NAVSTAR PERFORMANCE ANALYSIS

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PREFACE

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NAVSTAR PERFORMANCE ANALYSIS

by

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ABSTRACT

The two dimensional, real time navigational accuracy available from NAVSTAR/GPS is investigated, with emphasis on GPS performance during the partially implemented phase (1980 to 1987), and on the ocean areas surrounding Canada.

The mathematical models used in this study to compute NAVSTAR satellite positions, check for satellite visibility, and compute the covariance matrix of two dimensional position are described. The length of the semi major axis of the standard error ellipse represented by this covariance matrix is used as the GPS performance indicator. A computer program implementing these models is listed.

Results based on four error models are presented. These error models are P-code ranging only (with 4 metre range errors), C/A-code ranging only (16 metre range errors), P-code assisted by Loran-C and C/A-code assisted by Loran-C. For this analysis Loran-C ranges to Cape Race, Angissoq and Sandur were assumed to have standard deviations of 140 m. In all cases it was assumed that the user's clock could be kept synchronized to GPS time independently from the GPS measurements, to within 0.3 microseconds. Based on these assumptions, it was found that in the Davis Strait area, combined P-code GPS and Loran-C should provide 150 metre positioning about 11 hours per day, with the present (1980) orbital configuration of six GPS satellites.

GPS performance with only six satellites is also a function of both latitude and longitude. In general high latitudes (60° and above) have poorer performance. The performance at low and middle latitudes depends on the relationship between the observer's meridian and the meridians travelled by the GPS satellite subtracks. Plots of the variation in the length of the GPS error ellipse semi major axis over a 24 hour period are presented for 14 different locations. Complete output listings are presented for three locations and several error models.

A full GPS constellation of 24 satellites was simulated. The two dimensional, P-code positioning accuracy in Davis Strait, using all visible satellites was uniformly of the order of five metres.

It is concluded that it is feasible to use GPS in its present limited deployment as an operational survey positioning system in the eastern Canadian arctic, provided the requirements of the survey are met by 150 metres or better positioning for about 11 hours per day.

ACKNOWLEDGEMENT

The software developed in the course of this work, and part of the analysis were funded by two Research Grants from the Natural Sciences and Engineering Research Council of Canada, one held by D.E. Wells and the other by P. Vanicek.

Part of the analysis contained in this report was performed under a contract funded by the Bedford Institute of Oceanography.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

1. Introduction

The purpose of this study is to analyze the performance of the Navigation Satellite Timing and Ranging (NAVSTAR) system, also known as the Global Positioning System (GPS), for the purposes of positioning at sea, during the partially implemented phase of NAVSTAR development (the period 1980 to 1987). The combination of NAVSTAR and passive ranging Loran-C is also investigated.

1.1 NAVSTAR status

NAVSTAR/GPS is presently under development by the United States Department of Defense. Phase one (concept validation) of this development has been completed. Phase two (full scale development) began during 1979. Phase three (production/development) is scheduled for the period 1983 to 1987 (Eckhardt, 1980).

Six prototype NAVSTAR satellites are now in orbit. This constellation will be maintained until operational satellites are placed in orbit, using the Space Shuttle, during the period 1985 to 1987. Once the full constellation of 18 or 24 NAVSTAR satellites are in place, continuous coverage from four or more satellites will be available anywhere on earth. This permits an instantaneous solution for four parameters - normally a three dimensional (3D) position and a time synchronization. Until 1985 at least, however, the six prototype satellites will provide coverage at any location on earth varying from no satellites up to all six satellites. This coverage is a function of time, as well as position, with a main period of twelve hours (NAVSTAR satellite orbital period).

1.2 Passive ranging

NAVSTAR positioning depends on passive ranging measurements, also known as pseudo-ranging and as "rho-rho" measurements. Atomic clocks in each NAVSTAR satellite are kept accurately synchronized with each other. Timing signals (using the technique of pseudo-random-noise or PRN data modulation on a carrier) are thus transmitted "simultaneously" from all satellites. The user measures the time of arrival of these signals, as compared to his own clock. Since his own clock will not in general be synchronized to the NAVSTAR satellite clocks, this synchronization must somehow be determined. There are two possibilities. Either an extra NAVSTAR passive ranging measurement can be used (self synchronization), or else some external method of synchronization can be used. In the latter case, an atomic clock is required by the user.

Passive ranging has been in use for some time with the Loran-C radionavigation system (Grant, 1976). In this case as well, synchronization can be accomplished internally (using an extra Loran-C range), or externally (using position fixes from some other system to "calibrate" the clock).

1.3 Study outline.

There are five ways in which NAVSTAR ranges can be used:

i) 3D fix with self-synchronization (requires four or more satellites).

ii) 3D fix with external synchronization (requiring three or more satellites).

iii) 2D fix with self-synchronization (requires three or more satellites).

iv) 2D fix with external synchronization (requires two or more satellites).

v) fix from combination of NAVSTAR with some other system (requires one or more satellites).

In this study we confine our interest to the last three possibilities.

In section 2 we develop the mathematical models required to compute a 2D error ellipse, given NAVSTAR satellite almanacs, user's position, and a passive ranging error model.

In section 3 we consider a selection of error models for passive ranging NAVSTAR, Loran-C, and user's clock synchronization.

In section 4 we present results of our analysis of NAVSTAR performance as a function of time, as a function of position (considering locations off Canada's east, north and west coasts, and in the north Atlantic), as a function of error model (isolating the effect of various factors in the error model), and in combination with Loran-C.

Details of these results, plotted and in tabular form, are contained in the appendices, as are the program listings used.

2. Mathematical models

2.1 NAVSTAR Satellite Positions.

The GPS user continuously receives navigation information from the GPS satellites in the form of data bits modulated on the received signals. This information includes the satellite's time, its clock correction and ephemeris parameters, almanacs and health for all GPS satellites (Van Dierendonck et al, 1978).

The satellite ephemeris presentation model is characterized by a set of parameters that is an extension of Keplerian elements plus secular drift terms and harmonic coefficients (ibid). The definitions of these parameters are given on Table 1. The mathematical models necessary for the determination of satellite positions into earth-fixed cartesian coordinates at specific transmission epochs are presented in a step by step fashion in Table 2.

2.2 Satellite Visibility Check

Because of the very high frequency of the GPS signals, visibility of GPS satellites is limited to the line of sight reception. To test for satellite visibility it is necessary to consider the coordinates of the satellite with respect to the observer's position on the surface of the earth.

The relative position of a satellite at $X_{S_i} = (x_{S_i}, y_{S_i}, z_{S_i})^T$ with respect to an observer given by $(\phi_{obs}, \lambda_{obs}, h_{obs})$ or by $X_{obs} = (x_{obs}, y_{obs}, z_{obs})^T$ is given by (Krakiwsky and Wells, 1971)

$$X_i^{AT} = X_{S_i}^{AT} - X_{obs}^{AT} \qquad (1)$$

where the superscript AT denotes the Average Terrestrial Coordinate System. After transformation to the observer's topocentric (local geodetic) system we have

TABLE I.

GPS Ephemeris Representation Parameters

Mo	Mean Anomaly at reference time.
$\Delta\eta$	Mean Motion difference from computed value.
e	Eccentricity.
$\sqrt{a}$	Square root of semi-major axis.
Ω_o	Right Ascension at reference time.
i_o	Inclination Angle at reference time.
ω	Argument of the Perigee.
$\dot{\Omega}$	Rate of Right Ascension.
C_{uc}, C_{us}	Cosine and Sine harmonic correction terms to the argument of latitude.
C_{rc}, C_{rs}	Cosine and sine harmonic correction terms to the orbit radius.
C_{ic}, C_{is}	Cosine and sine harmonic correction terms to the inclination.
t_{oe}	Ephemeris reference time.

TABLE 2

GPS satellite positions computation from broadcast ephemeris

$\mu = 3.986008 \cdot 10^{14}\ m^3/sec^2$	Universal Gravitational Constant (WGS 72)
$\omega_e = 7.292115147 \cdot 10^{-5}$ rad/sec	Earth's rotation rate (WGS 72)
$a = (\sqrt{a})^2$	Semi-major axis.
$n_o = \sqrt{\mu/a^3}$	Computed Mean Motion
$t_k = t - t_{oe}$	Time from reference epoch
$n = n_o + \Delta n$	Corrected Mean Motion
$M_k = M_o + nt_k$	Mean Anomaly
$M_k = E_k - e \sin E_k$	Kepler's equation for eccentric anomaly.
$COSV_k = (\cos E_k - e)/(1 - e \cos E_k)$ $SINV_k = \sqrt{1-e^2} \sin E_k/(1-e \cos E_k)$	True Anomaly
$\phi_k = V_k + \omega$	Argument of latitude.
$\delta u_k = C_{uc} \cos 2\phi_k + C_{us} \sin 2\phi_k$	Correction to the argument of latitude (2nd harmonic perturbations)
$\delta r_k = C_{rc} \cos 2\phi_k + C_{rs} \sin 2\phi_k$	Correction to the orbit radius (2nd harmonic perturbations)
$\delta i_k = C_{ic} \cos 2\phi_k + C_{is} \sin 2\phi_k$	Correction to the inclination angle (2nd harmonic perturbations)
$u_k = \phi_k + \delta u_2$	Corrected argument of latitude
$r_k = a(1-e \cos E_k) + \delta r_k$	Corrected orbit radius
$i_k = i_o + \delta i_k$	Corrected inclination
$x_k = r_k \cos u_k$ $y_k = r_k \sin u_k$	Position in orbital plane
$\Omega_k = \Omega_o + (\dot{\Omega} - \omega_e)t_k - \omega_e t_{oe}$	Corrected longitude of ascending node
$X_k = x_k \cos\Omega_k - y_k \cos i_k \sin\Omega_k$ $Y_k = x_k \sin\Omega_k + y_k \cos i_k \cos\Omega_k$ $Z_k = y_k \sin i_k$	Earth fixed coordinates

$$X_i^{Topo} = P_2 R_2(\phi_{obs} - 90°) R_3(\lambda_{obs} - 180°) X_i^{AT} \quad (2)$$

where P_2 represents a reflection on the y-axis, and R_2, R_3 represent rotations about the y and z axes respectively.

Once the position vector X_i^{Topo} is computed, visibility is only possible if

$$z_i^{Topo} \geq 0 \quad (3)$$

The azimuth of a visible satellite is then given by

$$A = \tan^{-1} \frac{y}{x} \quad (4)$$

and its elevation angle is given by

$$E = \tan^{-1} \frac{z}{(x^2 + y^2)^{1/2}} \quad (5)$$

2.3 Positioning Design Matrix

As already stated earlier NAVSTAR positioning depends on passive ranging measurements, also known as pseudo-range measurements. These are defined as the transit times of the satellite generated signals as observed by the user and scaled by the speed of light c. For a given observation, the true slant range R is represented by the equation

$$R = C(t_R - t_T) + e \quad (6)$$

Where t_R is the GPS received time, t_T is the GPS transmission time and e is the measurement error due to atmospheric delay, measurement noise and other user errors. The corresponding pseudo-range measurement is described as

$$\tilde{R} = R + C(\Delta t_u - \Delta t_s) + e \quad (7)$$

where Δt_s and Δt_u are the satellite's and user's clock offsets from the GPS reference time. The range R may be expressed in terms of the navigator's coordinates and the satellite position, so that the equation

$$F(X,L) \equiv \sqrt{(X_s - X_{OBS})^2 + (Y_s - Y_{OBS})^2 + (Z_s - Z_{OBS})^2} + c\Delta t_u$$

$$-c\Delta t_{s_i} + e_i - \tilde{R}_i \qquad , i = 1,2,\ldots,n \qquad (8)$$

summarizes the information from n satellites which is required for the computation of user position and user clock bias. The n equations represented by eqn. (8) can be linearized on the usual way using a first order Taylor series expansion about an approximate user position and clock bias $X°$. The linearized equations can then be written in expanded matrix form as

$$A\delta + BV + W = 0 \qquad (9)$$

where δ is a vector of corrections to the user's position and clock bias, V is the vector of residuals, W is the misclosure vector and A and B are design matrices with

$$B \equiv I \qquad (10a)$$

and

$$A = \frac{\partial F}{\partial X}\Big|_{X°} \qquad (10b)$$

In the 2-D case we consider here the design matrix A has rows having three elements such that

$$A_t = [\frac{\partial F}{\partial \phi} \; \frac{\partial F}{\partial \lambda} \; \frac{\partial F}{\partial \Delta t_u}]_t \qquad (11)$$

where t denotes time epoch and

$$\frac{\partial F}{\partial \phi} = [\frac{\partial F}{\partial x_t^\circ} \quad \frac{\partial F}{\partial y_t^\circ} \quad \frac{\partial F}{\partial z_t^\circ}] \frac{\partial}{\partial \phi} \begin{bmatrix} x_t^\circ \\ y_t^\circ \\ z_t^\circ \end{bmatrix} \qquad (12a)$$

$$\frac{\partial F}{\partial \lambda} = \left[\frac{\partial F}{\partial x_t^\circ} \quad \frac{\partial F}{\partial y_t^\circ} \quad \frac{\partial F}{\partial z_t^\circ} \right] \quad \frac{\partial}{\partial \lambda} \begin{bmatrix} x_t^\circ \\ y_t^\circ \\ z_t^\circ \end{bmatrix} \tag{12b}$$

$$\frac{\partial F}{\partial \Delta t_u} = c \tag{12c}$$

where the partial derivatives involved are given in Krakiwsky and Wells (1971) and McCaskill et al (1978) as

$$\frac{\partial F}{\partial X} = - \frac{X_s - X_{obs}^\circ}{R^\circ} \tag{13a}$$

$$\frac{\partial F}{\partial Y} = - \frac{Y_s - Y_{obs}^\circ}{R^\circ} \tag{13b}$$

$$\frac{\partial F}{\partial Z} = - \frac{Z_s - Z_{obs}^\circ}{R^\circ} \tag{13c}$$

$$\frac{\partial x}{\partial \phi} = \left[\frac{a}{(1-e^2\sin^2\phi)^{\frac{1}{2}}} + h\right] \sin\phi \, \cos\lambda + \frac{ae^2\sin\phi\cos^2\phi\cos\lambda}{(1-e^2\sin^2\phi)^{3/2}} \tag{14a}$$

$$\frac{\partial Y^\circ}{\partial \phi} = - \left[\frac{a}{(1-e^2\sin^2\phi)^{\frac{1}{2}}} + h\right] \sin\phi\sin\lambda + \frac{ae^2\sin\phi\cos^2\phi\sin\lambda}{(1-e^2\sin^2\phi)^{3/2}} \tag{14b}$$

$$\frac{\partial Z_t^\circ}{\partial \phi} = \left[\frac{a}{(1-e^2\sin^2\phi)^{\frac{1}{2}}} + h - \frac{ae^2}{(1-e^2\sin^2\phi)^{\frac{1}{2}}}\right] \cos\phi + \frac{ae^2(1-e^2)\sin^2\phi\cos\phi}{(1-e^2\sin^2\phi)^{3/2}} \tag{14c}$$

$$\frac{\partial X_t^\circ}{\partial \lambda} = \left[\frac{a}{(1-e^2\sin^2\phi)^{\frac{1}{2}}} + h\right] \cos\phi\sin\lambda \tag{14d}$$

$$\frac{\partial Y_t^o}{\partial \lambda} = [\frac{a}{(1-e^2 \sin^2\phi)^{\frac{1}{2}}} + h] \cos\phi\cos\lambda \quad (14e)$$

$$\frac{\partial Z_t^o}{\partial \lambda} = 0 \quad (14f)$$

2.4 Covariance Matrix of Position

Assuming that a weight matrix P is given for the errors corresponding to the n simultaneous (or near simultaneous) pseudo-range measurements to the n satellites, the estimate of δ is given by

$$\hat{\delta} = (A^T P A)^{-1} A^T PW \quad (15)$$

and the covariance of the corresponding error in the estimate of δ is given by

$$C_{\hat{\delta}} = (A^T PA)^{-1} \quad (16)$$

which is also the covariance of the adjusted solution vector

$$\hat{X} = X^o + \hat{\delta}$$

Once the covariance matrix of position matrix of position has been computed from eqn.(16) corresponding error ellipses can be computed in the usual manner whereby the semi-major (α) and semi-minor (β) axes are given by

$$\alpha = [\frac{\sigma_\phi + \sigma_\lambda}{2} + \sqrt{\frac{(\sigma_\lambda - \sigma_\phi)^2}{4} + \sigma_{\phi\lambda}^2}\ ]$$

$$\beta = \left[\frac{\sigma_\phi + \sigma_\lambda}{2} - \sqrt{\left(\frac{\sigma_\lambda - \sigma_\phi}{4}\right)^2 + \sigma_{\phi\lambda}^2}\right]$$

and the orientation of the error ellipse is given by

$$\Theta = \tfrac{1}{2} \tan^{-1} \frac{2\sigma_{\phi\lambda}}{\sigma_\lambda - \sigma_\phi}$$

3. Error models

3.1 NAVSTAR Error Models

The level of navigation performance with the GPS is a direct result of the waveform characteristics of the GPS satellite signals. Operation with either the P or C/A code to a large extent establishes the navigation accuracy level which can be achieved by the user. The environmental medium and propagation link in which the signals are transmitted and received are also significant performance constraints on GPS. The basic NAVSTAR error models and the term which may be employed in a performance analysis have been discussed by Martin (1978), and also by Gilbert (1979). A summary of this error budget, which was also used for the present analysis, is given in table 3.

3.2 LORAN-C Error Models

Examining the combined performance of GPS with LORAN-C associated standard deviations for the LORAN ranges were computed using the empirical relationship (pers.comm. Grant)

$$\sigma_L = 100/\sqrt{SNR} \quad (m)$$

where SNR is the signal-to-noise ratio of the measured ranges which can typically be 0.5 for a weak signal or 10.0 for a strong signal. From recent operations on Davis Strait the accuracy of LORAN ranging to Saglek, Cape Race and Angissoq was of the order of 100 to 280 m, from table 4. For the present analysis LORAN ranging to Cape Race, Angissoq and Sandur was assumed with obtainable accuracies of $\sim$140 m, i.e.SNR = 0.5

TABLE 3.

GPS Error Budget expressed as

uncorrelated equivalent range errors (m)

	P-Code	C/A-Code
Satellite Ephemeris	1.5	1.5
Satellite Clock Delay	0.9	0.9
Pseudorange Noise	1.0	10.0
Range Quantization	0.3	0.3
Mechanization	1.0	10.0
Ionospheric Dual Frequency Compensation	3.0	
Uncompensated ionospheric delay		
Daytime		5.0 to 15.0
Nightime		0.5 to 1.5
Tropospheric Delay	1.0	1.0
Multipath	1.2	5.0
Rms	4.0 m	16 to 21 m

TABLE 4

Loran Measurements in Davis Strait*
($\phi = 66^\circ\ 45'$)

To	Noise N	S/N = 128/N	$\sigma_L = 100/\sqrt{S/N}$
Saglek	1000	0.13	280 m
Cape Race	377	0.34	170 m
Angissoq	135	0.95	100 m

* After Grant (October 1980, personel communication).

3.3 Clock synchronization Error

To further enhance the analysis of the NAVSTAR navigation performance it was assumed that clock synchronization can be retained within 0.3 μsec (∿ 100 m in equivalent range) and that the navigator knows his position within 10° in ϕ and λ.

This information was incorporated into the model by treating ϕ, λ and Δt_u as "pseudo-observables" with weight matrix P_x, and rewriting equation (16) as

$$C_{\hat{\delta}} = (A^T P A + P_x)^{-1}$$

4. Results

Some aspects of the nature of GPS orbits and the combination of their lines of position are discussed in section 4.1.

For the purposes of this report, GPS performance was measured by the length of the semi-major axis of the error ellipse computed as described in section 2.4. This performance was evaluated as a function of time, as a function of position, and as a function of error model, both alone and in combination with LORAN-C. Results are given in Sections 4.2, 4.3 and 4.4.

For the purposes of this report, LORAN-C transmitters were treated as "stationary" GPS satellites, located on the surface of the earth. That is rho-rho LORAN-C was treated as measuring chord distances through the earth, rather than geodesic distances over the surface of the earth. This introduces a spurious dip of up to 10° below the horizon for the range vector, but this will propagate only weakly into the determination of the two-dimensional horizontal design matrix in equation 16.

4.1 GPS orbit geometry

Because of their high altitude (20,000 km) GPS spacecraft are visible at spherical distances of up to 76°.

Due to their twelve hour orbital period and the small precession of their orbit planes, GPS satellites ground tracks repeat from day to day nearly exactly.

Due to their 63° orbit plane inclination and twelve hour period, the GPS ground tracks plot almost like a square wave on a mercator plot. In contrast to Transit satellite ground tracks, GPS ground tracks move from west to east. Figures 1 and 2 show GPS ground tracks plotted on a polar

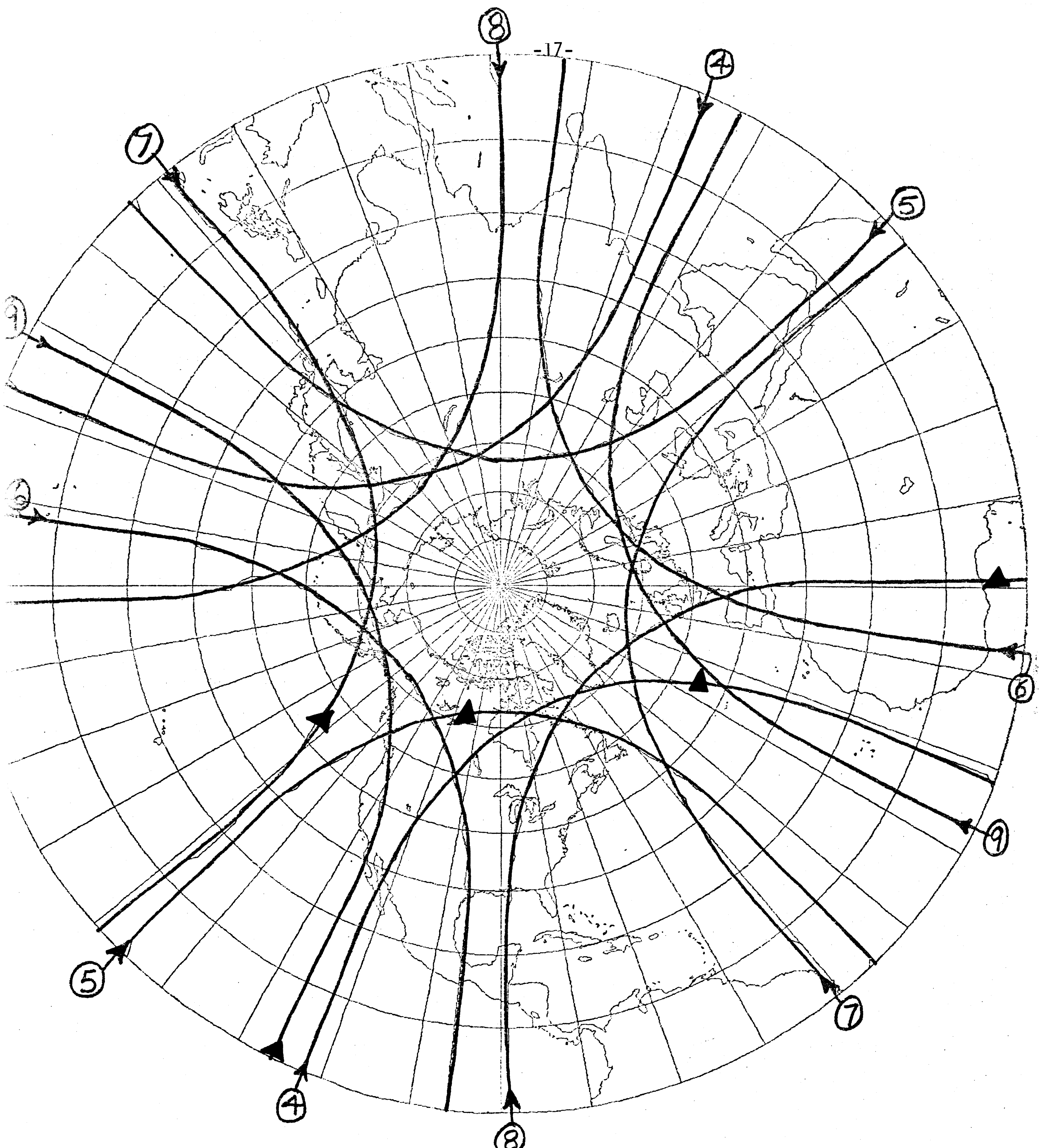


Figure 1.
SUBTRACKS OF SIX GPS
SPACE VEHICLES IN ORBIT
AS OF 1 OCTOBER 1980.
SHOWING VISIBLE SVS FROM
65°N, 60°W, AS OF 0019 UT

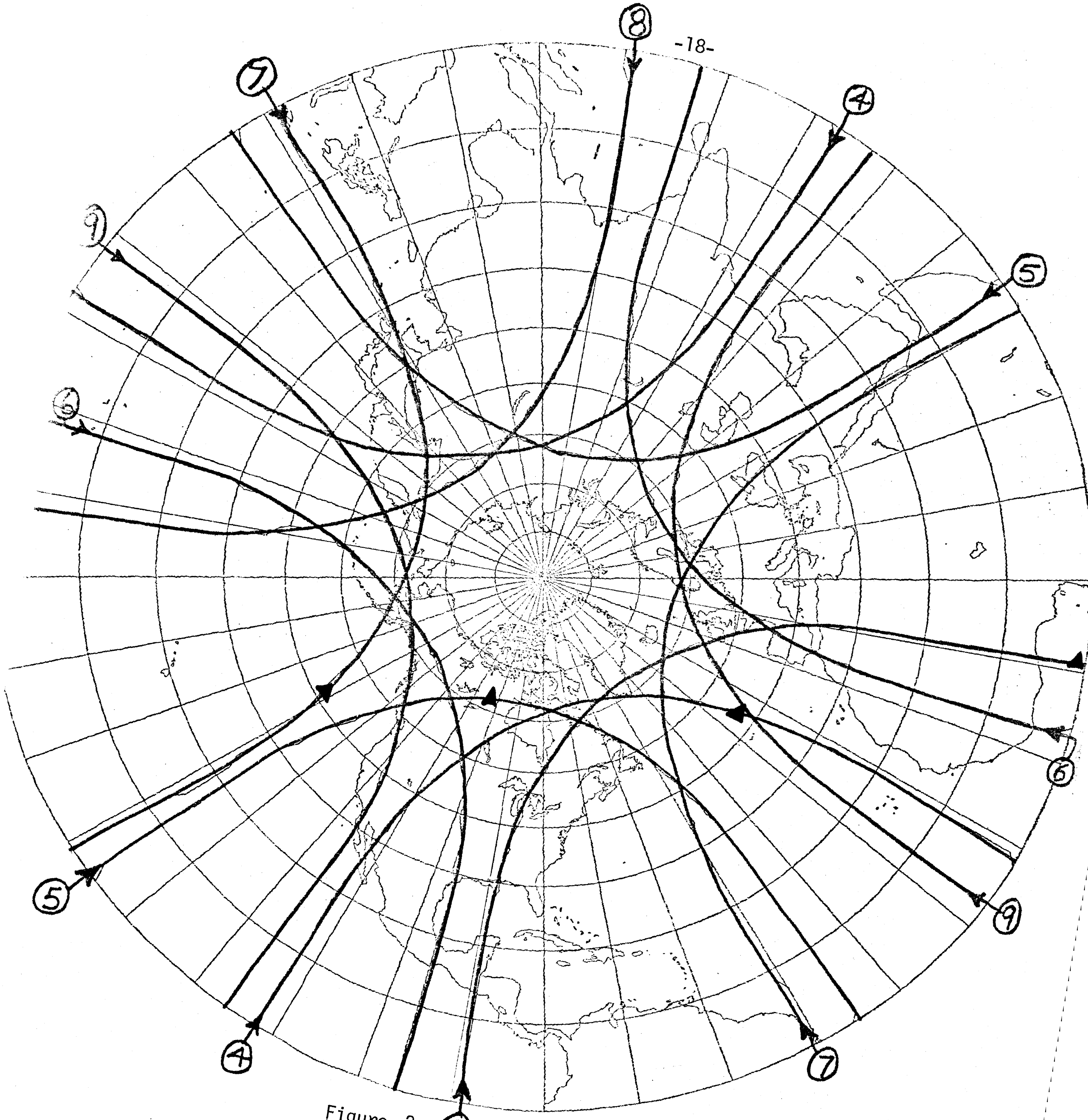


Figure 2.
SUBTRACKS OF SIX GPS SPACE VEHICLES IN ORBIT AS OF 1 OCTOBER, 1980. SHOWING VISIBLE SVS FROM 65°N, 60°W, AS OF 0024 UT

stereographic projection.

