

Chapter 2 - The Orbital Cycle

- common envelope evolution, leading to a compact binary [more in Chapter 4]
- relative size and brightness of the binary components
- reflection effect
- mass ratio
- Roche Lobe geometry [shape determined by 'q', scale determined by 'a']
- tidal locking
- ellipsoidal variations
- mass transfer
- sound speed
- circularisation radius [equating specific angular momentum at L1 and r_{circ} - Box 2.4]
- formation of accretion disc
- bright spot
- eclipse geometry [timing of eclipse of various components in a cataclysmic variable]
- understanding CV light curve in terms of its main components [disc, bright spot, secondary, etc.]
- Box 2.1 - 2.4 [follow the discussion and derivations in each of the boxes]

Chapter 3 - Spectral Characteristics

- Blackbody radiation
- Spectrum of a white dwarf
- Spectrum of a red dwarf
- Spectrum of an accretion disc
- Spectral lines, e.g. the origin of Balmer emission and absorption lines
- Understanding CV spectra in terms of their components
- Modelling of accretion disc temperatures [more in Chapter 5]
- Emission lines vs. absorption lines (physical conditions giving rise to one or the other)
- Doppler shifts
- S-waves [origin]
- Double-peaked lines from the accretion discs
- Doppler tomography [mapping features in velocity-space]
- Box 3.1 - 3.3 [follow the discussion and derivations in each of the boxes]
- Appendix A: Deriving stellar masses [dynamics, spectrum]

Chapter 4 - The Evolution of Cataclysmic Variables

- Common envelope phase
- Angular momentum loss mechanisms
- Gravitational radiation
- Magnetic braking
- The binary's response to mass transfer (box 4.1)
- The binary's response to angular momentum loss
- The secondary's response to mass loss
- Estimating distances and mass-transfer rates (box 4.2)
- Orbital period distribution
- Interpretation of Figure 4.1
- The period gap
- The period minimum
- The interpretation of Figure 4.2
- AM CVn stars
- Box 4.1 - 4.2 [follow the discussion and derivations in each of the boxes]
- Appendix A: Estimating M_2 from P_{orb} [Section A.5]

Chapter 5 - Discs and outbursts

- dwarf nova outburst
- Viscosity
- disc instability model
- alpha disc model
- turbulence driven by magnetic instabilities
- thermal-viscous instability
- opacity (sources of)
- surface density
- heating wave: outside-in or inside-out outburst
- cooling wave
- S curve
- Novalikes
- Standstills
- Box 5.1 - 5.3