

# Geodetic and Charting Publications

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NGS: Tying America Together

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

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**NOAA Technical Memorandum NOS C&GS 2.** GPS-assisted phototriangulation Package (GAPP) users guide, Version 1.02 by Lucas, James R., November 1989, 25 p., \$2.20.

**NOAA Technical Memorandum NOS C&GS 3.** Overview of the integrated digital photogrammetric facility by Snyder, Gregory I., November 1990, 10 p., \$1.30.

**NOAA Technical Memorandum NOS NGS- 1.** Use of climatological and meteorological data in the planning and execution of National Geodetic Survey field operations by Leffler, Robert J., December 1975, 30 p., \$2.20.

**NOAA Technical Memorandum NOS NGS- 2.** Final Report on Responses to Geodetic Data Questionnaire by Spencer, Jr., John F., March 1976, 40 p., \$3.10.

**NOAA Technical Memorandum NOS NGS- 3.** Adjustment of geodetic field data using a sequential method by Whiting, Marvin C., and Pope, Allen J., March 1976, 11 p., \$1.30.

**NOAA Technical Memorandum NOS NGS- 4.** Reducing the profile of sparse symmetric matrices by Snay, Richard A., June 1976, 24 p., \$2.20.

**NOAA Technical Memorandum NOS NGS- 6.** Determination of North American Datum 1983 coordinates of map corners by Vincenty, T. , October 1976, 8 p., \$1.30.

**NOAA Technical Memorandum NOS NGS- 7.** Recent elevation change in southern California by Holdahl, Sanford R., February 1977, 19 p., \$1.60.

**NOAA Technical Memorandum NOS NGS- 8.** Establishment of calibration base lines by Dracup, Joseph F., Fronczek, Charles J., Spofford, Paul R., and Tomlinson, Raymond W., February 1994, 17 p., \$1.60.

**NOAA Technical Memorandum NOS NGS-10.** Use of calibration base lines by Fronczek, Charles J., December 1977, 38 p., \$2.80.

**NOAA Technical Memorandum NOS NGS-11.** Applicability of array algebra by Snay, Richard A., February 1978, 6 p., \$1.30.

**NOAA Technical Memorandum NOS NGS-13.** Application of three-dimensional geodesy to adjustments of horizontal networks by Vincenty, T. , and Bowring, B. R., June 1978, 10 p., \$1.30.

**NOAA Technical Memorandum NOS NGS-14.** Solvability analysis of geodetic networks using logical geometry by Snay, Richard A., October 1978, 28 p., \$2.20.

**NOAA Technical Memorandum NOS NGS-15.** Goldstone validation survey - phase 1 by Carter, William E., and Pettey, James E., November 1978, 39 p., \$2.80.

**NOAA Technical Memorandum NOS NGS-16.** Determination of North American Datum 1983 coordinates of map corners (second prediction) by Vincenty, T. , April 1979, 5 p., \$1.30.

**NOAA Technical Memorandum NOS NGS-18.** Determination of astronomic positions for California-Nevada boundary monuments near Lake Tahoe by Pettey, James E., March 1979, 16 p., \$1.60.

**NOAA Technical Memorandum NOS NGS-20.** Geodetic leveling and the sea level slope along the California coast by Douglas, Bruce C., and Balazs, Emery I., September 1979, 22 p., \$1.90.

**NOAA Technical Memorandum NOS NGS-21.** Haystack-Westford survey by Fronczek, Charles J., Carter, William E., and Pettey, James E., September 1979, 57 p., \$4.10.

**NOAA Technical Memorandum NOS NGS-22.** Gravimetric tidal loading computed from integrated Green's functions by Goad, Clyde C., October 1979, 15 p., \$1.30.

**NOAA Technical Memorandum NOS NGS-23.** Use of auxiliary ellipsoids in height-controlled spatial adjustments by Vincenty, T. , and Bowring, B. R., November 1979, 6 p., \$1.30.

**NOAA Technical Memorandum NOS NGS-24.** Determination of the geopotential from satellite-to-satellite tracking data by Douglas, Bruce C., Goad, Clyde C., and Morrison, Foster, January 1980, 29 p., \$2.20.

**NOAA Technical Memorandum NOS NGS-26.** Motorized leveling at the National Geodetic Survey by Poetzschke, Heinz , October 1980, 17 p., \$1.60.

