

Armchair Astronomy No.1 - Introduction

Heavens Above! Astronomy from your Armchair. (© R Bee 2007)

Introduction to Astronomy

Let's be clear about this from the start. This set of articles is about ASTRONOMY. So if you want to know if your partner is compatible with you, if you should pop the question, if you are about to take a trip over water or if you'll win the lottery this week, you'll be disappointed. Try the Astrology columns, and good luck.

No, this and the following articles will explore the wonders of space as seen from the armchair or backyards by ordinary people like you and me. No science degree needed, just common sense and a willingness to be awed.

I'm a founding member of the Macarthur Astronomical Society and have been studying and observing astronomy as an amateur for over forty years. Though I now own two largish telescopes, I also have been blessed with a beautiful pair of 12x50mm binoculars which have provided me with countless nights of awestruck stargazing. Your binoculars can do the same for you.

I have read shelves of astronomy books, feeding my passion to understand the origin of the Universe, galaxies, stars, planets etc. Still, every week-end when I escape from the suburban lights, I am struck dumb by the simple beauty of the starry sky; a sense of awe best expressed in this anonymous poem in the introduction of Burnham's Celestial Handbook:

*"Look skyward now... and see above... INFINITY
Vast and dark and deep... and endless... your heritage.
Silent clouds of stars, other worlds uncountable
And other suns beyond numbering
And realms of fire-mist and star-cities as grains of sand...
Drifting... across the void... across the gulf of night...
Across the endless rain of years... across the ages..."*

We are living in exciting times for astronomy. Who hasn't been fascinated by the pictures from Mars showing the rovers Spirit and Opportunity crawling over the dry red dust, moving from crater to crater, revelation to revelation? As I write this, an announcement was made of the discovery of liquid water on Mars... amazing! There was all the drama about the collision of the Deep Impact probe with the comet Tempel 1 in 2005. And who hasn't marvelled at the fantastic photographs from the Hubble Space Telescope revealing details of nebulae and galaxies that astronomers could only dream about fifteen years ago?

Every other day some new fantastic astronomical discovery is announced, overturning existing theories, setting the astronomers and cosmologists to scratching their heads and going back to their computers to derive new theories. It helps keep them humble, recognising they don't know everything after all. It is captured in a famous Shakespearean paraphrase (from Julius Caesar) about 19th century astronomers who doubted their observations of the newly discovered and unbelievable white-dwarf stars: "The fault is not in the stars but in their theories."

But for us, we can still marvel at the ordinary sky overhead, undisturbed by these exotic discoveries. I hope to be able to show you some of the exciting things to be seen 'up there' with the naked eye and binoculars. As Hamlet said to Horatio: "There are more things in heaven and earth, than are dreamt of in your philosophy."

Yes, the Universe is a big place, and the topic of astronomy is as large as its subject. There are the stars and constellations, planets, comets, star clusters of all shapes and sizes, nebulae, galaxies. Then there's the weird stuff – white dwarfs, neutron stars and pulsars, black holes, dark matter, dark energy... ENOUGH!

I've only these few articles to fill, not an encyclopaedia.

Not only is the Universe big, it's AWESOME... as in 'inspires awe'. And with awe comes poetry. Many a poet has waxed eloquent about the stars and the night sky, starting with 'Twinkle twinkle little star', then Milton, Dante, Longfellow and Tennyson et al. All had stars in their stanzas.

So be prepared for anything.

Clear skies!