



JULY 2000



## GPS Orbit Data

NGS computes improvements to the Global Positioning System (GPS) orbits in order to achieve an accuracy of 7 cm, Root Mean Square (RMS), and is working to attain an accuracy of 5 cm RMS. NGS distributes orbit data in a time frame to meet users' requirements, including a rapid product (8-14 cm accuracy) available within 16 hours after data collection, and a more accurate product available within 7 to 10 days of data collection. Other orbit products include improved Earth orientation parameters and tropospheric scale parameters.

NGS is producing high-accuracy orbits in order to:

- improve positioning over observed baselines,
- reduce the time needed to position geodetic control points, and
- improve the accuracy of GPS-derived heights.

NGS publishes GPS orbits computed from global IGS tracking stations. The orbits are computed using coordinates and velocities calculated in the International Earth Rotation Service Terrestrial Reference Frame (ITRF). GPS orbital data are available without cost from the NGS Web site, the U.S. Coast Guard Navigation Center Web site, and IGS global data centers. NGS also distributes archival GPS orbit data for a small fee.

For more information, contact:

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On the Web at: <http://www.ngs.noaa.gov/GPS/GPS.html>

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U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Ocean Service  
National Geodetic Survey

The National Geodetic Survey (NGS) defines and manages the National Spatial Reference System, which determines position, height, distance, direction, gravity, and shoreline throughout the United States. Since 1807 NGS and its predecessor agencies have led the world in precise positioning and developed emerging technologies for the public. NGS provides its expertise and a wealth of free information, including direct access to its data base, on the World Wide Web at: [www.ngs.noaa.gov](http://www.ngs.noaa.gov)

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