

We will be 'using' High Energy Astrophysics' by M. Longair 3rd edition.

- Introductory Lecture 1
- Introductory Lecture 2
- Radiation Process Lecture 3-4 Parts of Part II
- X-ray Detectors Lecture 5
- Gamma-ray Detectors and X-ray Telescopes Lecture 6
- Clusters of Galaxies 1 Lectures 7-9 Ch 4
- Supernova and Supernova Remnants 10-13
- Neutron Stars Lecture 14-16 Ch 13/14
- Stellar Mass Black Holes Lecture 17-20 Ch 13/14
- Gamma-ray bursts 21
- AGN 22-26 Ch 18/19/20

We will cover several chapters in the book, but not in the order in which they appear (chapter numbers in Longair)

- 1 High energy astrophysics – an introduction
- 4 Clusters of galaxies
- 6 Radiation of accelerated charged particles and bremsstrahlung of electrons
- 8 Synchrotron radiation
- 9 Interactions of high energy photons
- 13 Dead stars- including Neutron stars, white dwarfs, supernova
- 14 Accretion power in astrophysics
- 18 Active galaxies
- 19 Black holes in the nuclei of galaxies
- 20 The vicinity of the black hole
- 22.7 γ -ray bursts
- 23 Cosmological aspects of high energy astrophysics