Monolithic Active Pixel Silicon Detector for Electron Relativistic Heavy Ion Colliders: Status and Plans
Benedetto Di Ruzza¹, Elke-Caroline Aschenauer¹, Brian Cole², Kevin Thomas Crowley², Emlyn Hughes², Daniel Malinsky², Marc Winter³
¹Brookhaven National Laboratory, Upton, NY 11973 (USA); ²Columbia University, New York City, NY 10027 (USA);
³Institut Pluridisciplinaire Hubert Curien, 67037 Strasbourg (France)

Abstract
There are still many open questions regarding the nucleon spin structure and transverse-momentum and impact parameter-dependent parton distributions in nucleons and nuclei.

Physics motivations of an electron-ion collider

EIC at RHIC: the eRHIC project

Preliminary design of the eRHIC Detector

Monolithic Active Pixel Silicon (MAPS) Sensor

Studies for the eRHIC silicon vertex

MAPS implementation in the STAR Detector upgrade (Mimosa 28 Ultimate)

Outlook

Acknowledgements

BNL and Columbia University test stations