→ NEWSLETTER JANUARY 2026

ESA's NEO Coordination Centre

Current NEO statistics

With a total of over 3000 new NEOs, the discovery rate for 2025 remains in line with that of the last 5 years. However, the discovered population is increasingly dominated by smaller objects, while large undiscovered NEOs have become increasingly rare.

- Known NEOs: 40 529 asteroids and 124 comets
- NEOs in risk list*: 1894
- NEOs designated during last month: 210
- NEOs discovered since 1 January 2025: 3398

Focus on

The year that just ended was quite different from 2024. Two years ago, the discovery news were dominated by imminent impactors, with four small objects discovered and tracked all the way to impact. In contrast, 2025 saw no imminent impactor discoveries. This does not imply a change in the true impact rate or a decline in our discovery capabilities. Rather, it reflects small-number statistics: small bodies are intrinsically difficult to detect, and despite improved surveys some will inevitably be missed. This is also confirmed by the fact that 2 of the 3 closest near misses ever detected were found in 2025, both coming within 500 km of the Earth surface.

By contrast, the past year was particularly significant for larger impactors. The discovery of 2024 YR4, which came to prominence in early 2025, gave the community its first opportunity since Apophis, two decades ago, to deal with a serious impact threat. This episode highlighted how much better prepared we now are. Observationally, we were able to rapidly mobilise nearly all available resources, including JWST, enabling prompt and effective follow-up. In parallel, the impact prediction community introduced new tools and methods to better follow the evolution of the risk. Finally, international bodies such as IAWN and SMPAG, created specifically to handle these scenarios, were tested by a real event and demonstrated both their readiness and their importance in managing potential impact threats.

Upcoming interesting close approaches

No objects known at the end of the year will come closer than the Moon in January.

Recent interesting close approaches

Two close approachers became bright last month.

- 2025 YE2 and 2025 XR reached magnitude 14 in December during very close flybys. 2025 YE2, a Chelyabinsk-sized NEO, passed at about 100 000 km, while the larger, Tunguska-sized 2025 XR flew by at roughly twice that distance.

News from the risk list

An object reached a high rating but was subsequently demoted due to new observations.

- 2025 WA14 was the highest-profile object in the risk list in December, reaching an impact probability of about 1 in a few thousands. Subsequent follow-up led to a reduction of the impact risk by more than an order of magnitude.

*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

- 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.

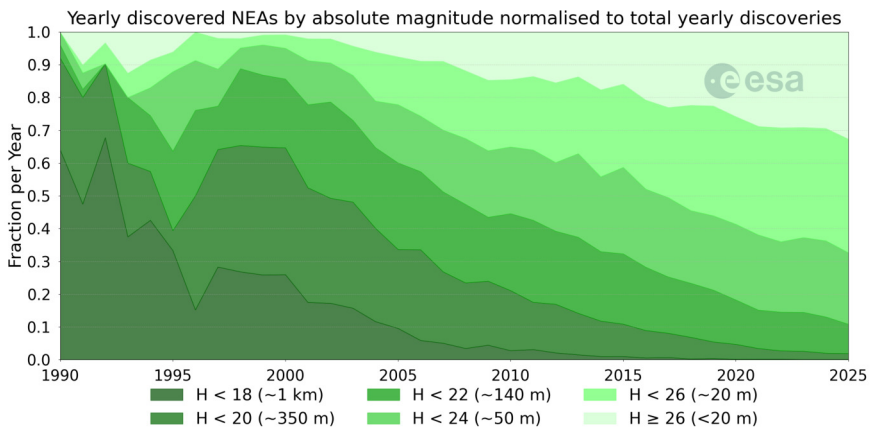
Upcoming events

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

Highest-rated objects added to the risk list in 2025

The table shows the top 10 objects entering the risk list in 2025 and still present, ranked by current Palermo Scale. Compared to previous years, there are now no remaining high-rated impactors (Palermo Scale above -3). This reflects the effectiveness of targeted observational efforts that are now promptly triggered as soon as a new object appears on the risk list, ensuring that enough data are rapidly collected and that potential impacts are ruled out before the objects become unobservable.

Designator	Size range in m	Date of possible impact	Impact probability	Palermo scale	Torino scale	Impact velocity in km/s
2025 LK	10-23	2052-06-08	1/600	-3.46	0	14.90
2025 BA1	08-18	2032-01-15	1/4 000	-3.82	0	17.43
2025 NC	08-18	2062-07-04	1/1 000	-4.20	0	14.17
2025 SQ4	13-29	2104-09-19	1/1 600	-4.21	0	14.19
2025 DT2	12-27	2044-02-26	1/1 600	-4.22	0	14.83
2025 SK22	15-30	2076-09-21	1/4 000	-4.39	0	14.22
2025 FC1	08-17	2103-03-21	1/2 400	-4.61	0	21.74
2025 YK9	400-1000	2044-03-06	1/150 000 000	-4.65	0	19.89
2025 CL3	22-50	2066-08-31	1/50 000	-4.67	0	17.07
2025 HX	08-19	2051-10-25	1/7 000	-4.69	0	16.98



Fraction of objects in different size classes discovered during each year, from 1990 to 2025.

The plot clearly shows that large kilometre-size discoveries are now rare, because most large objects are already known. Today, more than two thirds of the newly discovered objects are smaller than an absolute magnitude of 24, roughly corresponding to the size of the Tunguska impactor.

[Data source: 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