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Charm physics with a tmQCD valence action

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We report on our ongoing determination of the charm quark mass and the masses and decay constants of various charmed mesons, obtained within a mixed-action setup. We employ $N_f = 2 + 1$ CLS ensembles combined with a Wilson twisted mass valence action that eliminates the leading $O(a)$ effects from our target observables. Alongside our preliminary results, we will discuss an exploration of GEVP techniques aimed at optimizing the precision in view of the extension of the computation to heavier quark masses.

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