

We have studied the entropy budget per particle emitted in blackbody radiation and determined explicit coarse-graining models for classical and quantum entropies. As the process is unitary, the entropy is exactly compensated by the “hidden information” in the correlations that we choose not to consider within the specific selected coarse-graining. Our goal is to extend these ideas to a black hole evaporation process. In order to carry out this calculation we adopted a variant of the “average subsystem” approach, but consider a multipartite pure system that includes the influence of the rest of the universe. In addition, the entropy budget should be corrected at the last stages of evaporation, due to quantum gravity effects. We have been shown recently how these effects (expressed in terms of the generalized uncertainty principle) modify the Hawking flux when we approach the Planck size.