

## ESA's NEO Coordination Centre

### Current NEO statistics

During the month of February we crossed the threshold of 41 000 known NEOs.

- Known NEOs: 41 075 asteroids and 124 comets
- NEOs in risk list\*: 1921
- NEOs designated during last month: 244
- NEOs discovered since 1 January 2026: 482

### Focus on

Last month we looked at the first NEA visited by a spacecraft, asteroid (433) Eros. The final "A" was chosen deliberately: in this issue, we celebrate one of the first spacecraft visits to an NEO, where the broader "O" for object also includes comets.

This month marks the 40th anniversary of ESA's first deep-space mission, Giotto. Launched in 1985, the spacecraft made history on 14 March 1986 by flying just 600 km from comet 1P/Halley, returning the first close-up images of a comet nucleus. Giotto was part of a large international collaboration that included the Soviet Vega-1 and Vega-2 and Japanese Suisei and Sakigake missions. Giotto's close-up of comet Halley followed just a few months after the pioneering comet encounter by NASA's International Cometary Explorer (ICE) in September 1985. These encounters demonstrated that close flybys of NEOs were technologically achievable, even within the extremely complex navigation environment of a cometary coma. Despite extreme dust impacts at high speed, Giotto survived and later went on to encounter a second comet, 26P/Grigg-Skjellerup.

The Giotto mission gave ESA the expertise to build, launch, and operate a significantly more complex cometary mission two decades later: Rosetta. It performed the first-ever successful orbital insertion around a comet nucleus, 67P/Churyumov-Gerasimenko.

### Upcoming interesting close approaches

None of the objects known at the beginning of March are expected to come closer than the Moon in March.

### Recent interesting close approaches

No known asteroids came closer than the geostationary ring in February.

- 2026 DN5 was the closest known approacher of the month. It reached a distance of about 43 000 km from the Earth's centre on 22 February, but it only peaked at magnitude 15 due to its tiny size of 2 to 4 metres.

### News from the risk list

Two new small but high-rated impactors appeared in the risk list in February.

- 2026 CF3 is a Chelyabinsk-sized object that entered the risk list on 15 February, and subsequently grew in Palermo Scale until reaching a value of -3.9 at the end of the month, for a possible impact in 2083 with a probability of about 1 in 1400.
- 2026 CQ4, a smaller object, entered the list just a few days later. In this case, impact solutions in multiple years, starting in 2072, are still possible, for an overall impact probability of about 1 in 80 over the next century.

\*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

- Hera's Deep Space Manoeuvre 2, executed in 4 individual burns during the February-March period, has been nearly fully completed. The first three burns, which already accumulated more than 360 m/s velocity change have been successfully executed. The last burn, compensating the small remaining velocity increment needed to precisely target the Didymos system, will be done in early March.

## Upcoming events

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

## Comets visited by spacecraft

The following table lists all comets visited by spacecraft so far, including some relevant information.

Designation	Mission	Space agency	Year of launch	Mission type	Status
21P/Giacobini-Zinner	ICE / ISEE-3	NASA	1978	Flyby	Completed
1P/Halley	Vega 1 - Vega 2	USSR	1984	Flyby	Completed
1P/Halley	Suisei	JAXA	1985	Flyby	Completed
1P/Halley	Sakigake	JAXA	1985	Flyby	Completed
1P/Halley & 26P/Grigg-Skjellerup	Giotto	ESA	1985	Flyby	Completed
19P/Borrelly	Deep Space 1	NASA	1998	Flyby	Completed
81P/Wild - 9P/Tempel	Stardust	NASA	1999	Flyby + Sample return	Completed
2P/Encke & 29P/Schwassmann-Wachmann & 6P/d'Arrest	CONTOUR	NASA	2002	Flyby	Failed
67P/Churyumov-Gerasimenko	Rosetta + Philae	ESA	2004	Orbiter + lander	Completed
9P/Tempel & 103P/Hartley	Deep Impact / EPOXI	NASA	2005	Impact + flyby	Completed



This composite image showcases comet Halley as captured by ESA's Giotto spacecraft on 14 March 1986.

The striking details reveal the comet's nucleus and its dynamic gas and dust envelope, offering a unique glimpse into the composition and activity of this iconic celestial body during its last spectacular approach.

[Credits: ESA / Giotto / MPAe]

## 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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