

PHY5846C: INTRODUCTION TO EXPERIMENTAL TECHNIQUES

BIBLIOGRAPHY FOR ACCELERATORS

1. Low energy charged particle optics:

- Miklos Szilagyi: *Electron and Ion Optics* (New York, Plenum 1988, ISBN 0-306-42717-6)
- D.W.O. Heddle: *Electrostatic Lens Systems* (Bristol, Adam Hilger, 1991, ISBN 0-7503-0119-8)

2. Energy analyzers:

Kenneth D. Sevier: *Low Energy Electron Spectrometry* (New York, Wiley - Interscience, 1972, ISBN 0-471-77850-8)

3. Charged particle optics:

- David C. Carey: *The Optics of Charged Particle Beams* (Chur, New York : Harwood Academic Publishers, 1987, ISBN 3-7186-0350-0)
- Herman Wollnik: *Optics of Charged Particles* (Orlando, Academic Press 1987, ISBN 0-12-762130-X)

4. Accelerators:

- Waldemar Scharf: *Particle Accelerators and their Uses* (Chur, New York, Harwood Academic Publishers, 1986, ISBN 3-7186-0034-X (vol.1), 3-7186-0317-9 (vol.2))
- Helmut Wiedemann: *Particle Accelerator Physics* (Berlin, New York, Springer 1993, ISBN 0-387-56550-7)
- Philip J. Bryant and Kjell Johnsen: *The Principles of Circular Accelerators and Storage Rings* (Cambridge, Cambridge University Press, 1993, ISBN 0-521-35578-8)
- Herwig Schopper (editor): *Advances of Accelerator Physics and Techniques and Technologies* (Singapore, World Scientific Publ. Co. 1993, ISBN 981-02-0958-4) (contains also chapters on synchrotron radiation sources and use of accelerators in medicine and industrial applications)

5. Synchrotron Radiation

- Herman Winick and S. Doniach (editors): *Synchrotron Radiation Research* (New York, Plenum Press 1980)
- Christof Kunz (editor): *Synchrotron Radiation: Techniques and Applications* (Berlin, Springer, 1979, ISBN 3-540-09149-1)
- J.D. Jackson: *Classical Electrodynamics* (sect. 14.2 for synchrotron radiation).

6. Odds and ends:

Particle Data Group: Review of particle properties, *European Physical Journal C* **3** (1998) 1 - 794.

- (a) p. 69 for physical constants,
- (b) p. 76 for properties of materials used in detectors,
- (c) p. 138 for physics of colliders
- (d) p. 141 for properties of colliders,
- (e) p. 78 for useful electromagnetic relations,
- (f) p. 186 for useful formulae of relativistic kinematics.