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## Mass spectrum of mesons containing charm quarks - continuum limit results from twisted mass fermions

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We present results from an on-going computation of masses of D mesons, D<sub>s</sub> mesons and charmonium, including both ground states and several parity and angular momentum excitations. We employ 2+1+1 flavours of dynamical maximally twisted mass fermions at three lattice spacings and three u/d quark masses at each lattice spacing. We consider different combinations of valence quarks, with either identical or opposite signs in front of the twisted mass terms. In the end, our setup allows for a good control of different kinds of systematic effects, in particular the quark mass dependence of the resulting meson masses and cut-off effects. We obtain very good agreement with experiment for the well-established states and some of our results are predictions.

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