Results from overlap valence quarks on a twisted mass sea

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I will present results of lattice computations using overlap fermions on a twisted mass background. Nf=2 full QCD gauge configurations have been produced by the ETM Collaboration with very light pions (down to about 270 MeV), with small lattice spacing (a~0.87 fm) and large volumes (V=24³x48). By profiting of the good chiral properties of the overlap operator for the valence quarks, it is also possible to have a precise (and unquenched) determination of those physical quantities where the chiral properties are crucial. In order to have unquenched results, we match the valence quark mass with the sea quark mass. We also perform computations with different quark masses in order to simulate (quenched) Strange and Charm quarks. A typical application is the computation of $B_K$, for which we present first results.