Reference = ABAZOV 16E; PRL 117 022003
Verifier code = D0

Normally we send all verifications for one experiment to one person, usually the spokesperson or data-analysis co-ordinator, who then distributes them to the appropriate people. Please tell us if we should send the verifications for your experiment to someone else.

PLEASE READ NOW

PLEASE REPLY WITHIN ONE WEEK

Dmitri Denisov

EMAIL: denisovd@fnal.gov

March 20, 2017

Dear Colleague,

(1) Please check the results of your experiment carefully. They are marked.

(2) Please reply within one week.

(3) Please reply even if everything is correct.

(4) IMPORTANT!! Please tell WHICH papers you are verifying. We have lots of requests out.

(5) Feel free to make comments on our treatment of any of the results (not just yours) you see.

Thank you for helping us make the Review accurate and useful.

Sincerely,

Simon Eidelman
BINP, Budker Inst. of Nuclear Physics
Prospekt Lavrent'eva 11
RU-630090 Novosibirsk
Russian Federation

EMAIL: simon.eidelman@cern.ch

BOTTOM, STRANGE MESONS
($B = \pm 1$, $S = \mp 1$)

NODE=MXXX046

$B_s^0 = s\overline{b}$, $\overline{B}_s^0 = \overline{s}\,b$, similarly for B_s^*'s

NODE=MXXX046

NODE=M232

$X(5568)^{\pm}$

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

OMITTED FROM SUMMARY TABLE

Seen as a peak in the $B_s\pi^{\pm}$ mass spectrum with a significance of more than 3σ by ABAZOV 16E in inclusive $p\overline{p}$ collisions at 1.96 TeV. Not seen by AAIJ 16AI. Needs confirmation.

NODE=M232

$X(5568)^{\pm}$ MASS

NODE=M232M

	VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
YOUR DATA	**$5567.8 \pm 2.9^{+0.9}_{-1.9}$**	133	[1] ABAZOV	16E	D0	$p\overline{p} \rightarrow B_s\pi^{\pm}X$

NODE=M232M

NODE=M232M

YOUR NOTE [1] Assumes $X(5568)^{\pm} \rightarrow B_s\pi^{\pm}$ decay. If $X(5568)^{\pm} \rightarrow B_s^*\pi^{\pm}$ decay is assumed, the mass shifts upward by 49 MeV.

NODE=M232M;LINKAGE=A

$X(5568)^{\pm}$ WIDTH

NODE=M232W

	VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
YOUR DATA	**$21.9 \pm 6.4^{+5.0}_{-2.5}$**	133	ABAZOV	16E	D0	$p\overline{p} \rightarrow B_s\pi^{\pm}X$

NODE=M232W

NODE=M232W

$X(5568)^{\pm}$ BRANCHING RATIOS

NODE=M232220

$\Gamma(B_s\pi^{\pm})/\Gamma_{total}$ **Γ_1/Γ**

NODE=M232R01

VALUE	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
not seen		[1] AAIJ	16AI	LHCB	$pp \rightarrow B_s^0\pi^{\pm}X$
YOUR DATA **seen**	133	[2] ABAZOV	16E	D0	$p\overline{p} \rightarrow B_s\pi^{\pm}X$

NODE=M232R01

[1] Not seen in 3 fb^{-1} of pp collision data at $\sqrt{s} = 7$ and 8 TeV in a scan over the $X(5568)$ mass and width, with B_s mesons reconstructed in decays to $D_s^-\pi^+$ or $J/\psi\phi$.

NODE=M232R01;LINKAGE=B

YOUR NOTE [2] Seen in $p\overline{p}$ collisions at 1.96 TeV at a rate of $(8.6 \pm 1.9 \pm 1.4)\%$ relative to inclusive B_s production in the kinematic region $10 < p_T(B_s) < 30$ GeV/c. An alternative possibility, $X(5568)^{\pm} \rightarrow B_s^*\pi^{\pm}$ with a missing γ, could not be ruled out.

NODE=M232R01;LINKAGE=A

$X(5568)^{\pm}$ REFERENCES

NODE=M232

	AAIJ	16AI	PRL 117 152003	R. Aaij *et al.*	(LHCb Collab.)
YOUR PAPER	ABAZOV	16E	PRL 117 022003	V.M. Abazov *et al.*	(D0 Collab.)

REFID=57549

REFID=57453