

Media release – 15 November 2022

Ginan for LEO satellites

FrontierSI has signed a collaborative agreement with Geoscience Australia, Curtin University and the University of Newcastle to enhance Ginan with features specifically aimed at supporting low Earth orbit (LEO) satellites.

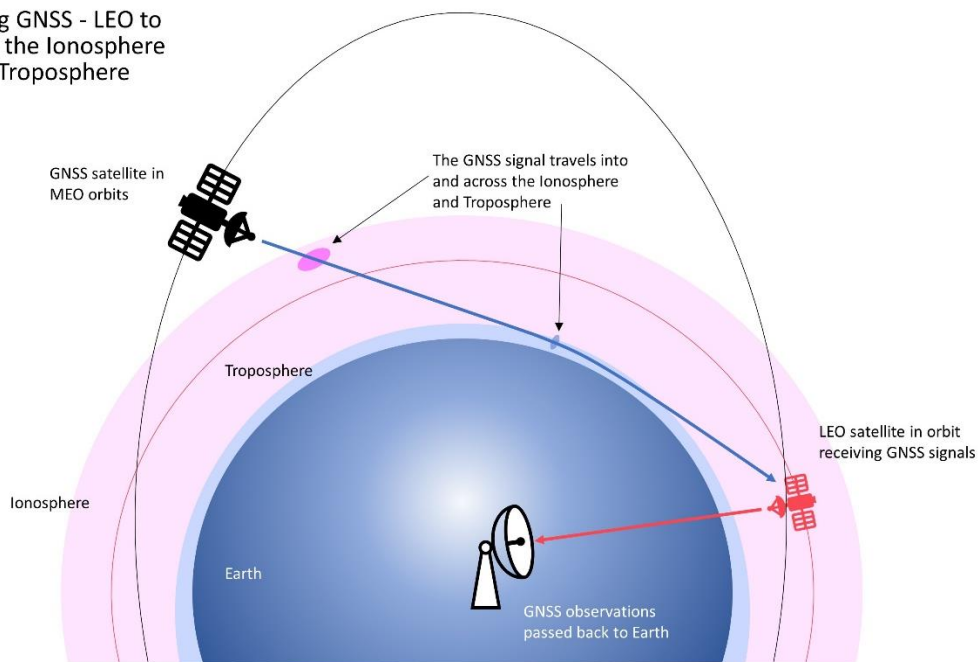
Ginan is an important part of Geoscience Australia's Positioning Australia program. Ginan is an open-source software toolkit for analysing GNSS data that can calculate positioning correction data and determine positions using GNSS satellites with centimetre accuracy.

The design, development and deployment of LEO satellites has grown significantly over the last decade. This agreement complements ongoing Ginan Precise Orbit Determination (POD) development activities, focusing on the implementation of LEO satellite modelling and the orbit integrator/propagator capabilities needed to enable LEO GNSS data to be processed and high precision LEO satellite trajectories estimated and predicted.

Such a capability will enable:

- Better monitoring of LEO satellites for station keeping, collision avoidance and end-of-life purposes,
- Improved ionosphere and troposphere monitoring and modelling through the analysis of GNSS signal occultation, to provide data for weather prediction and precise positioning purposes.

Using GNSS - LEO to
map the Ionosphere
and Troposphere



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FrontierSI is a not-for-profit company that exists to deliver major benefits to governments, industry and the community in Australia and New Zealand using deep expertise in spatial mapping, infrastructures, positioning, geodesy, space systems, analytics and standards