C38 A review of methods for experimentally determining linear optics in storage rings

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In order to maximize the brightness and provide sufficient dynamic aperture in synchrotron radiation storage rings, one must understand and control the linear optics. Control of the horizontal beta function and dispersion is important for minimizing the horizontal beam size. Control of the skew gradient distribution is important for minimizing the vertical size. In this paper, various methods for experimentally determining the optics in a storage ring will be reviewed. Recent work at the National Synchrotron Light Source X-Ray Ring will be presented as well as work done at laboratories worldwide.