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Abstract

Applications of the Global Positioning System (GPS) to Earth Science are numerous. The International GPS Service (IGS), a federation of government agencies and universities, plays an increasingly critical role in support of GPS-related research and engineering activities. Contributions from the IGS Governing Board and Central Bureau, analysis and data centers, station operators, and others constitute the 2000 Technical Reports. This report has a companion publication, the 2000 Annual Report. Hard copies of each volume can be obtained by contacting the IGS Central Bureau at the Jet Propulsion Laboratory. Electronic versions can be viewed at http://igscb.jpl.nasa.gov/overview/pubs.html.

Preface

This volume documents the technical progress of the International GPS Service in the year 2000. While the detail in this report is generally compiled for the benefit and interest of the internal IGS participants, more often recently, universities, libraries and other organizations request copies of the documentation for reference purposes. Attempts are made by the editors to obtain submissions from the many contributors to the IGS – Analysis Centers, Data Centers, IGS Coordinators (for Analysis, Network and Reference Frame), Network Operators, Projects, Working Groups, and status reports from the Governing Board and the Central Bureau. A companion volume is the 2000 Annual Report which serves as the executive summary of key annual activities for this unique organization.

The year 2000 saw many new technical developments in the IGS, notably the establishment of two new projects, the Low Earth Orbiter Pilot Project and the International GLONASS Pilot Project. During the latter half of the year, the IGS Governing Board was engaged in a strategic planning effort resulting in a renewed mission statement and identified goals and objectives for the period 2002-2007. The final plan document will be available by early 2002.

The Analysis Center Coordinator, Tim Springer at the University of Bern in Switzerland, departed for a new position with very fond farewells from long-time IGS colleagues, The University of Bern succeeded in seamlessly reassigning responsibility for this vital role, and continues to produce the combined IGS products, orbits, clocks, station position and velocities under the leadership of Robert Weber. The IGS through its Analysis Centers collectively produces the most precise GPS orbit products available anywhere. The IGS Network continued to grow, not just in number of stations and affiliated regional arrays, but in functionality as stations become identified as meeting requirements necessary for one or more of the IGS projects. Data Centers are a critical link in the smooth processing of the IGS, and find themselves responding to an increasing user base with decreasing latencies as many groups and applications push towards real-time availability of data and products. The IGS as an organization continues to leverage the resources of over 200 contributing organizations and fosters the evolution of many GPS applications through projects and working groups.

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