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Abstract for an Invited Paper  
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**Parton Saturation at Electron Ion Collider**

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In this presentation I will discuss the prospects for testing the phenomenon of the gluon saturation at an Electron Ion Collider. First, the basics and concept of the gluon saturation in high density QCD will be reviewed and implications for the experimental detection discussed. I will focus on the experimental signatures in the Deep Inelastic Scattering on protons and on nuclei at small values of Bjorken  $x$ . Several signatures will be discussed: inclusive processes, exclusive vector meson production, particle correlations and forward hadron and particle production.