

**Berwick-upon-Tweed Educational Association**  
**Introduction to Astronomy**  
**A series of five lectures by Dr Adrian Jannetta CMath FRAS**

**Saturdays 28<sup>th</sup> October to 25<sup>th</sup> November 2017 from 10-12noon**

Course content

The following sessions will give a broad introduction to aspects of modern astronomy and practical astronomy. In addition to the topics listed for each week advice will be given about how to find seasonal stars and constellations in the night sky and fair warning about events such as planetary alignments and meteor showers. **The sessions are designed to be interactive. Although not essential, you might like to bring your smart phone or tablet to these sessions!**

**SATURDAY 28<sup>TH</sup> OCTOBER - PART 1 --- THE SOLAR SYSTEM**

In this session we'll look the Sun, moon and planets. We'll cover the following points:

- Different types of planet.
- The asteroid belt. Pluto and the outer solar system.
- Comets and meteors
- Extrasolar planets.
- How the solar system formed.

**SATURDAY 4<sup>TH</sup> NOVEMBER - PART 2 --- THE SUN, EARTH AND MOON**

In this session we'll look at how the Sun and moon influence our view of the sky. We'll cover these topics:

- Gravity and tides; why do the seas rise and fall?
- Seasons: why we get summer and winter.
- The Sun and the solar cycle.
- Aurora: what causes the northern lights?
- The Moon: the phases of the moon. Solar and lunar eclipses.

**SATURDAY 11<sup>TH</sup> NOVEMBER - PART 3 --- CHOOSING AND USING BINOCULARS AND TELESCOPES**

This session will include an introduction to different types of telescope.

- Refractors, reflectors and catadioptrics.
- Eyepieces and accessories
- Magnification, light gathering and resolution.
- Different types of telescope mount.

## SATURDAY 18<sup>TH</sup> NOVEMBER - PART 4 --- THE STARS

This will be a session aimed at strategies for navigating the night sky.

- Why do stars shine?
- Stellar classifications.
- Lives and deaths of stars.
- Our local island of stars; the Milky Way.

## SATURDAY 25<sup>TH</sup> NOVEMBER - PART 5 --- INTRODUCTION TO COSMOLOGY

This final topic will explore the universe at large and introduce

- Large scale structure of the universe.
- Speed of light and looking back in time.
- The expanding universe (Big Bang theory)
- Dark matter and dark energy

The lectures will be held at the Berwick Voluntary Centre on Tweed Street, Berwick, on Saturday mornings between 10 and 12 noon. The cost of the course is £30.00, including refreshments. Individual sessions can be booked at a cost of £6.00 each.

Details of this and our other courses can be found on our website at [www.berwickea.co.uk](http://www.berwickea.co.uk)

**Julie Gibbs is handling the booking for this course. Her details are below.**

TO BOOK, please complete the attached slip and post to Julie Gibbs at West View, Bowsden, Berwick, TD15 2TW (juliegibbs1@btinternet.com or 01289 388950) together with a cheque payable to 'Berwick-upon-Tweed Educational Association'. Your booking will be confirmed once your payment has been received

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Tel No: \_\_\_\_\_

email: \_\_\_\_\_

Cheque enclosed to the amount of £\_\_\_\_\_ (Astronomy Oct 2017)