

An 'Astronomical' Engineer



by Ir. Ooi Kao Yang

MY mother told me stories about the sky when I was young. She used to point towards the three evenly spaced stars in the sky and told me about 'the three sisters'. And being a mother, she warned me against pointing my finger at the moon, or else my ears will get cut the next morning. Although all these stories were fascinating, nobody could explain what the little points of light mean in the bigger scheme of things.

The breakthrough came about one night 15 years ago while on the way to a floating restaurant in the sea off Bintan Island, Indonesia. The engine misfired and failed, and the boat drifted. To save on diesel, the boatman switched off all the lights in his desperate attempt to restart the engine.

It was then that I saw the night sky in its full glory, with the arms of the Milky Way spanning the full width of the sky from one end of the horizon to the other. I immediately made plans to learn more about astronomy.

In 2000, I registered with the Swinburne University of Technology, Melbourne, for an online Masters course. The 12 units accredited Masters course took me five years to complete and, in October 2004, I graduated with a M.Sc. (Astronomy) from the Swinburne University of Technology, Melbourne. Since then, I have been giving talks on astronomy as well as organising observation sessions for students in Kulai, Senai and Johor Bahru free-of-charge.

I am currently in charge of the Rotary Observatory in Senai which houses a 12" computerised reflector, the largest telescope in the state of Johor. Group observations are by appointment only. I have also brought the telescope to those who may not be able to go to the observatory. Such groups include handicapped children and old folks in various nursing homes. All observations and talks are free.

Under the Rotary Club of Johor Bahru, three astronomy camps have been carried out since 1998. These 3D/2N camps include

astronomy lectures, observations as well as hands-on projects. The lecturers were from Universiti Sains Malaysia, Penang, and Nanyang Technological University, Singapore.

Here are some tips for those who are interested to know more about astronomy:

- If you are interested in astronomy, start reading any book that explains the basics such as what are constellations and how to identify them; the various planets in our solar system.
- Avoid the temptation of jumping into the theories of black holes and Albert Einstein.
- Learn the sky like the back of your hands first.
- All of us have the most important basic tool; our eyes.
- Constellation identification can only be done with your naked eyes.
- After you are familiar with the constellations, you might then want to invest in a pair of good binoculars; possibly nitrogen-filled.
- From then on, you should be able to see globular clusters, craters of the moon, and if the binoculars is fixed onto a tripod, you can even see Jupiter with its moons and Saturn with its ring.
- If you are still interested after the many nights of constellation identification, you may want to graduate to a small telescope.
- Do not be tempted into buying one from the hypermarket which boasts of very high magnification. What you need is good resolution, not magnification.
- High magnification on poor lenses gives you a big blob of light without details.

The cost of a telescope with good resolution is expensive, so be prepared to spend thousands of ringgit. However, if you are truly interested in astronomy, the money you spend on the telescope and the time you spend at night peering into the scope will be well worth all the effort, even with mosquitoes buzzing around you. ■

About the author:

Ir. Ooi Kao Yang graduated from the University of Singapore in 1975 in Civil Engineering. Having worked in various positions within the government departments (both in Singapore and Malaysia), as well as with a local contractor and an international consultant, he is currently operating an engineering consulting firm called Perunding OA which is based in Johor Bahru. He is an active IEM member in the southern region and had served as Branch Chairman for the 1987/1988 and 1988/1989 sessions.

