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## Two-Gluon Correlations in Heavy-Light Ion Collisions

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We derive the cross-section for two-gluon production in heavy-light ion collisions in the saturation/Color Glass Condensate framework. This is the first-ever two-gluon production calculation including saturation effects to all orders in one of the nuclei (heavy ion) along with a single saturation correction in the projectile (light ion). The calculation of the correlation function predicted (qualitatively) two identical ridge-like correlations, near- and away-side. This prediction was later supported by experiment findings. Concentrating on the energy and geometry dependence of the correlation functions we find that the correlation function is nearly center-of-mass energy independent. The geometry dependence of the correlation function leads to an enhancement of near- and away-side correlations for the tip-on-tip U+U collisions when compared with side-on-side U+U collisions, an exactly opposite behavior from the correlations generated by the elliptic flow of the quark-gluon plasma.

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