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**Dynamic Jet Charge**<sup>1</sup> TYLER WILSON, SONNY MANTRY, MARK SPRAKER, University of North Georgia, ZHONGBO KANG, University of California, Los Angeles, XIAOHUI LIU, Beijing Normal University — The "Jet Charge" is a potentially useful tool for identifying the hard-process partons that initiate jets produced in high energy collisions. The standard jet charge definition corresponds to a momentum-weighted sum of electric charges of the particles clustered within a jet. In this work, we explore modifications of the standard Jet Charge definition with the aim of improving the discrimination between quark- and gluon-initiated jets. Such modifications could be particularly useful in heavy ion collisions, where the noisy environment reduces the effectiveness of standard techniques of quark and gluon jet discrimination. Preliminary results on the effectiveness of the modified jet charge definitions in discriminating between quark and gluon jets, based on Monte Carlo simulations, will be presented.

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