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## An Automated QUAD Scan Based Emittance Measurement Software

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Beam emittance plays the crucial role in a beam transportation system. At the NASA Space Radiation Laboratory (NSRL), beam emittance is determined through measuring the beam width via a segmented wire ion chamber (SWIC) and varying quadrupole strength. In this paper, we briefly describe the quadrupole scan technique to calculate the beam emittance and describe an automated system developed to carry out this measurement expeditiously. A dedicated manager has been developed to set up measurements, acquire data, paired with a python-based software package to perform analysis to calculate the emittance along the beam line.

### Footnotes

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