**NOAA Technical Memorandum NOS NGS-27.** 1978 Houston-Galveston and Texas Gulf Coast vertical control surveys by Balazs, Emery I., November 1980, 61 p., \$4.40.

**NOAA Technical Memorandum NOS NGS-28.** Storage of satellite altimeter data by Agreen, Russell W., December 1980, 11 p., \$1.30.

**NOAA Technical Memorandum NOS NGS-29.** Subroutine package for processing large, sparse, least-squares problems by Dillinger, William H., January 1981, 18 p., \$1.60.

**NOAA Technical Memorandum NOS NGS-30.** Determination of plumb line curvature by astronomical and gravimetric methods by Groten, Erwin , February 1981, 17 p., \$1.60.

**NOAA Technical Memorandum NOS NGS-31.** Model of temperature stratification for correction of leveling refraction by Holdahl, Sandford R., April 1981, 27 p., \$2.20.

**NOAA Technical Memorandum NOS NGS-32.** Report of survey for McDonald Observatory, Harvard Radio Astronomy Station, and vicinity by Carter, William E., and Pettay, James E., May 1981, 83 p., \$5.90.

**NOAA Technical Memorandum NOS NGS-33.** 3.5-year GEOS-3 data set by Agreen, Russel W., January 1982, 8 p., \$1.30.

**NOAA Technical Memorandum NOS NGS-34.** Corrections applied by the National Geodetic Survey to precise leveling observations by Young, Gary M., and Balazs, Emery I., June 1982, 12 p., \$1.30.

**NOAA Technical Memorandum NOS NGS-35.** Automatic detection of loops in leveling networks by Herbrechtsmeier, Edward H., June 1982, 15 p., \$1.30.

**NOAA Technical Memorandum NOS NGS-36.** Goldstone validation survey - phases II and III by Carter, William E., and Pettay, James E., July 1982, 78 p., \$5.60.

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**NOAA Technical Memorandum NOS NGS-45.** Empirical calibration of Zeiss NI-1 level instruments to account for magnetic errors by Holdahl, Sandford R., June 1986, 26 p., \$2.20.

**NOAA Technical Memorandum NOS NGS-47.** Adjust: The horizontal observation adjustment program by Milbert, Dennis G., and Kass, William G., September 1987, 53 p., \$3.80.

**NOAA Technical Memorandum NOS NGS-50.** NADCON, the application of minimum curvature-derived surfaces in the transformation of positional data from the North American Datum of 1927 to the North American Datum of 1983 by Dewhurst, Warren T., January 1990, 30 p., \$2.20.

**NOAA Technical Memorandum NOS NGS-52.** Pseudo-kinematic GPS results using the ambiguity function method by Remondi, Benjamin W., May 1990, 23 p., \$1.90.

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**NOAA Technical Memorandum NOS NGS-54.** A prograde Geosat exact repeat mission? by Wagner, Carl A., August 1990, 12 p., \$1.30.

**NOAA Technical Memorandum NOS NGS-55.** Kinematic GPS results without static initialization by Remondi, Benjamin W., May 1991, 25 p., \$2.20.

**NOAA Technical Memorandum NOS NGS-56.** Pseudo-kinematic surveying based upon full-wavelength dual-frequency GPS observations by Remondi, Benjamin W., November 1993, 20 p., \$1.90.

**NOAA Technical Memorandum NOS NGS-57.** General Integrated Analytical Triangulation Program GIANT, Version 4.0 Users Guide by Malhotra, Roop C., and Elassal, Atef A., July 1995, 94 p., \$6.90.

**NOAA Technical Memorandum NOS NGS-58.** Guidelines for Establishing GPS-Derived Ellipsoid Heights (Standards 2 cm and 5 cm) Version 4.3 by Zilkoski, David B., July 1997, 22 p., \$1.90.

### **NOAA Technical Reports**

**NOAA Technical Report NOS 101 C&GS 1.** Evaluation of HYDROPLOT position filtering procedure by Guenther, Gary C., August 1983, 37 p., \$2.80.

**NOAA Technical Report NOS 106 C&GS 2.** Prediction and correction of propagation-induced depth measurement biases plus signal attenuation and beam spreading for airborne laser hydrography by Guenther, Gary C., and Thomas, Robert W. L., August 1984, 124 p., \$8.80.

