$D(2550)^0$

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

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	$pp \to D^{*+}\pi^- X$
2539.4± 4.5±6.8	34k	DEL-AMO-SA...10P	BABR	$e^+ e^- \to D^{*+}\pi^- X$

$D(2550)^0$ WIDTH

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

$D(2550)^0$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$D^{*+}\pi^-$	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 $D_J \to D^*\pi$ and $D^* \to D\pi$ 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	$pp \to D^{*+}\pi^- X$

[1] Systematic uncertainty not estimated.

$D(2550)^0$ REFERENCES

AAIJ	13CC	JHEP 1309 145	R. Aaij *et al.*	(LHCb Collab.)
DEL-AMO-SA...	10P	PR D82 111101	P. del Amo Sanchez *et al.*	(BABAR Collab.)