

$D(2550)^0$

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

OMITTED FROM SUMMARY TABLE

Unnatural parity according to the helicity analysis of DEL-AMO-SANCHEZ 10P and AAIJ 13CC. DEL-AMO-SANCHEZ 10P suggests $J^P = 0^-$.

 $D(2550)^0$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
2564 ±20 OUR AVERAGE				Error includes scale factor of 3.9.
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	$e^+ e^- \rightarrow D^{*+} \pi^- X$

 $D(2550)^0$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
135 ±17 OUR AVERAGE				
177.5 ± 17.8 ± 46.0	60k	AAIJ	13CC LHCB	$pp \rightarrow D^{*+} \pi^- X$
130 ± 12 ± 13	34k	DEL-AMO-SA...10P	BABR	$e^+ e^- \rightarrow D^{*+} \pi^- X$

 $D(2550)^0$ DECAY MODES

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

 $D(2550)^0$ 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.				

 $D(2550)^0$ REFERENCES

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.)