

$D_0(2550)^0$

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

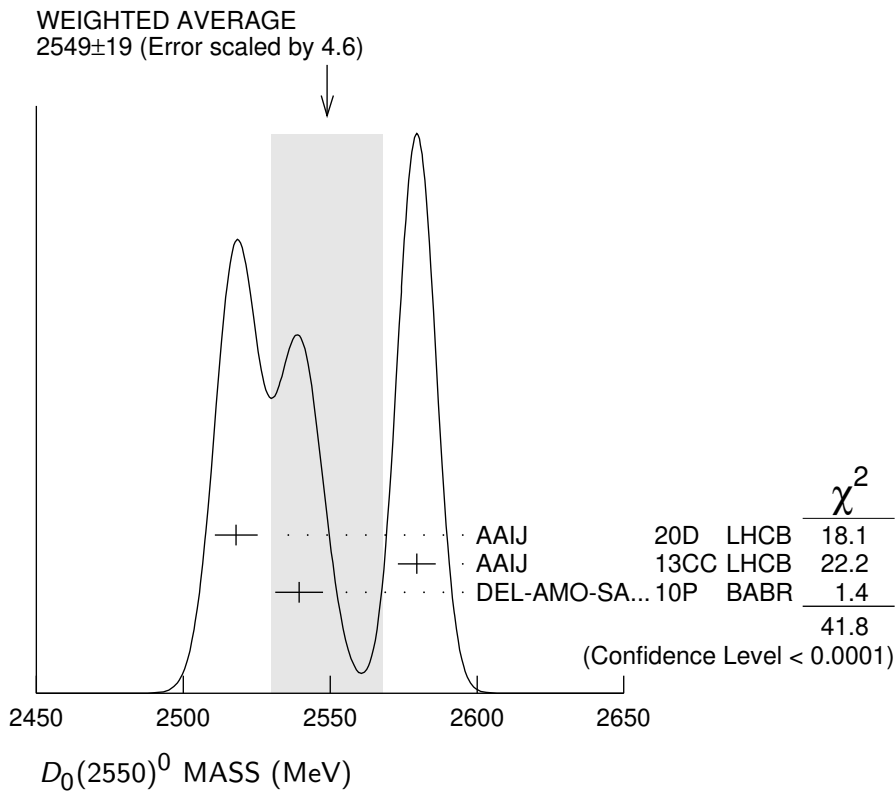
OMITTED FROM SUMMARY TABLE

$J^P = 0^-$ determined by AAIJ 20D.

$D_0(2550)^0$ MASS

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
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	$e^+ e^- \rightarrow D^{*+} \pi^- X$

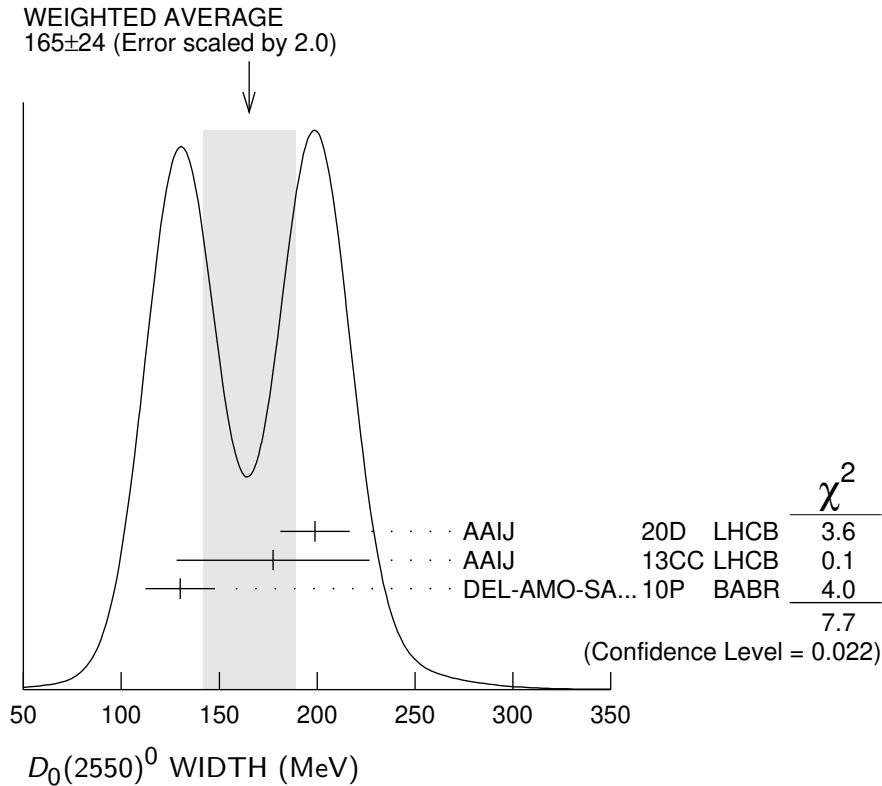
¹ From a full four-body amplitude analysis of the $B^- \rightarrow D^{*+} \pi^- \pi^-$ decay.



$D_0(2550)^0$ WIDTH

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
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	$e^+ e^- \rightarrow D^{*+} \pi^- X$

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



$D_0(2550)^0$ 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
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• • • We do not use the following data for averages, fits, limits, etc. • • •

4.2 ± 1.3	60k	¹ AAIJ	13CC LHCb	$pp \rightarrow D^{*+} \pi^- X$
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¹Systematic 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.)