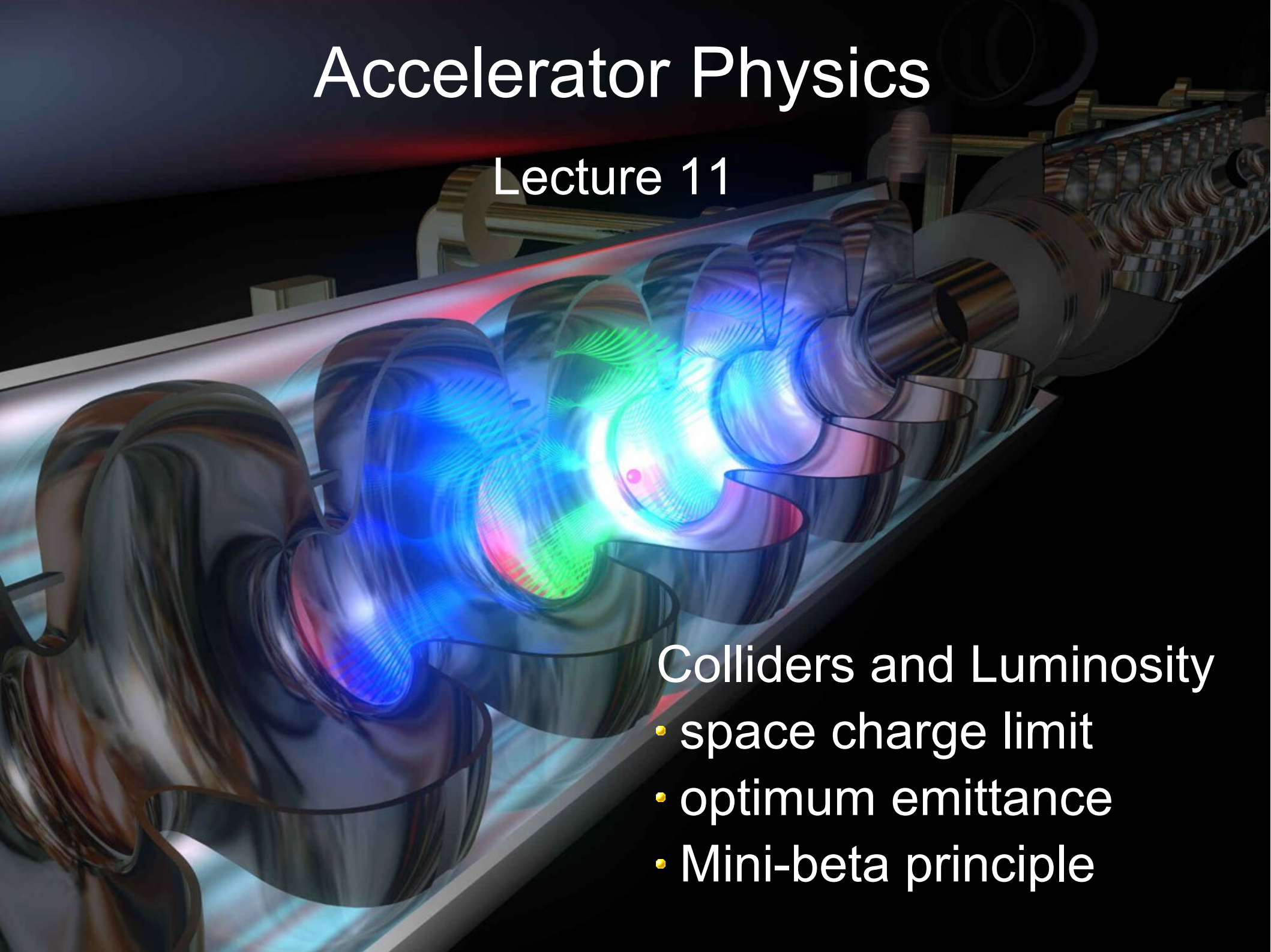


Accelerator Physics

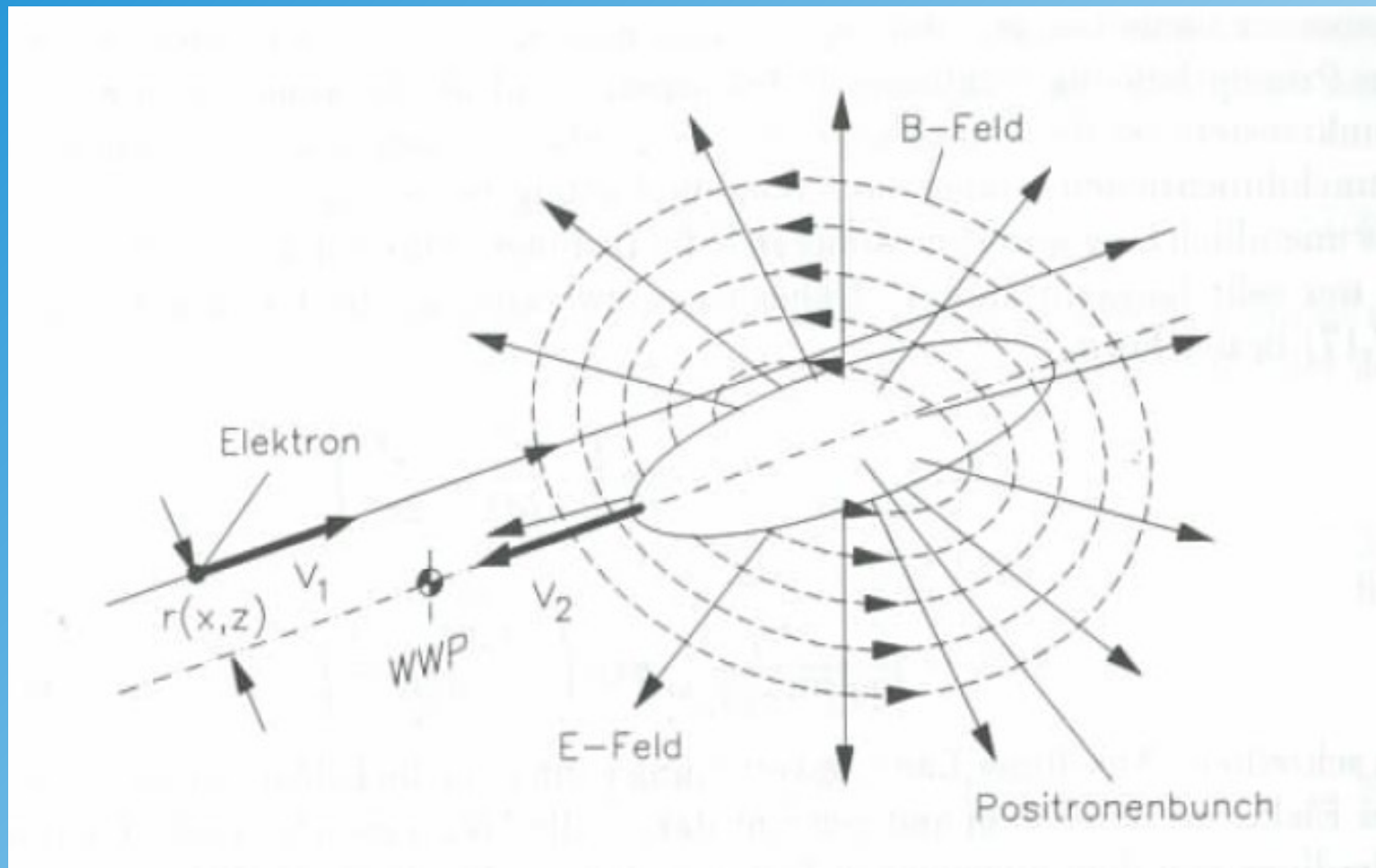
