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Light hadrons from $N_f=2+1+1$ dynamical twisted mass fermions

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We present results from simulations performed by ETMC using $2 + 1 + 1$ flavours of twisted mass fermions at maximal twist. We concentrate on one value of the lattice spacing of $a \approx 0.078\text{fm}$, but we add first data at a second value of $a = 0.06\text{fm}$ to test for the size of lattice artefacts. The quark mass dependence of light meson masses and decay constants will be confronted to chiral perturbation theory. We will also discuss the K and D-meson masses. Using several lattice sizes as well as different values of the light, strange and charm quark masses we will make an attempt to assess systematic effects affecting our results.

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talk

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