

MP 3: HV Osborne

Time: Tuesday 12:00–12:40

Location: HFT-FT 101

Invited Talk

MP 3.1 Tue 12:00 HFT-FT 101

Quantum information measures for quantum fields — •TOBIAS OSBORNE — Institut für Theoretische Physik, Leibniz Universität Hannover, Hannover, Germany

I discuss how to endow the set of (cutoff) quantum field states with an operationally motivated information geometry using quantum information distance measures. This is done by recognising that all mea-

surements are inherently imperfect so that microscopic details are effectively indistinguishable experimentally. A procedure to identify the corresponding induced equivalence classes of microscopic states will be described. These equivalence classes may be modelled with a simpler effective Hilbert space. Connections to the AdS/CFT correspondence will be sketched and I will explain how the resulting structure allows one to quantify information loss along RG trajectories.