Lecture 11



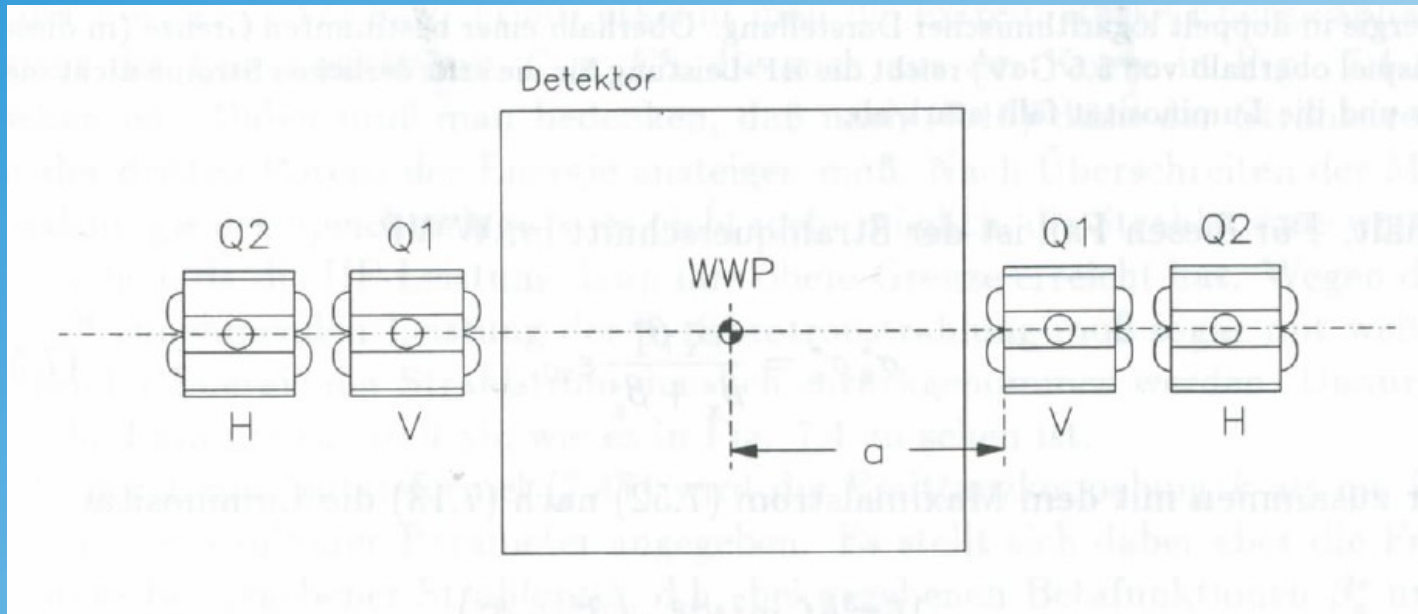
Colliders and Luminosity

