

$D_2^*(2460)^0$

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

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

$D_2^*(2460)^0$ MASS

| <u>VALUE (MeV)</u> | <u>EVTS</u> | <u>DOCUMENT ID</u> | <u>TECN</u> | <u>COMMENT</u> |
|---|-------------|--------------------|-------------|--|
| 2458.9 ± 2.0 OUR AVERAGE Error includes scale factor of 1.2. | | | | |
| 2465 ± 3 ± 3 | 486 | AVERY | 94C CLE2 | $e^+ e^- \rightarrow D^+ \pi^- X$ |
| 2453 ± 3 ± 2 | 128 | FRABETTI | 94B E687 | $\gamma Be \rightarrow D^+ \pi^- X$ |
| 2461 ± 3 ± 1 | 440 | AVERY | 90 CLEO | $e^+ e^- \rightarrow D^{*+} \pi^- X$ |
| 2455 ± 3 ± 5 | 337 | ALBRECHT | 89B ARG | $e^+ e^- \rightarrow D^+ \pi^- X$ |
| 2459 ± 3 ± 2 | 153 | ANJOS | 89C TPS | $\gamma N \rightarrow D^+ \pi^- X$ |
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | |
| 2461 ± 6 | 126 | ¹ ABREU | 98M DLPH | $e^+ e^-$ |
| 2466 ± 7 | 1 | ASRATYAN | 95 BEBC | $53,40 \nu(\bar{\nu}) \rightarrow p + X,$ $d + X$ |

¹ No systematic error given.

$D_2^*(2460)^0$ WIDTH

| <u>VALUE (MeV)</u> | <u>EVTS</u> | <u>DOCUMENT ID</u> | <u>TECN</u> | <u>COMMENT</u> |
|---------------------------|-------------|--------------------|-------------|--------------------------------------|
| 23 ± 5 OUR AVERAGE | | | | |
| $28^{+8}_{-7} \pm 6$ | 486 | AVERY | 94C CLE2 | $e^+ e^- \rightarrow D^+ \pi^- X$ |
| 25 ± 10 ± 5 | 128 | FRABETTI | 94B E687 | $\gamma Be \rightarrow D^+ \pi^- X$ |
| 20^{+9+9}_{-12-10} | 440 | AVERY | 90 CLEO | $e^+ e^- \rightarrow D^{*+} \pi^- X$ |
| 15^{+13+5}_{-10-10} | 337 | ALBRECHT | 89B ARG | $e^+ e^- \rightarrow D^+ \pi^- X$ |
| 20 ± 10 ± 5 | 153 | ANJOS | 89C TPS | $\gamma N \rightarrow D^+ \pi^- X$ |

$D_2^*(2460)^0$ DECAY MODES

$\bar{D}_2^*(2460)^0$ modes are charge conjugates of modes below.

| Mode | Fraction (Γ_i/Γ) |
|------------------------------------|--------------------------------|
| $\Gamma_1 \quad D^+ \pi^-$ | seen |
| $\Gamma_2 \quad D^*(2010)^+ \pi^-$ | seen |

$D_2^*(2460)^0$ BRANCHING RATIOS

| $\Gamma(D^+ \pi^-)/\Gamma_{\text{total}}$ | Γ_1/Γ | | | |
|---|-------------------|--------------------|-------------|------------------------------------|
| <u>VALUE</u> | <u>EVTS</u> | <u>DOCUMENT ID</u> | <u>TECN</u> | <u>COMMENT</u> |
| seen | 337 | ALBRECHT | 89B ARG | $e^+ e^- \rightarrow D^+ \pi^- X$ |
| seen | | ANJOS | 89C TPS | $\gamma N \rightarrow D^+ \pi^- X$ |

| $\Gamma(D^*(2010)^+\pi^-)/\Gamma_{\text{total}}$ | | | | Γ_2/Γ |
|--|--------------------|-------------|-----------------------------------|-------------------|
| <u>VALUE</u> | <u>DOCUMENT ID</u> | <u>TECN</u> | <u>COMMENT</u> | |
| seen | AVERY | 90 CLEO | $e^+e^- \rightarrow D^{*+}\pi^-X$ | |
| seen | ALBRECHT | 89H ARG | $e^+e^- \rightarrow D^*\pi^-X$ | |

| $\Gamma(D^+\pi^-)/\Gamma(D^*(2010)^+\pi^-)$ | | | | Γ_1/Γ_2 |
|---|--------------------|-------------|-----------------------------------|---------------------|
| <u>VALUE</u> | <u>DOCUMENT ID</u> | <u>TECN</u> | <u>COMMENT</u> | |
| 2.3±0.6 OUR AVERAGE | | | | |
| 2.2±0.7±0.6 | AVERY | 94C CLE2 | $e^+e^- \rightarrow D^{*+}\pi^-X$ | |
| 2.3±0.8 | AVERY | 90 CLEO | e^+e^- | |
| 3.0±1.1±1.5 | ALBRECHT | 89H ARG | $e^+e^- \rightarrow D^*\pi^-X$ | |

$D_2^*(2460)^0$ REFERENCES

| | | | | |
|----------|-----|-------------|-----------------------------|---------------------|
| ABREU | 98M | PL B426 231 | P. Abreu <i>et al.</i> | (DELPHI Collab.) |
| ASRATYAN | 95 | ZPHY C68 43 | A.E. Asratyan <i>et al.</i> | (BIRM, BELG, CERN+) |
| AVERY | 94C | PL B331 236 | P. Avery <i>et al.</i> | (CLEO Collab.) |
| FRABETTI | 94B | PRL 72 324 | P.L. Frabetti <i>et al.</i> | (FNAL E687 Collab.) |
| AVERY | 90 | PR D41 774 | P. Avery, D. Besson | (CLEO Collab.) |
| ALBRECHT | 89B | PL B221 422 | H. Albrecht <i>et al.</i> | (ARGUS Collab.) JP |
| ALBRECHT | 89H | PL B232 398 | H. Albrecht <i>et al.</i> | (ARGUS Collab.) JP |
| ANJOS | 89C | PRL 62 1717 | J.C. Anjos <i>et al.</i> | (FNAL E691 Collab.) |

OTHER RELATED PAPERS

| | | | | |
|---------|----|-----------------------------|--------------|--|
| SEMENOV | 99 | SPU 42 847 | S.V. Semenov | |
| | | Translated from UFN 42 937. | | |