

Astronomy Talk 14th February 2023

Venus – Earth's Evil Twin

Venus was chosen as a relevant subject for Valentine's Day. Roy Gunson from Mexborough gave this as a Zoom only talk. 67 attended. Roy started with the classical stories of Venus (Roman) and Aphrodite (Greek). With its blanketing clouds it's been a planet of mystery. Hence the popular press supposing life, e.g., the Treens and the Mekon.

Roy went back to records from Babylon and onwards, but only recently has it been established that its surface temperature is around 456° C. The rotation is retrograde 242 Earth days, and its year is in a 13:8 resonance with Earth's. It was used in the 1700's transits to measure the scale of the solar system, which was difficult to do exactly as the atmosphere blurs the contact moments. There have been several probes landing and fly-bys, mostly Russian, and many more are planned.

We then looked at the planet itself, including absence of tectonic plates and resurfacing around 500 million years ago. We looked at many craters, volcanoes, pancake domes and sand dunes. Maxwell Montes is the highest mountain and is not volcanic: possibly a remnant of earlier plate tectonics. Most of the topography has been done by using radar mapping from Earth.

The atmospheric pressure is 90 times the Earth's but at an altitude of 50 km it's nearer Earth's and much cooler, and that is thought to be where the suggested potential life indicating phosphine was detected. However, the clouds are full of sulphuric acid. At the surface wind speeds are typically 200 km/h, and at the poles there are huge vortices.

The talk was followed by Bob Mizon giving a "what's on" short talk, and Kate Earl gave us a special short talk referring to all sorts of different astronomical things that one might associate with Valentine's day.