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Why doesn't the moon shave?

It waxes!

Written and designed by:

Emma Coker
9S



Questions:

(e-mail your answers to Mr.Downing, first correct entry will receive a prize)

All answers can be found in the text:

1: When does the second moon leave?

2: Is 2024 PT5 predicted to return and if so, when?

3: What is Mae Jemison's full name?

4: When did she die?

Scientists of the month: Collect your prize from Mr Downing

Year 7: Andrii Leonov

Year 8: Amiee Francis

Year 9: Lara Dorsett

Year 10: Dougie Livingstone

Year 11: Casey Corbett

Year 12: Oliver Cope

Year 13: Muhammed Bin Homer

Earth's temporary second moon!

A small asteroid is going to be captured by Earth's gravitational pull and temporarily become a mini-moon from September 29th to November 25th.

Unfortunately, the second moon is too small to be seen, unless you have a professional telescope (which I doubt you do). The asteroid was first spotted by NASA's Asteroid Terrestrial-Impact Last Alert System - ATLAS - (In short - Things crashing into Earth Tracker) on the 7th of August.

The asteroid (2024 PT5) is from the Arjuna asteroid belt, which contains rocks that follow an orbit that is similar to Earth's.

Occasionally, some of these asteroids get relatively close, getting as near as 2.8 million miles from our planet. Yep, really close. Not far at all. No, really, the sun is about 93 million miles away, so actually 2.8 million miles is fairly close, compared to the distance of the other planets.

According to the researchers involved in the study, if an asteroid like this is moving at a relatively slow speed of around 2,200mph, Earth's gravitational field can exert a strong influence, enough to trap it temporarily. Again, 2,200mph doesn't feel 'relatively slow', but Earth orbits around the sun at a speed of 67,100 miles per hour. That's the equivalent of travelling from London to New York in about 3 minutes.

"It's not going to complete a full revolution of our planet, it's just going to kind of have its orbit altered, just twisted slightly by our own planet and then it'll continue on its merry way," Dr Jennifer Millard said.

The asteroid is approximately 32ft (10m) long, again tiny in comparison to Earth's moon, with a diameter of approximately 1,080 miles.

Because it is small and made of dull rock it will not be visible to anyone on Earth even if you have powerful binoculars or a home telescope. "Professional telescopes, they'll be able to pick it up. So you'll be able to look out for lots of wonderful pictures online of this little dot kind of moving past the stars at great speed," said Dr Millard.

Mini-moons have been spotted before and some even come back for re-visits (the 2022 NX1 asteroid became one of our mini-moons in 1981 and again in 2022). Scientists predict 2024 PT5 will also return to Earth's orbit again in 2055.

Mae Carol Jemison





Mae Carol Jemison was the first black female astronaut to go into space.

Quick facts:

- Age: 67
- Born: October 17th 1956
- In 1992 she spent over a week in the space shuttle Endeavour

Mae Carol Jemison was born on October 17, 1956, in Decatur, Alabama, the youngest of three children. Her father was a maintenance worker, and her mother was a schoolteacher. When she was three years old, the family moved to Chicago, Illinois. The Jemisons encouraged their youngest daughter's wide-ranging interests, which included anthropology archaeology, evolution, and astronomy as well as dance.

Mae Jemison graduated from high school at the age of 16 and entered Stanford University in California. In 1977 she received undergraduate degrees in chemical engineering and African American studies. Later in the same year she began studying medicine at Cornell University in New York. She was particularly interested in international medicine and volunteered to work for a summer in a Cambodian refugee camp in Thailand. In 1979 she studied in Kenya.

Jemison graduated from medical school in 1981. She worked briefly as a general practice physician in Los Angeles, California, before joining the U.S. Peace Corps. From 1983 to 1985 she served as a Peace Corps medical officer in Africa. While in Africa, she also conducted research for the National Institutes of Health and the Centres for Disease Control.

When she returned to the United States in 1985, Mae Jemison resumed work as a general practice physician and she also studied engineering. Later, she applied for NASA's (National Aeronautics and Space Administration) astronaut training programme. In October 1986 out of 2000 applicants, she was one of the 15 selected.

Mae Jemison completed her training as a space shuttle mission specialist in 1988 and in September 1992 she served as a mission specialist on the space shuttle Endeavour for the STS-47 Spacelab J mission. She conducted experiments on the effect of weightlessness on human and animal biology. At this time, she was the only African American female astronaut.

Jemison left NASA in March 1993, at the age of 37, to start her own company, the Jemison Group. The company develops advanced technology for use in developing countries. From 1995 to 2002 she taught environmental studies at Dartmouth College. She has received many awards for her work. Her autobiography, Find Where the Wind Goes: Moments from My Life (2001), gives the story of her childhood and youth.