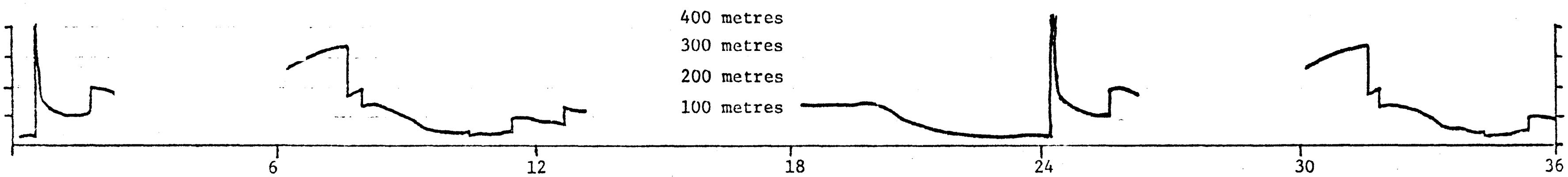
The combination of lines of position from GPS satellites at a given tracking station changes with time as satellites rise and set over the horizon, and change position relative to each other and to the tracking station. In particular, if a satellite providing a particularly strong geometry sets, the combined positional accuracy may change dramatically. Figures 1 and 2 illustrate an example of this. Figure 1 shows the five GPS satellites visible from Davis Strait (65°N, 60°W) as of 0019 hours on 1 October 1980. Note that satellites 7,5,4 and 8 are almost collinear with Davis Strait, but satellite 9 is not. Figure 2 shows the situation five minutes later. Satellite 9 has set and the remaining satellites are even more collinear with Davis Strait. The error ellipse semi major axes at Davis Strait corresponding to Figures 1 and 2 respectively are 31 and 414 metres.

Figure 3 shows a 36 hour record of this semi major axis at Davis Strait. Each of the discontinuities corresponds to the rise or set of a satellite which significantly changes the strength of the geometry.

FIGURE 3.

SEMI-MAJOR AXIS OF ERROR ELLIPSE USING GPS ALONE (IF MORE THAN 3 SATELLITES) AND IN COMBINATION WITH LORAN-C (IF FEWER)

FOR DAVIS STRAIT ($65^{o}N$, $60^{o}W$)   USING P-CODE



HOURS FROM 0000 HOURS UT OCTOBER 1, 1980

4.2 GPS performance as a function of time

There are three aspects to this analysis. Most important is the variation in GPS performance during a 24 hour cycle. Second is the variation from day to day, and third is the variation from year to year.

The present constellation of six satellites was assumed throughout. The performance during a 24 hour cycle is characterized by periods of no satellites, periods of excellent multisatellite geometry, and periods in between these extremes. Performance characteristics were computed at five minute intervals for 24 hour time spans. Appendix C contains the results. The performance characteristics used are the combined error ellipse semi-major axis, semi-minor axis, and orientation; the number of satellites visible; and the elevation, azimuth, and subtrack latitude and longitude for each visible satellite.

A typical plot of the error ellipse semi-major axis is shown in figure 3. A full set of plots is contained in Appendix B.

Plots of the portion of each day for which GPS provides a specified accuracy (as measured by the error ellipse semi-major axis) are shown in figures 4,5,6 and 7, 8 and 9.

Analysis of the variation from day to day and year to year is limited by the fact that only one set of GPS almanacs was available, and these almanacs accurately represent actual GPS orbits only at the time of transmission. According to van Dierendonk (1978) the almanac error is 1 km after 1 day and 20 km after 5 weeks. A time series of almanacs would be required for a more detailed analysis.

From the 36 hour results listed in Appendix B, it can be seen that the orbit periods differ by a few minutes from exactly 24 hours. This is equivalent to an along track precession of several hundred kilometers (at

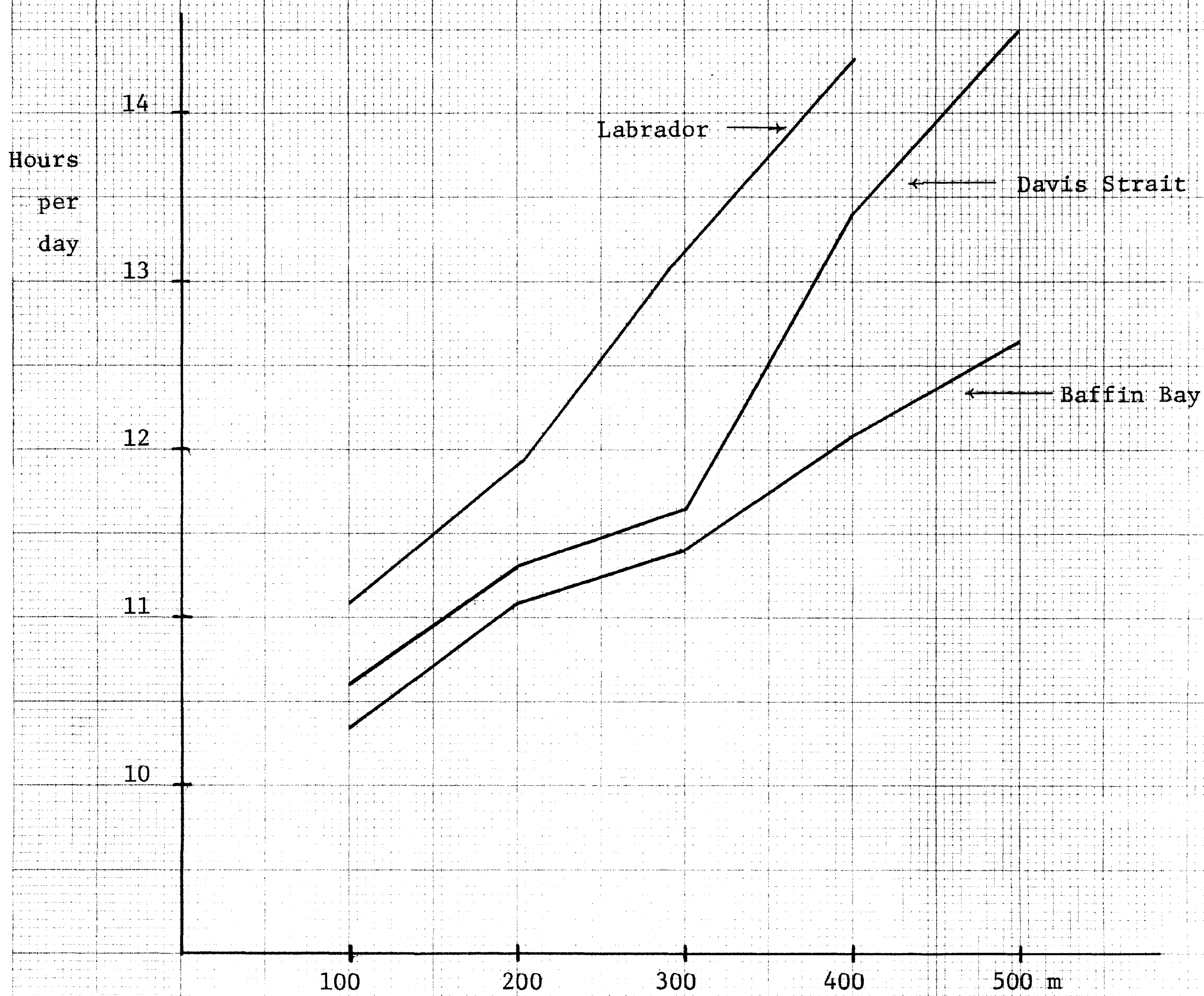


Figure 4

GPS performance as a function pf position

Hours per day for which the GPS P-code ranging error ellipse semi-major axis is below a specified value.

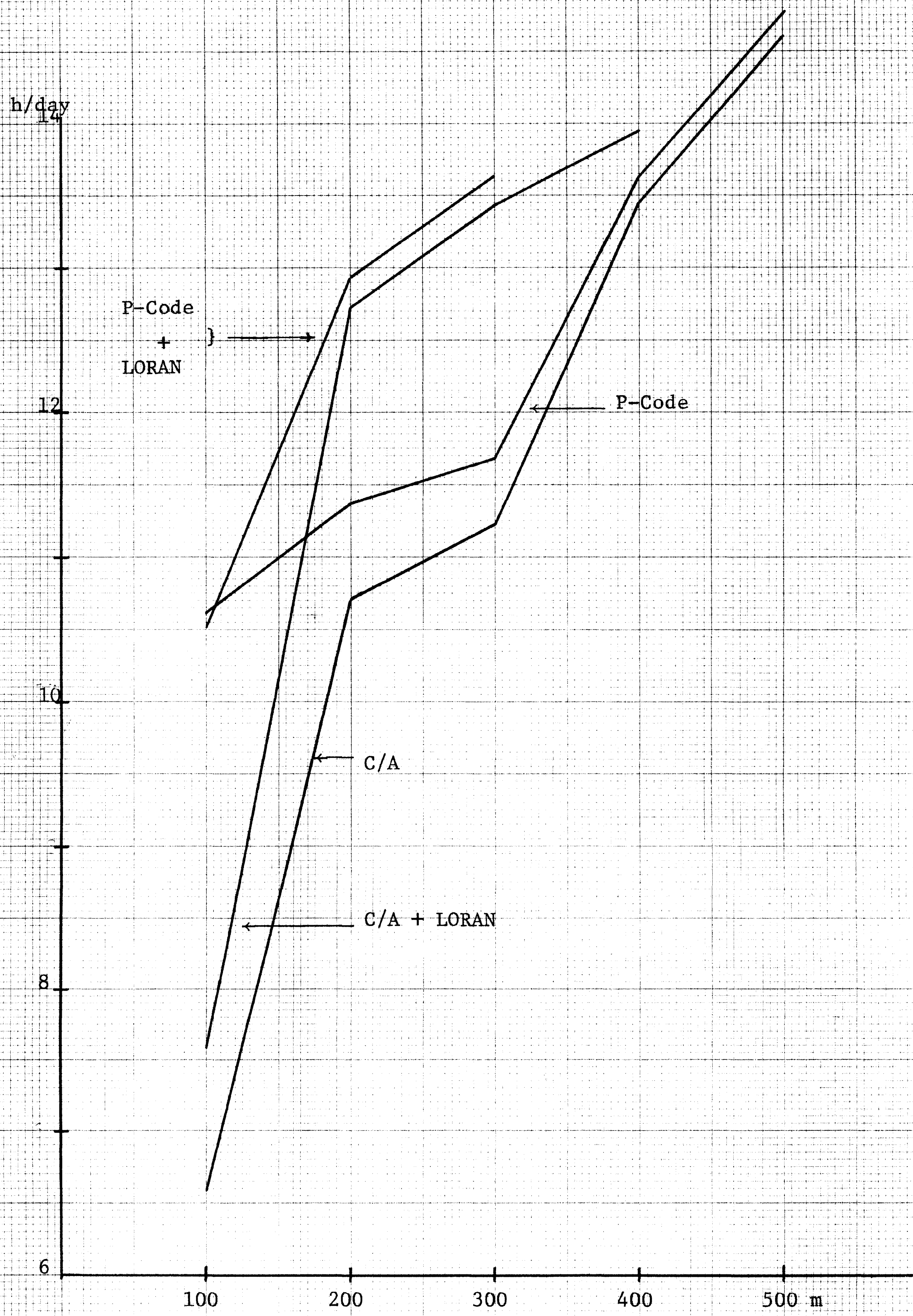


Figure 5.
GPS performance as a function of error model for Davis Strait. Hours per day for which the GPS/loran error ellipse semi-major axis is below a spedified value.

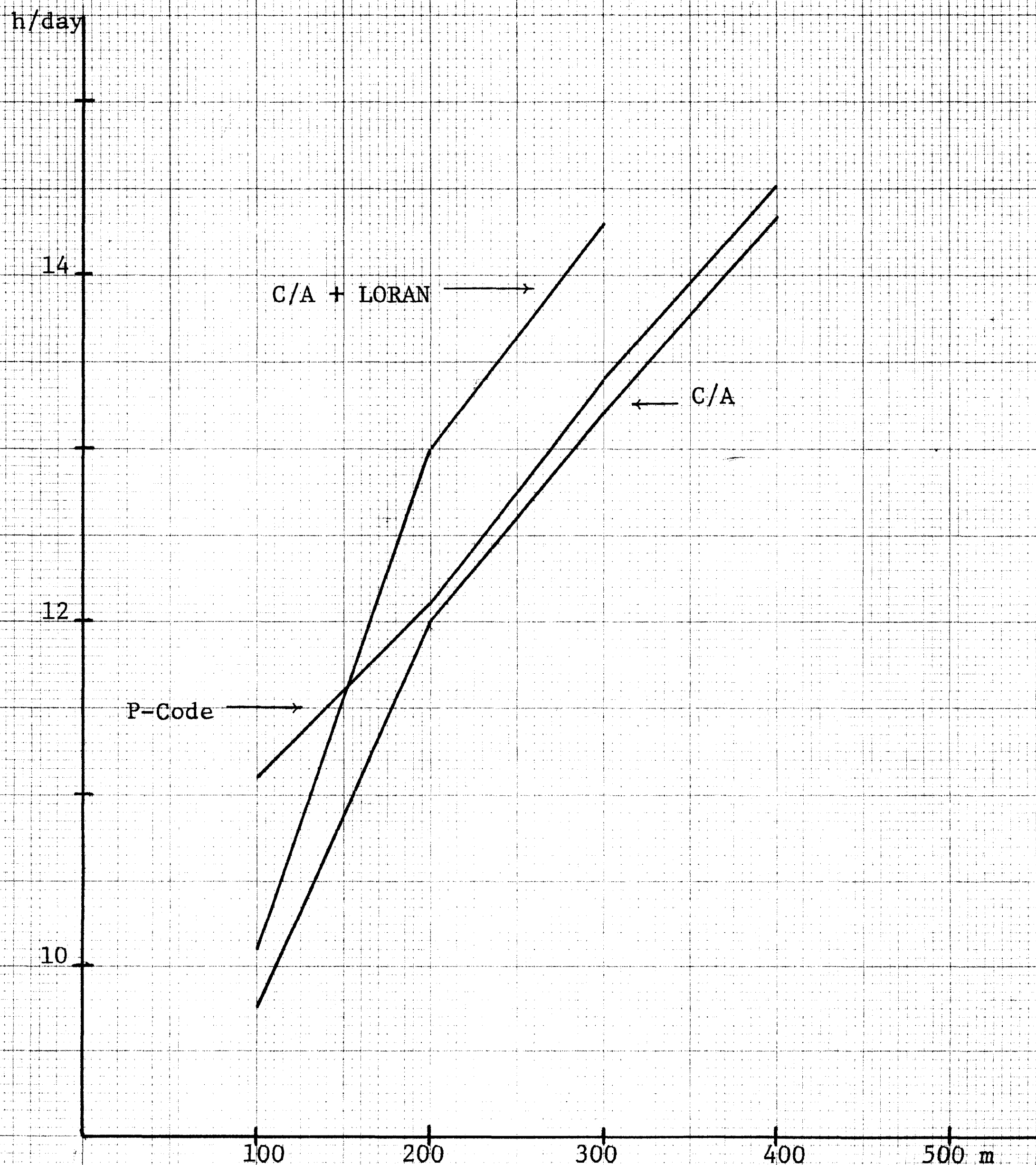


Figure 6.
GPS performance as a function of error model for Labrador sea. Hours per day for which GPS/LORAN error ellipse semi-major axis is below a specified value.

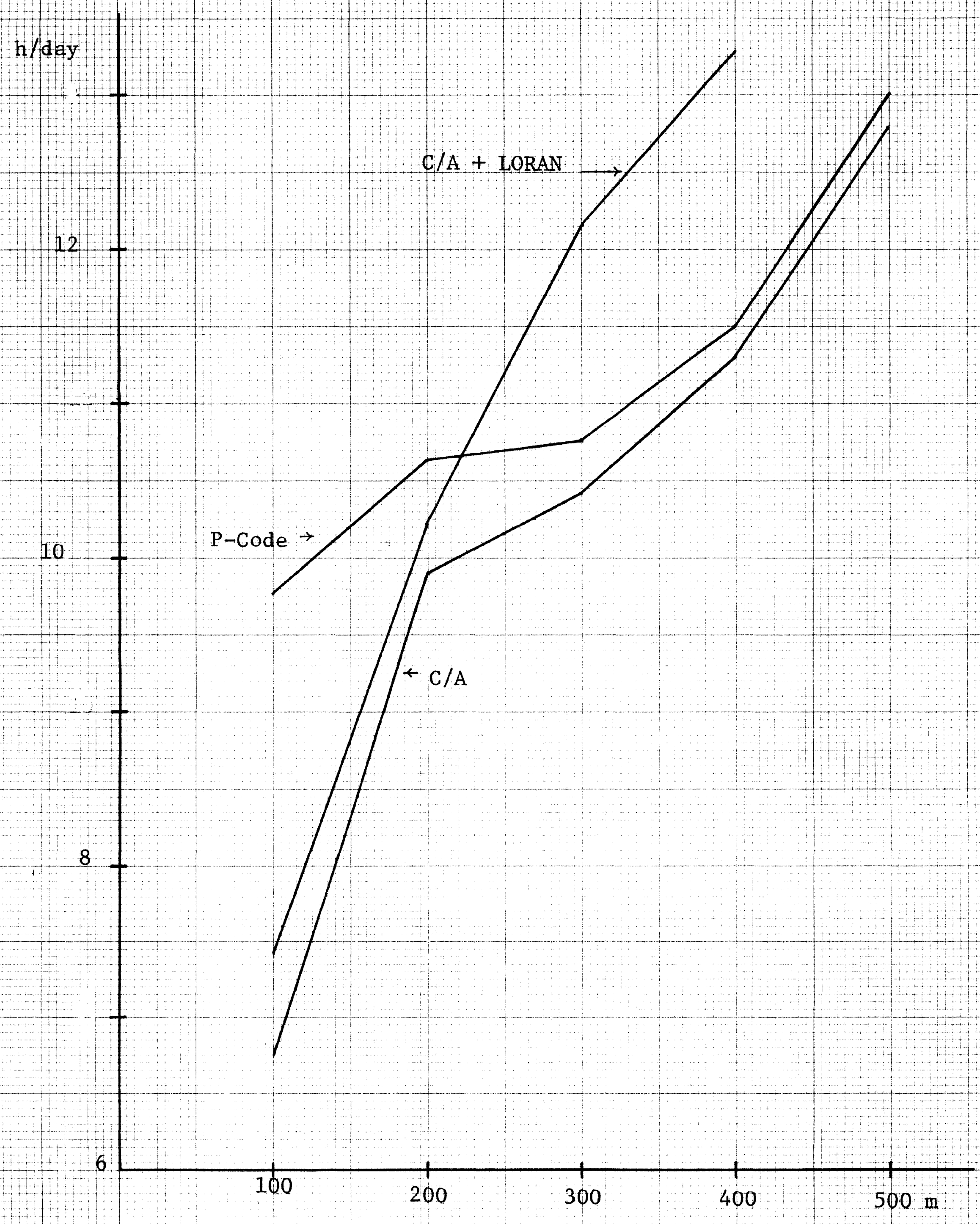


Figure 7
GPS Performance as a function of error model for Baffin Bay. Hours per day for which GPS/LORAN error ellipse semi-major axis is below a specified value.

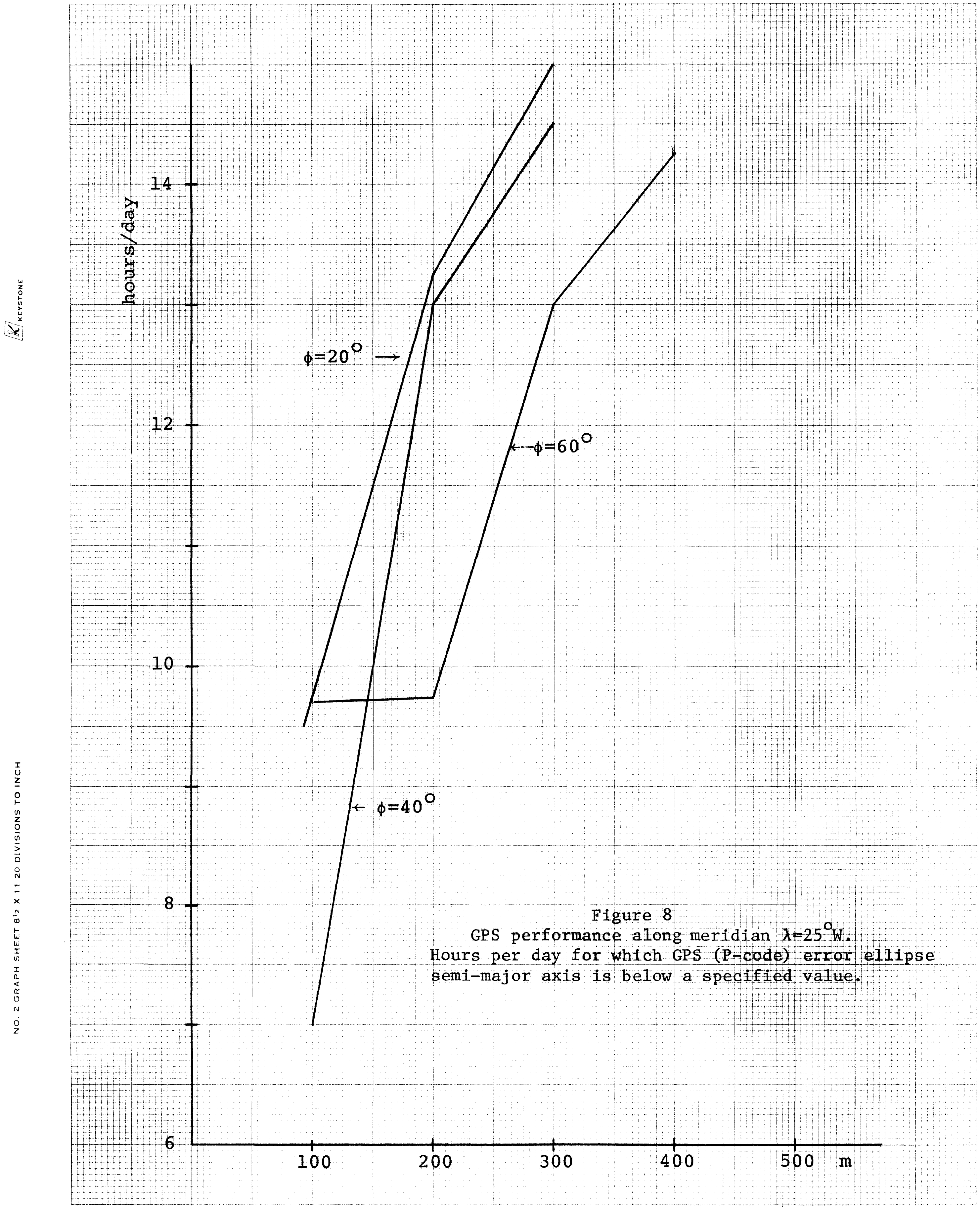


Figure 8
GPS performance along meridian $\lambda=25^{\circ}$W.
Hours per day for which GPS (P-code) error ellipse semi-major axis is below a specified value.

