

Abstract Submitted  
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**The vacuum in light-front quantum field theory**<sup>1</sup> WAYNE POLYZOU, MARC HERRMANN, Univ of Iowa — Light-front formulations of quantum field theory have many advantages over canonical formulations of the theory, but they have properties that are difficult to reconcile with the canonical formulation. Two of these properties are the presence of “zero modes” and the triviality of the light-front vacuum. We discuss how both of these features can be reconciled with covariant formulations of the theory by considering the relation between the Wightman functions of the theory and the algebra of free fields restricted to a light front.

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