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Heat transfer through suspensions of particles in turbulent convection ANDREA SCAGLIARINI, ARMANN GYLFASON, University of Reykjavik, FEDERICO TOSCHI, Eindhoven University of Technology — We study, by means of numerical simulations the turbulent dynamics of a layer of liquid confined between two plates, heated form below and cooled from above (as in the standard Rayleigh-Bénard setup), with suspended solid particles. We consider both the cases where particles exert or not a back-reaction on the fluid flow. In particular we will address the dependence of the heat transfer (quantified by the Nusselt number) on particles volume fraction, heat diffusivity and of particle properties.

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