

# Falling to Earth takes a long time

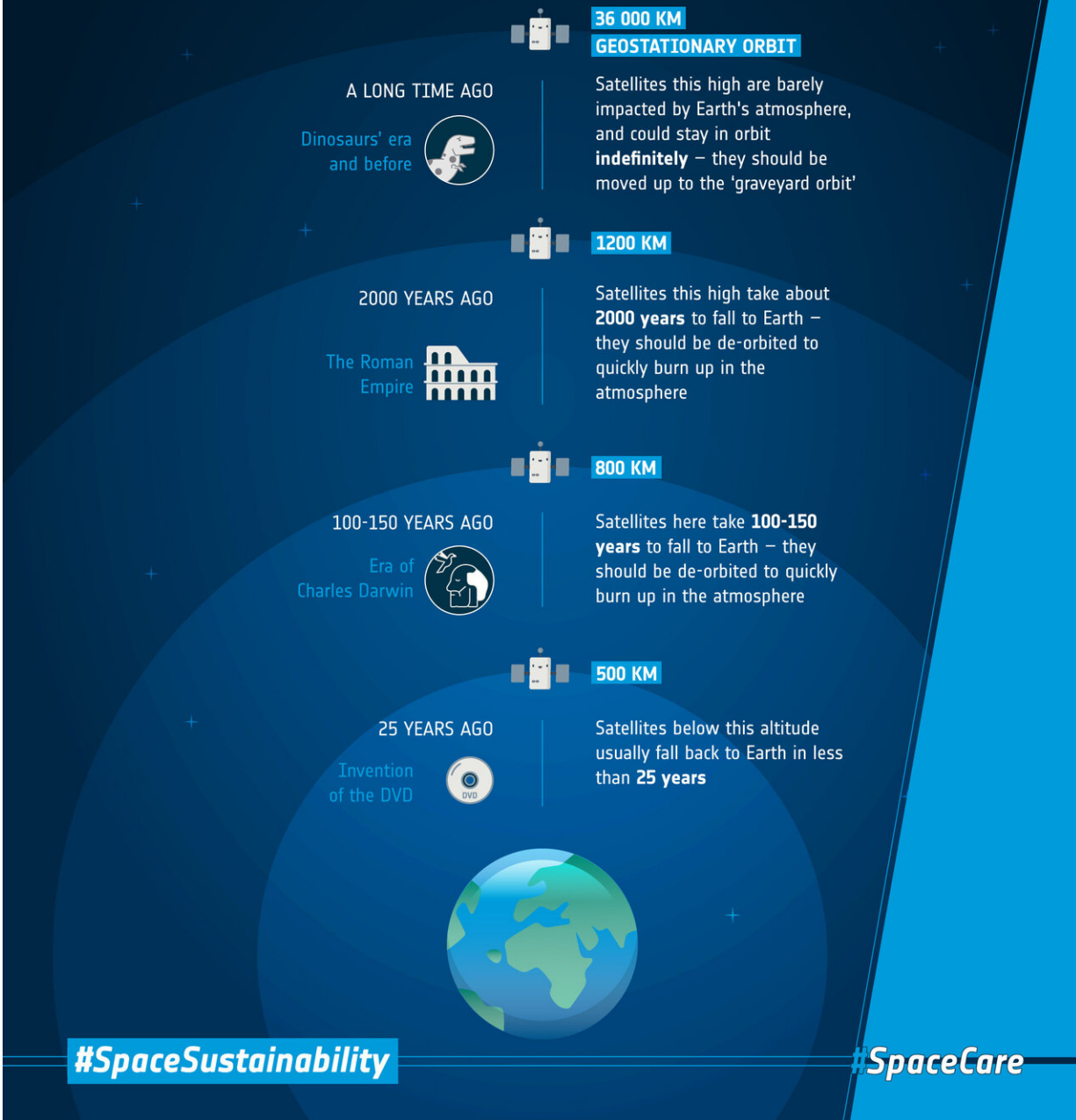
February 17 2021

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## FALLING TO EARTH TAKES A LONG TIME

Abandoned satellites are **dragged down to Earth** by the planet's atmosphere, which can take **thousands of years** depending on their altitude. Had the Romans launched a satellite to 1200 km, it would only come back down today. To ensure space isn't full of slowly returning satellites, **operators should move them to safety** at the end of their lives, either **up to the graveyard zone** or **down to burn up in the atmosphere**, according to international guidelines.



Credit: ESA / UNOOSA

Our planet's atmosphere reduces the energy of satellites in orbit (on Earth, this would be like reducing their speed, but in space, it's complex!). This then brings them back down to Earth.

This process can be relatively fast for satellites flying at low altitudes, taking less than 25 years, but for satellites launched into orbits tens of thousands of kilometers away, it can be thousands of years before they return, if the atmosphere is able to impact them at all.

Had the dinosaurs launched a [satellite](#) into the furthest geostationary [orbit](#), it would still be up there today.

This means that as we launch satellites to [space](#) we must consider how they will be removed at the end of their lives, or else the skies will be filled with old, defunct spacecraft at risk of collision, explosion, and the near-certain creation of vast amounts of space debris.

In this infographic from ESA and UNOOSA, find out how long it would take satellites at different altitudes to naturally fall back to Earth, and what must be done responsibly dispose of them at the end of their lives.

Provided by European Space Agency

Citation: Falling to Earth takes a long time (2021, February 17) retrieved 6 May 2024 from <https://phys.org/news/2021-02-falling-earth.html>

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