

From the Kitchen

6 June 2012



The interplanetary transit authority is lazy. For instance, it organises only two Venustian transits every 100 years or so. If you miss both, that's it for the duration of the rest of your expected earthly existence this time around.

I watched the transit of Venus across the sun today, streamed over the internet from Alice Springs by NASA. More than 220 years ago, James Cook had to sail halfway around this planet (twice) to witness and measure the two transits of *his* lifetime. We may not have been watching through the NASA telescopes in Alice Springs if Cook had not sailed further west to the east coast of what was then a more or less unknown body of land. Or I may have been watching it today with French commentary.

One thing about watching a planet the size of Earth passing between us and the sun, is that it makes it easier to visualise the 3-dimensional arrangement of the objects in the solar system.

There are other periodic cosmic events that people may only see once in a lifetime, such as the 76-yearly visit to the inner solar system by Halley's Comet. And, if, from past visitations, we expected a spectacle in 1986 and were anticipating something awe-inspiring, we would have been very disappointed, knowing that there will not be a 'next time' for most of us. There are drawings of earlier appearances of Halley's Comet, showing a tale visible during the day and stretching over one quarter of the sky.

There are, of course, more frequent cosmic spectacles, such as eclipses of the sun and moon and occasional conjunctions of the moon with one or more planets. One such created a 'happy face' when Venus and Jupiter were visually close to the crescent moon on 1st December 2008.¹

I watched the first artificial satellite (Sputnik) track overhead in October 1957 from where we lived in rural NSW. There are now thousands of satellites orbiting the earth and their reflected light can be seen for several hours after sunset or before sunrise as they track across the sky. However, the light pollution in most cities and towns makes it unlikely that many people would notice, or even be aware it was happening.

As a teenager, living in suburban Armadale (a Melbourne suburb about seven kilometres from the city centre) in the 1960s, I was able to observe the heavens with the naked eye from my upstairs bedroom window, down to stars of the fifth magnitude. Well, not quite the naked eye, as I wore spectacles. Now, in Mount Eliza, 50 Km south of the city centre, I am lucky to see anything fainter than the 3rd or 4th magnitude. When I lived in the Dandenong Ranges in the 1980s, I could almost read by the light from the stars on a clear night.

Some celestial apparitions are unpredictable and, therefore, perhaps more breathtaking – for instance meteors fleetingly leaving their thin trails in the sky. In the country, I would see these every night if I was out for more than twenty minutes. Of course one needs to be facing the right direction. In 1995 I was fortunate to be sitting outside in northern NSW facing

south-west, when I witnessed the bright, multi-coloured trail and explosion of a meteor which, I later found out, disintegrated in spectacular fashion over Broken Hill.

We can also stop and stare in wonder at a full, double (or even rarer triple) rainbow. I once saw what I at first thought was an optical illusion: a complete double rainbow with a third rainbow crossing one end of it. I was driving along a freeway at the time, on my way to catch a plane and running late. I did not stop to admire the spectacle or take any photos. The scheduled event got in the way of the unscheduled – at least I allowed it to. I later found a few references to this rare phenomenon: two rain showers at different distances from the observer and therefore presenting to the observer slightly different angles with the sun.

I could have travelled, as Cook did, to observe the transit of Venus – perhaps 50 Km to an observatory instead of almost 20,000 Km. Instead, I watched it from the comfort of my desk (in the morning) and then the end of it from where I now sit in the café, writing this. All of it with the aid of modern technology.

I have to remind myself that the light from the sun against which the sphere of Venus is silhouetted took eight minutes to reach Alice Springs, while the image from the telescope-mounted camera at Alice Springs, via optical cable, satellites, relay stations, computer servers and microwave mobile telephone transmitters to my computer took no more than a second or so.

And then I contemplate that one second, eight minutes and 105 years are all measured against the 13+ billion years of what we believe to be the age of everything.

1. See the photo above [From the Kitchen #154](#)