**Design and Measurement of IOTA non-linear insert magnets**

**Abstract:**

Radiabeam is designing and prototyping the non-linear inserts required for the proof-of-concept experiment of non-linear integrable optics at FermiLab. We present results from the measurement of the 4 section prototype and design plans for the full two meter sections that will be installed at the IOTA component of ASTA.

**Summary:**

Fermilab's Integrable Optics Test Accelerator (IOTA) is an electron storage ring designed for testing advanced accelerator physics concepts, including implementation of non-linear integrable beam optics and experiments on optical stochastic cooling. We present here a description of the contribution of RadiaBeam Technologies to the IOTA project which includes non-linear magnet engineering, prototype fabrication and measurement. At this time, the initial four section prototype is being measured with a specially designed measurement system and the full two meter section that will be installed at the IOTA ring is under design and engineering.