Abstract Submitted
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Asymptotic quantum fields at spatial infinity KARTIK PRABHU, University of California Santa Barbara, GAUTAM SATISHCHANDRAN, University of Chicago — I will consider the asymptotic behaviour of massless quantum fields at spatial infinity in Minkowski spacetime. The bulk fields can be written in terms of massive de Sitter fields on the hyperboloid of directions at spatial infinity. This gives a formulation of the QFT purely in terms of fields defined at spatial infinity which can be generalised to any asymptotically-flat spacetime. Further, the gravitational field near spatial infinity can also be formulated in this manner giving an asymptotic formulation of quantum gravity. I will also comment on the asymptotic charges in the quantum theory which label the Hilbert spaces corresponding to different superselection sectors and the possible relation to asymptotic quantization on null infinity.

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