- space charge limit
- optimum emittance
- Mini-beta principle

Beam-Beam Interactions



Final Focus



Chromaticity from Quads

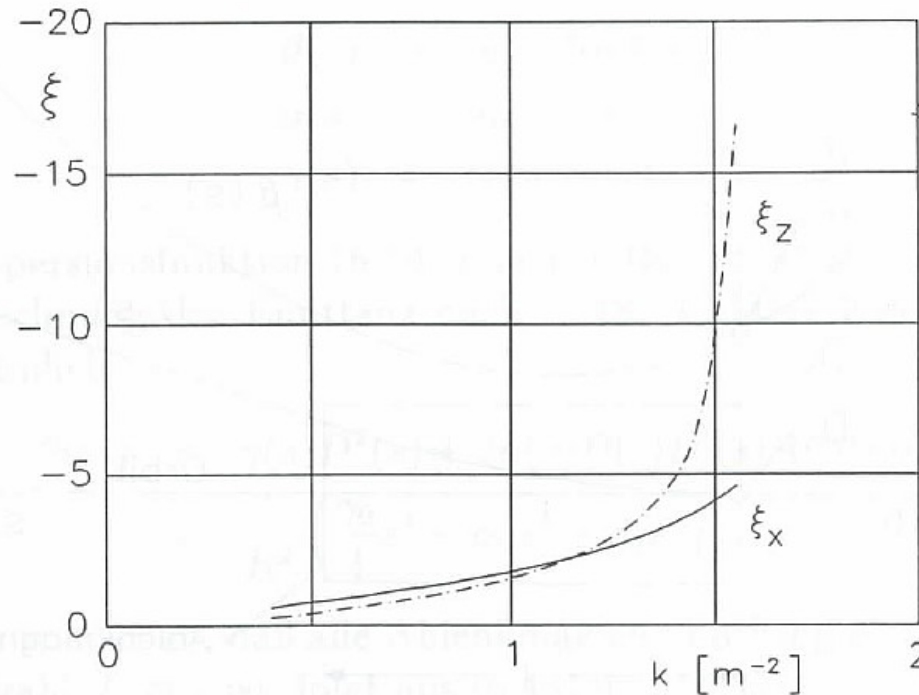
