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Negative Casimir entropies YANG LI, KIMBALL MILTON, Univ of Oklahoma — In the last decade, various results on the entropy related to the Casimir interactions between two bodies have been obtained and the striking feature that negative values of Casimir entropy frequently appear. The origin of this effect lies in many factors, such as the dissipation of the materials, the geometry of the configuration and so on. We recently investigated the entropies of one body systems. Although the self-free energy of one body systems are always divergent, the self-entropy could be finite in many cases. These phenomenon may throw more light on thermal dynamical behavior of quantum field systems.

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