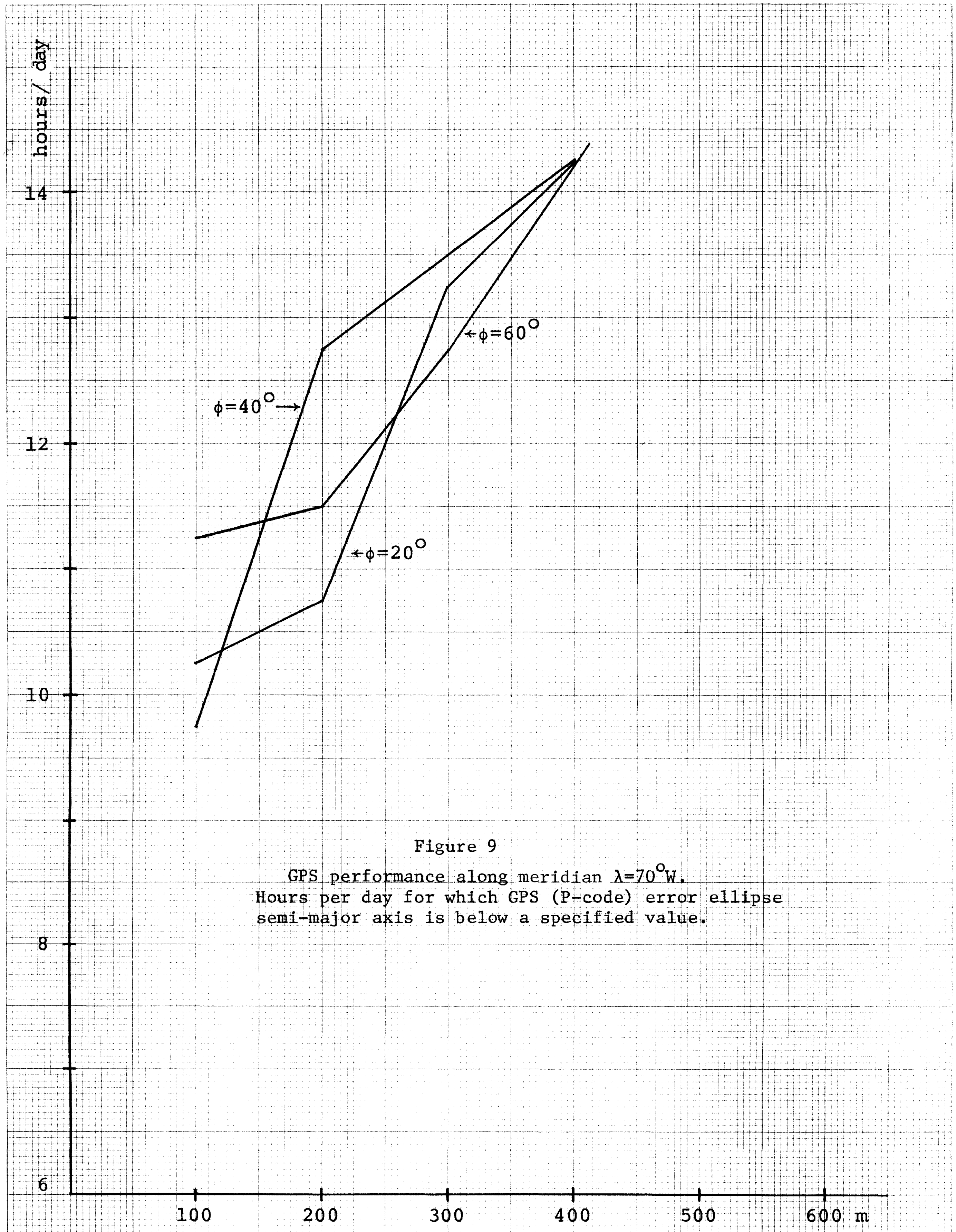


Figure 9

GPS performance along meridian λ=70°W.
Hours per day for which GPS (P-code) error ellipse semi-major axis is below a specified value.

orbit altitude) per day. This appears to be outside the error of the almanacs, and hence probably represents a real (but slight) change in the orbit configurations from day to day.

A special run was made, using the same almanacs, for 1 October, 1981, and compared with the 1980 results. This indicated that the orbit planes precess by a few degrees per year. This is likely within the error of the almanacs, and no firm conclusion should be drawn.

4.3 GPS performance as a function of position

Three tracking station positions were selected for analysis. They are Labrador (55°N, 65°W), Davis Strait (65°N, 60°W) and Baffin Bay (70°N, 68°W). The results are contained in Appendix B.

Figure 4 compares GPS performance at each of these three positions, expressed in terms of the number of hours per day that GPS accuracy measured by the error ellipse semi-major axis) was below a specified value. For example, from this preliminary analysis GPS accuracy is predicted to be 150 metres or better for 11.5, 11.0 and 10.75 hours per day at Labrador, Davis Strait and Baffin Bay respectively.

4.4 GPS performance as a function of error model

Two simple error models were chosen for GPS ranges, using the data of Table 3. P-code ranging was assumed to have a standard deviation of 4 metres, and C/A-code ranging standard deviation to be 16 metres.

Rho-Rho LORAN-C ranging from Angissoq and Cape Race were both assumed to have standard deviations of 140 metres at all tracking stations. According to the data of Table 4 this was probably a reasonable choice for Davis Strait. It is probably too pessimistic for Labrador. Baffin Bay is probably beyond the groundwave range for Angissoq and Cape Race.

A priori standard deviations of 10° in latitude and longitude were assigned to the tracking station coordinates. An a priori standard deviation of the tracking station clock synchronization, expressed in terms of equivalent range, of 100 metres was assumed.

In the absence of these a priori standard deviations (weighted constants) the C/A code error ellipses are exactly four times the size of the P-code error ellipses. However when the weighted constraints are included this is no longer true.

The algorithm chosen for the combination of GPS and LORAN-C was; a) if four or more GPS satellites were visible, a GPS-only error ellipse was computed; b) if one to three GPS satellites were visible a combined GPS-LORAN error ellipse was computed; c) if no GPS satellites were visible, no error ellipse was computed.

Runs were made at each of the three tracking stations for each of three conditions:

a) P-code ranging without LORAN

b) C/A-code ranging without LORAN

c) C/A-code ranging with LORAN

The results are summarized in Figures 5,6 and 7. Figure 5 alone shows results from P-code ranging with LORAN. Figure 5 indicates that 150 metre or better positioning is predicted for 8.5, 10.0, 11.0 and 11.75 hours per day at Davis Strait, using C/A only, C/A + LORAN, P only and P with LORAN respectively.

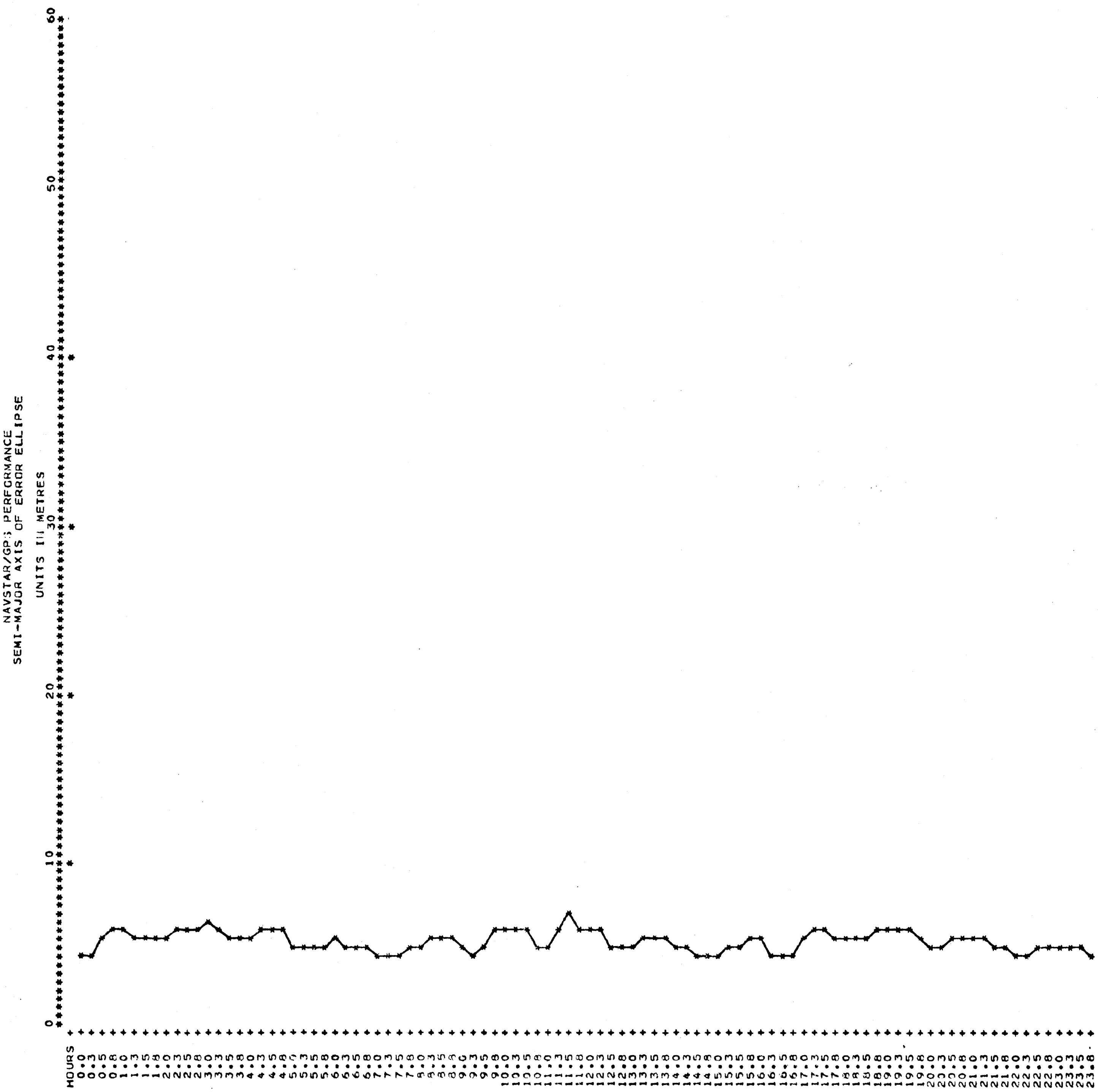
The weighted constraint of 100 metres equivalent range (or 0.33 microseconds) on the clock synchronization implies the use of an atomic frequency standard, and of some external method of maintaining synchronization (for example Transit fixes to check GPS range measurements). However, as long as there are three or more GPS satellites with good geometry, the GPS-only solution for synchronization overwhelms the influence of this weighted constraint. From two special runs at Davis Strait with this constraint removed, 150 metre or better positioning is predicted for 11.0 and 11.3 hours per day using P code only and P code with LORAN. This is essentially unchanged from the previous results. On the other hand a priori knowledge of the clock synchronization as represented by this weighted constraint does mean that GPS fixes are possible with only two satellites.

4.5 Fully implemented GPS performance

The performance of a full GPS constellation of 24 satellites was simulated by generating almanacs for satellites spaced 45° apart in mean anomaly M_0, in each of three orbit planes separated in right ascension by 120° and inclined at 63°.

For this analysis, all visible satellites were used in a two dimensional position fix, with the clock synchronization constrained as above. This of course differs from the usually proposed mode of four parameter fixes (three dimensions plus clock synchronization)using only the best four of the available satellites.

Using P-code only, the results shown in Figure 10 indicate continuous coverage, with the standard error ellipse semi major axis at about 5 metres.



Davis Strait (65°N, 60°W) using P-code.
Full satellite constellation.

Figure 10.

5. Conclusions

During the present phase of GPS development, during which only limited GPS coverage is available, the variation in GPS performance has a predominant 24 hour cycle. The nature of this cycle is strongly dependent on the number and relative positions of the GPS satellites, and were weakly dependent on the receiver position.

The 24 hour cycle evolves slightly from day to day as the satellites precess, however more information on the variation of GPS satellite almanac parameters with time is required before firm conclusions can be drawn on the nature of this evolution.

The results presented here predict that the present six-satellite GPS configuration will provide 150 metre or better positioning about 11 hours per day for the area studied (Labrador to Baffin Bay). This coverage degrades slightly as latitude of the tracking station increases, and is worse for C/A-code GPS ranging unaided by LORAN-C.

The main objective of this study was to assess the feasibility of using GPS in its present limited deployment as an operational survey positioning system in the eastern Canadian arctic. Consistant with this objective the mathematical models and error models used, while reasonably realistic, are simple and contain several approximations identified in this report. The principal conclusion of this report then is:

> It is feasible to use GPS if 150 metres or better positioning for about 11 hours per day meets the requirements of an operational survey.

It is deemed that the approximations used in this analysis will not affect this principal conclusion.

REFERENCES

Eckhardt (1980) - "The Global Positioning System", Hydrographic Society Spec. Publ. No. 7.

Gilbert, G.A.(1979) - "Civil Applications of NAVSTAR GPS", AGARD-AG-245, July.

Grant, S.T. (1976) - "Integration of passive LORAN-C, satellite navigation, ship's log and gyrocompass", M.Sc. Thesis, Department of Surveying Engineering, University of New Brunswick.

Krakiwsky, E.J. and Wells, D.E. (1971) - "Mathematical Models for Positioning by Satellite", Lecture Notes No. 17, Department of Surveying Engineering, University of New Brunswick

Martin, E.H.(1978) - "GPS user equipment error models", Journal of Navigation, Vol. 25, No. 2, p. 201.

McCaskill, T., Buisson, J. and Buonaguro, A. (1978) - "A Sequential Range Navigation Algorithm for a Medium Altitude Navigation Satellite", Journal of Navigation, Vol. 23, No. 2, P 164.

Van Dierendonck, A.J. Russell, S.S., Kopitzke, E.R. and Birnbaum, M. (1978) - "The GPS Navigation Message", Journal of Navigation, Vol. 25, No. 2. p. 147.

Wells, D.E. (1971) - "Orbital Information from the U.S. Navy Navigation Satellite System", Lecture Notes No. 19, Department of Surveying Engineering, University of New Brunswick.

