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(Picture credits: *JHUAPL*)

Van Allen Probes launch anniversary (2012)

Space agency/country: NASA
Mission: *Van Allen Probes*

The Van Allen belts are one of two electron swarms, located approximately one thousand kilometers from Earth. These belts are usually shaped as a ‘donut’, but they can slightly change their form because of incoming radiation from the Sun. These changes can affect and damage artificial satellites, so it is important to understand which orbits may be in harm’s way at certain times. That is why the Johns Hopkins University’s Applied Physics Laboratory designed the *Van Allen Probes* spacecraft for NASA’s ‘Living With a Star’ programme. The two probes have, since their launch, observed and collected data on the Earth’s radiation particles, so that scientists can see how electrons and ions in the radiation belts affect changes.

For more information:

<https://vanallenprobes.jhuapl.edu/Spacecraft/index.php>

<https://www.nasa.gov/missions/van-allen-probes/nasas-van-allen-probes-revolutionize-view-of-radiation-belts/>