

ENSO

(Expleo Nanosat for Solar-irradiance Observations)

What's the context?

Today around 2,000 satellites orbit Earth, supporting everything from weather forecasts to financial systems. However, **3,000 dead satellites and 34,000 pieces of space junk** pose a threat to their safe operation every day. If we are to continue to maximise the benefits of space technology on Earth, we need to look for new approaches.

What did we do?

The Expleo-led ENSO CubeSAT programme has **successfully miniaturised satellites to just 10x10x10cm** – small enough to hold in your hands. The in-house project is in partnership with the University Space Centre of Montpellier, with Expleo creating a nanosatellite R&D platform that aims **to help characterise the ionosphere by providing a signal to SANSA ground stations that measure solar activity and its impact on Earth.**

What's the impact?

Nanosatellites have the potential to remove many of the barriers to entry for privatised and commercial space programmes, including space flight and environmental monitoring. ENSO will launch satellites to measure the impact of solar activity on Earth, furthering our knowledge of the world and space.

What's next?

With the cost of a nanosatellite dramatically lower compared to standard satellites, emphasis is now on reducing the cost of launch to support commercialisation. This will lower costs and accelerate deployment enough to make it possible for companies to launch their own satellite networks to support applications such as private telecoms networks, supporting economic growth.