APPENDIX A PREANALYSIS SOFTWARE

This Appendix contains a listing of the software used to generate the results in this report. It consists of a main routine and eleven subroutines.

```
      IMPLICIT REAL*8(A-H,O-Z)
      REAL *8 MO , INC , NO , MK
      INTEGER ELEV , AZIM , SLAT , SLON , EA , EB , PHI
C
      DIMENSION SLAT(6) , SLON(6)
      DIMENSION SIGRG(3) , SIGLRN(2) , PRN(2), XLAT(3) , XLON(3)
      DIMENSION MO( 6) , DN( 6) , E( 6) , A( 6) , CW( 6) , INC( 6) ,
     #          W( 6) , CWD( 6) , TOE( 6) , ISAT( 6) , NO( 6) ,
     #          JD( 6) , TJD( 6) , IH( 6) , IM( 6) , IS( 6)
      DIMENSION ELEV( 6) , AZIM( 6) , EPOCH( 6) , XS(3)
      DIMENSION DA(6,3),ATPA(3,3),IW1(3),IW2(3)
      DIMENSION PX(3)
C
      COMMON /PLOTS/ XMIN,XMAX
      COMMON /ALMNAC/ A, MO , NO , E , W , INC , CW , CWD ,
     #                TOE , EPOCH , ISAT
C
      XMIN=0.D0
      XMAX=600.D0
      CALL PLINIT(8,120)
      PI = DARCOS(-1.D0)
      RHO = PI/180.D0
C
      DATA ICR /5/ , IPR/6/ , PRN / 8HPRECISE , 8H   C/A   /
C
C    REFERENCE ELLIPSOID PARAMETERS
C
      DATA  GM /3.986008D14/ , WE /7.2921151470-5/
      DATA AE / 6378135.D0 / , BE / 6356750.5D0 /
C
      DATA XLAT / 46.7756055600  , 59.9881305500 , 64.9073833300 /
      DATA XLON / 306.8255111D0 , 314.8257028D0 , 336.0772917D0 /
C
C
C    (UNCORRELATED) RANGE ERROR SCHEDULES
C        MCODE = 1 , PRECISE MODE , SIGRG = 4.00 M
C
C                2 , C/A MODE , SIGRG = 16.00 M
C                3 , SIGRG = 1.00 (IDENTITY WEIGHT MATRIX)
C
      SIGRG(1) = 4.0D00
      SIGRG(2) = 16.0000
      SIGRG(3) = 1.0000
C
      PX(1) = 1./100.D0
      PX(2) = 1./100.D0
      PX(3) = 1./10000.D0
C
C    LORAN RANGE ERROR SCHEDULES
C
C        MLORN = 1 , WEAK SIGNAL(S/N RATIO SNR=0.5)
C                2 , STRONG SIGNAL(S/N RATIO SNR=10.0)
C
      SIGLRN(1) = 100. / DSQRT(0.5D0)
      SIGLRN(2) = 100. / DSQRT(10.D0)
C
      DO 20 I = 1,3
      XLAT(I) = XLAT(I) * RHO
   20 XLON(I) = XLON(I) * RHO
C
      READ(ICR,1001) OLAT,OLONG,HT,DAY1,ELMIN,NSAT,MCODE,MLORN,LORAN
      IF(OLONG.LT.0.D0) OLONG = OLONG + 360.D0
C
C
      SNR = 0.5
      IF(MLORN .EQ. 2) SNR = 10.
      WRITE(IPR,2016) OLAT,OLONG,PRN(MCODE),SIGRG(MCODE),SNR
```

```
C
C   READ SATELLITE ALMANAC
C
C        ISAT - SATELLITE NUMBER
C        TOE  - ALMANAC REFERENCE TIME; TIME OF THE WEEK (SEC)
C        A    - SQUARE ROOT OF THE SEMI-MAJOR AXIS
C        MO   - MEAN ANOMALY AT REFERENCE TIME (RAD)
C        E    - ECCENTRICITY
C        W    - ARGUMENT OF THE PERIGEE (RAD)
C        INC  - INCLINATION ANGLE AT REFERENCE TIME (RAD)
C        CW   - RIGHT ASCENSION AT REFERENCE TIME (RAD)
C        CWD  - RATE OF RIGHT ASCENSION (RAD/SEC)
C        JD   - ALMANAC REFERENCE TIME; JULIAN DAY OF YEAR
C        TJD  - TIME OF JULIAN DAY
C
      DO 10 I = 1,NSAT
      READ(ICR,1000) ISAT(I),TOE(I),A(I),MO(I),E(I),W(I),INC(I),
     #               CW(I),CWD(I),JD(I),TJD(I)
      NO(I) = DSQRT(GM)/(A(I)**3)
      A(I) = A(I)**2
      EPOCH(I)  = DFLOAT(JD(I)) + TJD(I)/86400.
      TOJD = TJD(I)
      CALL HHMMSS (TOJD,IH(I),IM(I),IS(I))
   10 CONTINUE
      I1 = 1
   13 I2 = I1 + 5
      IF(I2.GT.NSAT) I2 = NSAT
      WRITE(IPR,2001) (ISAT(I),I=I1,I2)
      WRITE(IPR,2002) (TOE(I),I=I1,I2)
      WRITE(IPR,2011) (JD(I),IH(I),IM(I),IS(I),I=I1,I2)
      WRITE(IPR,2003) (A(I),I=I1,I2)
      WRITE(IPR,2004) (MO(I),I=I1,I2)
      WRITE(IPR,2005) (E(I),I=I1,I2)
      WRITE(IPR,2006) (W(I),I=I1,I2)
      WRITE(IPR,2007) (INC(I),I=I1,I2)
      WRITE(IPR,2008) (CW(I),I=I1,I2)
      WRITE(IPR,2009) (CWD(I),I=I1,I2)
      WRITE(IPR,2010) (NO(I),I=I1,I2)
      IF(I2.EQ.NSAT) GO TO 12
      I1 = I2 + 1
      GO TO 13
   12 CONTINUE
      WRITE(IPR,2014)
      WRITE(IPR,2012) ISAT

      WRITE(IPR,2015)
C
      HOUR = 0.D0
      FSTDAY = DAY1
   14 DAY1 = FSTDAY + HOUR/24.D0
C
      NN = 0
      DO 11 I = 1,NSAT
C
C   COMPUTE SATELLITE (EARTH FIXED)  COORDINATES
C
      CALL SATVEC(I,DAY1,XS)
      CALL XYZPLH(XS(1),XS(2),XS(3),PLAT,PLON,HSAT)
C
C   COMPUTE LAT AND LONG OF SATELLITE SUBPOINT
C
      SLAT(I) = DINT(PLAT/RHO)
      SLON(I) = DINT(PLON/RHO)
```

```
C
C
C     COMPUTE SATELLITE AZIMUTH , ELEVATION ANGLE , SLANT RANGE AND
C     ITS DERIVATIVE WITH RESPECT TO LAT AND LONG
        CALL DERIV (IPR,AE,BE,OLAT,OLONG,HT,XS,S,DSDP,DSDL,EL,AZ,IER)
C
        ELEV(I) = DINT(EL)
        AZIM(I) = DINT(AZ)
C
        IDAY = DAY1
        TOD = HOUR*3600.D0
        CALL HHMMSS (TOD,IHR,IMIN,ISEC)
        IHR = MODULO(IHR,24)
        T=DFLOAT(IHR)+IMIN/60.D0
C
C     CHECK FOR MINIMUM ELEVATION ANGLE
        IF(EL .LT. ELMIN) GO TO 17
        NN = NN + 1
C
C     FORM DESIGN MATRIX
C
        WGTRG = 1.D0/SIGRG(MCODE)
           DA(NN,1) = DSDP * WGTRG
           DA(NN,2) = DSDL * WGTRG
           DA(NN,3) = 1.D0 * WGTRG
C
        GO TO 11
   17   ELEV(I) = 0
        AZIM(I) = 0
        EA = 0
        EB = 0
        PHI = 0
        EEA = 0.
C
   11   CONTINUE
        NPR = NN
        LRN = 0
        IF(NN .GT. 3) GO TO 18
        IF(NN .LT.2) GO TO 16
        IF(LORAN .EQ. 0) GO TO 18
C
C     IF LESS THAN 3 PSEUDO-RANGES AVAILABLE TRY COMBINED PERFORMANCE
C     WITH LORAN RANGES
C
       DO 19 L = 1,3
       CALL PLHXYZ(XLAT(L),XLON(L),0.D0,0.D0,0.D0,0.D0,AE,BE,XX,YY,ZZ)
       XS(1) = XX
       XS(2) = YY
       XS(3) = ZZ
       CALL DERIV(IPR,AE,BE,OLAT,OLONG,HT,XS,S,DSDP,DSDL,EL,AZ,IER)
       LRN = LRN + 1
       NN = NPR + LRN
C
       WGTRG = 1./SIGLRN(MLORN)
          DA(NN,1) = DSDP * WGTRG
          DA(NN,2) = DSDL * WGTRG
          DA(NN,3) = 1.D0 * WGTRG
   19  CONTINUE
   18  CONTINUE
       CALL MATMPY(DA,DA,ATPA,3,NN,3,6,6,3,2)
       DO 30 II = 1,3
   30  ATPA(II,II) = ATPA(II,II) + PX(II)
       CALL MINVD(ATPA,3,3,DETA,IW1,IW2)
```

```
C
C     COMPUTE STANDARD ERROR ELLIPSE
C
      CALL ELIPS(ATPA(1,1),ATPA(2,1),ATPA(2,2),EEA,EEB,1.D0,FI)
      EA = DINT(EEA*6371.D3*RHO)
      EB = DINT(EEB*6371.D3*RHO)
      PHI = DINT(FI/RHO)
      EEA = EEA * 6371.D3 * RHO
   16 CONTINUE
      WRITE(IPR,2013) IDAY,IHR,IMIN,(ELEV(I),AZIM(I),
     #    SLAT(I),SLON(I),I=1,NSAT),EA,EB,PHI,NPR,LRN
      CALL PLOT(8,120,EEA,T)
      HOUR = HOUR + 5./60.
      IF(HOUR.LT.24.D0) GO TO 14
 1000 FORMAT(I4,F8.0,4D16.12,4X,/,3E16.12,I4,F8.0)
 1001 FORMAT(3F8.0,2F4.0,4I4)
 2001 FORMAT (/,5X,'SATELLITE NO.',11X,6I16)
 2002 FORMAT (/,5X,'REF. TIME - TIME OF WEEK (SEC)',1X,6D16.8)
 2003 FORMAT(/,5X,'SEMI - MAJOR AXIS              (M)',6D16.8)
 2004 FORMAT(/,5X,'MEAN ANOMALY @ TREF    (RADIANS)',6D16.8)
 2005 FORMAT(/,5X,'ECCENTRICITY',19X,6D16.8)
 2006 FORMAT(/,5X,'ARG OF PERIGEE   (RADIANS)',6X,6D16.8)
 2007 FORMAT(/,5X,'INCLINATION   (RADIANS)', 9X,6D16.8)
 2008 FORMAT(/,5X,'RIGHT ASCENSION   (RADIANS)',5X,6D16.8)
 2009 FORMAT(/,5X,'RATE OF RA   (RADIANS/SEC)',6X,6D16.8)
 2010 FORMAT(/,5X,'MEAN MOTION   (RADIANS/SEC)',5X,6D16.8)
 2011 FORMAT(/,5X,'JULIAN DATE   (DDD HH MM SS)',4X,6(4X,4I3))
 2012 FORMAT(11X,6(5X,'SAT # ',I2,4X),2X,'ERROR ELLIPSE',/)
 2013 FORMAT(I5,2I3,6(I3,2I4,I5,1X),I6,2I4,2I3)
 2014 FORMAT(//)
 2015 FORMAT(2X,'DAY HH MM',6('  EL   AZ LAT LONG '),3X,'AA',2X,'BB',2
     #   'PHI',//)
 2016 FORMAT(50X,'GPS PERFORMANCE PRE-ANALYSIS',//,40X,'LATITUDE =',
     #    F8.4,10X,'LONGITUDE =',F8.4,//,20X,'OPTIONS USED FOR THIS R
     #   ,//,40X,'CODE : ',A8,//,40X,'SIGMA PSEUDO-RANGE = ',F6.2,
     #5X,'(M)',//,40X,'SIGMA LORAN-RANGE = 100/SQRT(',F4.1,')    (M)'
       STOP
       END
```

```
      FUNCTION MODULO(I,J)
      MODULO = I - (I-1)/J*J
      RETURN
      END
```

```
      SUBROUTINE HHMMSS (TJD,IH,IM,IS)
      IMPLICIT REAL*8(A-H,O-Z)
C
      IH = TJD / 36.D2
      IM = ((TJD/36.D2) - IH)*60.
      IS = TJD - IH*3600. - IM*60.
      RETURN
      END
```

```
      SUBROUTINE ROTREF(NUM,NAXIS,ANGLE,ROT)
C***********************************************************************
C*                                                                     *
C*    COMPUTE PRODUCT MATRIX OF SEQUENCE OF ROTATIONS AND REFLECTIONS  *
C*                                                                     *
C*    INPUTS                                                           *
C*        NUM = NUMBER OF ROTATIONS AND REFLECTIONS IN SEQUENCE        *
C*        NAXIS = SEQUENCE OF ROTATION AND REFLECTION AXES             *
C*                FOR ROTATIONS USE     1, 2, OR 3                     *
C*                FOR REFLECTIONS USE   -1, -2, OR -3                  *
C*        ANGLE = SEQUENCE OF ROTATION ANGLES IN RADIANS               *
C*                FOR REFLECTIONS THIS ANGLE IS IGNORED (ASSUMED ZERO) *
C*                                                                     *
C*     OUTPUT                                                          *
C*        ROT = 3X3 PRODUCT MATRIX                                     *
C*                                                                     *
C***********************************************************************
      IMPLICIT REAL*8(A-H,O-Z)
      DIMENSION ROT(3,3),R1(3,3),R2(3),ANGLE(NUM),NAXIS(NUM)
      EPS = 1D-15
C
C     ...INITIALIZE (SET 'ROT' = IDENTITY MATRIX)
C
      DO 10 I=1,3
      DO 10 J=1,3
      ROT(I,J)=0.
      IF(I.EQ.J)  ROT(I,J)=1.
   10 CONTINUE
C
C      ...PROCESS SEQUENCE OF ROTATIONS AND REFLECTIONS ONE AT A TIME
C
      DO 100 N=1,NUM
C
C     ...DEFINE 3 AXES FOR CURRENT ROTATION OR REFLECTION
C
      N1=IABS(NAXIS(N))
      N2=N1+1
      IF(N2.GT.3)  N2=N2-3
      N3=N2+1
      IF(N3.GT.3)  N3=N3-3
C
C     ...DEFINE DIAGONAL ELEMENTS
C
      R1(N1,N1) = 1.
      IF(NAXIS(N).LT.0.)  R1(N1,N1) = -1.
      R1(N2,N2) = DCOS(ANGLE(N))
      IF(NAXIS(N).LT.0.)  R1(N2,N2) = 1.
      R1(N3,N3) = R1(N2,N2)
C
C     ...DEFINE NONZERO OFF-DIAGONAL ELEMENTS
C
      R1(N2,N3) = DSIN(ANGLE(N))
      IF(NAXIS(N).LT.0.)  R1(N2,N3) = 0.
      R1(N3,N2) = -R1(N2,N3)
C
C     ...DEFINE ZERO OFF-DIAGONAL ELEMENTS
C
      R1(N1,N2) = 0.
      R1(N1,N3) = 0.
      R1(N2,N1) = 0.
      R1(N3,N1) = 0.
C
C     ...FORM PRODUCT (SET 'ROT' = 'R1' * 'ROT')
C
      DO 100 J=1,3
      DO 30 I=1,3
      R2(I) = 0.
      DO 30 K=1,3
   30 R2(I) = R2(I) + R1(I,K)*ROT(K,J)
      DO 100 I=1,3
      ROT(I,J) = R2(I)
      IF(DABS(ROT(I,J)).LT.EPS)  ROT(I,J) = 0.
  100 CONTINUE
      RETURN
      END
```

```
      SUBROUTINE PLHXYZ(PHI,RLAM,H,XO,YO,ZO,A,B,X,Y,Z)
C
C        THIS ROUTINE COMPUTES THE CARTESIAN COORDINATES X,Y,Z GIVEN THE
C      ELLIPSOIDAL COORDINATES PHI,RLAM,H.
C
C        INPUT:
C              PHI-ELLIPSOIDAL LATITUDE IN RADIANS.
C              RLAM-ELLIPSOIDAL LONGITUDE IN RADIANS.
C                  (POSITIVE EAST OF GREENWICH)
C              H-ELLIPSOIDAL HEIGHT IN METRES.
C              XO,YO,ZO-TRANSLATION COMPONENTS FROM THE ORIGIN OF THE
C                       CARTESIAN COORDINATE SYTEM (X,Y,Z)TO THE CENTER
C                       OF THE REFERENCE ELLIPSOID. (IN METRES.)
C              A,B-SEMI-MAJOR AND SEMI-MINOR AXES OF THE REFERENCE
C                  ELLIPSOID IN METRES.
C
C        OUTPUT:
C              X,Y,Z-CARTESIAN COORDINATES OF THE POINT IN METRES.
C
C                                               WRITTEN BY R.R.STEEVES
C                                                    JUNE,1977
C
C
      IMPLICIT REAL*8(A-Z)
      E2=(A*A-B*B)/(A*A)
      SP=DSIN(PHI)
      CP=DCOS(PHI)
      N=A/DSQRT(1.D0-E2*SP**2)
      X=XO+(N+H)*CP*DCOS(RLAM)
      Y=YO+(N+H)*CP*DSIN(RLAM)
      Z=ZO+(N*(1.D0-E2)+H)*SP
      RETURN
      END


      SUBROUTINE XYZPLH (X,Y,Z,PHI,RLAM,H)
C
C        THIS ROUTINE COMPUTES THE ELLIPSOIDAL COORDINATES PHI,RLAM,H
C      GIVEN THE CARTESION COORDINATES X,Y,Z.
C
C        INPUT:
C              X,Y,Z-CARTESION COORDINATES OF THE POINT IN METRES.
C              XO,YO,ZO-TRANSLATION COMPONENTS FROM THE ORIGIN OF THE
C                       CARTESIAN COORDINATE SYTEM (X,Y,Z)TO THE CENTER
C                       OF THE REFERENCE ELLIPSOID. (IN METRES.)
C              A,B-SEMI-MAJOR AND SEMI-MINOR AXES OF THE REFERENCE
C                  ELLIPSOID IN METRES.
C
C        OUTPUT:
C              PHI-ELLIPSOIDAL LATITUDE IN RADIANS.
C              RLAM-ELLIPSOIDAL LONGITUDE IN RADIANS.
C                  (POSITIVE EAST OF GREENWICH)
C              H-ELLIPSOIDAL HEIGHT IN METRES.
C
C                                               WRITTEN BY R.R.STEEVES
C                                                    JUNE,1977
C
      IMPLICIT REAL*8(A-Z)
C
C   NOTE             ADOPTED ELLIPSOID OF REFERENCE 'NWL 9D'
C
      DATA A, B, XO, YO, ZO /6378135.D0, 6356750.5D00, 3*0D0/
C
      E2=(A*A-B*B)/(A*A)
      XP=X-XO
      YP=Y-YO
      ZP=Z-ZO
      S=DSQRT(XP**2+YP**2)
      RLAM=DATAN2(YP,XP)
      ZPS=ZP/S
      H=DSQRT(XP**2+YP**2+ZP**2)-A
      PHI=DATAN(ZPS/(1.D0-E2*A/(A+H)))
    1 N=A/DSQRT(1.D0-E2*DSIN(PHI)**2)
      HP=H
      PHIP=PHI
      H=S/ DCOS(PHI)-N
      PHI=DATAN(ZPS/(1.D0-E2*N/(N+H)))
      IF(DABS(PHIP-PHI).GT.1.D-11.OR.DABS(HP-H).GT.1.D-5)GO TO 1
      RETURN
      END
```

```
      SUBROUTINE DERIV(LU,AE,BE,XLAT,XLON,HGT,XS,
     $                S,DSDP,DSDL,ELEV,AZ,IER)
      DOUBLE PRECISION AE,ANG,BE,BOA,CL,CP,DATN2,DCOS,
     $                DEPOK,DRDL,DRDP,DSDL,DSDP,DSIN,DSQRT,DX,
     $                ELEV,PI,RM,RN,ROT,S,SEC,SL,SP,HGT,AZ,
     $                XLAT,XLON,XR,XS,XT
      DIMENSION       ANG(3),DRDL(3),DRDP(3),DX(3),NAXIS(3),
     $                ROT(3,3),XR(3),XS(3),    XT(3)
      DATA            NAXIS /3,2,-2/,
     $                PI    /3.14159265359D0/
C
C PURPOSE       DERIV COMPUTES SLANT RANGE(S) TO SATELLITE, ITS
C               DERIVATIVES WITH RESPECT TO LAT (DSDP) AND LONG (DSDL),
C               AND ELEVATION ANGLE (ELEV)
C
C INPUT ARGUMENTS
C             LU = LISTING LU
C             AE = SEMIMAJOR AXIS OF EARTH ELLIPSOID (M)
C             BE = SEMIMINOR AXIS (M) OR RECIPROCAL FLATTENING
C             XLAT = RECEIVER LATITUDE (DEG)
C             XLON = RECEIVER LONGITUDE (DEG)
C             HGT = RECEIVER ELLIPSOID HEIGHT (M)
C             INDEX = DOPPLER INTERVAL NUMBER (SINCE LOCKON)
C             XS(3,33) = SATELLITE LOCAL TERRESTRIAL COORDS (M)
C
C OUTPUT ARGUMENTS
C             S = RECEIVER TO SATELLITE SLANT RANGE (M)
C             DSDP = DERIVATIVE OF S WITH RESPECT TO LATITUDE (M/DEG)
C             DSDL = DERIVATIVE OF S WITH RESPECT TO LONG (M/DEG)
C             ELEV = SATELLITE ELEVATION ABOVE HORIZON (DEG)
C             IER = 0 SUCCESSFUL RETURN
C
C EXTERNALS     DATN2,DCOS,DEPOK,DSIN,DSQRT,ROTRF
C
      IER = 0
C COMPUTE RECEIVER LOCAL TERRESTRIAL COORDS XR
      CP  = DCOS(XLAT*PI/180.)
      SP  = DSIN(XLAT*PI/180.)
      CL  = DCOS(XLON*PI/180.)
      SL  = DSIN(XLON*PI/180.)
      BOA = (BE / AE)**2
      IF(BE .LT. 6D3) BOA = (1. - 1./BE)**2
      RN = AE / DSQRT(CP**2 + BOA * SP**2)
      RM = RN * BOA * (RN/AE)**2
      XR(1) = (RN+HGT) * CP * CL
      XR(2) = (RN+HGT) * CP * SL
      XR(3) = (RN*BOA + HGT) * SP
C COMPUTE DERIVATIVES OF XR WITH RESPECT TO LAT AND LONG
      DRDP(1) = -(RM+HGT) * SP * CL * PI / 180.
      DRDP(2) = -(RM+HGT) * SP * SL * PI / 180.
      DRDP(3) =  (RM+HGT) * CP      * PI / 180.
      DRDL(1) = -XR(2) * PI / 180.
      DRDL(2) =  XR(1) * PI / 180.
      DRDL(3) = 0.
C     WRITE(LU,1001) XR,DRDP,DRDL
C COMPUTE SLANT RANGE AND ITS DERIVATIVES
      DO 10 I = 1,3
   10   DX(I) = XS(I) - XR(I)
      S = DSQRT(DX(1)**2 + DX(2)**2 + DX(3)**2)
      DSDP = -(DX(1)*DRDP(1) + DX(2)*DRDP(2) + DX(3)*DRDP(3)) / S
      DSDL = -(DX(1)*DRDL(1) + DX(2)*DRDL(2) + DX(3)*DRDL(3)) / S
C COMPUTE ELEVATION ANGLE
      ANG(1) =(XLON - 180.)*PI/180.
      ANG(2) =(XLAT - 90.)*PI/180.
      ANG(3) = 0.D0
      CALL ROTREF(3,NAXIS,ANG,ROT)
      DO 20 I = 1,3
        XT(I) = 0.
        DO 20 J = 1,3
   20     XT(I) = XT(I) + ROT(I,J) * DX(J)
      ELEV = DATAN2(XT(3),DSQRT(XT(1)**2 + XT(2)**2)) * 180. / PI
      AZ = DATAN2(XT(2),XT(1)) * 180. / PI
C     WRITE(LU,1002) S,DSDP,DSDL,ELEV,AZ
      RETURN
 1001 FORMAT(' DERIV1',20X,3F14.2,2(/27X,3F14.2))
 1002 FORMAT(' DERIV2',20X,3F14.2,2F6.1)
      END
```

```
      SUBROUTINE SATVEC(I,DAY1,XS)
C
C
C   SATVEC COMPUTES SATELLITE (EARTH FIXED) COORDINATES FROM
C   ORBITAL KEPLERIAN PARAMETERS TRANSMITTED BY THE NAVIGATION MESSAGE
C
      IMPLICIT REAL*8(A-H,O-Z)
      REAL *8 MO , NO , INC , MK
      DIMENSION MO(6) , NO(6) , A(6) , E(6) , W(6) , INC(6) ,
     #          CW(6) , CWD(6) , EPOCH(6) , TOE(6) ,ISAT(6) , XS(3)
C
      COMMON /ALMNAC/ A, MO , NO , E , W , INC , CW , CWD ,
     #          TOE , EPOCH , ISAT
      WE = 7.292115147D-5
C
C   TIME FROM ALMANAC REFERENCE EPOCH
C
      TK = (DAY1 -  EPOCH(I))*864.D2
C
C
C
C        MEAN ANOMALY (RAD)
C
      MK = MO(I) + NO(I)*TK
C
C
C        SOLVE KEPLER'S EQUATION FOR THE ECCENTRIC ANOMALY
C
      EK0 = MK + E(I)*DSIN(MK)+(E(I)**2/2.)*DSIN(2.*MK)
   50 FTM = EK0 - E(I)*DSIN(EK0)
      DFTM = FTM - MK
      EK0 = EK0 - DFTM/(1.-E(I)*DCOS(EK0))
      IF(DABS(DFTM) .GT. 1.D-12)  GO TO 50
      EK = EK0
   15 CONTINUE
C
C        TRUE ANOMALY (RAD)
C
      ECOSEK = 1.D0 - E(I)*DCOS(EK)
      COSVK = (DCOS(EK) - E(I)) / ECOSEK
      SINVK = DSQRT(1.D0 - E(I)**2)*DSIN(EK) / ECOSEK
C
      VK = DATAN2(SINVK,COSVK)
C
C        ARGUMENT OF LATITUDE
C
      FK = VK + W(I)
C
C
C   COMPUTE SECOND HARMONIC PERTURBATIONS IN
C
C        ARGUMENT OF LATITUDE
C        SATELLITE RADIUS
C        INCLINATION
C        (CORRECTIONS NOT IMPLEMENTED YET)
C
      UK = FK
      RK = A(I) * (1.D0-E(I)*DCOS(EK))
C
C        POSITION IN THE ORBITAL PLANE
C
      XPK = RK * DCOS(UK)
      YPK = RK * DSIN(UK)
C
C
C        CORRECTED LATITUDE OF THE ASCENDING NODE
C
      CWK = CW(I) + (CWD(I)-WE)*TK - WE*TOE(I)
C
C
C        EARTH FIXED COORDINATES
C
      XK = XPK*DCOS(CWK) - YPK*DCOS(INC(I))*DSIN(CWK)
      YK = XPK*DSIN(CWK) + YPK*DCOS(INC(I))*DCOS(CWK)
      ZK = YPK*DSIN(INC(I))
C
      XS(1) = XK
      XS(2) = YK
      XS(3) = ZK
      RETURN
      END
```

```
      SUBROUTINE MATMPY(M1,M2,M3,L,M,N,JL,JM,JN,ICODE)
C
C   NAME                MATMPY
C
C   PURPOSE             TO COMPUTE THE PRODUCT OF TWO MATRICES IN ANY
C                       ALLOWABLE TRANSPOSE COMBINATION AS FOLLOWS:
C
C                            OPTION ICODE              PRODUCT M3
C
C                                 1                      M1*M2
C                                 2                    (M1)T*M2
C                                 3                    M1*(M2)T
C                                 4                    (M1)T*(M2)T
C
C
C                       (L,M),(M,N),(L,N) ARE THE DIMENSIONS OF THE
C                                         PRE- , POST- AND PRODUCT-MATRICES
C                                         RESPECTIVELY
C                                JL,JM,JN ARE CORRESPONDING DECLARED ROW
C                                         DIMENSIONS AT THE CALLINE PROGRAM
C
C
      REAL *8 M1,M2,M3
      DIMENSION M1(JL,1) , M2(JM,1) , M3(JN,1)
C
      DO 11 I = 1,L
        DO 11 J = 1,N
          M3(I,J) = 0.
          DO 11 K = 1,M
            GO TO(1,2,3,4),ICODE
    1       CONTINUE
C    M3 = M1 * M2
            M3(I,J) = M3(I,J) + M1(I,K)*M2(K,J)
            GO TO 11
    2       CONTINUE
C    M3 = M1 TRANSPOSE * M2
            M3(I,J) = M3(I,J) + M1(K,I)*M2(K,J)
            GO TO 11
    3       CONTINUE
C    M3 = M1 * M2 TRANSPOSE
            M3(I,J) = M3(I,J) + M1(I,K)*M2(J,K)
            GO TO 11
    4       CONTINUE
C    M3 = M1 TRANSPOSE * M2 TRANSPOSE
            M3(I,J) = M3(I,J) + M1(K,I)*M2(J,K)
   11 CONTINUE
      RETURN
      END
      SUBROUTINE ELIPS(QXX,QXY,QYY,A,B,C,PHI)
C***********************************************************************
C*
C*  ELIPS COMPUTES THE SEMI-MAJOR AND SEMI-MINOR AXES AND THE ORIENTATIC
C*  (AZIMUTH OF THE MAJOR AXIS) OF THE ERROR ELLIPSE SPECIFIED BY QXX, Q
C*  QXY AND THE FACTOR C.
C*
C*
C*  INPUT:
C*     QXX,QXY,QYY-  ELEMENTS OF THE 2 BY 2 COVARIANCE MATRIX OF THE VARI
C*                   FOR WHICH AN ERROR ELLIPSE IS REQUIRED
C*      C-           FACTOR FOR THE ELLIPSE IN RAISING IT TO A SPECIFIC
C*                    PROBABILITY LEVEL (COMPUTED IN ERREL)
C*
C*  OUTPUT:
C*     A,B-       SEMI-MAJOR AND SEMI-MINOR AXES OF THE ELLIPSE
C*     PHI-       AZIMUTH OF THE MAJOR AXIS (IN RADIANS)
C*
C*
C*                                         WRITTEN BY:
C*                                            R.R. STEEVES, APRIL, 1976
C*
C***********************************************************************
      IMPLICIT REAL*8(A-H,O-Z)
      P1=(QXX+QYY)/2.D0
      P2=DSQRT((QXX-QYY)**2/4.0D0+QXY**2)
      A=DSQRT(P1+P2)*C
      B=DSQRT(P1-P2)*C
      PI=3.14159265358979300
      IF(QXX.LT.1.D0-20.AND.QYY.LT.1.D0-20)PHI=0.D0
      IF(QXX.LT.1.D0-20.AND.QYY.LT.1.D0-20)GOTO1
      PHI=-0.5D0*DATAN2(-2.D0*QXY,QYY-QXX)
      IF(PHI.LT.0.D0)PHI=PHI+2.D0*PI
    1 RETURN
      END
```

```
      SUBROUTINE PLINIT(LU,LPLOT)
C
C     INITIALIZE + PLOT HORIZONTAL AXIS
C
      DOUBLE PRECISION XMIN,XMAX
      DIMENSION IPLOT(120)
      COMMON /PLOTS/ XMIN,XMAX
      DATA IAX/1H+/,  IBL/1H / , IST/1H*/
      DO 1 I=1,LPLOT
         IPLOT(I)=IST
    1 CONTINUE
C
C     PLOT AXIS
C
      WRITE(LU,1000)(IPLOT(I),I=1,LPLOT)
 1000 FORMAT(1H1,8X,120A1)
      DO 2 I=1,LPLOT
         IF(I/20*20.EQ.I) GO TO 2
         IPLOT(I)=IBL
    2 CONTINUE
      WRITE(LU,1001)(IPLOT(I),I=1,LPLOT)
 1001 FORMAT(' ',7X,'+',120A1)
      WRITE(LU,1002)
 1002 FORMAT(' ')
      RETURN
      END
```

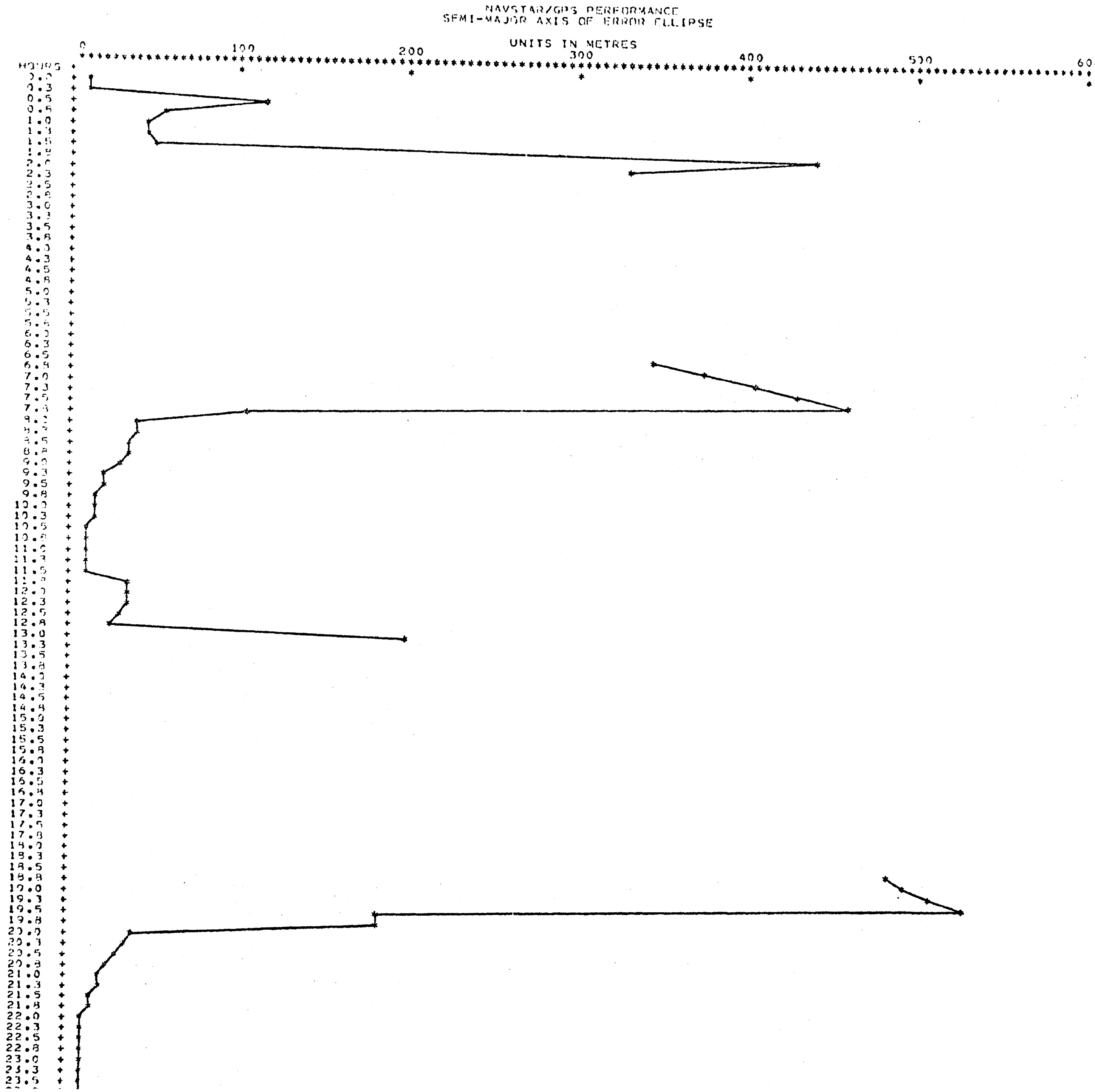
```
      SUBROUTINE PLOT(LU,LPLOT,X,T)
      DOUBLE PRECISION XMIN,XMAX,X,T
      DIMENSION IPLOT(120)
      COMMON /PLOTS/ XMIN,XMAX
      DATA IBL/1H / , IAX/1H+/ , IST/1H*/
      DO 1 I=1,LPLOT
         IPLOT(I)=IBL
    1 CONTINUE
      IF(X.LE.XMIN) GO TO 2
      K=((X-XMIN)/(XMAX-XMIN))*LPLOT+0.5
      IF(K.LT.1.OR.K.GT.LPLOT) GO TO 2
      IPLOT(K)=IST
    2 WRITE(LU,1001)T,(IPLOT(I),I=1,LPLOT)
 1001 FORMAT(' ',F5.1,2X,'+',120A1)
      WRITE(LU,1002)
 1002 FORMAT(' ',7X,'+')
      RETURN
      END
```

