NODE=M120

$D_1(2420)^{\pm}$

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

OMITTED FROM SUMMARY TABLE

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

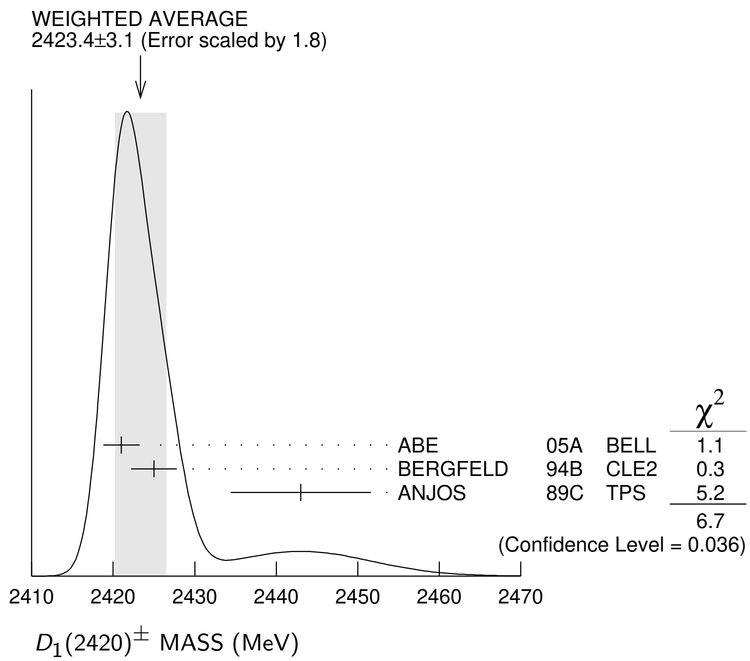
NODE=M120

$D_1(2420)^{\pm}$ MASS

NODE=M120205

NODE=M120M

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



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

NODE=M120207

NODE=M120DM

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*COMMENT*
$\mathbf{4^{+2}_{-3}\pm3}$	BERGFELD	94B	CLE2	$e^+ e^- \to$ hadrons

$D_1(2420)^{\pm}$ WIDTH

NODE=M120210

NODE=M120W

VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
25± 6 OUR AVERAGE					
21± 5±8	124	ABE	05A	BELL	$\overline{B}^0 \to D^+ \pi^+ \pi^- \pi^-$
$26^{+8}_{-7}\pm4$	146	BERGFELD	94B	CLE2	$e^+ e^- \to D^{*0} \pi^+ X$
41±19±8	190	ANJOS	89C	TPS	$\gamma N \to D^0 \pi^+ X^0$

$D_1(2420)^{\pm}$ DECAY MODES

NODE=M120215;NODE=M120

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

NODE=M120

	Mode	Fraction (Γ_i/Γ)	
Γ_1	$D^*(2007)^0 \pi^+$	seen	DESIG=1
Γ_2	$D^+ \pi^+ \pi^-$	seen	DESIG=3;OUR EST;→ NOT CHECKED ←
Γ_3	$D^+ \rho^0$		DESIG=4
Γ_4	$D^+ f_0(600)$		DESIG=5
Γ_5	$D_0^*(2400)^0 \pi^+$		DESIG=6
Γ_6	$D^0 \pi^+$	not seen	DESIG=2;OUR EVAL;→ NOT CHECKED ←
Γ_7	$D^{*+} \pi^+ \pi^-$	not seen	DESIG=7;OUR EST;→ NOT CHECKED ←

$D_1(2420)^{\pm}$ BRANCHING RATIOS

NODE=M120220

$\Gamma(D^*(2007)^0\pi^+)/\Gamma_{total}$ — Γ_1/Γ

NODE=M120R1
NODE=M120R1

VALUE	DOCUMENT ID		TECN	COMMENT
seen	ANJOS	89C	TPS	$\gamma N \to D^0\pi^+X^0$

$\Gamma(D^0\pi^+)/\Gamma(D^*(2007)^0\pi^+)$ — Γ_6/Γ_1

NODE=M120R2
NODE=M120R2

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.18	90	BERGFELD	94B	CLE2	$e^+e^- \to$ hadrons

$D_1(2420)^{\pm}$ REFERENCES

NODE=M120

ABE 05A PRL 94 221805 K. Abe *et al.* (BELLE Collab.) REFID=50755
BERGFELD 94B PL B340 194 T. Bergfeld *et al.* (CLEO Collab.) REFID=44099
ANJOS 89C PRL 62 1717 J.C. Anjos *et al.* (FNAL E691 Collab.) REFID=40737

OTHER RELATED PAPERS

CLOSE 05C PR D72 094004 F.E. Close, E.S. Swanson (OXFTP) REFID=50962
SEMENOV 99 SPU 42 847 S.V. Semenov REFID=47363
Translated from UFN 42 937.