

# $D_1(2420)^\pm$

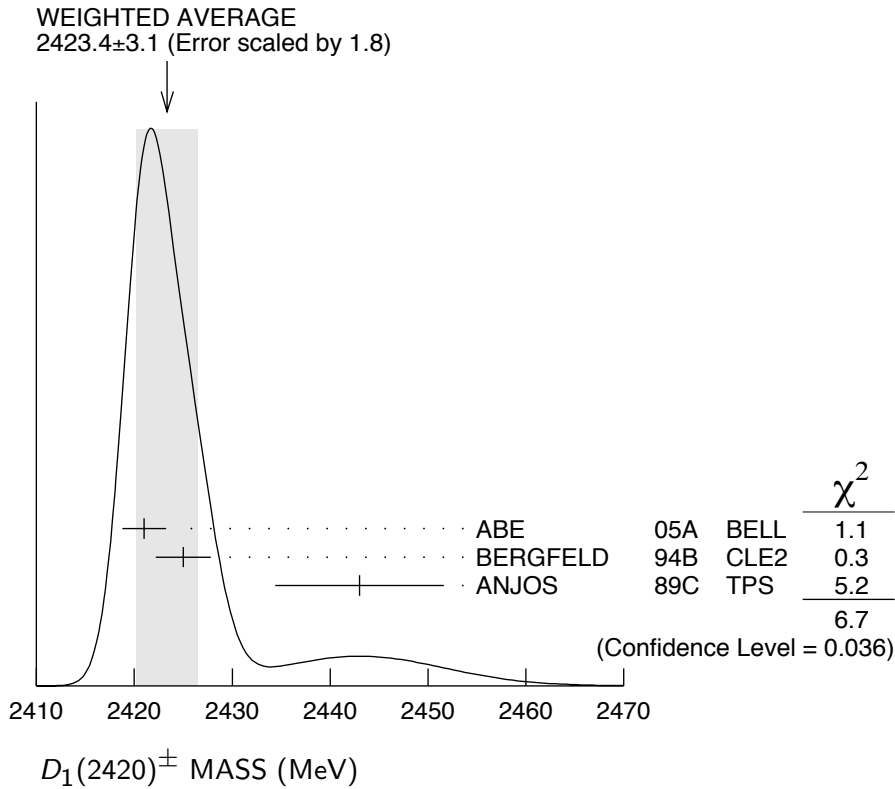
$I(J^P) = \frac{1}{2}(??)$   
 $I$  needs confirmation.

OMITTED FROM SUMMARY TABLE

Seen in  $D^*(2007)^0 \pi^+$ .  $J^P = 0^+$  ruled out.

## $D_1(2420)^\pm$ MASS

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>2423.4 ± 3.1 OUR AVERAGE</b>	Error	includes scale factor of 1.8.	See the ideogram below.	
2421 ± 2 ± 1	124	ABE	05A BELL	$\bar{B}^0 \rightarrow D^+ \pi^+ \pi^- \pi^-$
2425 ± 2 ± 2	146	BERGFELD	94B CLE2	$e^+ e^- \rightarrow D^{*0} \pi^+ X$
2443 ± 7 ± 5	190	ANJOS	89C TPS	$\gamma N \rightarrow D^0 \pi^+ X^0$



## $m_{D_1^*(2420)^\pm} - m_{D_1^*(2420)^0}$

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b><math>4^{+2}_{-3} \pm 3</math></b>	BERGFELD	94B CLE2	$e^+ e^- \rightarrow$ hadrons

## $D_1(2420)^\pm$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
<b>25 ± 6 OUR AVERAGE</b>				
21 ± 5 ± 8	124	ABE	05A BELL	$\bar{B}^0 \rightarrow D^+ \pi^+ \pi^- \pi^-$
26 <sup>+</sup> <sub>7</sub> ± 8	146	BERGFELD	94B CLE2	$e^+ e^- \rightarrow D^{*0} \pi^+ X$
41 ± 19 ± 8	190	ANJOS	89C TPS	$\gamma N \rightarrow D^0 \pi^+ X^0$

## $D_1(2420)^\pm$ DECAY MODES

$D_1^*(2420)^-$  modes are charge conjugates of modes below.

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1$ $D^*(2007)^0 \pi^+$	seen
$\Gamma_2$ $D^+ \pi^+ \pi^-$	seen
$\Gamma_3$ $D^+ \rho^0$	
$\Gamma_4$ $D^+ f_0(600)$	
$\Gamma_5$ $D_0^*(2400)^0 \pi^+$	
$\Gamma_6$ $D^0 \pi^+$	not seen
$\Gamma_7$ $D^{*+} \pi^+ \pi^-$	not seen

## $D_1(2420)^\pm$ BRANCHING RATIOS

$\Gamma(D^*(2007)^0 \pi^+)/\Gamma_{\text{total}}$	DOCUMENT ID	TECN	COMMENT	$\Gamma_1/\Gamma$
<b>seen</b>	ANJOS	89C TPS	$\gamma N \rightarrow D^0 \pi^+ X^0$	

$\Gamma(D^0 \pi^+)/\Gamma(D^*(2007)^0 \pi^+)$	CL%	DOCUMENT ID	TECN	COMMENT	$\Gamma_6/\Gamma_1$
<0.18	90	BERGFELD	94B CLE2	$e^+ e^- \rightarrow \text{hadrons}$	

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

<0.18      90      BERGFELD      94B CLE2       $e^+ e^- \rightarrow \text{hadrons}$

## $D_1(2420)^\pm$ REFERENCES

ABE	05A	PRL 94 221805	K. Abe <i>et al.</i>	(BELLE Collab.)
BERGFELD	94B	PL B340 194	T. Bergfeld <i>et al.</i>	(CLEO Collab.)
ANJOS	89C	PRL 62 1717	J.C. Anjos <i>et al.</i>	(FNAL E691 Collab.)

## OTHER RELATED PAPERS

CLOSE	05C	PR D72 094004	F.E. Close, E.S. Swanson	(OXFTP)
SEMENOV	99	SPU 42 847	S.V. Semenov	
		Translated from UFN 42 937.		