APPENDIX B — PLOTS OF RESULTS

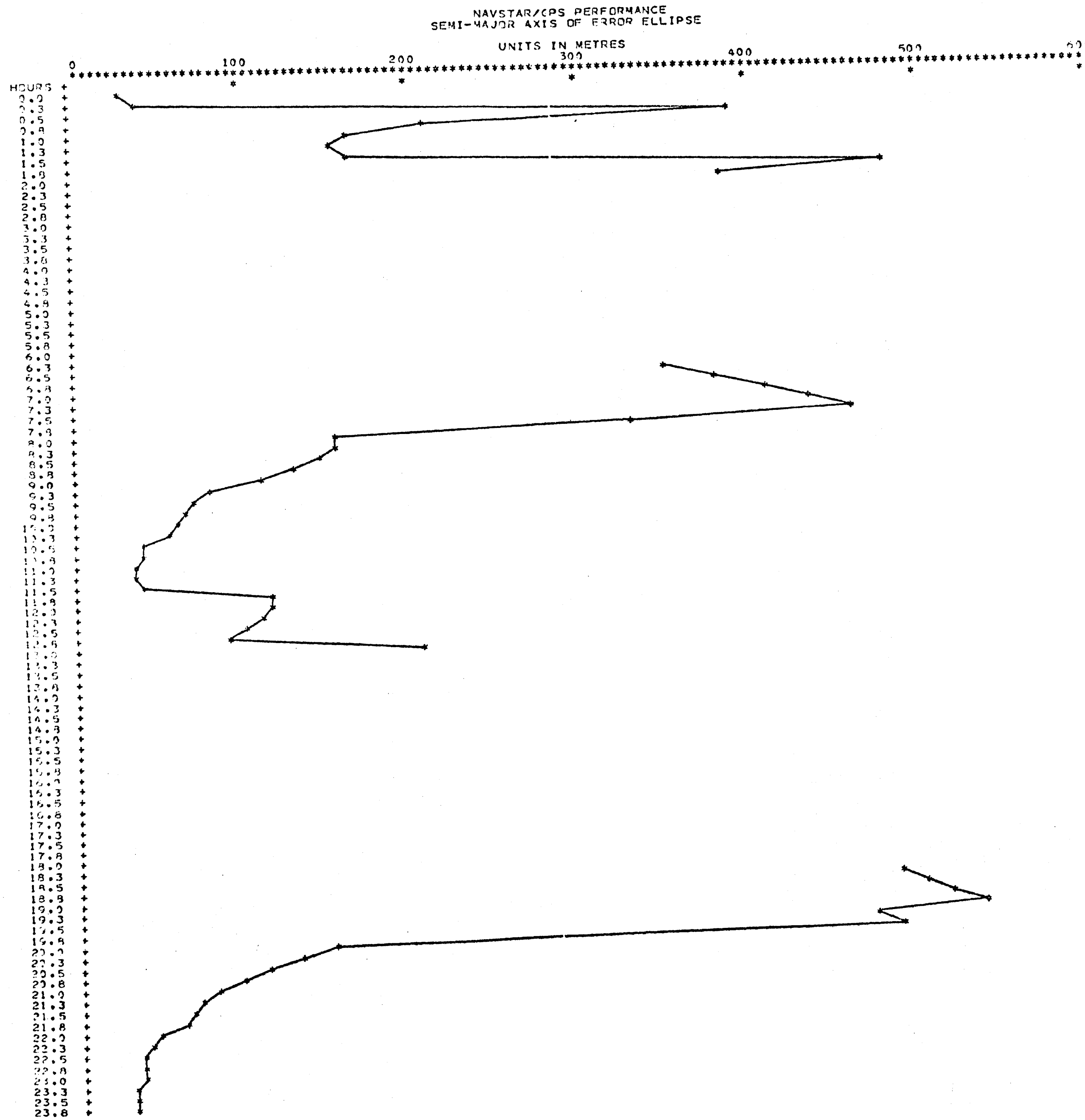
1.	BAFFIN BAY P-CODE	NO LORAN
2.	BAFFIN BAY C/A CODE	NO LORAN
3.	BAFFIN BAY C/A CODE	WITH LORAN
4.	DAVIS STRAIT P-CODE	NO LORAN
5.	DAVIS STRAIT C/A CODE	NO LORAN
6.	DAVIS STRAIT C/A CODE	WITH LORAN
7.	LABRADOR P-CODE	NO LORAN
8.	LABRADOR C/A CODE	NO LORAN
9.	LABRADOR C/A CODE	WITH LORAN
10.	AZORES P-CODE	NO LORAN
11.	GRAND BANKS P-CODE	NO LORAN
12.	HUDSON BAY P-CODE	NO LORAN
13.	BEAUFORT SEA P-CODE	NO LORAN
14.	ARCTIC OCEAN P-CODE	NO LORAN
15.	BRITISH COLUMBIA P-CODE	NO LORAN
16.	20°N 25°W P-CODE	NO LORAN
17.	40°N 25°W P-CODE	NO LORAN
18.	60°N 25°W P-CODE	NO LORAN
19.	20°N 70°W P-CODE	NO LORAN
20.	40°N 70°W P-CODE	NO LORAN
21.	60°N 70°W P-CODE	NO LORAN

NOTES:

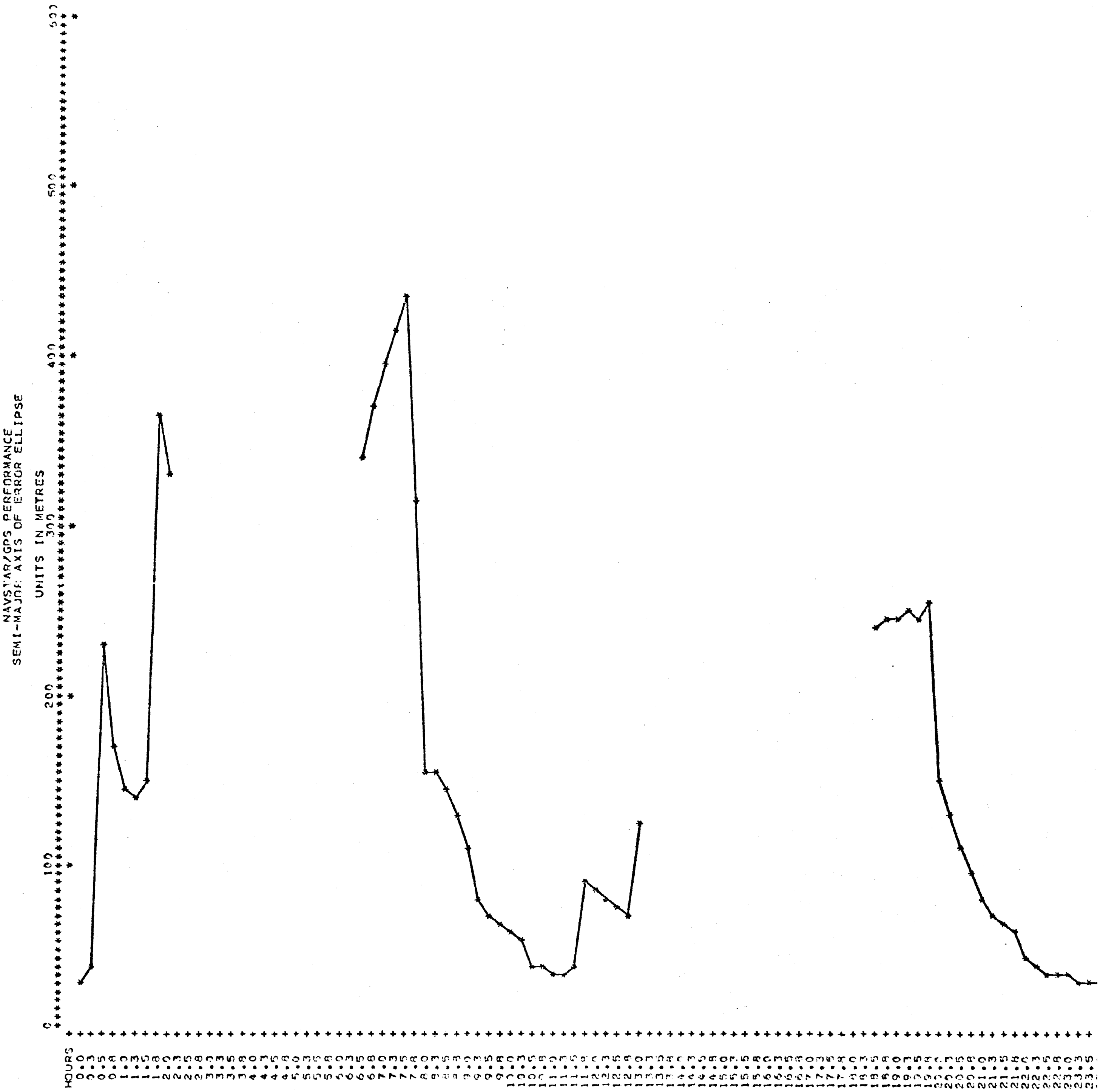
1. In all plots the length of the semi-major axis standard error ellipse is plotted against time for the 24 hour period starting at 0000 UT 1 Oct. 1980.
2. All plots are for the present GPS configuration of six satellites.



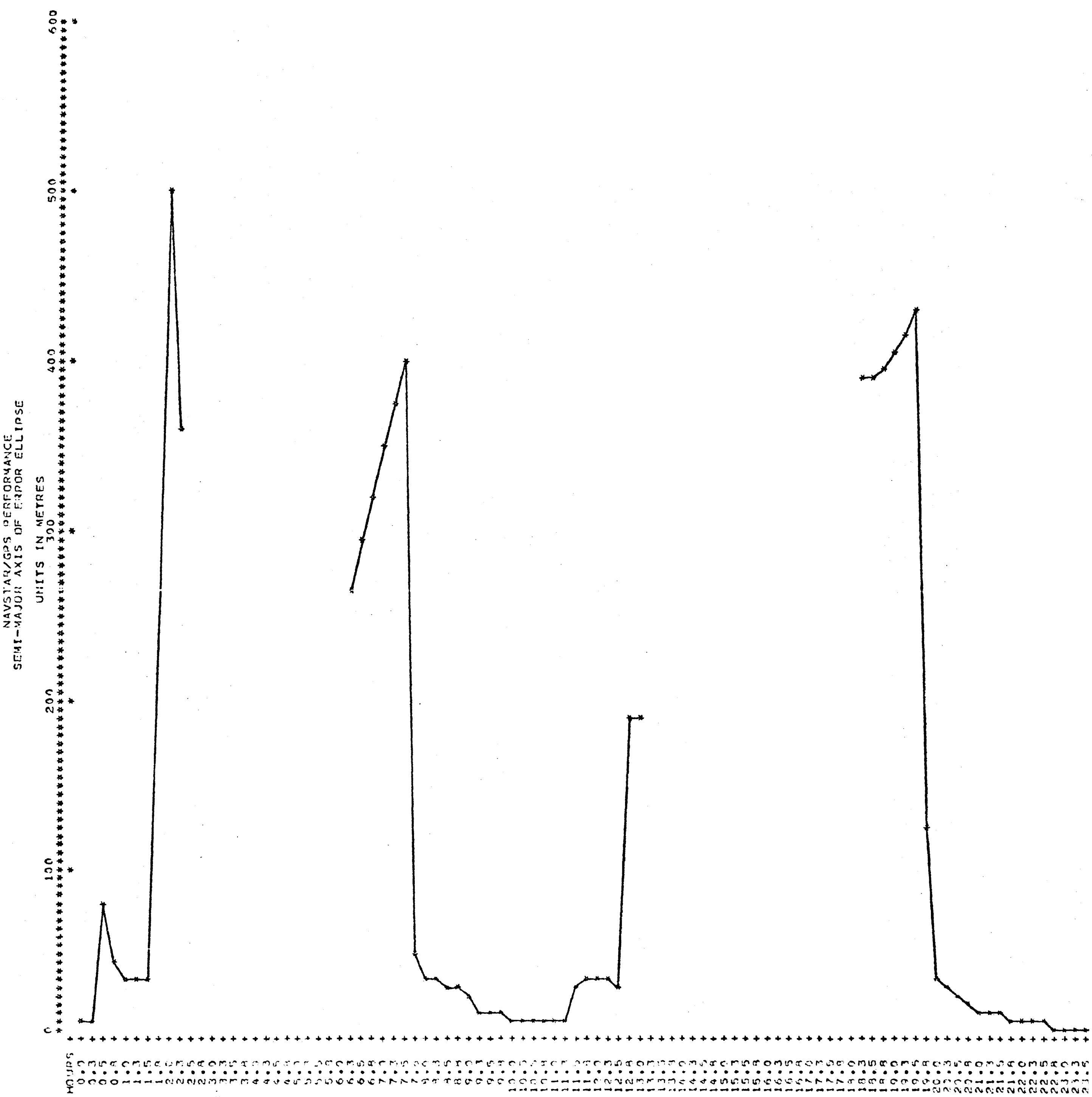
Baffin Bay (70^{o}N, 68^{o}W) using P-code.



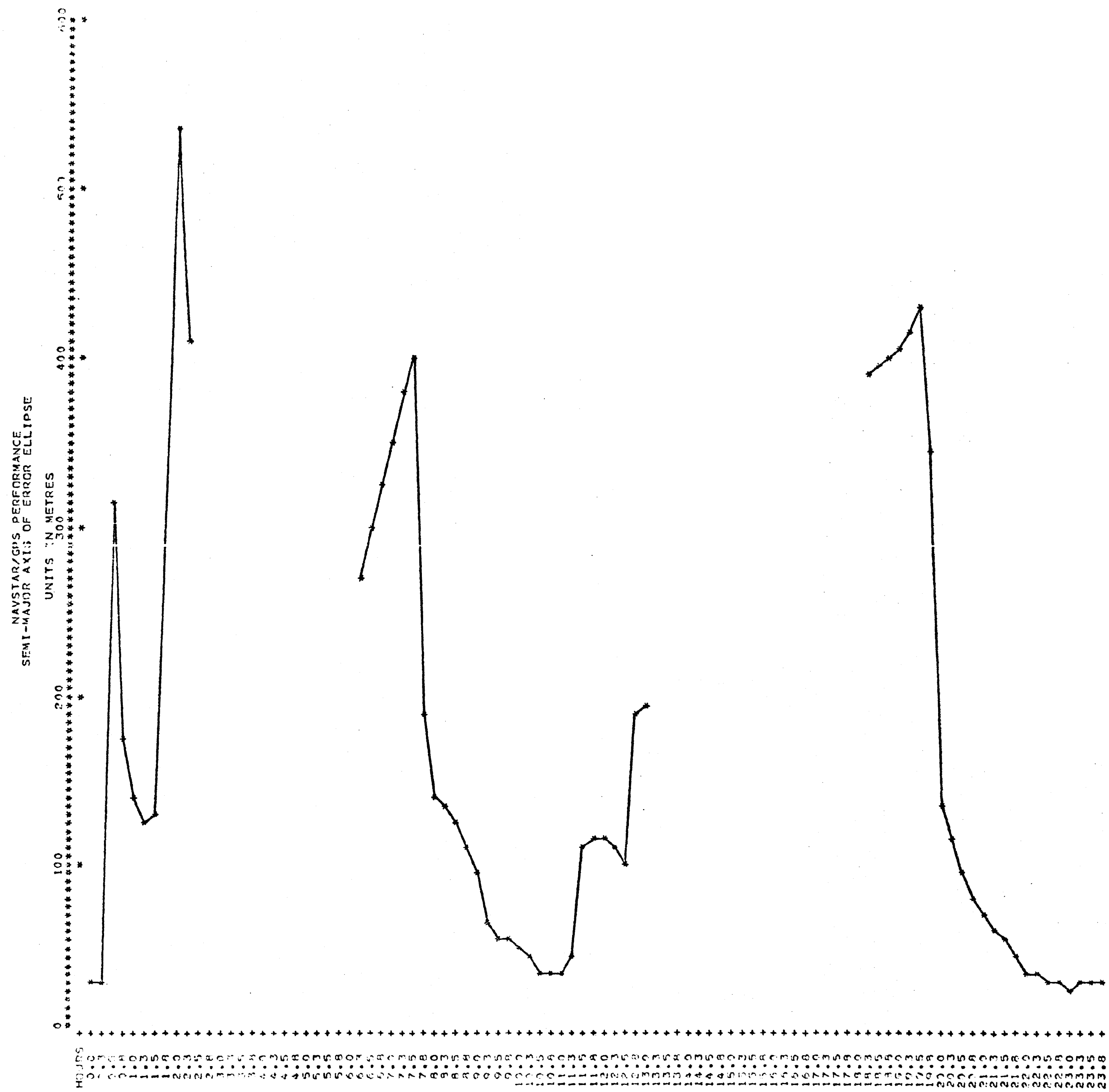
Baffin Bay (70°N, 68°W) using C/A-code



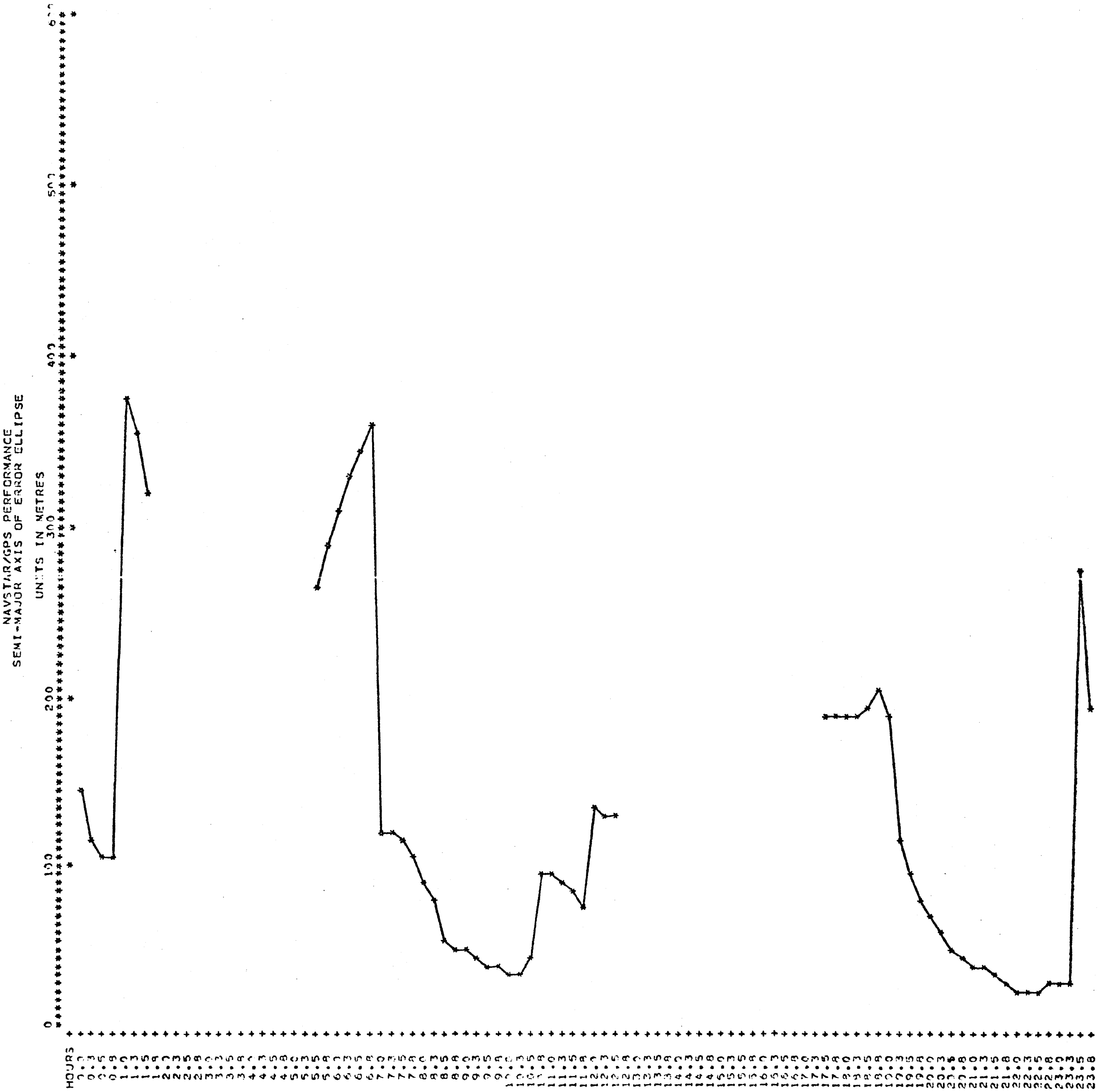
Baffin Bay (70°N, 68°W) using C/A-code in
combination with LORAN-C



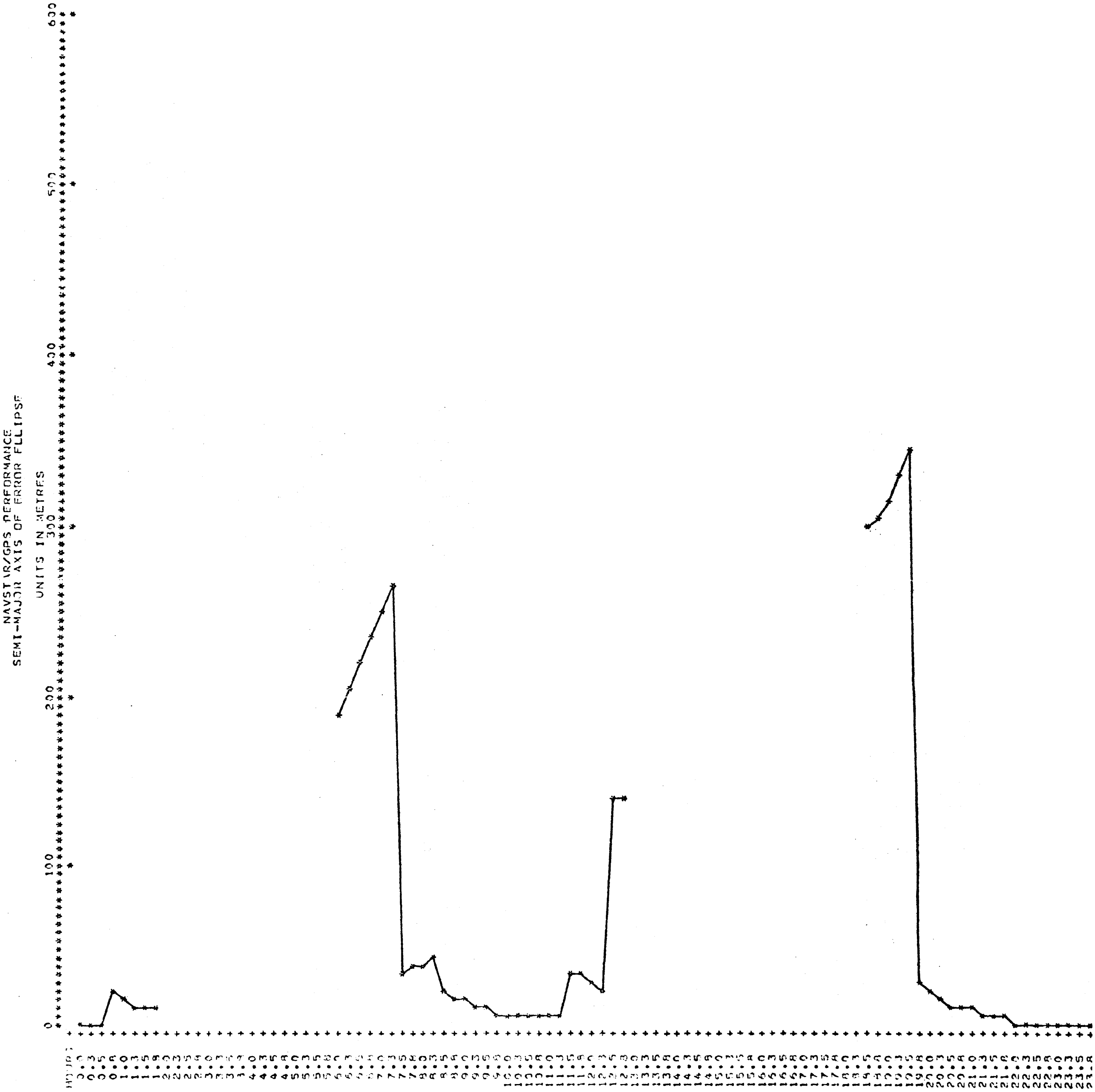
Davis Strait (65°N, 60°W) using P-code.



