

Astronomy 101 Section 1
Unit V Lecture Outline

7 December, 2016

Lecture	Date	Topic	Material (see outline below)
37	21 Nov	Introduction to Exobiology	5.1.1. - 5.1.2.
38	28 Nov	Detecting Exoplanets	5.1.3. - 5.1.4., 5.2.1. - 5.2.2.
39	30 Nov	Observations of Exoplanets	5.2.3. - 5.2.6., 5.3.1.
40	2 Dec	The Kepler Revolution	5.3.2. - 5.3.4., 5.4.1. - 5.4.2.
41	5 Dec	Life out There	5.4.2. - 5.4.4., 5.5.1. - 5.5.2.
42	7 Dec	Conclusion and Review	5.5.2. - 5.5.5., 5.6.
43	16 Dec	Final	Units I-V

Outline for Unit V. Exobiology

- 5.1. Introduction to Exobiology
 - 1. The making of life
 - 2. Stellar astronomy in a nutshell
 - 3. Some definitions
 - 4. Habitable zones
- 5.2. Detecting Exoplanets
 - 1. Methods
 - 2. Wobble I - astrometry
 - 3. Wobble II - radial velocity
 - 4. Transits
 - 5. Direct imaging
 - 6. Other methods
- 5.3. Observations of Exoplanets
 - 1. False alarms
 - 2. Brown dwarfs
 - 3. Radial velocity discoveries
 - 4. Direct imaging discoveries
 - 5. Transits from the ground
- 5.4. The Kepler Revolution
 - 1. The Kepler mission
 - 2. Discoveries
 - 3. New Earths
 - 4. Future missions
- 5.5. Life out There
 - 1. The Drake Equation
 - 2. Fermi's Paradox
 - 3. SETI
 - 4. UFOs
 - 5. The moral of the story
- 5.6. Conclusion and Review
 - 1. A perspective
 - 2. This thing called science
 - 3. Revolutions