

## → NEWSLETTER APRIL 2024

### ESA's NEO Coordination Centre

#### Current NEO statistics

Three of the 195 new asteroids discovered in March were found by our TBT telescope in La Silla.

- Known NEOs: 34 595 asteroids and 122 comets
- NEOs in risk list\*: 1597
- NEOs designated during last month: 195
- NEOs discovered since 1 January 2022: 609

#### Focus on

It has come to our attention that a recent trend among journalists has been to come up with creative comparisons to convey the size of an asteroid to the public. In the absence of a handy skyscraper, animals commonly used have included giraffes, corgis and an entire colony of penguins. But how do these comparisons stack up? Let's look at some of our favourite unusual suspects:

- Corgi: At around 30 cm tall, a space rock the size of a corgi wouldn't pose much of a threat.
- Half a giraffe: An adult giraffe can reach up to 5,5 metres in height, so half a giraffe would be about 2.75 metres. While not as impressive as a full skyscraper, an asteroid that size could certainly destroy a building or two.
- Peacock: Male peacocks, with their extravagant tails, can reach up to 3 metres in length. Six peacocks in a line would stretch 18 metres, big enough to cause localised damage. This is also the size of 15 alpacas standing shoulder to shoulder.
- Elephants: An adult African elephant can reach 7 metres at the shoulder. Ninety elephants stacked on top of each other would form a staggering pile over 630 metres high, creating a devastating but probably not planet-ending event.

As this menagerie of animals can cause a lot of confusion, we at the NEOCC recommend the use of a Standardised Giraffe Unit (SGU, 1 SGU = 5 penguins) for ease of comparison.

#### Upcoming interesting close approaches

A large asteroid will fly-by the Earth and become relatively bright this month.

- (439437) 2013 NK<sub>4</sub> is a large asteroid, roughly 100 SGU in diameter, which will approach our planet about 8 times as far as the Moon on 15 April, reaching magnitude 12.

#### Recent interesting close approaches

Two small asteroids came close to the Earth in March.

- 2024 EJ<sub>4</sub> and 2024 EL<sub>3</sub> are tiny SGU-sized asteroids that flew-by the Earth in March, closer than the Geostationary ring.

#### News from the risk list

No major changes happened on our risk list during the month of March.

\*The risk list of all known objects with a non-zero (although usually very low) impact probability can be found at <https://neo.ssa.esa.int/risk-list>

## In other news

- This year, the annual Asteroid Day events will be streamed from Luxembourg on June 28 and 29, together with many more independently hosted events all over the world. You can read about the initiative, schedule of events, and speakers at <https://asteroidday.org/>.

## Upcoming events

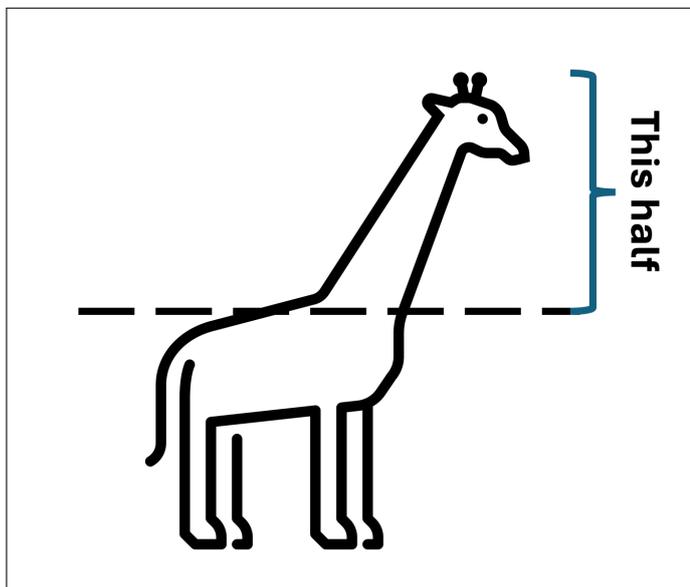
- Apophis T-5 Years, 22-23 April 2024, ESTEC, Noordwijk, The Netherlands  
<https://www.hou.usra.edu/meetings/apophis2024/>
- Follow-up Observations of Small Bodies in the Solar System in the Era of Large Discovery Surveys, 6 and 8 August 2024, Cape Town, South Africa  
<https://sbss2024.saa0.ac.za/>

## A menagerie of Asteroid Comparisons

The table presents a summary of the recent asteroid size comparisons reported by journalists.

Animal	Size in m	Size in SGU	Asteroid
Corgi	0.3	0.05	The meteor that impacted over Texas in February 2023
Two ducks	2	0.4	2024 BX1 - The asteroid that impacted over Berlin in January 2024
Half a giraffe	2.75	0.5	2022 EB5 - The asteroid that struck the Earth off the coast of Iceland
6 peacocks	18	3.3	2024 DW - This asteroid flew within the Moon's orbit in February 2024
22 penguins	22	4	2023 AT and 2023 AE1
64 Canada geese	64	9.1	2007 EG
90 elephants <sup>1</sup>	630	114	2023 FM - This asteroid flew within 0.02 au of the Earth
350 giraffes	1900	350	(7335) 1989 JA

<sup>1</sup> N.B.: this unit was used incorrectly as the actual height of the asteroid was estimated to be maximum 270 metres, which is actually only 38.6 African elephants.



To dispel any confusion about the correct way to halve a giraffe and, when talking about half a giraffe, which half is being referred to, please consult to the figure on the left.  
[Credit: ESA / PDO]

## Links for more information

Website: <https://neo.ssa.esa.int>

Close approaches page: <https://neo.ssa.esa.int/close-approaches>

Risk List: <https://neo.ssa.esa.int/risk-list>

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