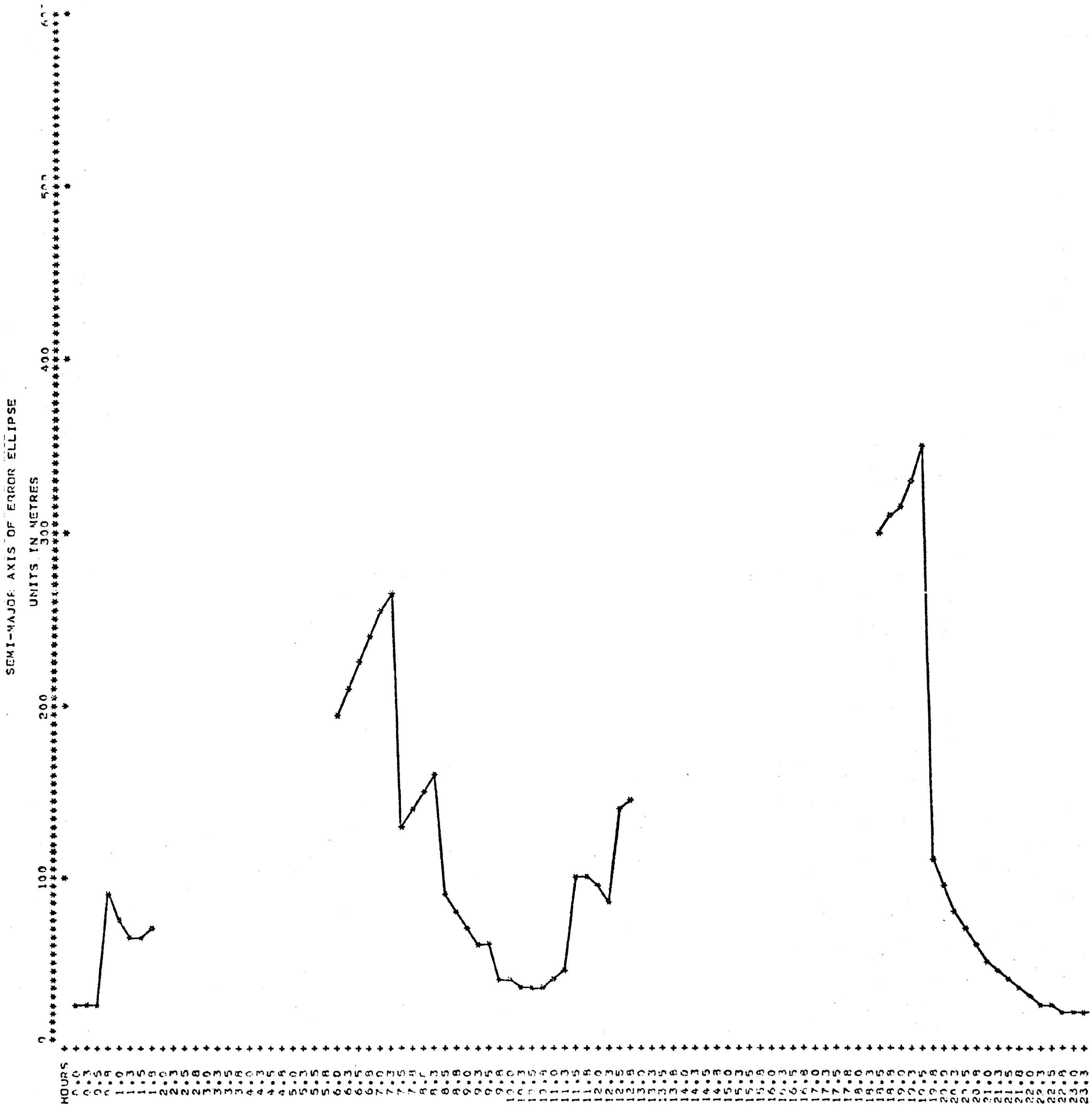
Davis Strait (65°N, 60°W) using C/A-code



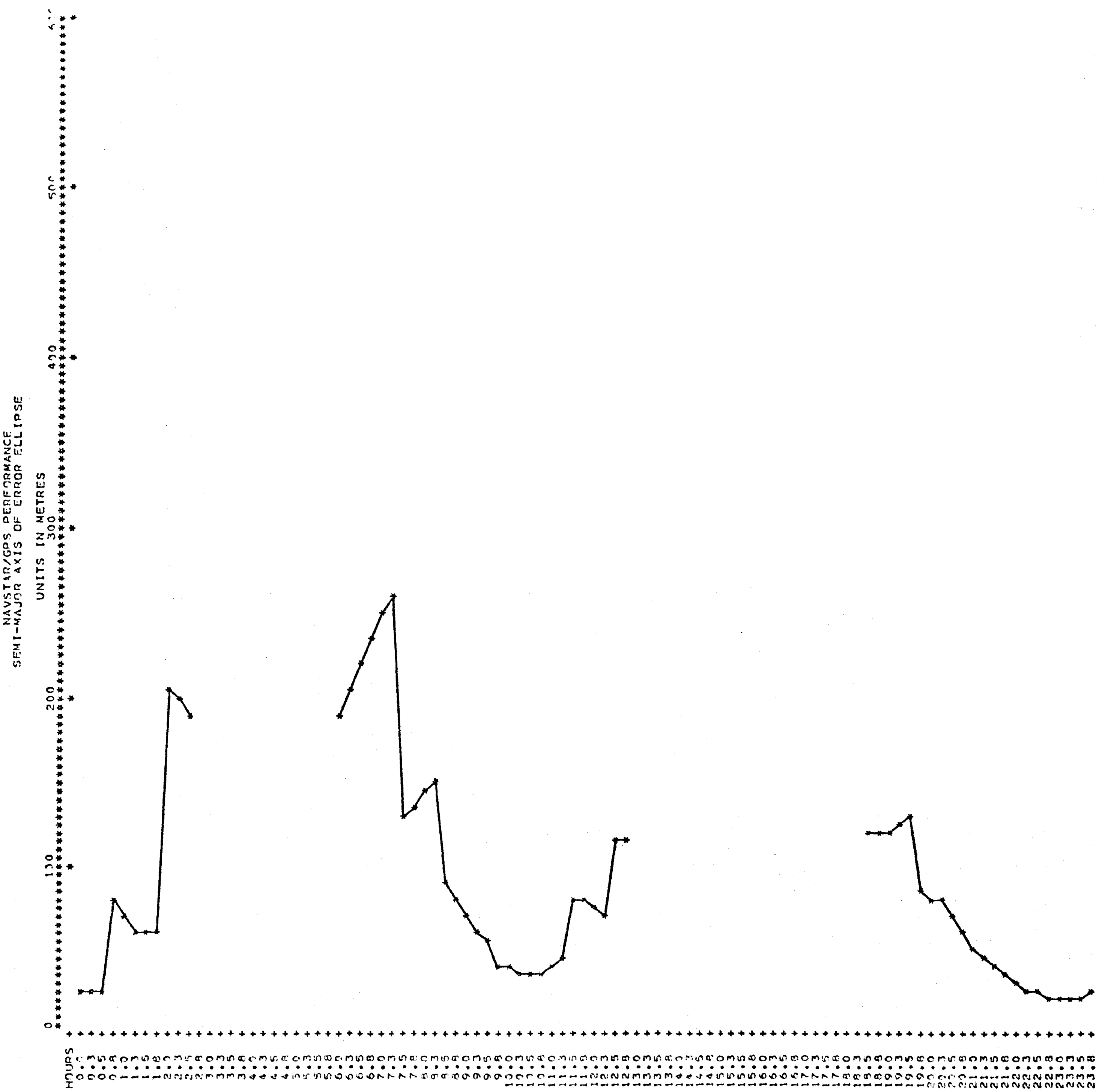
Davis Strait (65°N, 60°W) using C/A-code
in combination with LORAN-C



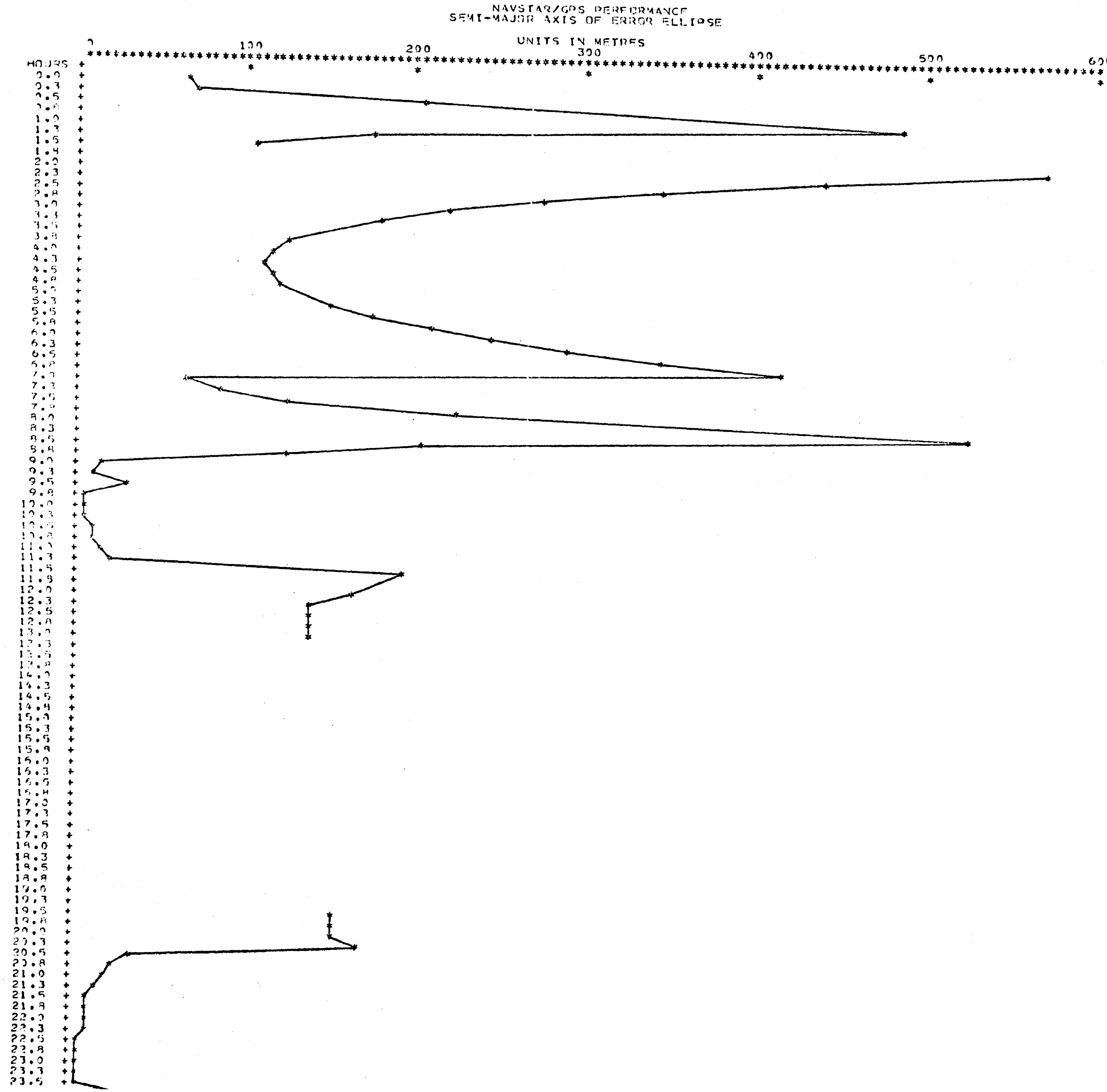
Labrador (55^{o}N, 65^{o}W) using P-code



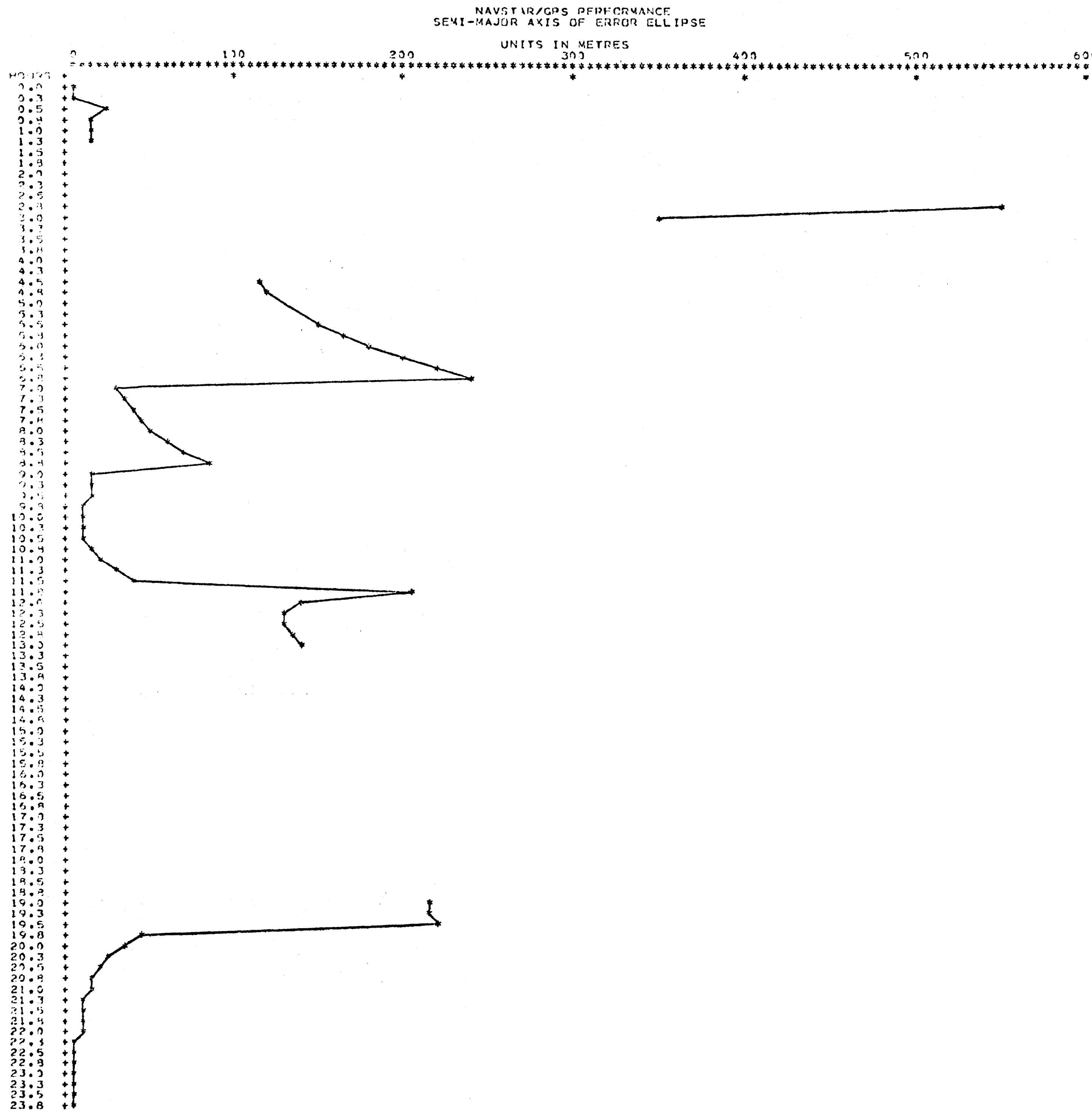
Labrador (55°N, 65°W) using C/A code



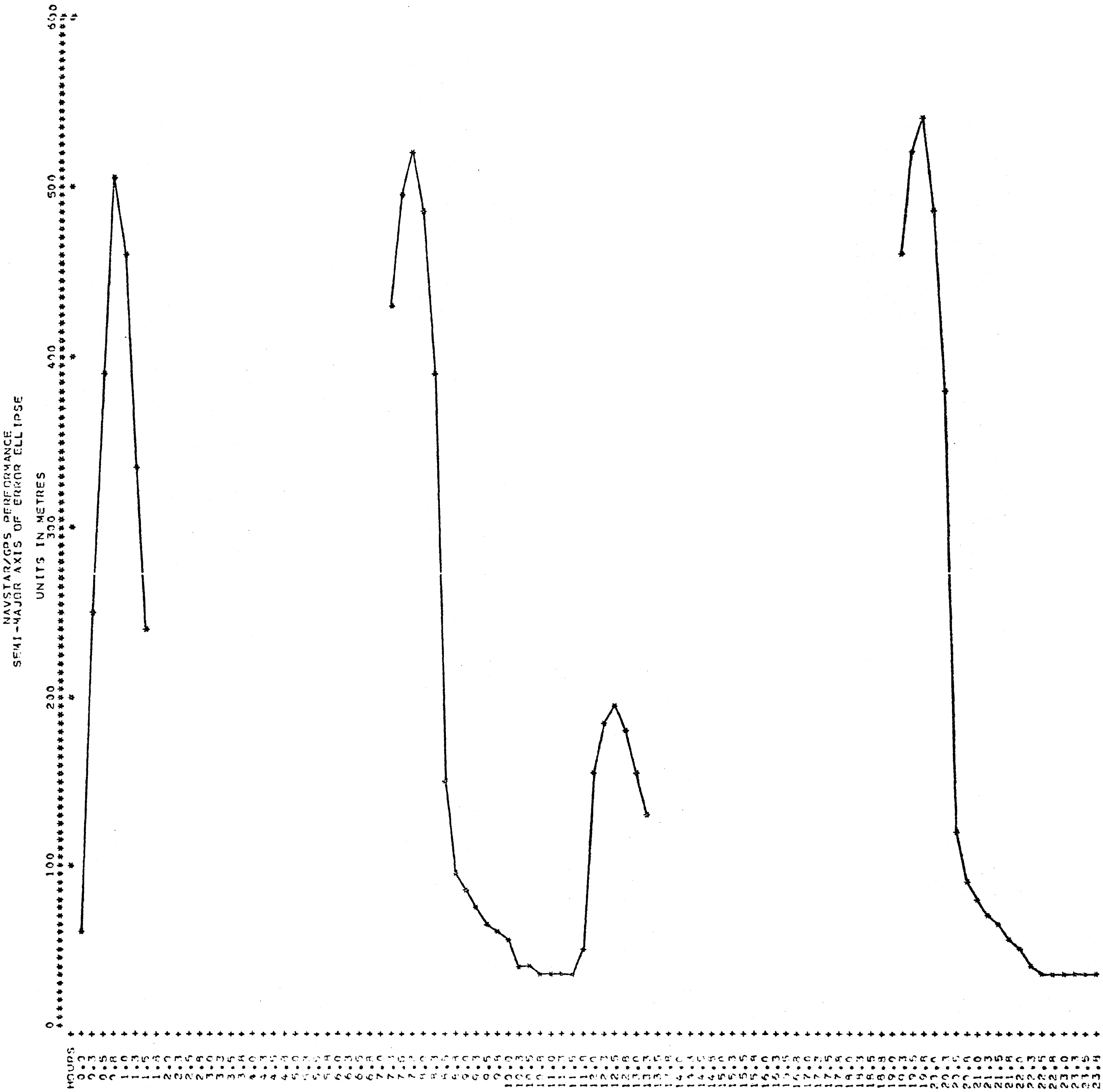
Labrador (55°N, 65°W) using C/A-code in
combination with LORAN-C



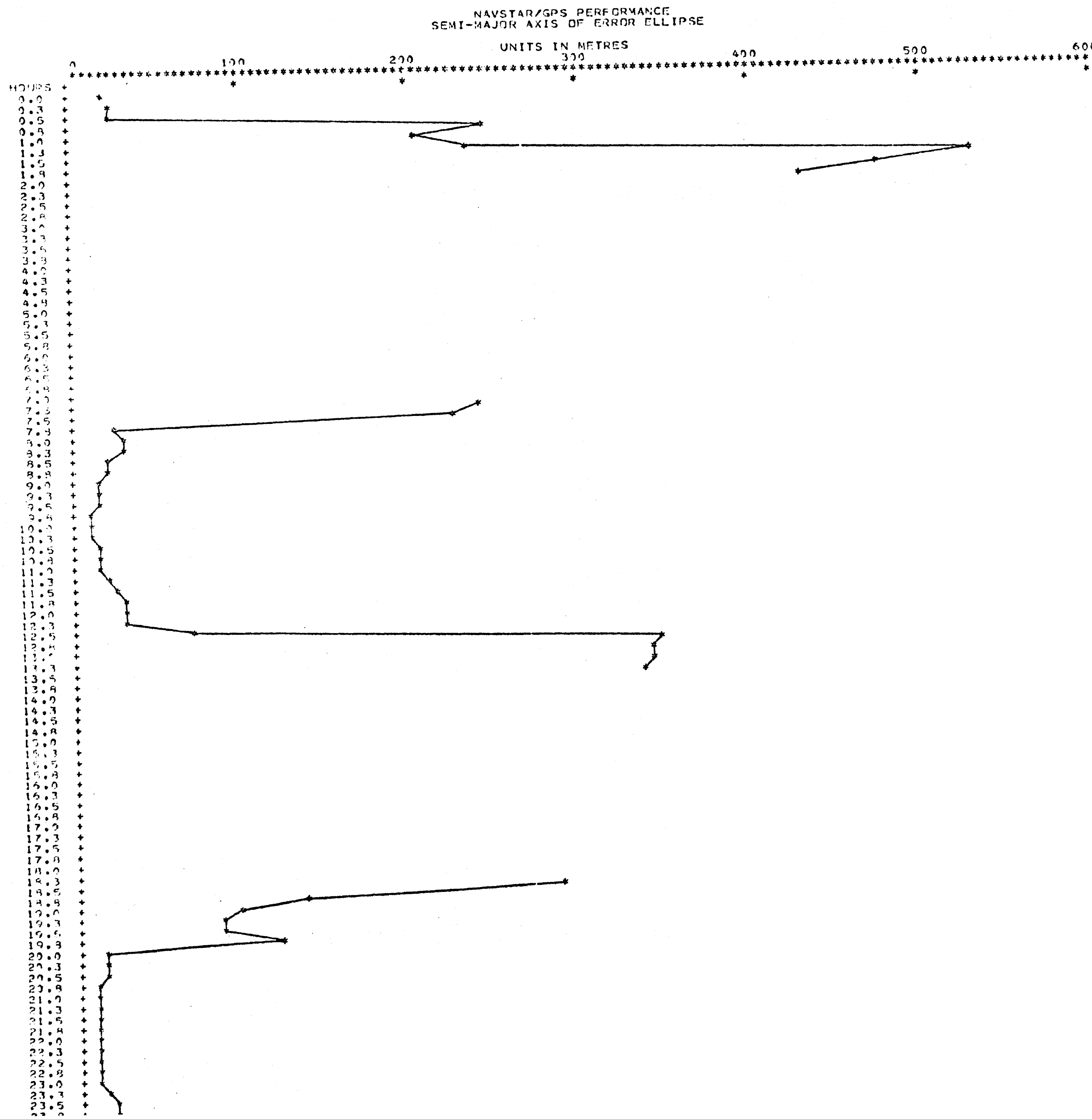
Azores (40^{o}N, 30^{o}W) using P-Code



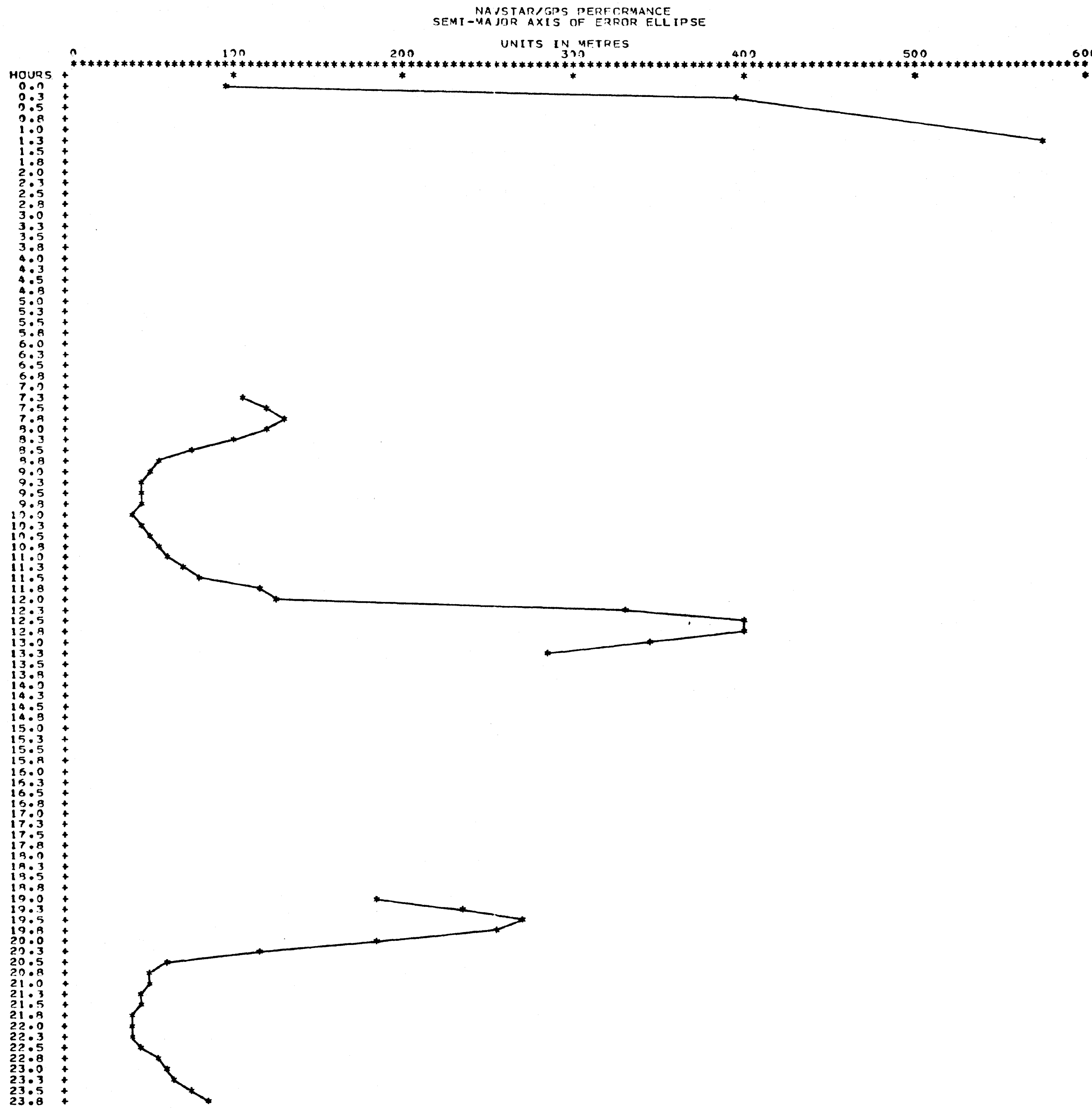
Grand Banks (45^{o}N, 50^{o}W) using P-Code



