NODE=M206

$\chi_b(3P)$

$I^G(J^{PC}) = ?^?(?^{?+})$

A mixture of $J = 0$, 1, and 2 spin components observed in the radiative decay to $\Upsilon(1S)$ and $\Upsilon(2S)$, therefore $C = +$. NODE=M206

$\chi_b(3P)$ MASS

NODE=M206M

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
10534± 9 OUR AVERAGE				
[10.530 ± 0.010 GeV OUR 2012 AVERAGE]				
10530± 5± 9	[1] AAD	12A	ATLS	$pp \to \gamma\mu^+\mu^- X$
10551±14±17	[1] ABAZOV	12Q	D0	$p\overline{p} \to \gamma\mu^+\mu^- X$

NODE=M206M NEW

[1] The mass barycenter of the merged lineshapes from the $J = 1$ and 2 states. NODE=M206M;LINKAGE=AA

$\chi_b(3P)$ DECAY MODES

NODE=M206215;NODE=M206

	Mode	Fraction (Γ_i/Γ)	
Γ_1	$\Upsilon(1S)\gamma$	seen	DESIG=1
Γ_2	$\Upsilon(2S)\gamma$	seen	DESIG=2

$\chi_b(3P)$ BRANCHING RATIOS

NODE=M206225

$\Gamma(\Upsilon(1S)\gamma)/\Gamma_{total}$ — Γ_1/Γ

NODE=M206R01

VALUE	DOCUMENT ID		TECN	COMMENT
seen	AAD	12A	ATLS	$pp \to \gamma\mu^+\mu^- X$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
seen	ABAZOV	12Q	D0	$p\overline{p} \to \gamma\mu^+\mu^- X$

NODE=M206R01

$\Gamma(\Upsilon(2S)\gamma)/\Gamma_{total}$ — Γ_2/Γ

NODE=M206R02

VALUE	DOCUMENT ID		TECN	COMMENT
seen	AAD	12A	ATLS	$pp \to \gamma\mu^+\mu^- X$

NODE=M206R02

$\chi_b(3P)$ REFERENCES

NODE=M206

AAD	12A	PRL 108 152001	G. Aad *et al.*	(ATLAS Collab.)
ABAZOV	12Q	PR D86 031103	V.M. Abazov *et al.*	(D0 Collab.)

REFID=54037
REFID=54264