

$D_2(2740)^0$

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

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                              |
|----------------------------|------|-------------------|-----------|--------------------------------------|
| <b>2747 ±6 OUR AVERAGE</b> |      |                   |           |                                      |
| 2751 ±3 ± 7                | 79k  | <sup>1</sup> AAIJ | 20D LHCb  | $B^- \rightarrow D^{*+} \pi^- \pi^-$ |
| 2737.0±3.5±11.2            | 7.7k | AAIJ              | 13CC LHCb | $pp \rightarrow D^{*+} \pi^- X$      |

<sup>1</sup>From a full four-body amplitude analysis of the  $B^- \rightarrow D^{*+} \pi^- \pi^-$  decay.

$D_2(2740)^0$  WIDTH

| VALUE (MeV)               | EVTS | DOCUMENT ID       | TECN      | COMMENT                              |
|---------------------------|------|-------------------|-----------|--------------------------------------|
| <b>88 ±19 OUR AVERAGE</b> |      |                   |           |                                      |
| 102 ± 6 ±26               | 79k  | <sup>1</sup> AAIJ | 20D LHCb  | $B^- \rightarrow D^{*+} \pi^- \pi^-$ |
| 73.2±13.4±25.0            | 7.7k | AAIJ              | 13CC LHCb | $pp \rightarrow D^{*+} \pi^- X$      |

<sup>1</sup>From a full four-body amplitude analysis of the  $B^- \rightarrow D^{*+} \pi^- \pi^-$  decay.

$D_2(2740)^0$  DECAY MODES

| Mode                          | Fraction ( $\Gamma_i/\Gamma$ ) |
|-------------------------------|--------------------------------|
| $\Gamma_1 \quad D^{*+} \pi^-$ | 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,  $\theta_H$ , distribution varies like  $1 + A_{D_J} \cos^2(\theta_H)$ , where  $\theta_H$  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. • • • |      |                   |           |                                 |
| 3.1±2.2                                                                       | 7.7k | <sup>1</sup> AAIJ | 13CC LHCb | $pp \rightarrow D^{*+} \pi^- X$ |

<sup>1</sup>Systematic uncertainty not estimated.

$D_2(2740)^0$  REFERENCES

|      |                    |                       |                   |
|------|--------------------|-----------------------|-------------------|
| AAIJ | 20D PR D101 032005 | R. Aaij <i>et al.</i> | (LHCb Collab.) JP |
| AAIJ | 13CC JHEP 1309 145 | R. Aaij <i>et al.</i> | (LHCb Collab.)    |