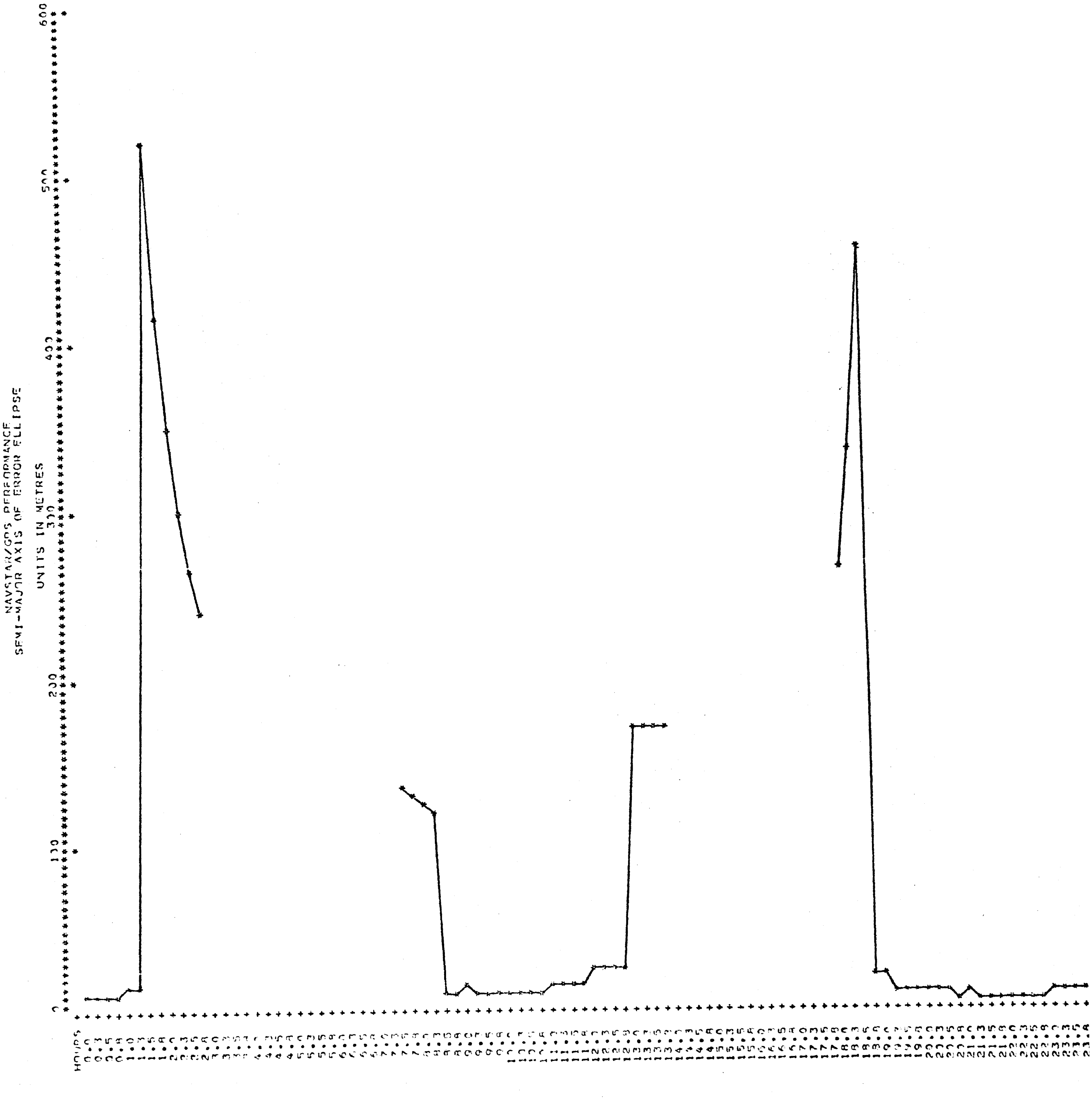
Hudson Bay (85°N, 60°W) using P-Code.



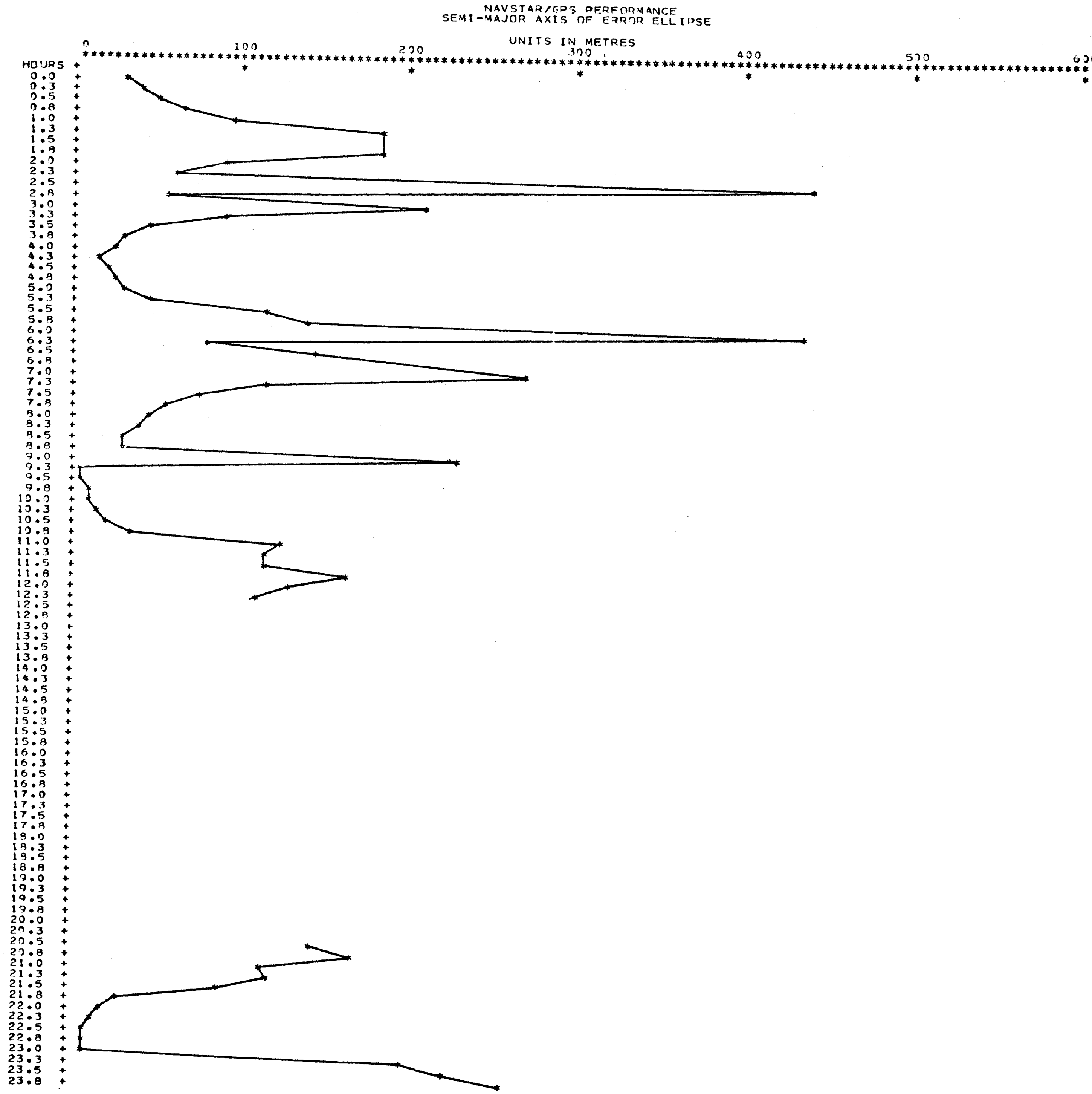
Beauford Sea (70°N, 130°W) using P-code



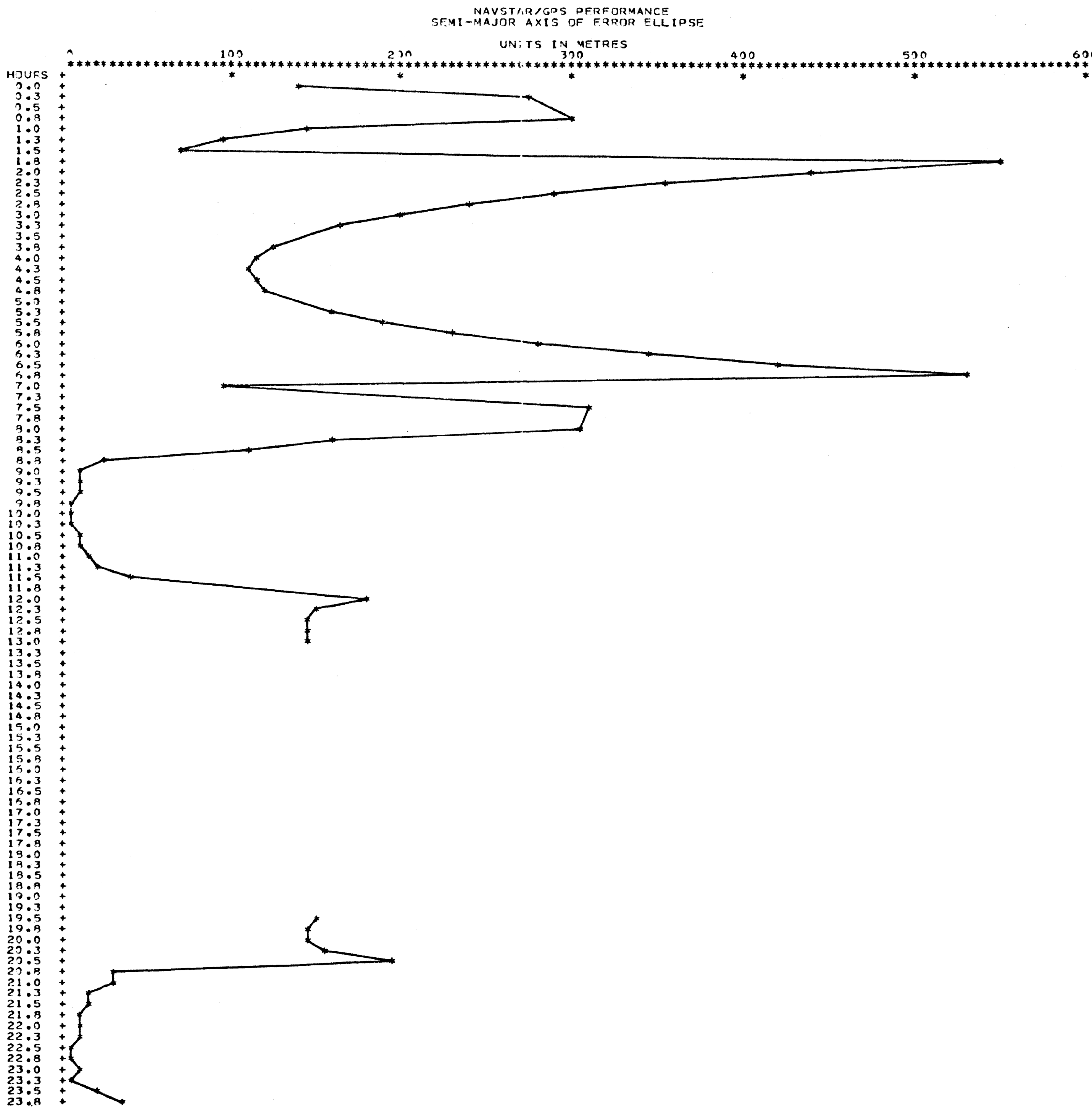
Arctic Ocean (85^{o}N , 130^{o}W) using P-code



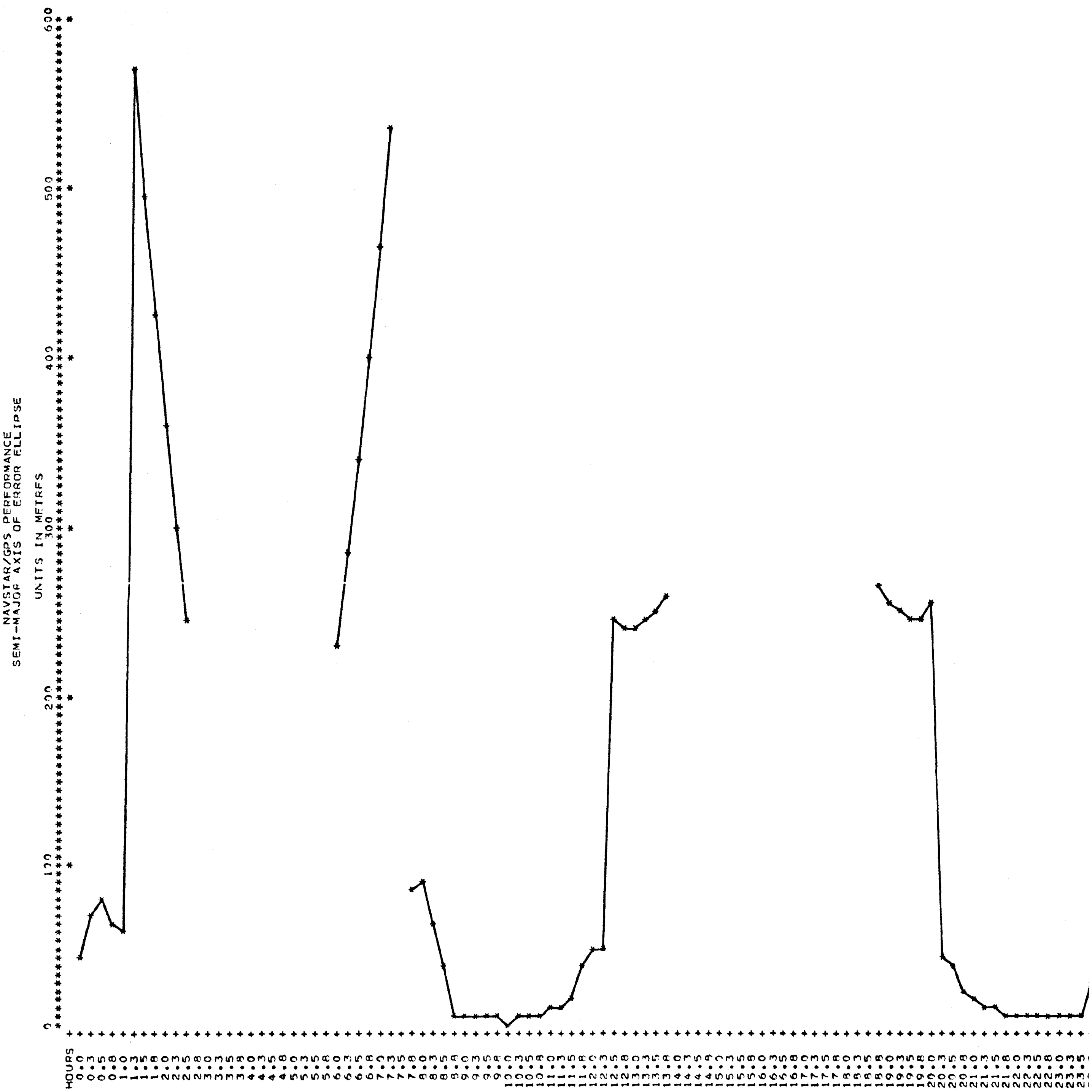
British Columbia (50^{o}N, 130^{o}W) using P-Code



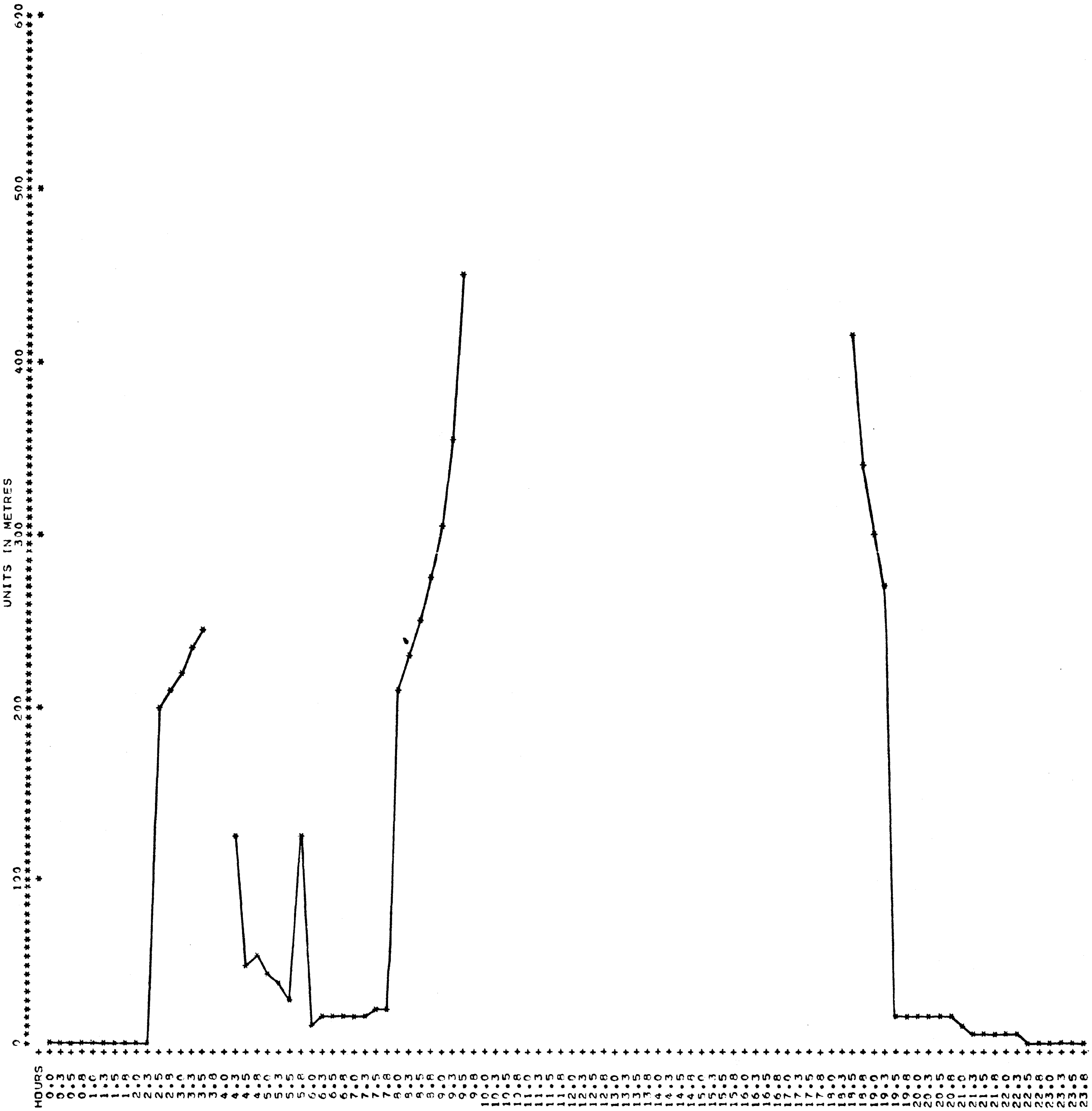
Latitude 20° N , longitude 25° W using P-code



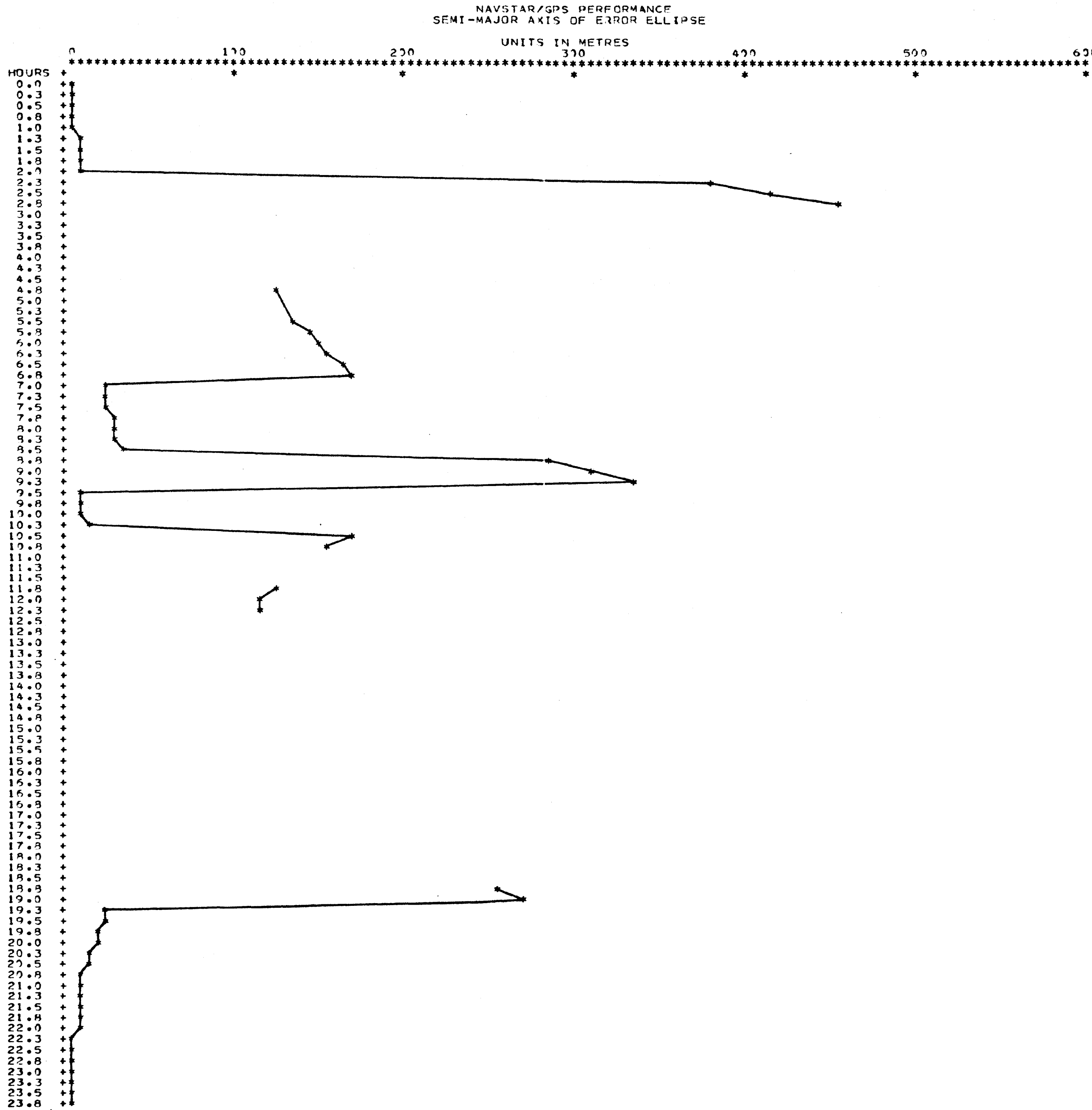
Latitude 40° N , longitude 25° W using P-code



