

## **MEASURING THE GLUON SIVERS FUNCTION AT A FUTURE ELECTRON-ION COLLIDER**

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Studying the largely unexplored gluon Sivers function (GSF) is important to obtain a complete picture of the 2D+1 momentum structure of the proton. It is proposed that the GSF can be studied through the dihadron single spin asymmetry (SSA) with the future high energy, high luminosity Electron-Ion Collider (EIC). In this work, a detailed study on the feasibility of measuring the dihadron SSA arising from the GSF is presented. It is shown that the high transverse momentum charged dihadron pair SSA at an EIC is a sensitive probe to the underlying gluon dynamics which can be measured with high precision.