

GDGPS High Accuracy Support to Public and Scientific Users for Real-Time GNSS Applications

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Jet Propulsion Laboratory's Near Earth Tracking Systems Group is planning to increase access to products from the GDGPS system developed at JPL since 2000. Using Global Differential Global Positioning System's high accuracy corrections, GPS user accuracies can improve from several meters to decimeter or few-decimeter level. Data provided by the new GDGPS high accuracy support, will be distributed via the Internet using NASA's CDDIS casters to serve the public and the scientific community.

The current GDGPS System takes streaming 1-Hz real-time data provided by more than 100 geodetic quality GNSS ground stations, solves for differential corrections to multi-constellation orbits and clocks (as well as ancillary parameters) and distributes corrections to US government and commercial users via the Internet.

The differential corrections (for both GPS and Galileo) will be openly available to users worldwide in streaming standard RTCM-3 and IGS SSR formats to support real-time positioning. Public users and the scientific community can then utilize those data by tailoring applications such as improving the accuracy of cell phone positioning. It is expected that the GDGPS high accuracy support project will begin populating NASA servers later in 2023 for public access and use.

