

Table 1: Measurements of masses and widths for excited  $D$  mesons. The column  $J^P$  lists the most significant assignment of spin and parity. If possible, an average mass or width is calculated. Table 1/2 for  $D$  mesons.

| Resonance         | $J^P$             | Decay mode              | Mass [MeV/ $c^2$ ]              | Width [MeV]                   | Measured by                              | Reference |
|-------------------|-------------------|-------------------------|---------------------------------|-------------------------------|------------------------------------------|-----------|
| $D_0^*(2400)^0$   | $0^+$             | $D^+\pi^-$              | $2297\pm 8 \pm 20$              | $273\pm 12 \pm 48$            | BABAR                                    | [1]       |
|                   |                   | $D^+\pi^-$              | $2308\pm 17 \pm 32$             | $276\pm 21 \pm 63$            | Belle                                    | [2]       |
|                   |                   | $D^+\pi^-$              | $2407\pm 21 \pm 35$             | $240\pm 55 \pm 59$            | FOCUS                                    | [3]       |
|                   |                   |                         | $2318.2\pm 16.9$                | $267.4\pm 35.6$               | Our average                              |           |
| $D_0^*(2400)^\pm$ | $0^+$             | $D^0\pi^+$              | $2360\pm 15 \pm 12 \pm 28$      | $255\pm 26 \pm 20 \pm 47$     | LHCb                                     | [4]       |
|                   |                   | $D^0\pi^+$              | $2349\pm 6 \pm 1 \pm 4$         | $217\pm 13 \pm 5 \pm 12$      | LHCb                                     | [5]       |
|                   |                   | $D^0\pi^+$              | $2403\pm 14 \pm 35$             | $283\pm 24 \pm 34$            | FOCUS( $m$ & $\Gamma$ ) + Belle( $J^P$ ) | [6]       |
|                   |                   |                         | $2351.3\pm 7.0$                 | $229.9\pm 16.1$               | Our average                              |           |
| $D_1(2420)^0$     | $1^+$             | $D^{*+}\pi^-$           | $2424.8\pm 0.1 \pm 0.7$         | $33.6\pm 0.3 \pm 2.7$         | LHCb                                     | [7]       |
|                   |                   | $D^{*+}\pi^-$           | $2419.6\pm 0.1 \pm 0.7$         | $35.2\pm 0.4 \pm 0.9$         | LHCb                                     | [8]       |
|                   |                   | $D^{*+}\pi^-$           | $2423.1\pm 1.5^{+0.4}_{-0.7}$   | $38.8\pm 5^{+1.9}_{-5.4}$     | Zeus                                     | [9]       |
|                   |                   | $D^{*+}\pi^-$           | $2420.1\pm 0.1 \pm 0.8$         | $31.4\pm 0.5 \pm 1.3$         | BABAR                                    | [10]      |
|                   |                   | $D^{*+}\pi^-$           |                                 | $20\pm 1.7 \pm 1.3$           | CDF                                      | [11]      |
|                   |                   | $D^{*+}\pi^-$           | $2421.4\pm 1.5 \pm 0.9$         | $23.7\pm 2.7 \pm 4$           | Belle                                    | [2]       |
|                   |                   | $D^0\pi^+\pi^-$         | $2426\pm 3 \pm 1$               | $24\pm 7 \pm 8$               | Belle                                    | [12]      |
|                   |                   | $D^{*+}\pi^-$           | $2421^{+1}_{-2} \pm 2$          | $20^{+6}_{-5} \pm 3$          | CLEO                                     | [13]      |
|                   |                   | $D^{*+}\pi^-$           | $2422\pm 2 \pm 2$               | $15\pm 8 \pm 4$               | E387                                     | [14]      |
|                   |                   | $D^{*+}\pi^-$           | $2414\pm 2 \pm 5$               | $13\pm 6^{+10}_{-5}$          | ARGUS                                    | [15]      |
|                   |                   | $D^{*+}\pi^-$           | $2428\pm 3 \pm 2$               | $23^{+8+10}_{-6-4}$           | CLEO                                     | [16]      |
|                   |                   | $D^{*+}\pi^-$           | $2428\pm 8 \pm 5$               | $58\pm 14 \pm 20$             | TPS                                      | [17]      |
|                   |                   |                         | $2421.8\pm 0.4$                 | $31.8\pm 0.7$                 | Our average                              |           |
