

$$D_2^*(2460)^\pm$$

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

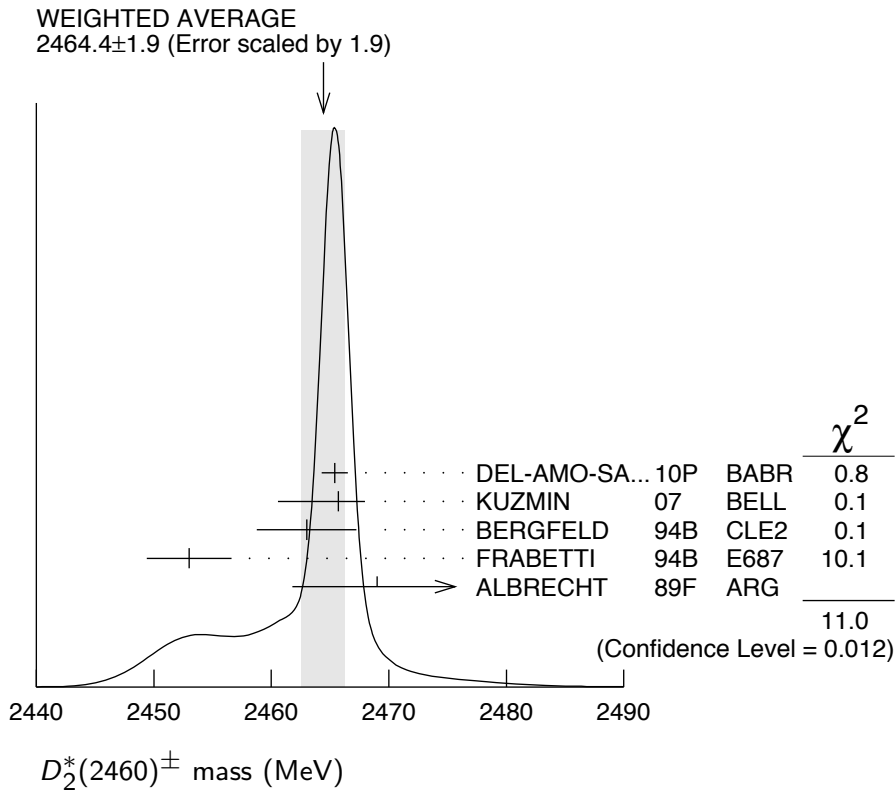
$J^P = 2^+$  assignment strongly favored (ALBRECHT 89B).

### $D_2^*(2460)^\pm$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
<b>2464.4 ± 1.9 OUR AVERAGE</b>		Error includes scale factor of 1.9. See the ideogram below.		
2465.4 ± 0.2 ± 1.1	111k	<sup>1</sup> DEL-AMO-SA...10P	BABR	$e^+e^- \rightarrow D^0\pi^+X$
2465.7 ± 1.8 <sup>+1.4</sup> <sub>-4.8</sub>	2909	KUZMIN	07	BELL $e^+e^- \rightarrow$ hadrons
2463 ± 3 ± 3	310	BERGFELD	94B	CLE2 $e^+e^- \rightarrow D^0\pi^+X$
2453 ± 3 ± 2	185	FRABETTI	94B	E687 $\gamma\text{Be} \rightarrow D^0\pi^+X$
2469 ± 4 ± 6		ALBRECHT	89F	ARG $e^+e^- \rightarrow D^0\pi^+X$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
2467.6 ± 1.5 ± 0.8	3.5k	<sup>2</sup> LINK	04A	FOCS $\gamma A$

<sup>1</sup> At a fixed width of 50.5 MeV.

<sup>2</sup> Fit includes the contribution from  $D_0^*(2400)^\pm$ . Not independent of the corresponding mass difference measurement,  $(m_{D_2^*(2460)^\pm}) - (m_{D_2^*(2460)^0})$ .



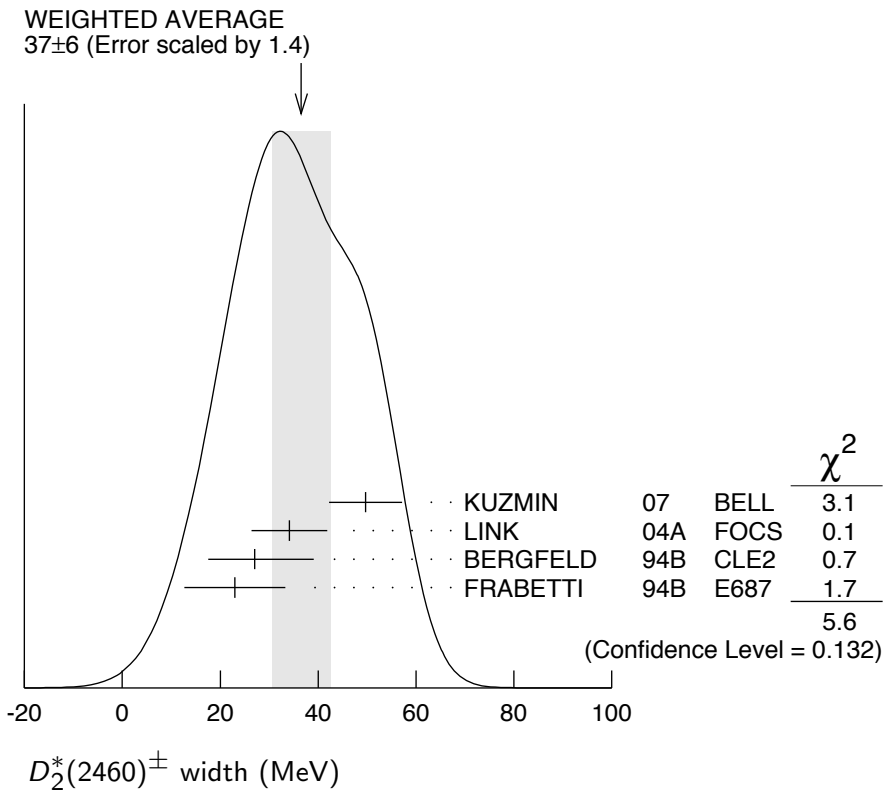
### $m_{D_2^*(2460)^\pm} - m_{D_2^*(2460)^0}$

