

Physics 7

Experimental Physics Laboratory



Important Info:

[Radiation Safety](#)

[Useful Constants](#)

[Mathematica Notebooks](#)

[CurveFit download](#)

Experiment Notes (each requires one lab session <week>):

([Link to a file with short descriptions of the experiments](#))

- 12* [Electron Diffraction](#)
- 13* [The Solid State Diode](#)
- 20 [The Geiger-Müller Detector and Ion Mobility](#)
- 21 [Beta Spectrometer and Relativity](#)
- 24* [The Temperature Dependence of Resistance](#)
- 25 [The Balmer Lines of Hydrogen and Deuterium](#)
- 27* [The Classical \(Normal\) Zeeman Effect](#)
- 28* [The Mössbauer Effect](#)
- 29† [The Mössbauer Effect – hyperfine splitting](#)
- 30a [Gamma Ray Interactions](#) **REQUIRED TO BE DONE DURING WEEK 1**
- 30b [More Gamma Ray Interactions](#)
- 32a [Compton Scattering – kinematics](#)
- 32b‡ [Compton Scattering – dynamics](#)
- 33 [The Stern-Gerlach Experiment](#)
- 34 [Lifetime of a Nuclear Excited State](#)

* You cannot do this experiment again if you did it in Physics 6.

† Experiment 28 is a prerequisite for experiment 29.

‡ Experiment 32a is a prerequisite for experiment 32b.

General Appendices to the Lab Notes:

A [Relativistic Kinematics](#)

C [Solid Angle](#)

B [Cross Sections](#)

D [Calculating Scintillator Compton Spectra](#)