**NOAA Technical Report NOS 107 C&GS 3.** Algorithms for confidence circles and ellipses by Hoover, Wayne E., September 1984, 34 p., \$2.50.

**NOAA Technical Report NOS 108 C&GS 4.** Shock and vibration environmental test of NOAA 29-foot hydrographic survey launch by Lewis, James W., October 1984, 42 p., \$3.10.

**NOAA Technical Report NOS 112 C&GS 5.** Cartographic generalization: a review of feature simplification and systematic point elimination algorithms by Clayton, Victoria H., November 1985, 29 p., \$2.20.

**NOAA Technical Report NOS 113 C&GS 6.** Shock environment NOAA 29-foot survey launch by Scavuzzo, Rudy, March 1985, 48 p., \$3.40.

**NOAA Technical Report NOS 114 C&GS 7.** Coordinate conversion for hydrographic surveying by Floyd, Richard P., December 1985, 124 p., \$8.80.

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1983 into the NOS nautical charting program by Monteith, William J., and Stemble Jr., Oren E., August 1985, 72 p., \$5.30.

**NOAA Technical Report NOS 124 C&GS 9.** General Cartographic Transformation Package (GCTP), Version II by Elassal, Atef A., February 1987, 24 p., \$2.20.

**NOAA Technical Report NOS 127 C&GS 12.** Cartographic generalization by Shea, K. Stuart, July 1988, 185 p., \$13.80.

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**NOAA Technical Report NOS 129 C&GS 14.** Integrated Triangulation Software (ITS) users guide by Malhotra, Roop C., January 1989, 35 p., \$2.50.

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**NOAA Technical Report NOS 68 NGS 4.** Test results of first-order class III leveling by Whalen, Charles T., and Balazs, Emery I., November 1976, 30 p., \$2.20.

**NOAA Technical Report NOS 70 NGS 5.** Selenocentric geodetic reference system by Doyle, Frederick J., Elassal, Atef A., and Lucas, James R., February 1977, 53 p., \$3.80.

**NOAA Technical Report NOS 71 NGS 6.** Application of digital filtering to satellite geodesy by Goad, Clyde C., May 1977, 73 p., \$5.30.

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- NOAA Technical Report NOS 86 NGS 17.** On the weight estimation in leveling by Vanicek, Petr , and Grafarend, Erik W., May 1980, 34 p., \$2.50.
- NOAA Technical Report NOS 87 NGS 18.** Crustal movement investigations at Tejon Ranch, California by Snay, Richard A., and Cline, Michael W., June 1980, 31 p., \$2.20.
- NOAA Technical Report NOS 88 NGS 19.** Horizontal control (supersedes C&GS Special Publication 227) by Dracup, Joseph F., June 1980, 32 p., \$2.50.
- NOAA Technical Report NOS 90 NGS 20.** Precise determination of the disturbing potential using alternative boundary values by Groten, Erwin , August 1981, 70 p., \$5.00.
- NOAA Technical Report NOS 91 NGS 21.** Results of photogrammetric control densification in Ada County, Idaho by Lucas, James R., December 1981, 74 p., \$5.30.
- NOAA Technical Report NOS 92 NGS 22.** Results of leveling refraction tests by the National Geodetic Survey by Whalen, Charles T., November 1981, 20 p., \$1.90.

**NOAA Technical Report NOS 94 NGS 23.** Scribing, graduation, and calibration of U.S. Coast and Geodetic Survey leveling rods from 1877 to 1968 by Strange, William E., August 1982, 33 p., \$2.50.

**NOAA Technical Report NOS 95 NGS 24.** Proceedings of Symposium No. 5: geodetic applications of radio interferometry, Int. Assn. of Geodesy, Tokyo, Japan, May 7-8, 1982 by Tusuchiya, A. , and Carter, William E., May 1982, 334 p., \$25.00.

**NOAA Technical Report NOS 96 NGS 25.** Allocation of inertial surveying system model parameters by Challstrom, Charles W., November 1982, 94 p., \$6.90.

**NOAA Technical Report NOS 97 NGS 26.** Inertial survey adjustment program: implementation and validation by Milbert, Dennis G., November 1982, 89 p., \$6.30.

**NOAA Technical Report NOS 98 NGS 27.** 1981 Saugus to Palmdale, California, leveling refraction test by Whalen, Charles T., and Strange, William E., January 1983, 13 p., \$1.30.

