

$B_J^*(5732)$
or B^{**}

$I(J^P) = ?(??)$
 I, J, P need confirmation.

OMITTED FROM SUMMARY TABLE

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

$B_J^*(5732)$ MASS

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
5697 ± 9 OUR AVERAGE	Error includes scale factor of 1.3. See the ideogram below.			
5695 ⁺¹⁷ ₋₁₉		¹ BARATE	98L ALEP	$e^+ e^- \rightarrow Z$
5704 ± 4 ± 10	1944	² BUSKULIC	96D ALEP	$E_{cm}^{ee} = 88-94$ GeV
5732 ± 5 ± 20	2157	ABREU	95B DLPH	$E_{cm}^{ee} = 88-94$ GeV
5681 ± 11	1738	AKERS	95E OPAL	$E_{cm}^{ee} = 88-94$ GeV

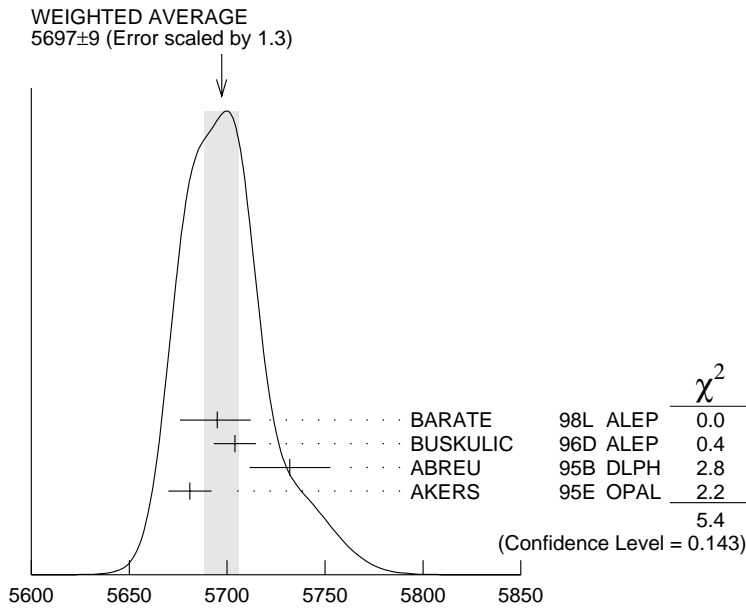
• • • We do not use the following data for averages, fits, limits, etc. • • •

5713 ± 2		³ ACCIARRI	99N L3	$e^+ e^- \rightarrow Z$
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¹ 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 $5739_{-11}^{+8}{}_{-4}^{+6}$ MeV/ c^2 and the relative production rate of $B(b \rightarrow B_2^* \rightarrow B^{(*)}\pi)/B(b \rightarrow B_{u,d}) = (31 \pm 9_{-5}^{+6})\%$.

² Using $m_{B\pi} - m_B = 424 \pm 4 \pm 10$ MeV.

³ 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 $5670 \pm 10 \pm 13$ MeV and $5768 \pm 5 \pm 6$ with the $B(b \rightarrow B^{**}) = (32 \pm 3 \pm 6) \times 10^{-2}$. 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.



$B_J^*(5732)$ mass (MeV)

$B_J^*(5732)$ WIDTH

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

$B_J^*(5732)$ DECAY MODES

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

$B_J^*(5732)$ REFERENCES

ACCIARRI	99N PL B465 323	M. Acciarri <i>et al.</i>	(L3 Collab.)
BARATE	98L PL B425 215	R. Barate <i>et al.</i>	(ALEPH Collab.)
BUSKULIC	96D ZPHY C69 393	D. Buskulic <i>et al.</i>	(ALEPH Collab.)
ABREU	95B PL B345 598	P. Abreu <i>et al.</i>	(DELPHI Collab.)
AKERS	95E ZPHY C66 19	R. Akers <i>et al.</i>	(OPAL Collab.)