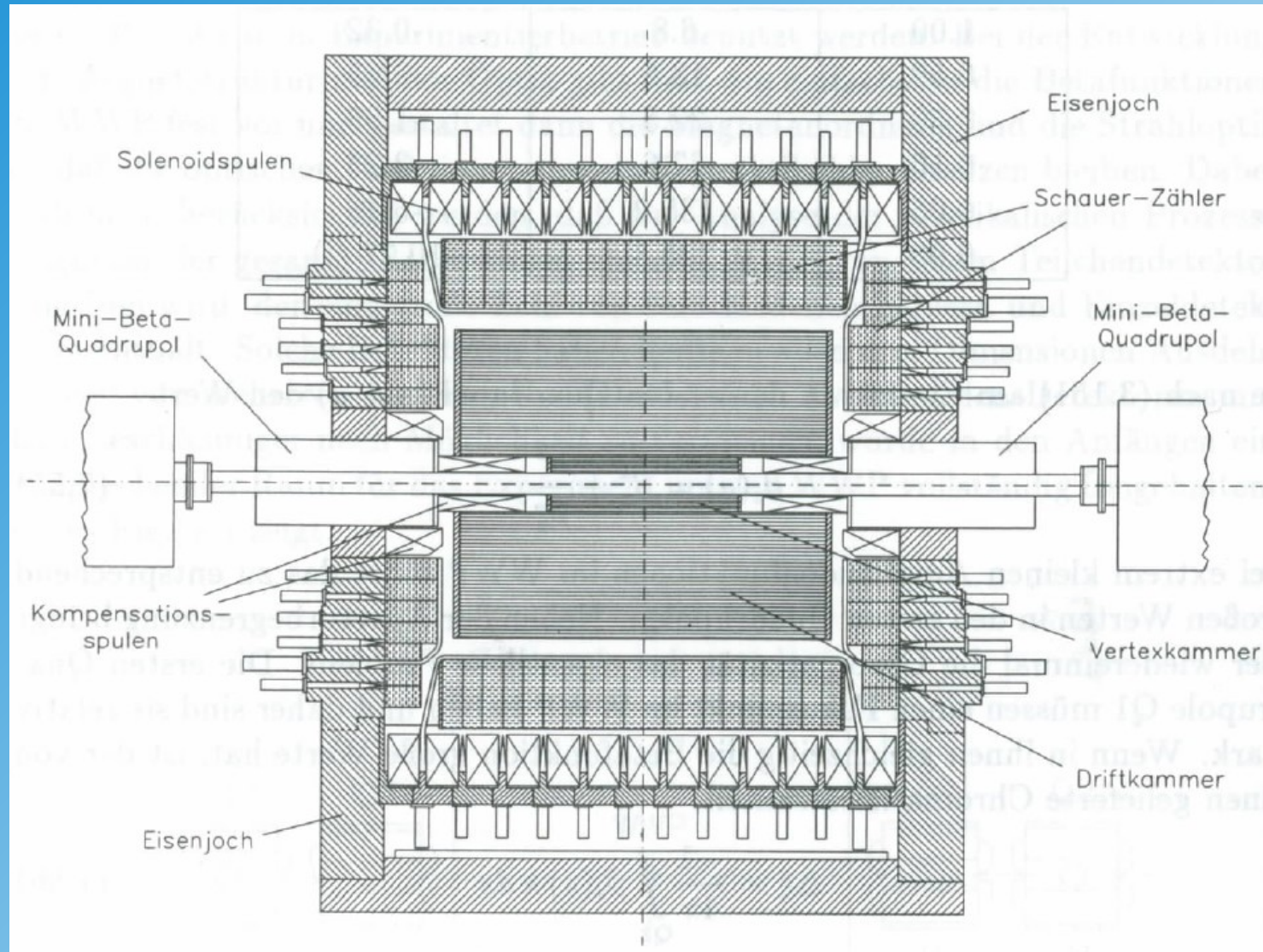
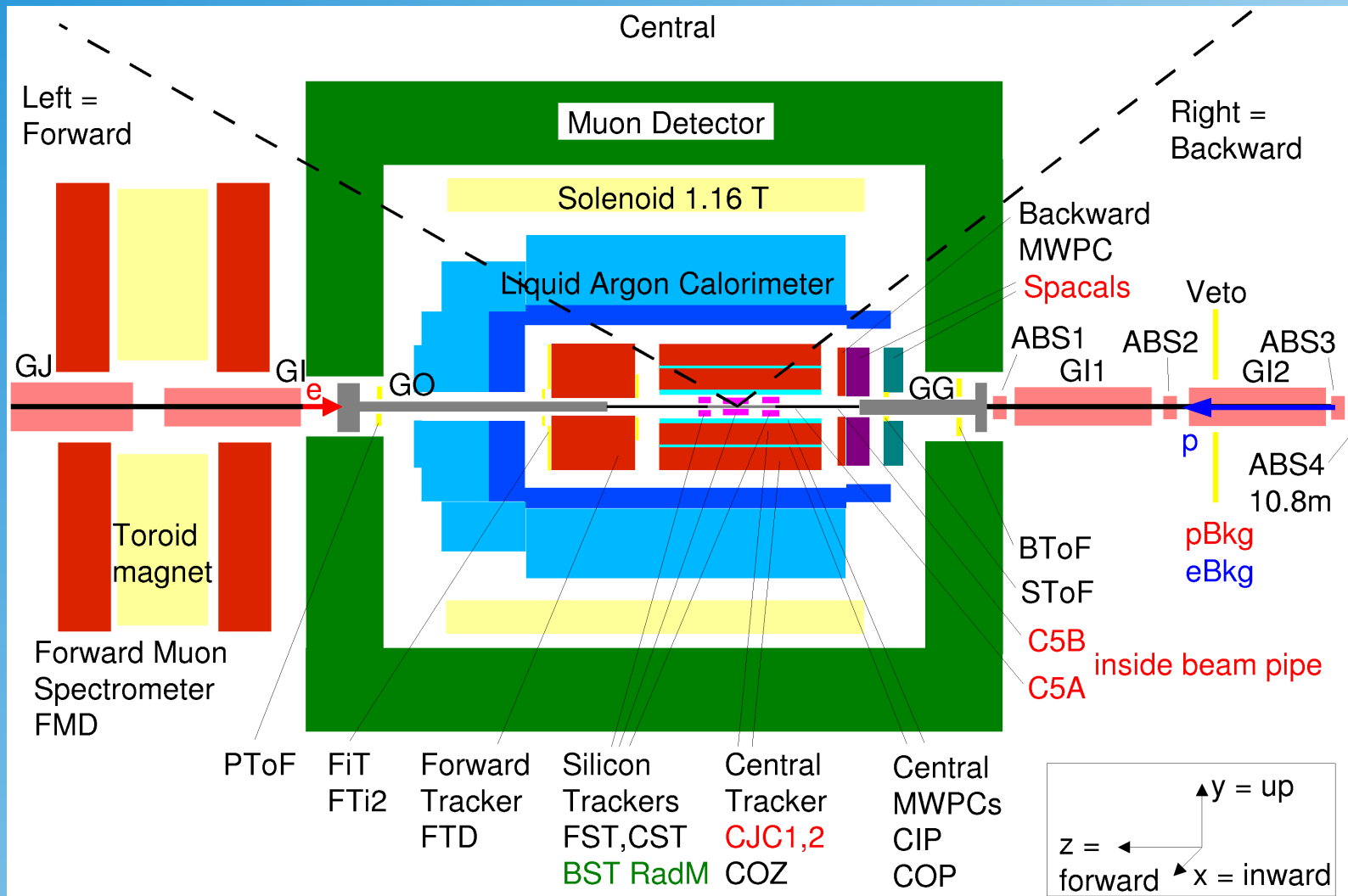