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**NOAA Technical Report NOS 109 NGS 31.** Geodetically derived strain from San Francisco Bay to the Mendocino Triple Junction, California by Snay, Richard A., Cline, Michael W. and Timmerman, Edward L., April 1985, 17 p., \$1.60.

**NOAA Technical Report NOS 110 NGS 32.** Orthometric height determination using GPS observations and the integrated geodesy adjustment model by Hein, Gunter W., April 1985, 16 p., \$1.60.

**NOAA Technical Report NOS 111 NGS 33.** A variance component estimation method for sparse matrix applications by Lucas, James R., May 1985, 12 p., \$1.30.

**NOAA Technical Report NOS 116 NGS 34.** Megatrend solutions in physical geodesy by Bjerhammar, Arne , February 1986, 29 p., \$2.20.

**NOAA Technical Report NOS 117 NGS 35.** A model comparison in vertical crustal motion estimation using leveling data by Hein, Gunter W., February 1986, 46 p., \$3.40.

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**NOAA Technical Report NOS 121 NGS 39.** National Geodetic Survey gravity network by Moose, Robert E., December 1986, 32 p., \$2.50.

**NOAA Technical Report NOS 122 NGS 40.** Mobile VLBI results for crustal dynamics project observations in the conterminous Western United States, June 27, 1983 to May 21, 1986 by Abell, Michael D., Mader, Gerald L., and Morrison, Michael L., February 1987, 125 p., \$8.80.

**NOAA Technical Report NOS 123 NGS 41.** GPS survey of crustal motion network near Mammoth Lakes, California by Snay, Richard A., Fury, Rudolf J., and Neugebauer, H. Clare, March 1987, 25 p., \$2.20.

**NOAA Technical Report NOS 125 NGS 42.** Project REDEAM: Models for historical horizontal deformation by Snay, Richard A., Cline, Michael W., and Timmerman, Edward L., September 1987, 76 p., \$5.60.

**NOAA Technical Report NOS 130 NGS 43.** National Geodetic Survey absolute gravity program by Moose, Robert E., Wessells, Claude W., and Peter, George , March 1989, 17 p., \$1.60.

**NOAA Technical Report NOS 131 NGS 44.** Subsidence at Houston, Texas 1973-87 by Holdahl, Sandford R., Zilkoski, David B., and Holzschuh, Joseph C., August 1989, 21 p., \$1.90.

**NOAA Technical Report NOS 132 NGS 45.** Accuracy of global positioning system broadcast orbits for relative surveys by Remondi, Benjamin W., and Hofmann-Wellenhof, B. , October 1989, 47 p., \$3.40.

**NOAA Technical Report NOS 133 NGS 46.** Extending the National Geodetic Survey standard GPS orbit formats by Remondi, Benjamin W., November 1989, 85 p., \$6.30.

**NOAA Technical Report NOS 136 NGS 48.** Refined M2 Tide From Geosat Altimetry by Wagner, Carl A., June 1991, 78 p., \$5.60.

**NOAA Technical Report NOS 137 NGS 49.** Proceedings of the AGU Chapman Conference on Geodetic VLBI: Monitoring Global Change by Carter, William E., and American Geophysical Union, January 1991, 440 p., \$31.30.

### **NOAA Manuals**

**NOAA Manual NOS NGS 1.** Geodetic bench marks by Floyd, Richard P., September 1978, 50 p., \$3.40.

**NOAA Manual NOS NGS 3.** Geodetic leveling (unbound, supersedes C&GS Special Publication 239) by Schomaker, M. Christine, and Berry, Ralph Moore, August 1981, 209 p., \$16.30.

**NOAA Manual NOS NGS 5.** State plane coordinate system of 1983 by Stem, James E., January 1989, 119 p., \$10.00.

### **NOAA Professional Papers**

**NOAA Professional Paper 12.** A priori prediction of roundoff error accumulation in the solution of a super-large geodetic normal equation system by Meissl, Peter, June 1980, 128 p., \$9.40.

**NOAA Professional Paper NOS 2.** North American Datum of 1983 by Schwarz, Charles R., December 1989, 256 p., \$25.00.

### **C&GS Special Publications**

**C&GS Special Publication 5. (sixth edition).** Tables for a polyconic projection of maps and

lengths of terrestrial arcs of meridian and parallels based upon Clarke's Reference Spheroid of 1866 by C&GS, June 1946, 189 p., \$15.00.

