

## Meson Summary Table

Including non- $q\bar{q}$  states. See also the table of suggested  $q\bar{q}$  quark-model assignments in the "Quark Model" review.

• Indicates particles that appear in the preceding Meson Summary Table. We do not regard the other entries as being established.

| LIGHT UNFLAVORED<br>( $S = C = B = 0$ )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                           | STRANGE<br>( $S = \pm 1, C = B = 0$ )                                                              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$c\bar{c}$ continued<br>$I^G(J^{PC})$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
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| $I^G(J^{PC})$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          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| <ul style="list-style-type: none"><li><math>\pi^\pm</math></li><li><math>\pi^0</math></li><li><math>\eta</math></li><li><math>f_0(500)</math></li><li><math>\rho(770)</math></li><li><math>\omega(782)</math></li><li><math>\eta'(958)</math></li><li><math>f_0(980)</math></li><li><math>a_0(980)</math></li><li><math>\phi(1020)</math></li><li><math>h_1(1170)</math></li><li><math>b_1(1235)</math></li><li><math>a_1(1260)</math></li><li><math>f_2(1270)</math></li><li><math>f_1(1285)</math></li><li><math>\eta(1295)</math></li><li><math>\pi(1300)</math></li><li><math>a_2(1320)</math></li><li><math>f_0(1370)</math></li><li><math>\pi_1(1400)</math></li><li><math>\eta(1405)</math></li><li><math>h_1(1415)</math></li><li><math>f_1(1420)</math></li><li><math>\omega(1420)</math></li><li><math>f_2(1430)</math></li><li><math>a_0(1450)</math></li><li><math>\rho(1450)</math></li><li><math>\eta(1475)</math></li><li><math>f_0(1500)</math></li><li><math>f_1(1510)</math></li><li><math>f_2'(1525)</math></li><li><math>f_2(1565)</math></li><li><math>\rho(1570)</math></li><li><math>h_1(1595)</math></li><li><math>\pi_1(1600)</math></li><li><math>a_1(1640)</math></li><li><math>f_2(1640)</math></li><li><math>\eta_2(1645)</math></li><li><math>\omega(1650)</math></li><li><math>\omega_3(1670)</math></li><li><math>\pi_2(1670)</math></li><li><math>\phi(1680)</math></li><li><math>\rho_3(1690)</math></li></ul> | <ul style="list-style-type: none"><li><math>\rho(1700)</math></li><li><math>a_2(1700)</math></li><li><math>a_0(1710)</math></li><li><math>f_0(1710)</math></li><li><math>X(1750)</math></li><li><math>\eta(1760)</math></li><li><math>f_0(1770)</math></li><li><math>\pi(1800)</math></li><li><math>f_2(1810)</math></li><li><math>X(1835)</math></li><li><math>\phi_3(1850)</math></li><li><math>\eta_1(1855)</math></li><li><math>\eta_2(1870)</math></li><li><math>\pi_2(1880)</math></li><li><math>\rho(1900)</math></li><li><math>f_2(1910)</math></li><li><math>a_0(1950)</math></li><li><math>f_2(1950)</math></li><li><math>a_4(1970)</math></li><li><math>\rho_3(1990)</math></li><li><math>\pi_2(2005)</math></li><li><math>f_2(2010)</math></li><li><math>f_0(2020)</math></li><li><math>f_4(2050)</math></li><li><math>\pi_2(2100)</math></li><li><math>f_0(2100)</math></li><li><math>f_2(2150)</math></li><li><math>\rho(2150)</math></li><li><math>\phi(2170)</math></li><li><math>f_0(2200)</math></li><li><math>f_J(2220)</math></li><li><math>\omega(2220)</math></li><li><math>\eta(2225)</math></li><li><math>\rho_3(2250)</math></li><li><math>f_2(2300)</math></li><li><math>f_4(2300)</math></li><li><math>f_0(2330)</math></li><li><math>f_2(2340)</math></li><li><math>\rho_5(2350)</math></li><li><math>\eta(2370)</math></li><li><math>f_0(2470)</math></li><li><math>f_6(2510)</math></li></ul> | <ul style="list-style-type: