

→ NEWSLETTER NOVEMBER 2025

ESA's NEO Coordination Centre

Current NEO statistics

With more than 2500 discoveries so far, we are now approaching 40 000 known NEOs.

- Known NEOs: 39 849 asteroids and 123 comets
- NEOs in risk list*: 1858
- NEOs designated during last month: 389
- NEOs discovered since 1 January 2025: 2502

Focus on

On 30 October, at 07:58 CET, the NEOCC team got awakened by a phone call... This call was the Meerkat alert system notifying them that an asteroid had been found with a 47% chance of impacting Earth, with an impact corridor going from the Southern Pacific to the Southern Atlantic Ocean and crossing the Southern tip of South America. The potential impactor, known at the time as ST25J47, is a tiny asteroid with an estimated size between 40 cm and 90 cm, so there was nothing to worry as it would have safely disintegrated in the atmosphere. However, while last year we had a total of 4 imminent impactors, none were found yet in 2025, so the team was excited.

A few minutes after the first alert, new observations were analysed, reducing the risk to 30% at 08:07 CET and to 0% at 08:10 CET. However, the reason for such a high impact probability going down so fast with new observation is that the object was about to fly-by Earth at a distance of only 230 km from the surface of the Southern Atlantic ocean at 12:11 UT, very close to the Southern tip of South America.

This object, now designated 2025 UC11, has the faintest absolute magnitude and the closest approach distance on record for any non-impacting known object (a few other objects have been witnessed to enter the atmosphere and then recede back to space, but they were observed during the atmospheric phase and thus have no asteroid designation). The previous distance record was held by 2020 VT4 with a 370 km fly-by.

Upcoming interesting close approaches

None of the objects known at the beginning of October will come closer than the Moon or become brighter than magnitude 15 during the month.

Recent interesting close approaches

During the month of October, three objects made close approaches below 1 Earth radii.

- 2025 UC11 is the topic of our focus on. It is smaller than a meter, and it passed at a distance of 230 km from the surface over the Southern Atlantic ocean.
- 2025 TF was another very close fly-by. It is a 1 to 3 metre object and made a close approach on 1 October at 400 km from the surface, over Antarctica.
- 2025 TQ2 is a 2 to 4 m object that made a close approach on 2 October at a distance of 4860 km from the surface over the North pole.

News from the risk list

The high-rated impactor of last month has now been excluded.

- 2025 SC5, mentioned last month as a new entry in our risk list, has now been cleared of any possible future impacts, thanks to new observations.

*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

- [Two internship positions](#) at ESA's Planetary Defence Office are now open. These positions are dedicated to university students, and the deadline for applications is on 30 November 2025.
- Graduate students are invited to apply for the 2026 [Schweickart Prize](#) with innovative proposals in planetary defence. The deadline for applications is on 4 February 2026.

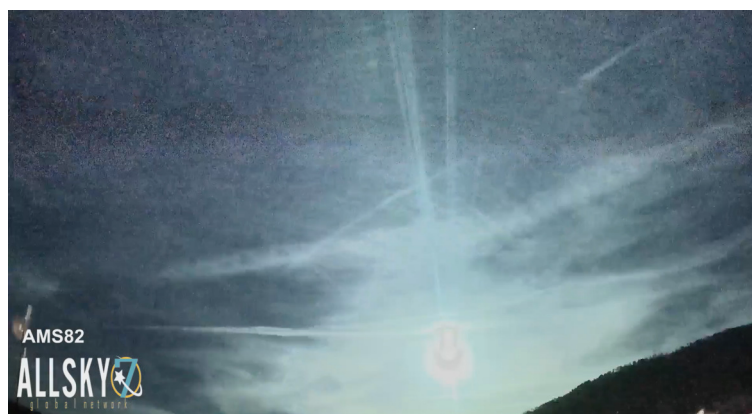
Upcoming events

- Asteroids, Comets, Meteors Conference, 6-10 July 2026, Poznań, Poland
<https://acm2026.eu/>

Past known non-impacting closest approaches

The table presents the list of the closest past approaches of known NEAs, excluding those that impacted the Earth. Two objects discovered last month occupy the first and third position of the list, while a third one ranks in the top positions. All these objects have been found in the last 6 years, showing how the capabilities of the worldwide planetary defence community have improved over the years.

Object name	Close approach date	Miss distance in Earth radii	Miss distance in km	Size range in m	H magnitude
2025 UC11	2025-10-30	0.04	230	0.4–0.9	34.1
2020 VT4	2020-11-13	0.06	370	5–11	28.6
2025 TF	2025-10-01	0.06	420	1–3	31.6
2024 XA	2024-12-01	0.21	1 300	1–3	31.5
2024 LH1	2024-06-06	0.27	1 700	2–4	30.8
2024 UG9	2024-10-30	0.39	2 500	1–2	32.4
2020 QG	2020-08-16	0.46	2 900	3–6	29.8
2021 UA1	2021-10-25	0.48	3 000	1–3	31.7
2025 BP6	2025-01-26	0.52	3 300	1–3	31.7
2023 BU	2023-01-27	0.56	3 600	4–8	29.3
2023 RS	2023-09-07	0.62	4 000	1–2	32.2
2025 OS	2025-07-19	0.64	4 100	3–6	30.1
2025 TQ2	2025-10-02	0.77	4 900	2–4	30.7



Snapshot of a bright bolide detected by AMS82, ESA-PDO's meteor detection station operated by NEOCC and located in Casas de Millán (Cáceres, Spain). Last Sunday 2 November 2025 around 19:41 UTC, this [stunning bolide](#) was observed from both Spain and Portugal, while flying over Portuguese skies for about 80 km (from Lousã to Amiosinho).

[Credit: ESA PDO, AllSky7 Network]

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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