of B_2^* to be $5739^{+\,8\,+6}_{-11\,-4}$ MeV/c^2 and the relative production rate of B($b \to B_2^* \to B^{(*)}\pi$)/B($b \to B_{u,d}$) = ($31 \pm 9^{+6}_{-5}$)%. NODE=M151M;LINKAGE=B

[3] Using $m_{B\pi} - m_B$ = 424 ± 4 ± 10 MeV. NODE=M151M;LINKAGE=A

[4] ACCIARRI 99N uses inclusive reconstructed B mesons to search for B^{**} production in the $B^{(*)}\pi^\pm$ system. In the framework of HQET, they measured the mass of B_1^* and B_2^* to be 5670 ± 10 ± 13 MeV and 5768 ± 5 ± 6 with the B($b \to B^{**}$)= (32 ± 3 ± 6) × 10^{-2}. They also reported the evidence for the existence of an excited B-meson state or mixture of states in the region 5.9–6.0 GeV. NODE=M151M;LINKAGE=N

$B_J^*(5732)$ WIDTH

NODE=M151W

NODE=M151W

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
128±18 OUR AVERAGE					
145±28	2157	ABREU	95B	DLPH	E^{ee}_{cm}= 88–94 GeV
116±24	1738	AKERS	95E	OPAL	E^{ee}_{cm}= 88–94 GeV

$B_J^*(5732)$ DECAY MODES

NODE=M151215;NODE=M151

	Mode	Fraction (Γ_i/Γ)	
Γ_1	$B^*\pi + B\pi$	seen	DESIG=1;OUR EST;→ UNCHECKED ←
Γ_2	$B^*\pi$(X)	[a] (85±29) %	DESIG=2

[a] X refers to decay modes with or without additional accompanying decay particles. LINKAGE=151

$B_J^*(5732)$ BRANCHING RATIOS

NODE=M151220

X refers to decay modes with or without additional accompanying decay particles.

NODE=M151220

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

NODE=M151R1

NODE=M151R1

VALUE	DOCUMENT ID		TECN	COMMENT
$\mathbf{0.85^{+0.26}_{-0.27}\pm0.12}$	ABBIENDI	02E	OPAL	$e^+e^- \to Z$

$B_J^*(5732)$ REFERENCES

NODE=M151

ABBIENDI	02E	EPJ C23 437	G. Abbiendi *et al.*	(OPAL Collab.)	REFID=48742
AFFOLDER	01F	PR D64 072002	T. Affolder *et al.*	(CDF Collab.)	REFID=48369
ACCIARRI	99N	PL B465 323	M. Acciarri *et al.*	(L3 Collab.)	REFID=47247
BARATE	98L	PL B425 215	R. Barate *et al.*	(ALEPH Collab.)	REFID=46082
BUSKULIC	96D	ZPHY C69 393	D. Buskulic *et al.*	(ALEPH Collab.)	REFID=44677
ABREU	95B	PL B345 598	P. Abreu *et al.*	(DELPHI Collab.)	REFID=44131
AKERS	95E	ZPHY C66 19	R. Akers *et al.*	(OPAL Collab.)	REFID=44182