Fig. 6.6 Verlauf der horizontalen Chromatizitäten $\xi_{x,z}$ des FODO-Modellrings als Funktion der Quadrupolstärke k .

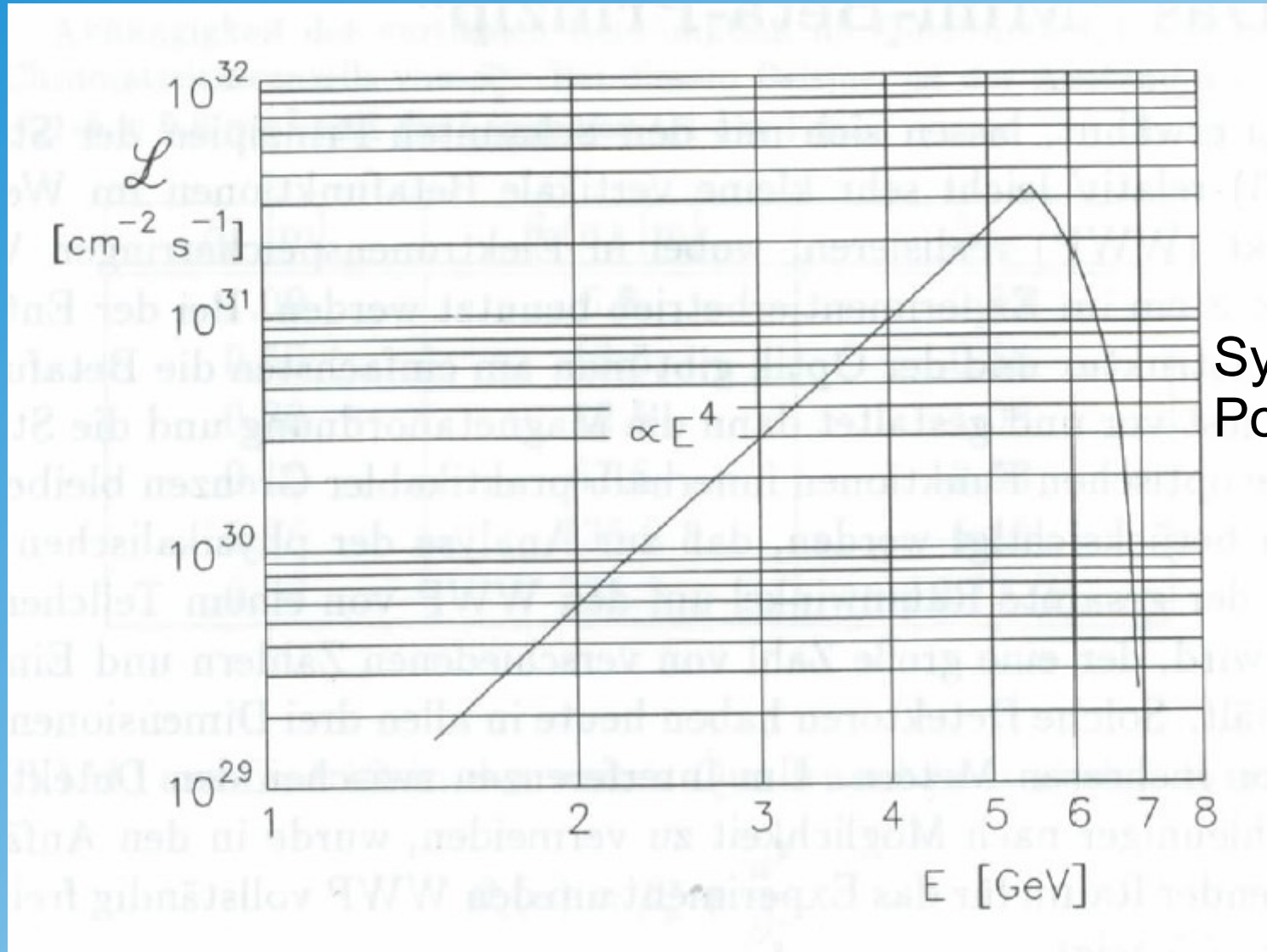
ARGUS Detector (DORIS, DESY)



GO/GG Magnet at HERA (H1)

