$D_2(2740)^0$

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

OMITTED FROM SUMMARY TABLE
was $D(2740)^0$
$J^P = 2^-$ determined by (AAIJ 20D).

$D_2(2740)^0$ MASS

VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
2747 ±6 OUR AVERAGE					
2751 ±3 ± 7	79k	[1] AAIJ	20D	LHCB	$B^- \to D^{*+}\pi^-\pi^-$
2737.0±3.5±11.2	7.7k	AAIJ	13CC	LHCB	$pp \to D^{*+}\pi^- X$

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

$D_2(2740)^0$ WIDTH

VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
88 ±19 OUR AVERAGE					
102 ± 6 ±26	79k	[1] AAIJ	20D	LHCB	$B^- \to D^{*+}\pi^-\pi^-$
73.2±13.4±25.0	7.7k	AAIJ	13CC	LHCB	$pp \to D^{*+}\pi^- X$

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

$D_2(2740)^0$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$D^{*+}\pi^-$	seen

$D_2(2740)^0$ 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. • • •					
3.1±2.2	7.7k	[1] AAIJ	13CC	LHCB	$pp \to D^{*+}\pi^- X$

[1] Systematic uncertainty not estimated.

$D_2(2740)^0$ REFERENCES

AAIJ	20D	PR D101 032005	R. Aaij *et al.*	(LHCb Collab.) JP
AAIJ	13CC	JHEP 1309 145	R. Aaij *et al.*	(LHCb Collab.)