

Jade Rabbit

A few days ago a Chinese space agency probe landed on the moon. Attached to the space craft was a 140 kilogram vehicle, named Yutu or Jade Rabbit, after the pet rabbit of Chang'e, the goddess of the moon in Chinese mythology. The mission started on the 2 December with the blast-off in south western China of the Long March 3B space rocket and ended with the lunar landing in a region of the moon called the Sinus Iridum or Bay of Rainbows.

This was an outstanding achievement on the part of the Chinese space agency. Only the United States and Russia had landed vessels on the moon before the arrival of China. The history of lunar exploration began more than 50 years ago in 1959 with space craft launched by the former Soviet Union. Yet it would take another ten years before the United States succeeded with a soft landing on the moon. This was soon followed by the first man setting foot on the moon's surface. The Soviet Union's first soft landing came in 1976. There had not been another moon landing until this week; almost 40 years after mans' last visit. The moon might appear close to Earth compared to other bodies in the sky. However at a distance of 384,000 kilometres away from Earth the moon's relative proximity should not be underestimated. The distance is the equivalent to flying from Hong Kong to London and back more than twenty times.

What made the feat more impressive was that this was the Chinese space agency's first attempt to land a space craft on the moon's surface. The United States tried 5 times before perfecting the technique. The Soviet Union took 11 attempts. On each of those unsuccessful bids the space craft crashed into the surface, unable to reduce speed quickly enough in the gravity free atmosphere. Of course, computers, scanners and cameras have improved exponentially since the first craft were built in the 1960s. That said the skill required to place a craft on the moon's surface and then dispatch a space vehicle displayed a high level of expertise and sophisticated computer technology. Clearly, China had abundance in both.

The space vehicle, Jade Rabbit, will explore the lunar surface over the next three months. It is equipped with an impressive selection of computer and mechanical technology to collect as much data as possible. Focusing on an area extending 3 kilometres from the landing site, Jade Rabbit will use

ground-penetrating radar, capable of seeing up to 100 metres underground. This will allow scientists to understand the structure and composition of landscape and possible evidence that the moon once held water. The vehicle also has a spectrometer that can analyse the chemical composition of the rocks. Furthermore, it has an array of sophisticated cameras and telescopes that will provide images of Earth and bodies deep into space.

This was a truly remarkable achievement that presents a rare opportunity for the advancement of science and technology. It also brings to mind thoughts about the relationship between faith and science. One writer has said "you can't help but think of God and his awesome power. This is God, we're in God and this is God's body." What lies in the heavens is an open question and our understanding of space is constantly changing. A recent study of the universe by the US Academy of Sciences concluded that 1 in 5 suns have an earth-like planet orbiting it. This could mean that there are 40 billion planets in the universe that have the potential to support life. Also, researchers at Cornell University said recently that they had identified a seven-planet solar system in the depths of space.

Religious believers once felt threatened by the science that changed their understanding of the world around them. However, most believers today are becoming more comfortable with science, particularly as it relates to space exploration. In fact, the majority see the universe as an extension of God's work. It has been said that "the more things we discover, the more wonders of God there will be." In this advent week let us remember the wonders of creation and the place of God in our lives.

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