

Large asteroid to zoom between Earth and Moon

March 25 2023, by Daniel Lawler



Small asteroids fly past Earth daily, but one this size coming so close only happens once a decade (artist's impression).

A large asteroid will safely zoom between Earth and the Moon on Saturday, a once-in-a-decade event that will be used as a training exercise for planetary defense efforts, according to the European Space

Agency.

The asteroid, named 2023 DZ2, is estimated to be 40 to 70 meters (130 to 230 feet) wide, roughly the size of the Parthenon, and big enough to wipe out a large city if it hit our planet.

At 19:49 GMT on Saturday it will come within a third of the distance from the Earth to the Moon, said Richard Moissl, the head of the ESA's planetary defense office.

Though that is "very close", there is nothing to worry about, he told AFP.

Small asteroids fly past every day, but one of this size coming so close to Earth only happens around once every 10 years, he added.

The asteroid will pass 175,000 kilometers (109,000 miles) from Earth at a speed of 28,000 kilometers per hour (17,400 miles per hour). The [moon](#) is roughly 385,000 kilometers away.

An [observatory](#) in La Palma, one of Spain's Canary Islands, first spotted the asteroid on February 27.

Last week, the UN-endorsed International Asteroid Warning Network decided it would take advantage of the close look, carrying out a "rapid characterization" of 2023 DZ2, Moissl said.

That means astronomers around the world will analyze the asteroid with a range of instruments such as spectrometers and radars.

The goal is to find out just how much we can learn about such an asteroid in only a week, Moissl said.

It will also serve as training for how the network "would react to a

threat" possibly heading our way in the future, he added.

'Scientifically interesting'

Moissl said preliminary data suggests 2023 DZ2 is "a scientifically interesting object", indicating it could be a somewhat unusual type of asteroid. But he added that more data was needed to determine the asteroid's composition.

The asteroid will again swing past Earth in 2026, but poses no [threat](#) of impact for at least the next 100 years—which is how far out its trajectory has been calculated.

Earlier this month a similarly sized asteroid, 2023 DW, was briefly given a one-in-432 chance of hitting Earth on Valentine's Day 2046.

But further calculations ruled out any chance of an impact, which is what normally happens with newly discovered asteroids. Moissl said 2023 DW was now expected to miss Earth by some 4.3 million kilometers.

Even if such an asteroid was determined to be heading our way, Earth is no longer defenseless.

Last year, NASA's DART spacecraft deliberately slammed into the pyramid-sized asteroid Dimorphos, significantly knocking it off course in the first such test of our planetary defenses.

© 2023 AFP

Citation: Large asteroid to zoom between Earth and Moon (2023, March 25) retrieved 18 June 2024 from <https://phys.org/news/2023-03-large-asteroid-earth-moon.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private

study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.