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On the Gluon Spectrum in the Boost-Invariant Glasma from a Semi-Analytic Approach MING LI, Univ of Minnesota - Twin Cities — In high energy heavy-ion collisions, the degrees of freedom at the very early stage can be effectively represented by strong classical gluonic fields within the color glass condensate framework. As the system expands, the strong gluonic fields eventually become weak such that an equivalent description using the gluonic particle degrees of freedom starts to become valid. I will discuss the spectrum of these gluonic particles from a semi-analytic approach by solving the classical Yang-Mills equations using a power series expansion in the proper time. I will show that the chromo-electric fields have larger contributions to the gluon spectrum than the chromo-magnetic fields do. Furthermore, the large momentum modes take less time to reach the weak-field regime while smaller momentum modes take more time. The resulting functional form of the gluon spectrum is exponential in nature and the spectrum is close to a thermal distribution, with effective temperatures around$0.6\,Q_s$ to$0.9\,Q_s$late in the Glasma evolution.

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