

NODE=M198

$D_0(2550)^0$

$$I(J^P) = \frac{1}{2}(0^-)$$

OMITTED FROM SUMMARY TABLE
 $J^P = 0^-$ determined by AAIJ 20D.

NODE=M198

NODE=M198M

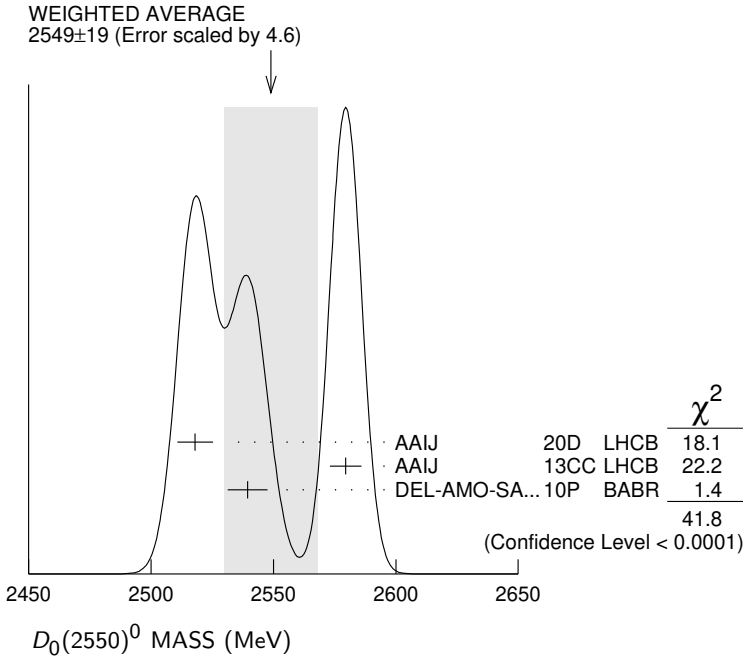
NODE=M198M

NODE=M198M;LINKAGE=A

$D_0(2550)^0$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
2549 ±19 OUR AVERAGE		Error includes scale factor of 4.6. See the ideogram below.		
2518 ± 2 ±7	79k	¹ AAIJ	20D LHCb	$B^- \rightarrow D^{*+} \pi^- \pi^-$
2579.5± 3.4±5.5	60k	AAIJ	13CC LHCb	$pp \rightarrow D^{*+} \pi^- X$
2539.4± 4.5±6.8	34k	DEL-AMO-SA..10P	BABR	$e^+ e^- \rightarrow D^{*+} \pi^- X$

¹ From a full four-body amplitude analysis of the $B^- \rightarrow D^{*+} \pi^- \pi^-$ decay.



$D_0(2550)^0$ WIDTH

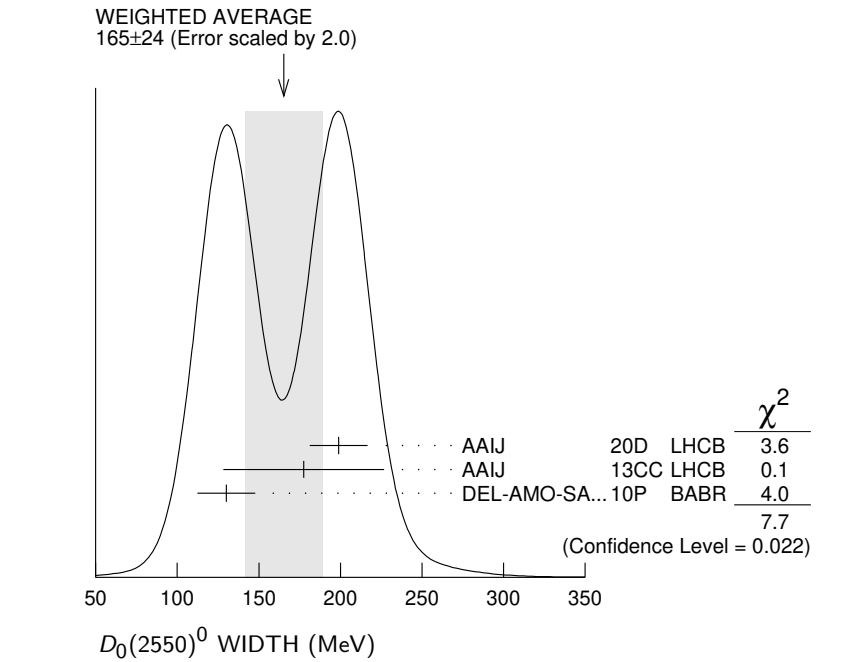
NODE=M198W

NODE=M198W

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
165 ±24 OUR AVERAGE		Error includes scale factor of 2.0. See the ideogram below.		
199 ± 5 ±17	79k	¹ AAIJ	20D LHCb	$B^- \rightarrow D^{*+} \pi^- \pi^-$
177.5±17.8±46.0	60k	AAIJ	13CC LHCb	$pp \rightarrow D^{*+} \pi^- X$
130 ±12 ±13	34k	DEL-AMO-SA..10P	BABR	$e^+ e^- \rightarrow D^{*+} \pi^- X$

¹ From a full four-body amplitude analysis of the $B^- \rightarrow D^{*+} \pi^- \pi^-$ decay.

NODE=M198W;LINKAGE=A



$D_0(2550)^0$ DECAY MODES

Mode	Fraction (Γ_i/Γ)
Γ_1 $D^{*+}\pi^-$	seen

$D_0(2550)^0$ POLARIZATION AMPLITUDE A_{D_J}

A polarization amplitude A_{D_J} is a parameter that depends on the initial polarization of the D_J . For D_J decays the helicity angle, θ_H , distribution varies like $1 + A_{D_J} \cos^2(\theta_H)$, where θ_H is the angle in the D_J rest frame between the two pions emitted in the $D_J \rightarrow D^*\pi$ and $D^* \rightarrow D\pi$ decays.

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
4.2 ± 1.3	60k	¹ AAIJ	13CC LHCb	$pp \rightarrow D^{*+}\pi^- X$
¹ Systematic uncertainty not estimated.				

$D_0(2550)^0$ REFERENCES

AAIJ	20D	PR D101 032005	R. Aaij <i>et al.</i>	(LHCb Collab.) JP
AAIJ	13CC	JHEP 1309 145	R. Aaij <i>et al.</i>	(LHCb Collab.)
DEL-AMO-SA...	10P	PR D82 111101	P. del Amo Sanchez <i>et al.</i>	(BABAR Collab.)

NODE=M198215;NODE=M198

DESIG=1;OUR EVAL;→ UNCHECKED ←

NODE=M198PAM

NODE=M198PAM

NODE=M198PAM

NODE=M198PAM;LINKAGE=A

NODE=M198

REFID=60253
REFID=55581
REFID=53534