NODE=M269

$T^*_{c\bar{s}0}(2900)$

$I(J^P) = 1(0^+)$

OMITTED FROM SUMMARY TABLE

Observed by LHCb in AAIJ 23B using a simultaneous amplitude analysis of $B^0 \to \overline{D}^0 D_s^+ \pi^-$ and $B^+ \to D^- D_s^+ \pi^+$. The $T^*_{c\bar{s}0}(2900)^0 \to D_s^+ \pi^-$ and $T^*_{c\bar{s}0}(2900)^{++} \to D_s^+ \pi^+$ decays are observed with 8.0 and 6.5 σ significance, respectively. NODE=M269

$T^*_{c\bar{s}0}(2900)^0$ MASS

NODE=M269M

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
2892±14±15	[1] AAIJ	23C	LHCB	$B^0 \to \overline{D}^0 D_s^+ \pi^-$

[1] From an amplitude analysis of $B^0 \to \overline{D}^0 D_s^+ \pi^-$. A simultaneous fit to $B^0 \to \overline{D}^0 D_s^+ \pi^-$ and $B^- \to D^- D_s^+ \pi^+$ assuming isospin symmetry yields a mass of 2908 ± 11 ± 20 MeV. NODE=M269M;LINKAGE=A

$T^*_{c\bar{s}0}(2900)^{++}$ MASS

NODE=M269M++

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
2921±17±20	[2] AAIJ	23C	LHCB	$B^- \to D^- D_s^+ \pi^+$

[2] From an amplitude analysis of $B^- \to D^- D_s^+ \pi^+$. A simultaneous fit to $B^0 \to \overline{D}^0 D_s^+ \pi^-$ and $B^- \to D^- D_s^+ \pi^+$ assuming isospin symmetry yields a mass of 2908 ± 11 ± 20 MeV. NODE=M269M++;LINKAGE=A

$T^*_{c\bar{s}0}(2900)^0$ WIDTH

NODE=M269W

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
119±26±13	[3] AAIJ	23C	LHCB	$B^0 \to \overline{D}^0 D_s^+ \pi^-$

[3] From an amplitude analysis of $B^0 \to \overline{D}^0 D_s^+ \pi^-$. A simultaneous fit to $B^0 \to \overline{D}^0 D_s^+ \pi^-$ and $B^- \to D^- D_s^+ \pi^+$ assuming isospin symmetry yields a width of 136 ± 23 ± 13 MeV. NODE=M269W;LINKAGE=A

$T^*_{c\bar{s}0}(2900)^{++}$ WIDTH

NODE=M269W++

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
137±32±17	[4] AAIJ	23C	LHCB	$B^- \to D^- D_s^+ \pi^+$

[4] From an amplitude analysis of $B^- \to D^- D_s^+ \pi^+$. A simultaneous fit to $B^0 \to \overline{D}^0 D_s^+ \pi^-$ and $B^- \to D^- D_s^+ \pi^+$ assuming isospin symmetry yields a width of 136 ± 23 ± 13 MeV. NODE=M269W++;LINKAGE=A

$T^*_{c\bar{s}0}(2900)$ DECAY MODES

NODE=M269215;NODE=M269

	Mode	Fraction (Γ_i/Γ)	
Γ_1	$D_s^+ \pi^-$	seen	DESIG=1
Γ_2	$D_s^+ \pi^+$	seen	DESIG=2

$T^*_{c\bar{s}0}(2900)$ BRANCHING RATIOS

NODE=M269225

$\Gamma(D_s^+ \pi^-)/\Gamma_{total}$ Γ_1/Γ

NODE=M269R01

VALUE	DOCUMENT ID		TECN	COMMENT
seen	AAIJ	23C	LHCB	$B^0 \to \overline{D}^0 D_s^+ \pi^-$

NODE=M269R01

$\Gamma(D_s^+ \pi^+)/\Gamma_{total}$ Γ_2/Γ

NODE=M269R02

VALUE	DOCUMENT ID		TECN	COMMENT
seen	AAIJ	23C	LHCB	$B^- \to D^- D_s^+ \pi^+$

NODE=M269R02

$T^*_{c\bar{s}0}(2900)$ REFERENCES

NODE=M269

AAIJ 23B PR D108 012017 R. Aaij *et al.* (LHCb Collab.) REFID=62091
AAIJ 23C PRL 131 041902 R. Aaij *et al.* (LHCb Collab.) REFID=62094