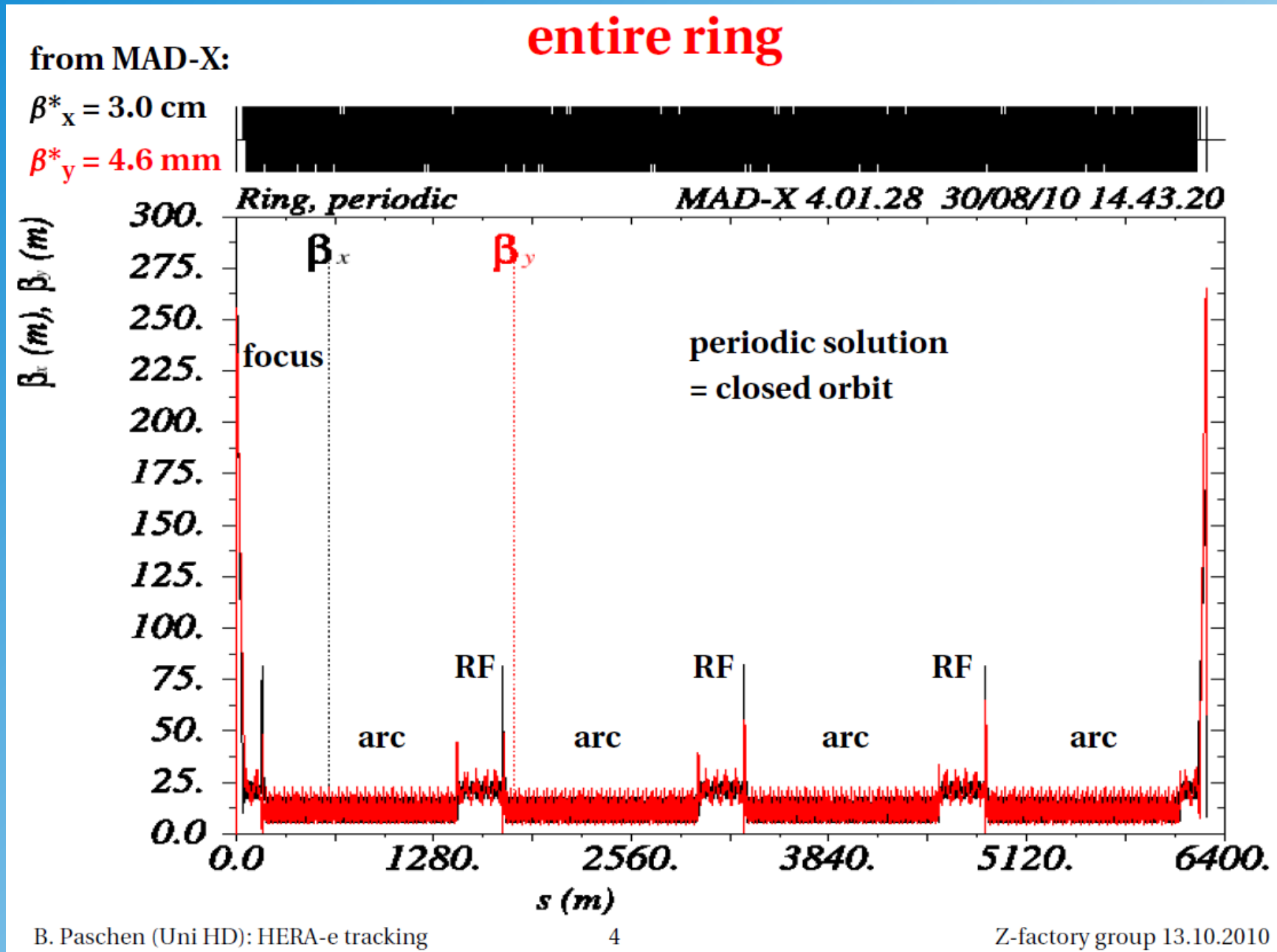


Luminosity for Space Charge Limit

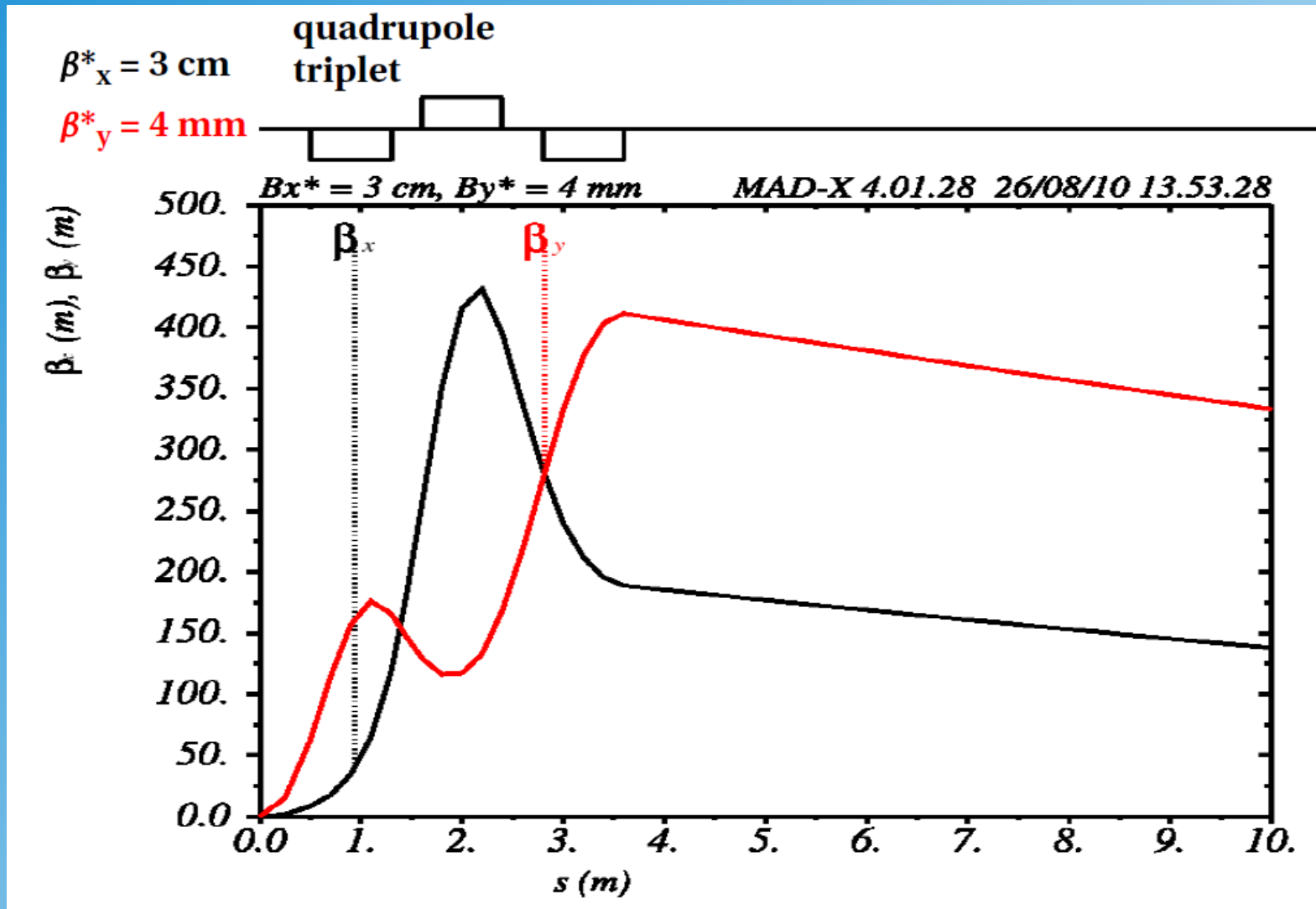


Synchr.
Power Limit

Positron Ring in HERA



Final Focus Matching



