

$B_1(5721)^0$
 $I(J^P) = \frac{1}{2}(1^+)$ Status: ***
 I, J, P need confirmation.

Quantum numbers shown are quark-model predictions.

 $B_1(5721)^0$ MASS

OUR FIT uses mass differences measurements listed below to determine the mass $m_{B_1(5721)^0}$.

VALUE (MeV)	DOCUMENT ID
5724.9 ± 2.4 OUR FIT	Error includes scale factor of 1.8.

 $m_{B_1^0} - m_{B^+}$

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
445.6 ± 2.4 OUR FIT			Error includes scale factor of 1.8.

441.5 ± 2.4 ± 1.3	ABAZOV	07T D0	$p\bar{p}$ at 1.96 TeV
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• • • We do not use the following data for averages, fits, limits, etc. • • •

446.2 ^{+1.9+1.0} _{-2.1-1.2}	¹ AALTONEN	09D CDF	Repl. by AALTONEN 14l
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¹ Observed in $B_1^0 \rightarrow B^{*+} \pi^-$. **$m_{B_1^0} - m_{B^{*+}}$**

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
400.1 ± 2.4 OUR FIT			Error includes scale factor of 1.9.

402.3 ± 0.9^{+1.1}_{-1.2}	² AALTONEN	14l CDF	$p\bar{p}$ at 1.96 TeV
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² AALTONEN 14l reports $m_{B_1(5721)^0} - m_{B^{*+}} - m_{\pi^-} = 262.7 \pm 0.9^{+1.1}_{-1.2}$ MeV which we adjusted by the π^- mass.

 $B_1(5721)^0$ WIDTH

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
23 ± 3 ± 4	AALTONEN	14l CDF	$p\bar{p}$ at 1.96 TeV

 $B_1(5721)^0$ DECAY MODES

Mode	Fraction (Γ_i/Γ)
$\Gamma_1 \quad B^{*+} \pi^-$	dominant

 $B_1(5721)^0$ BRANCHING RATIOS

$\Gamma(B^{*+} \pi^-)/\Gamma_{\text{total}}$				Γ_1/Γ
VALUE	DOCUMENT ID	TECN	COMMENT	
dominant	AALTONEN	09D CDF	$p\bar{p}$ at 1.96 TeV	
dominant	³ ABAZOV	07T D0	$p\bar{p}$ at 1.96 TeV	

³ Observed in $B_1^0 \rightarrow B^{*+} \pi^-$ with $B^{*+} \rightarrow B^+ \gamma$ and $B^+ \rightarrow J/\psi \pi^+$.

$B_1(5721)^0$ REFERENCES

AALTONEN	14I	PR D90 012013	T. Aaltonen <i>et al.</i>	(CDF Collab.)
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.)
