



BALLARAT MUNICIPAL OBSERVATORY & MUSEUM

Introduction to Astronomy - November 2017 (Ballarat Observatory)

Date	Session 1 Topics 7:00 - 7:45 pm	Break 15mins	Session 2 Topics 8:00 - 8:45pm
Day 1 Saturday 4th November 2017	Basics 1: <ul style="list-style-type: none"> • History of Astronomy • Constellations <i>(dividing the night sky)</i> • Ancient Models • The Scientific Method • Kepler & his laws • Newton & Gravity 		Basics 2: <ul style="list-style-type: none"> • Astronomical Distances • Nature of Light • Doppler Effect • Magnitude scale • Naming of stars
Day 2 Saturday 11th November 2017	Celestial Mechanics <ul style="list-style-type: none"> • Celestial Sphere • Celestial Coordinates • Time, Seasons • Phases of the Moons • Tides • Transits & Eclipses 		Tools of Astronomy <ul style="list-style-type: none"> • Types of Telescopes • How Telescopes work • Resolution & Magnification • Instrumentation
			Practical session (weather permitting/after 8:45pm) Naked eye observing Guide to buying telescopes
Day 3 Saturday 18th November 2017	Stellar Astronomy/ Astrophysics <ul style="list-style-type: none"> • Our Sun • Life cycle of Stars • Star Clusters • Classification of Stars 		Our Solar System and other Star Systems <ul style="list-style-type: none"> • Planets and Moons • The bit and pieces • The outer reaches of the Solar System • Origins of the Solar System • Other star systems
Day 4 Saturday 25th November 2017	“Seeing the Unseen Universe” <ul style="list-style-type: none"> • The Universe beyond the visible • What are we made of? A journey into the realm of particle physics 		Galactic, Extra Galactic Astronomy & Cosmology <ul style="list-style-type: none"> • The Milky Way & other Galaxies • Black Holes & The Exotic Realm • Hubble’s Law & The Expanding Universe • The Standard Theory of Cosmology • The Dark Universe