Emittance in FODO Ring

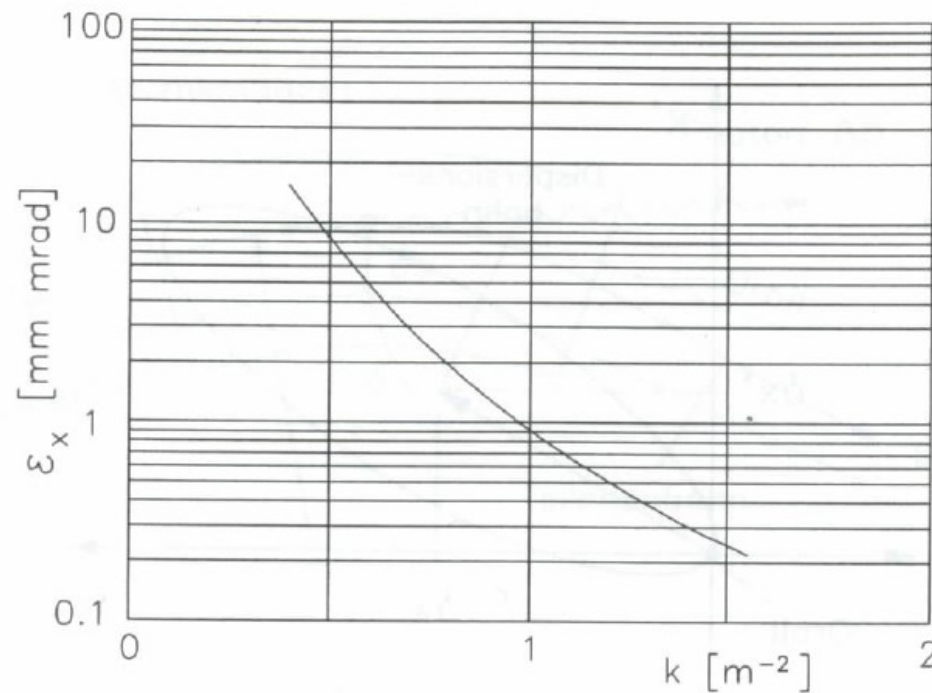


Fig. 6.5 Verlauf der horizontalen Emittanz des FODO-Modellrings als Funktion der Quadrupolstärke k .

Optimum Beta Function in Dipole