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
<b>2.4 ± 1.7 OUR AVERAGE</b>			
3.1 ± 1.9 ± 0.9	LINK	04A	FOCS $\gamma$ A
- 2 ± 4 ± 4	BERGFELD	94B	CLE2 $e^+e^- \rightarrow$ hadrons
0 ± 4	FRABETTI	94B	E687 $\gamma$ Be $\rightarrow$ $D\pi X$
14 ± 5 ± 8	ALBRECHT	89F	ARG $e^+e^- \rightarrow D^0\pi^+ X$

### $D_2^*(2460)^\pm$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
<b>37 ± 6 OUR AVERAGE</b>	Error includes scale factor of 1.4. See the ideogram below.			
49.7 ± 3.8 ± 6.4	2909	KUZMIN	07	BELL $e^+e^- \rightarrow$ hadrons
34.1 ± 6.5 ± 4.2	3.5k	<sup>3</sup> LINK	04A	FOCS $\gamma$ A
27 $^{+11}_{-8}$ ± 5	310	BERGFELD	94B	CLE2 $e^+e^- \rightarrow D^0\pi^+ X$
23 ± 9 ± 5	185	FRABETTI	94B	E687 $\gamma$ Be $\rightarrow D^0\pi^+ X$

<sup>3</sup>Fit includes the contribution from  $D_0^*(2400)^\pm$ .



## $D_2^*(2460)^\pm$ DECAY MODES

$D_2^*(2460)^-$  modes are charge conjugates of modes below.

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1$ $D^0 \pi^+$	seen
$\Gamma_2$ $D^{*0} \pi^+$	seen
$\Gamma_3$ $D^+ \pi^+ \pi^-$	not seen
$\Gamma_4$ $D^{*+} \pi^+ \pi^-$	not seen

## $D_2^*(2460)^\pm$ BRANCHING RATIOS

$\Gamma(D^0 \pi^+)/\Gamma_{\text{total}}$	$\Gamma_1/\Gamma$
<u>VALUE</u>	<u>DOCUMENT ID</u> <u>TECN</u> <u>COMMENT</u>
<b>seen</b>	ALBRECHT 89F ARG $e^+ e^- \rightarrow D^0 \pi^+ X$

$\Gamma(D^0 \pi^+)/\Gamma(D^{*0} \pi^+)$	$\Gamma_1/\Gamma_2$
<u>VALUE</u>	<u>DOCUMENT ID</u> <u>TECN</u> <u>COMMENT</u>
<b><math>1.9 \pm 1.1 \pm 0.3</math></b>	BERGFELD 94B CLE2 $e^+ e^- \rightarrow \text{hadrons}$

$\Gamma(D^0 \pi^+)/[\Gamma(D^0 \pi^+) + \Gamma(D^{*0} \pi^+)]$	$\Gamma_1/(\Gamma_1 + \Gamma_2)$
<u>VALUE</u>	<u>EVTS</u> <u>DOCUMENT ID</u> <u>TECN</u> <u>COMMENT</u>

• • • We do not use the following data for averages, fits, limits, etc. • • •

$0.62 \pm 0.03 \pm 0.02$       3361      <sup>4</sup> AUBERT      09Y      BABR       $\bar{B}^0 \rightarrow D_2^{*+} \ell^- \nu_\ell$

<sup>4</sup> Assuming  $\Gamma(\Upsilon(4S) \rightarrow B^+ B^-) / \Gamma(\Upsilon(4S) \rightarrow B^0 \bar{B}^0) = 1.065 \pm 0.026$  and equal partial widths for charged and neutral  $D_2^*$  mesons.

## $D_2^*(2460)^\pm$ REFERENCES

DEL-AMO-SA... 10P	PR D82 111101	P. del Amo Sanchez <i>et al.</i>	(BABAR Collab.)
AUBERT 09Y	PRL 103 051803	B. Aubert <i>et al.</i>	(BABAR Collab.)
KUZMIN 07	PR D76 012006	A. Kuzmin <i>et al.</i>	(BELLE Collab.)
LINK 04A	PL B586 11	J.M. Link <i>et al.</i>	(FOCUS Collab.)
BERGFELD 94B	PL B340 194	T. Bergfeld <i>et al.</i>	(CLEO Collab.)
FRABETTI 94B	PRL 72 324	P.L. Frabetti <i>et al.</i>	(FNAL E687 Collab.)
ALBRECHT 89B	PL B221 422	H. Albrecht <i>et al.</i>	(ARGUS Collab.)
ALBRECHT 89F	PL B231 208	H. Albrecht <i>et al.</i>	(ARGUS Collab.)