**C&GS Special Publication 8.** Formulas and tables for the computation of geodetic positions (first 19 pages text only, no tables included). by C&GS, January 1911, 19 p., \$1.60.

**C&GS Special Publication 28.** Application of the theory of least squares to the adjustment of triangulation by Adams, Oscar S., May 1915, 220 p., \$16.30.

**C&GS Special Publication 68. (fifth edition).** Elements of map projection with applications to map and chart construction by Adams, Oscar S., and Deetz, Charles H., January 1921, 226 p., \$16.30.

**C&GS Special Publication 71. (superseded by two pages).** Relationship between local plane coordinates and geographic positions by Reynolds, Walter F., January 1921, 2 p., \$1.30.

**C&GS Special Publication 138.** Manual of triangulation computation and adjustment by Reynolds, Walter F., August 1928, 242 p., \$17.50.

**C&GS Special Publication 193 (first 14 pages only).** Manual of plane-coordinate computation by Adams, Oscar S., and Claire, Charles N., May 1935, 14 p., \$1.30.

**C&GS Special Publication 205.** Cartography, review and guide for the construction and use of charts by Deetz, Charles H., June 1936, 83 p., \$5.90.

**C&GS Special Publication 225.** Manual of reconnaissance for triangulation by Musseter, William, January 1941, 100 p., \$7.50.

**C&GS Special Publication 234.** Signal building by Bilby, Jasper S., March 1943, 43 p., \$3.10.

**C&GS Special Publication 235.** State coordinate systems (a manual for surveyors) by Mitchell, Hugh C., and Simmons, Lansing G., May 1945, 62 p., \$4.40.

**C&GS Special Publication 240.** Manual of leveling computation and adjustment by Rappleye, Howard S., August 1948, 178 p., \$13.80.

**C&GS Special Publication 241.** Natural tables for the computation of geodetic positions: Clarke spheroid of 1866 by Simmons, Lansing G., September 1949, 86 p., \$6.30.

**C&GS Special Publication 246.** Sines, cosines, and tangents, ten decimal places with ten second interval: zero degrees-six degrees by C&GS, September 1949, 36 p., \$2.80.

**C&GS Special Publication 247.** Manual of geodetic triangulation by Gossett, Franklin R., January 1950, 344 p., \$25.00.

**C&GS Special Publication 251.** Conformal projections in geodesy and cartography by Thomas, Paul D., February 1952, 142 p., \$10.60.

**C&GS Special Publication 252.** Plane coordinate projection tables: Texas (Lambert) by C&GS, January 1950, 64 p., \$4.70.

**C&GS Special Publication 253.** Plane coordinate projection tables: California (Lambert) by C&GS, January 1951, 70 p., \$5.00.

**C&GS Special Publication 255.** Plane coordinate projection tables: Florida (Lambert and Transverse Mercator) by C&GS, January 1951, 30 p., \$2.20.

**C&GS Special Publication 256.** Plane coordinate projection tables: Maine (Transverse Mercator) by C&GS, January 1951, 27 p., \$2.20.

**C&GS Special Publication 257.** Plane coordinate projection tables: Arizona (Transverse Mercator) by C&GS, January 1951, 32 p., \$2.50.

**C&GS Special Publication 258.** Plane coordinate projection tables: Wyoming (Transverse Mercator) by C&GS, February 1952, 20 p., \$1.90.

**C&GS Special Publication 259.** Plane coordinate projection tables: Indiana (Transverse Mercator) by C&GS, February 1952, 19 p., \$1.60.

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**C&GS Special Publication 295.** Plane coordinate intersection tables: Nebraska by C&GS, March 1953, 117 p., \$8.10.

**C&GS Special Publication 296.** Plane coordinate intersection tables: Florida by C&GS, March 1953, 115 p., \$8.10.

**C&GS Special Publication 297.** Plane coordinate intersection tables: Wyoming by C&GS, March 1953, 184 p., \$13.80.

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**C&GS Special Publication 330.** Plane coordinate intersection tables: Connecticut by C&GS, April 1954, 16 p., \$1.60.

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**NOTE** - Index to State Plane Coordinate Zone Code is available for \$7.00. This 1:5,000,000 scale U.S. map shows at a glance the counties within each State Plane Coordinate Zone and the type of

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