| $D_1(2420)^\pm$   | $1^+$             | $D^{*0}\pi^+$           | $2421.9\pm 4.7^{+3.4}_{-1.2}$   |                               | Zeus                                     | [9]       |
|                   |                   | $D^+\pi^-\pi^+$         | $2421\pm 2 \pm 1$               | $21\pm 5 \pm 8$               | Belle                                    | [12]      |
|                   |                   | $D^{*0}\pi^+$           | $2425\pm 2 \pm 2$               | $26^{+8}_{-7} \pm 4$          | CLEO                                     | [18]      |
|                   |                   | $D^{*0}\pi^+$           | $2443\pm 7 \pm 5$               | $41\pm 19 \pm 8$              | TPS                                      | [17]      |
|                   |                   | $2423.2\pm 1.6$         | $25.0\pm 6.0$                   | Our average                   |                                          |           |
| $D_1(2430)^0$     | $1^+$             | $D^{*+}\pi^-$           | $2411\pm 3 \pm 9$               | $309\pm 9 \pm 28$             | LHCb                                     | [7]       |
|                   |                   | $D^{*+}\pi^-$           | $2427\pm 26 \pm 25$             | $384^{+107}_{-75} \pm 74$     | Belle                                    | [2]       |
|                   |                   |                         | $2412.0\pm 9.2$                 | $312.6\pm 28.6$               | Our average                              |           |
| $D_2^*(2460)^0$   | $0^+$             | $D^+\pi^-$              | $2463.7\pm 0.4 \pm 0.4 \pm 0.6$ | $47\pm 0.8 \pm 0.9 \pm 0.3$   | LHCb                                     | [19]      |
|                   |                   | $D^+\pi^-$              | $2460.4\pm 0.1 \pm 0.1$         | $45.6\pm 0.4 \pm 1.1$         | LHCb                                     | [8]       |
|                   |                   | $D^{*+}\pi^-$           | $2464\pm 1.4 \pm 0.5 \pm 0.2$   | $43.8\pm 2.9 \pm 1.7 \pm 0.6$ | LHCb                                     | [20]      |
|                   |                   | $D^{*+}\pi^-, D^+\pi^-$ | $2462.5\pm 2.4^{+1.3}_{-1.1}$   | $46.6\pm 8.1^{+5.9}_{-3.8}$   | Zeus                                     | [9]       |
|                   |                   | $D^+\pi^-$              | $2462.2\pm 0.1 \pm 0.8$         | $50.5\pm 0.6 \pm 0.7$         | BABAR                                    | [10]      |
|                   |                   | $D^+\pi^-$              | $2460.4\pm 1.2 \pm 2.2$         | $41.8\pm 2.5 \pm 2.9$         | BABAR                                    | [1]       |
|                   |                   | $D^+\pi^-$              |                                 | $49.2\pm 2.3 \pm 1.3$         | CDF                                      | [11]      |
|                   |                   | $D^+\pi^-$              | $2461.6\pm 2.1 \pm 3.3$         | $45.6\pm 4.4 \pm 6.7$         | Belle                                    | [2]       |
|                   |                   | $D^+\pi^-$              | $2464.5\pm 1.1 \pm 1.9$         | $38.7\pm 5.3 \pm 2.9$         | FOCUS                                    | [3]       |
|                   |                   | $D^+\pi^-$              | $2465\pm 3 \pm 3$               | $28^{+8}_{-7} \pm 6$          | CLEO                                     | [13]      |
|                   |                   | $D^+\pi^-$              | $2455\pm 3 \pm 5$               | $15^{+13+5}_{-10-10}$         | ARGUS                                    | [21]      |
|                   |                   | $D^+\pi^-$              | $2459\pm 3 \pm 2$               | $20\pm 10 \pm 5$              | TPS                                      | [17]      |
| $D^{*+}\pi^-$     | $2461\pm 3 \pm 1$ | $20^{+9}_{-12} \pm 9$   | CLEO                            | [16]                          |                                          |           |
|                   | $2453\pm 3 \pm 2$ | $25\pm 10 \pm 5$        | E687                            | [14]                          |                                          |           |
|                   | $2460.6\pm 0.1$   | $47.6\pm 0.6$           | Our average                     |                               |                                          |           |

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