none"><li><math>K^\pm</math></li><li><math>K^0</math></li><li><math>K_S^0</math></li><li><math>K_L^0</math></li><li><math>K_0^*(700)</math></li><li><math>K^*(892)</math></li><li><math>K_1(1270)</math></li><li><math>K_1(1400)</math></li><li><math>K^*(1410)</math></li><li><math>K_0^*(1430)</math></li><li><math>K_2^*(1430)</math></li><li><math>K(1460)</math></li><li><math>K_2(1580)</math></li><li><math>K(1630)</math></li><li><math>K_1(1650)</math></li><li><math>K^*(1680)</math></li><li><math>K_2(1770)</math></li><li><math>K_3^*(1780)</math></li><li><math>K_2(1820)</math></li><li><math>K(1830)</math></li><li><math>K_0^*(1950)</math></li><li><math>K_2^*(1980)</math></li><li><math>K_4^*(2045)</math></li><li><math>K_2(2250)</math></li><li><math>K_3(2320)</math></li><li><math>K_5^*(2380)</math></li><li><math>K_4(2500)</math></li><li><math>K(3100)</math></li></ul> | <ul style="list-style-type: none"><li><math>D_{s0}(2590)^+</math></li><li><math>D_{s1}^*(2700)^\pm</math></li><li><math>D_{s1}^*(2860)^\pm</math></li><li><math>D_{s3}^*(2860)^\pm</math></li><li><math>D_{sJ}(3040)^\pm</math></li></ul> | <ul style="list-style-type: none"><li><math>\psi(4230)</math></li><li><math>\chi_{c1}(4274)</math></li><li><math>X(4350)</math></li><li><math>\psi(4360)</math></li><li><math>\psi(4415)</math></li><li><math>\chi_{c0}(4500)</math></li><li><math>X(4630)</math></li><li><math>\psi(4660)</math></li><li><math>\chi_{c1}(4685)</math></li><li><math>\chi_{c0}(4700)</math></li></ul> |  |                                                                                                                                                                                                                                                                                                                                                                                                                               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style="list-style-type: none"><li><math>\eta_b(1S)</math></li><li><math>\gamma(1S)</math></li><li><math>\chi_{b0}(1P)</math></li><li><math>\chi_{b1}(1P)</math></li><li><math>h_b(1P)</math></li><li><math>\chi_{b2}(1P)</math></li><li><math>\eta_b(2S)</math></li><li><math>\gamma(2S)</math></li><li><math>\gamma_2(1D)</math></li><li><math>\chi_{b0}(2P)</math></li><li><math>\chi_{b1}(2P)</math></li><li><math>h_b(2P)</math></li><li><math>\chi_{b2}(2P)</math></li><li><math>\gamma(3S)</math></li><li><math>\chi_{b1}(3P)</math></li><li><math>\chi_{b2}(3P)</math></li><li><math>\gamma(4S)</math></li><li><math>\gamma(10753)</math></li><li><math>\gamma(10860)</math></li><li><math>\gamma(11020)</math></li></ul>                                                                                                                                                                                                              |  |
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style="list-style-type: none"><li><math>T_{c\bar{c}0}^*(2870)^0</math></li><li><math>T_{c\bar{c}1}^*(2900)^0</math></li><li><math>T_{c\bar{c}0}^*(2900)</math></li><li><math>T_{cc}(3875)^+</math></li><li><math>T_{c\bar{c}1}(3900)</math></li><li><math>T_{c\bar{c}\bar{c}1}(4000)</math></li><li><math>T_{c\bar{c}\bar{c}}(4020)</math></li><li><math>T_{c\bar{c}\bar{c}}(4050)^+</math></li><li><math>T_{c\bar{c}\bar{c}}(4055)^+</math></li><li><math>T_{c\bar{c}\bar{c}}(4100)^+</math></li><li><math>T_{c\bar{c}\bar{c}1}(4200)^+</math></li><li><math>T_{c\bar{c}\bar{c}1}(4220)</math></li><li><math>T_{c\bar{c}\bar{c}0}(4240)^+</math></li><li><math>T_{c\bar{c}\bar{c}}(4250)^+</math></li><li><math>T_{c\bar{c}1}(4430)^+</math></li><li><math>T_{b\bar{b}}(5568)^+</math></li><li><math>T_{c\bar{c}\bar{c}\bar{c}}(6900)^0</math></li><li><math>T_{b\bar{b}1}(10610)</math></li><li><math>T_{b\bar{b}1}(10650)</math></li></ul> |  |
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