$T_{cc}(3875)^+$

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

OMITTED FROM SUMMARY TABLE

Observed with large significance by AAIJ 22E in the doubly-charmed ($C = 2$) decay mode $D^0 D^0 \pi^+$ using inclusive pp collisions at 7, 8, and 13 TeV.

$T_{cc}(3875)^+$ MASS

OUR FIT value comes from the measuremet of $m_{T_{cc}^+} - (m_{D^{*+}} + m_{D^0})$ below and $m_{D^{*+}} + m_{D^0}$ values.

VALUE (MeV)	DOCUMENT ID
3874.83±0.11 OUR FIT	

$m_{T_{cc}^+} - (m_{D^{*+}} + m_{D^0})$

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
−0.27 ±0.06 OUR FIT				
$-0.273 \pm 0.061 ^{+0.012}_{-0.015}$	117	[1] AAIJ	22E LHCB	$pp \to D^0 D^0 \pi^+ X$

[1] The fit assumes a relativistic P-wave Breit Wigner function modified by Blatt-Weisskopf form factor with radius 3.5 GeV^{-1}. The significance for $m_{T_{cc}^+} - (m_{D^{*+}} + m_{D^0}) < 0$ is 4.3 σ.

$T_{cc}(3875)^+$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
$0.410 \pm 0.165 ^{+0.047}_{-0.057}$	117	[1] AAIJ	22E LHCB	$pp \to D^0 D^0 \pi^+ X$

[1] The fit assumes a relativistic P-wave Breit Wigner function modified by Blatt-Weisskopf form factor with radius 3.5 GeV^{-1}.

$T_{cc}(3875)^+$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$D^0 D^0 \pi^+$	seen

$T_{cc}(3875)^+$ BRANCHING RATIOS

$\Gamma(D^0 D^0 \pi^+)/\Gamma_{total}$ $\qquad\qquad$ Γ_1/Γ

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT
seen	117	AAIJ	22E LHCB	$pp \to D^0 D^0 \pi^+ X$

$T_{cc}(3875)^+$ REFERENCES

AAIJ	22E	NATP 18 751	R. Aaij *et al.*	(LHCb Collab.)