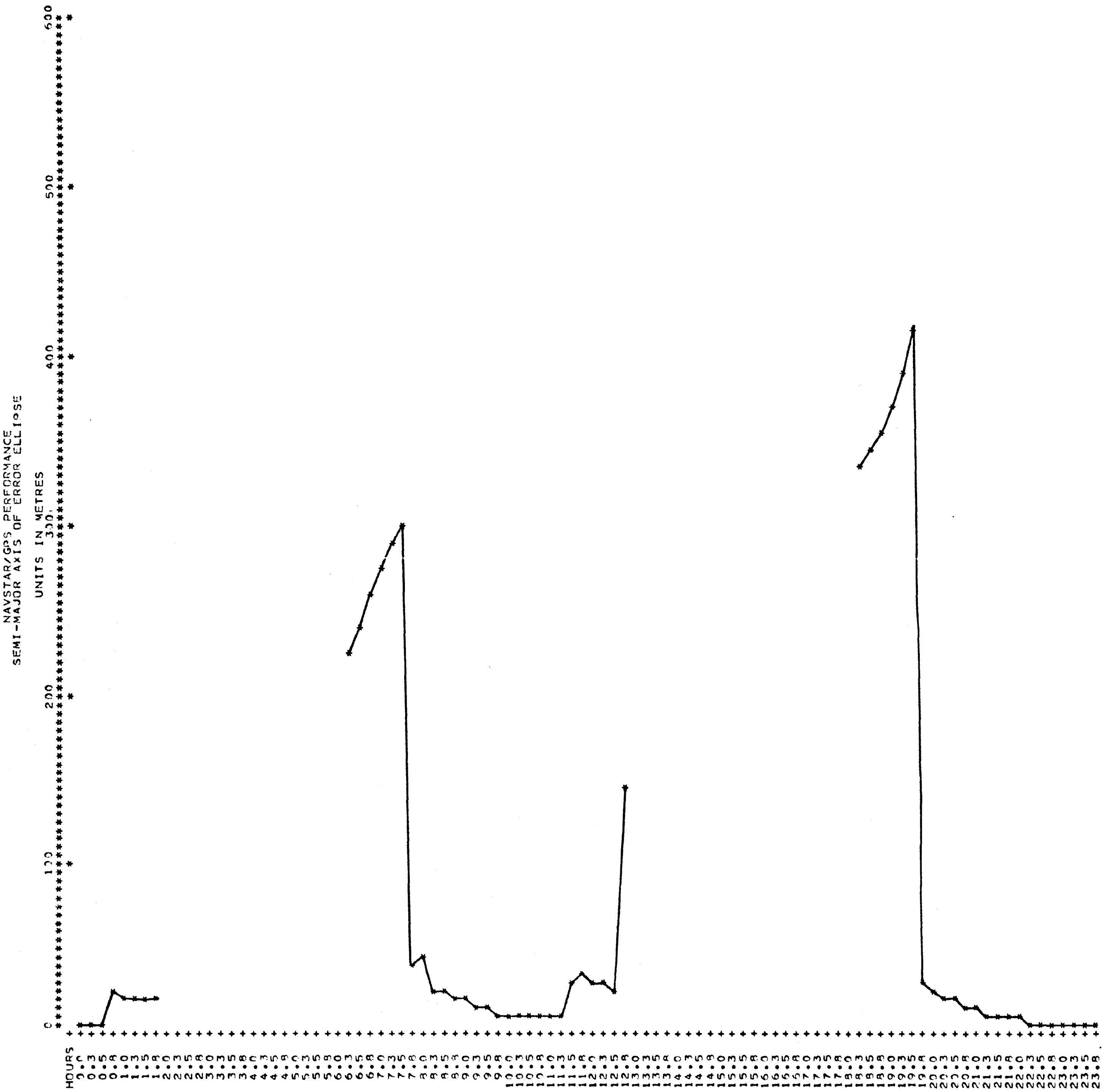
Latitude 60° N , longitude 25° W using P-code



Latitude 20° N , longitude 70° W using p-code



Latitude 40° N, longitude 70° W using P-code



Latitude 60° N , longitude 70° W using P-code

APPENDIX C — LISTINGS OF RESULTS

1.	BAFFIN BAY P-CODE	NO LORAN
2.	BAFFIN BAY C/A CODE	NO LORAN
3.	BAFFIN BAY C/A CODE	WITH LORAN
4.	DAVIS STRAIT P-CODE	NO LORAN
5.	DAVIS STRAIT C/A CODE	NO LORAN
6.	DAVIS STRAIT C/A CODE	WITH LORAN
7.	LABRADOR P-CODE	NO LORAN
8.	LABRADOR C/A CODE	NO LORAN
9.	LABRADOR C/A CODE	WITH LORAN

Column headings for each listing

DAY HH MM	1980 day, hour minute
EL AZ LAT LONG	elevation and azimuth of satellite in degrees, as seen from ground station, and latitude and longitude of sattelite ground track, in degrees
AA BB PHI	GPS error ellipse semi-major axis (AA), semi-minor axis (BB), and orientation of semi-major axis (clockwise from north). AA,BB in metres, PHI in degrees.
no headings	number of satellites visible number of Loran-C ranges combined with GPS

GPS PERFORMANCE PRE-ANALYSIS

LATITUDE = 70.0000　　　　LONGITUDE =292.0000

BAFFIN BAY
P - Code

OPTIONS USED FOR THIS RUN

CODE : PRECISE

SIGMA PSEUDO-RANGE = 4.00 (M)

SIGMA LORAN-RANGE = 100/SQRT(0.5) (M)

SATELLITE NO.	4	5	6	7	8	9
REF. TIME - TIME OF WEEK (SEC)	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.22528000D+06
JULIAN DATE (DDD HH MM SS)	145 18 42 8	145 18 42 8	145 18 42 8	145 18 42 8	145 18 42 8	169 14 34 40
SEMI - MAJOR AXIS (M)	0.26560399D+08	0.26560943D+08	0.26560254D+08	0.26560449D+08	0.26560017D+08	0.26560147D+08
MEAN ANOMALY @ TREF (RADIANS)	-0.21159685D+01	0.12833393D+01	0.85431182D+00	-0.32870960D+00	0.17212573D+01	-0.91869777D+00
ECCENTRICITY	0.14967920D-02	0.19474030D-02	0.59700012D-03	0.69551468D-02	0.91743469D-03	0.69322591D-02
ARG OF PERIGEE (RADIANS)	0.31187789D+01	-0.10636019D+01	0.17242581D+01	0.13419558D+01	0.53818911D-01	0.14604583D+01
INCLINATION (RADIANS)	0.11035115D+01	0.11125715D+01	0.11011986D+01	0.11076880D+01	0.11036613D+01	0.10981785D+01
RIGHT ASCENSION (RADIANS)	-0.57879102D+00	-0.58088678D+00	-0.26814451D+01	-0.26411774D+01	-0.57803953D+00	0.31143453D+01
RATE OF RA (RADIANS/SEC)	-0.62631171D-08	-0.61831158D-08	-0.62059708D-08	-0.63774079D-08	-0.62173999D-08	-0.62288299D-08
MEAN MOTION (RADIANS/SEC)	0.14585361D-03	0.14584913D-03	0.14585481D-03	0.14585320D-03	0.14585676D-03	0.14585563D-03

			SAT # 4				SAT # 5				SAT # 6				SAT # 7				SAT # 8				SAT # 9				ERROR ELLIPSE				
DAY	HH	MM	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	AA	BB	PHI		
275	0	0	58	117	51	-31	58	-92	57	-119	0	0	-26	-97	39	-74	51	-148	5	104	13	1	8	-127	9	-116	7	6	28	5	0
275	0	4	55	117	50	-29	60	-93	59	-116	0	0	-28	-97	38	-77	49	-146	3	105	11	1	6	-127	7	-116	7	6	32	5	0
275	0	9	52	117	48	-28	63	-94	60	-113	0	0	-30	-96	37	-80	47	-145	1	106	9	1	4	-128	5	-116	7	6	37	5	0
275	0	14	50	118	46	-27	65	-95	61	-110	0	0	-32	-96	35	-82	45	-144	0	0	7	1	2	-128	2	-116	10	7	6	4	0
275	0	19	47	118	44	-25	67	-97	62	-106	0	0	-34	-96	34	-84	43	-143	0	0	4	1	0	0	0	-116	822	8	51	3	0
275	0	24	45	118	42	-25	70	-100	62	-102	0	0	-36	-95	32	-86	41	-142	0	0	2	1	0	0	-1	-116	213	8	52	3	0
275	0	29	42	119	40	-24	72	-104	63	-98	0	0	-38	-95	30	-88	39	-141	0	0	0	1	0	0	-3	-116	117	8	53	3	0
275	0	34	40	119	38	-23	74	-109	63	-93	0	0	-40	-94	28	-90	37	-140	0	0	-1	1	0	0	-6	-116	83	8	54	3	0
275	0	39	37	120	36	-23	76	-116	63	-89	0	0	-42	-93	26	-92	35	-140	0	0	-4	0	0	0	-8	-117	66	8	54	3	0
275	0	44	35	120	34	-22	77	-125	63	-85	0	0	-44	-92	24	-93	33	-139	0	0	-6	0	0	0	-10	-117	56	8	55	3	0
275	0	49	33	121	32	-22	78	-136	63	-80	0	0	-46	-91	22	-95	31	-139	0	0	-8	0	0	0	-12	-117	50	8	56	3	0
275	0	54	30	122	30	-22	79	-150	62	-76	0	0	-48	-90	20	-96	29	-139	0	0	-10	0	0	0	-14	-117	47	8	56	3	0
275	0	59	28	122	27	-21	78	-163	61	-73	0	0	-50	-89	18	-97	27	-139	0	0	-13	0	0	0	-17	-117	44	8	57	3	0
275	1	4	25	123	25	-21	77	-175	60	-69	0	0	-52	-87	16	-98	24	-139	0	0	-15	0	0	0	-19	-117	43	8	58	3	0
275	1	9	23	124	23	-21	76	175	59	-66	0	0	-53	-85	14	-99	22	-138	0	0	-17	0	0	0	-21	-117	42	8	58	3	0
275	1	14	21	125	21	-21	74	167	58	-63	0	0	-55	-83	12	-100	20	-138	0	0	-19	0	0	0	-23	-117	42	8	58	3	0
275	1	19	18	125	19	-21	72	162	57	-60	0	0	-56	-81	9	-101	18	-138	0	0	-21	0	0	0	-25	-117	43	8	59	3	0
275	1	24	16	126	16	-21	70	158	55	-58	0	0	-58	-78	7	-102	15	-138	0	0	-24	0	0	0	-27	-116	45	8	59	3	0
275	1	29	14	127	14	-21	67	155	53	-56	0	0	-59	-75	5	-103	13	-139	0	0	-26	0	0	0	-30	-116	48	8	59	3	0
275	1	34	12	128	12	-21	65	153	52	-54	0	0	-60	-72	3	-103	11	-139	0	0	-28	0	0	0	-32	-116	52	8	59	3	0

275	1	39	9	128	10	-21	62	152	50	-52	0	0	-61	-68	1	-104	9	-139	0	0	-30	1	0	0	-34	-115	57	8	59	3	1
275	1	44	7	129	8	-21	60	151	48	-51	0	0	-62	-65	0	0	7	-139	0	0	-32	1	0	0	-36	-115	438	20	41	2	0
275	1	49	5	130	5	-21	57	150	46	-50	0	0	-62	-61	0	0	4	-139	0	0	-34	1	0	0	-38	-115	403	22	42	2	0
275	1	54	3	131	3	-21	55	149	44	-49	0	0	-62	-56	0	0	2	-139	0	0	-36	2	0	0	-40	-114	367	24	43	2	0
275	1	59	1	131	1	-21	52	149	42	-48	0	0	-63	-52	0	0	0	-139	0	0	-38	2	0	0	-42	-113	331	26	45	2	0
275	2	4	0	0	0	-22	50	149	40	-47	0	0	-63	-48	0	0	-1	-139	0	0	-40	3	0	0	-44	-112	0	0	0	1	0
275	2	9	0	0	-3	-22	47	149	38	-47	0	0	-62	-44	0	0	-4	-139	0	0	-42	4	0	0	-46	-111	0	0	0	1	0
275	2	14	0	0	-5	-22	45	149	36	-46	0	0	-62	-40	0	0	-6	-140	0	0	-44	5	0	0	-47	-110	0	0	0	1	0
275	2	19	0	0	-7	-22	42	149	34	-46	0	0	-61	-36	0	0	-8	-140	0	0	-46	6	0	0	-49	-109	0	0	0	1	0
275	2	24	0	0	-9	-22	39	150	32	-45	0	0	-60	-32	0	0	-10	-140	0	0	-48	7	0	0	-51	-107	0	0	0	1	0
275	2	29	0	0	-12	-22	37	150	30	-45	0	0	-59	-29	0	0	-13	-140	0	0	-50	8	0	0	-53	-105	0	0	0	1	0
275	2	34	0	0	-14	-22	34	150	28	-45	0	0	-58	-26	0	0	-15	-140	0	0	-52	10	0	0	-54	-103	0	0	0	1	0
275	2	39	0	0	-16	-22	32	151	26	-45	0	0	-57	-23	0	0	-17	-140	0	0	-53	12	0	0	-56	-101	0	0	0	1	0
275	2	44	0	0	-18	-22	29	151	23	-45	0	0	-55	-21	0	0	-19	-140	0	0	-55	14	0	0	-57	-99	0	0	0	1	0
275	2	49	0	0	-21	-22	27	152	21	-45	0	0	-54	-18	0	0	-21	-140	0	0	-56	16	0	0	-58	-96	0	0	0	1	0
275	2	54	0	0	-23	-22	25	152	19	-45	0	0	-52	-16	0	0	-24	-140	0	0	-58	19	0	0	-59	-93	0	0	0	1	0
275	2	59	0	0	-25	-22	22	152	17	-45	0	0	-50	-15	0	0	-26	-140	0	0	-59	22	0	0	-60	-89	0	0	0	1	0
275	3	4	0	0	-27	-22	20	153	15	-45	0	0	-49	-13	0	0	-28	-140	0	0	-60	25	0	0	-61	-86	0	0	0	1	0
275	3	9	0	0	-29	-22	17	153	12	-45	0	0	-47	-12	0	0	-30	-140	0	0	-61	29	0	0	-62	-82	0	0	0	1	0
275	3	14	0	0	-31	-21	15	154	10	-45	0	0	-45	-11	0	0	-32	-139	0	0	-62	33	0	0	-62	-78	0	0	0	1	0
275	3	19	0	0	-34	-21	13	154	8	-45	0	0	-43	-10	0	0	-34	-139	0	0	-62	37	0	0	-62	-74	0	0	0	1	0
275	3	24	0	0	-36	-21	10	155	6	-45	0	0	-41	-9	0	0	-36	-138	0	0	-63	41	0	0	-62	-70	0	0	0	1	0
275	3	29	0	0	-38	-20	8	155	3	-45	0	0	-39	-8	0	0	-38	-138	0	0	-63	45	0	0	-62	-66	0	0	0	1	0
275	3	34	0	0	-40	-19	6	156	1	-45	0	0	-37	-8	0	0	-40	-137	0	0	-63	50	0	0	-62	-62	0	0	0	1	0
275	3	39	0	0	-42	-19	4	156	0	-46	0	0	-35	-7	0	0	-42	-137	0	0	-62	54	0	0	-61	-58	0	0	0	1	0
275	3	44	0	0	-44	-18	1	157	-2	-46	0	0	-33	-7	0	0	-44	-136	0	0	-62	58	0	0	-60	-54	0	0	0	1	0
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275	3	54	0	0	-48	-16	0	0	-7	-46	0	0	-28	-6	0	0	-48	-134	0	0	-60	65	0	0	-58	-48	0	0	0	0	0
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275	4	4	0	0	-51	-13	0	0	-11	-46	0	0	-24	-6	0	0	-52	-131	0	0	-58	72	0	0	-56	-42	0	0	0	0	0
275	4	9	0	0	-53	-11	0	0	-14	-46	0	0	-22	-6	0	0	-53	-129	0	0	-57	74	0	0	-54	-40	0	0	0	0	0
275	4	14	0	0	-54	-9	0	0	-16	-46	0	0	-20	-6	0	0	-55	-127	0	0	-55	77	0	0	-53	-38	0	0	0	0	0
275	4	19	0	0	-56	-7	0	0	-18	-46	0	0	-18	-6	0	0	-56	-125	0	0	-54	79	0	0	-51	-36	0	0	0	0	0
275	4	24	0	0	-57	-4	0	0	-20	-46	0	0	-15	-6	0	0	-58	-122	0	0	-52	81	0	0	-49	-35	0	0	0	0	0
275	4	29	0	0	-59	-1	0	0	-22	-46	0	0	-13	-6	0	0	-59	-119	0	0	-50	83	0	0	-48	-33	0	0	0	0	0
275	4	34	0	0	-60	1	0	0	-25	-46	0	0	-11	-6	0	0	-60	-116	0	0	-48	84	0	0	-46	-32	0	0	0	0	0
275	4	39	0	0	-61	5	0	0	-27	-46	0	0	-9	-6	0	0	-61	-113	0	0	-47	85	0	0	-44	-31	0	0	0	0	0
275	4	44	0	0	-62	8	0	0	-29	-46	0	0	-6	-6	0	0	-62	-109	0	0	-45	86	0	0	-42	-30	0	0	0	0	0
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275	4	54	0	0	-63	16	0	0	-33	-45	0	0	-2	-6	0	0	-63	-101	0	0	-41	88	0	0	-38	-29	0	0	0	0	0
275	4	59	0	0	-63	21	0	0	-35	-45	0	0	0	-6	0	0	-63	-97	0	0	-39	89	0	0	-36	-28	0	0	0	0	0
275	5	4	0	0	-63	25	0	0	-38	-45	0	0	2	-7	0	0	-63	-92	0	0	-37	89	0	0	-34	-28	0	0	0	0	0
275	5	9	0	0	-62	29	0	0	-40	-44	0	0	4	-7	0	0	-63	-88	0	0	-35	90	0	0	-32	-27	0	0	0	0	0
275	5	14	0	0	-62	33	0	0	-42	-43	1	115	6	-7	0	0	-62	-84	0	0	-32	90	0	0	-30	-27	0	0	0	1	0
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275	5	24	0	0	-61	41	0	0	-46	-42	6	114	10	-7	0	0	-61	-76	0	0	-28	91	0	0	-25	-27	0	0	0	1	0
275	5	29	0	0	-60	44	0	0	-47	-40	8	113	13	-7	0	0	-60	-73	0	0	-26	91	0	0	-23	-26	0	0	0	1	0
275	5	34	0	0	-58	48	0	0	-49	-39	10	113	15	-7	0	0	-59	-70	0	0	-24	91	0	0	-21	-26	0	0	0	1	0
275	5	39	0	0	-57	50	0	0	-51	-38	12	112	17	-7	0	0	-57	-67	0	0	-22	91	0	0	-19	-26	0	0	0	1	0
275	5	44	0	0	-56	53	0	0	-53	-36	15	111	19	-7	0	0	-56	-64	0	0	-19	91	0	0	-17	-26	0	0	0	1	0
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275	6	4	0	0	-49	60	0	0	-59	-26	23	107	28	-7	0	0	-50	-57	0	0	-11	91	0	0	-8	-27	0	0	0	1	0
275	6	9	0	0	-47	62	0	0	-60	-23	25	106	30	-6	0	0	-48	-56	0	0	-8	91	0	0	-6	-27	0	0	0	1	0
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275	6	24	0	0	-41	65	0	0	-63	-12	32	101	36	-5	0	0	-42	-53	0	0	-2	91	1	137	0	-27	334	9	354	2	0
275	6	29	0	0	-39	66	0	0	-63	-7	34	99	39	-5	0	0	-40	-52	0	0	0	91	4	137	2	-27	344	9	355	2	0
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275	6	39	0	0	-35	67	0	0	-63	0	37	95	43	-3	0	0	-36	-51	0	0	4	90	8	136	7	-27	364	8	356	2	0
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275	6	49	0	0	-31	67	0	0	-63	9	40	90	46	-1	0	0	-32	-50	0	0	9	90	13	135	11	-27	384	8	358	2	0
275	6	54	0	0	-29	68	0	0	-62	13	42	87	48	0	0	0	-30	-50	0	0	11	90	15	134	14	-27	394	8	358	2	0
275	6	59	0	0	-27	68	0	0	-61	17	43	85	50	1	0	0	-27	-50	0	0	13	90	17	133	16	-27	404	7	358	2	0
275	7	4	0	0	-25	68	0	0	-60	20	44	81	52	2	0	0	-25	-49	0	0	15	90	20	133	18	-27	413	7	359	2	0
275	7	9	0	0	-23	68	0	0	-59	24	45	78	53	4	0	0	-23	-49	0	0	18	90	22	132	20	-27	423	7	359	2	0
275	7	14	0	0	-20	68		0	-58	27	45	75	55	6	0	0	-21	-49	0	0	20	90	24	131	22	-27	432	7	0	2	0

275	7	19	0	0	-18	68		0	-56	29	46	71	56	9	0	0	-19	-49	0	0	22	90	27	130	25	-27	441	7	0	2	0
275	7	24	0	0	-16	[illegible]		0	-55	31	46	68	58	11	0	0	-16	-49	0	0	24	90	29	129	27	-27	449	6	0	2	0
275	7	29	0	0	-14	[illegible]	0	0	-53	33	46	64	59	14	0	0	-14	-49	0	0	26	90	31	128	29	-27	457	6	1	2	0
275	7	34	0	0	-12	63	0	0	-51	35	46	61	60	18	0	0	-12	-49	0	0	28	90	33	127	31	-27	465	6	1	2	0
275	7	39	0	0	-9	68	0	0	-50	37	46	57	61	21	0	0	-10	-49	0	0	31	91	36	125	33	-26	472	6	1	2	0
275	7	44	0	0	-7	68	0	0	-48	38	45	54	62	25	0	0	-8	-50	0	17	33	91	38	124	35	-26	105	3	4	3	0
275	7	49	0	0	-5	68	0	0	-46	39	44	51	62	29	0	0	-5	-50	2	16	35	91	40	122	37	-25	106	4	4	3	0
275	7	54	0	0	-3	68	0	0	-44	40	43	48	63	33	1	161	-3	-50	4	16	37	92	42	120	39	-25	39	2	0	4	0
275	7	59	0	0	0	68	0	0	-42	41	42	45	63	38	3	161	-1	-50	6	15	39	93	44	118	42	-24	39	2	0	4	0
275	8	4	0	0	1	67	0	0	-40	42	41	43	63	42	6	161	0	-50	8	14	41	93	46	115	43	-23	39	2	0	4	0
275	8	9	0	0	3	67	0	0	-38	43	39	40	62	46	8	161	3	-50	10	13	43	94	47	112	45	-22	39	2	0	4	0
275	8	14	0	0	5	67	0	0	-36	43	38	38	62	50	10	161	5	-50	12	12	45	95	49	109	47	-21	39	2	0	4	0
275	8	19	0	0	8	67	0	0	-34	43	36	36	61	54	13	160	7	-50	14	11	47	96	50	106	49	-19	38	2	0	4	0
275	8	24	0	0	10	67	0	0	-31	44	34	34	60	58	15	160	9	-51	16	10	49	97	52	102	51	-18	37	2	1	4	0
275	8	29	0	0	12	67	0	0	-29	44	32	33	59	61	18	160	12	-51	18	9	50	99	53	99	53	-16	36	2	1	4	0
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96

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275	18	19	0	0	-43	-115	0	0	-62	165	11	-52	35	173	0	0	-43	126	1	-158	-3	-88	0	0	0	152	477	3	5	2	0
275	18	24	0	0	-41	-114	0	0	-63	169	13	-51	37	174	0	0	-41	127	3	-158	-1	-88	0	0	1	152	480	3	5	2	0
275	18	29	0	0	-39	-113	0	[illegible]	[illegible]	173	15	-51	39	175	0	0	-39	127	5	-157	1	-88	0	0	3	152	483	3	4	2	0
275	18	34	0	0	-37	-113	0			178	17	-51	41	175	0	0	-37	128	8	-157	3	-89	0	0	6	152	487	3	4	2	0

275	18	39	0	0	-35	-112	0			[illegible]	20	-51	43	176	0	0	-35	128	10	-156	5	-89	0	0	8	152	491	3	4	2	0
275	18	44	0	0	-32	-112	0	0	-63	[illegible]	22	-50	45	177	0	0	-33	129	12	-156	7	-89	0	0	10	152	495	3	4	2	0
275	18	49	0	0	-30	-111	0	0	-62	-168	24	-50	47	178	0	0	-31	129	15	-155	10	-89	0	0	12	152	500	3	4	2	0
275	18	54	0	0	-28	-111	0	0	-62	-164	26	-51	49	-179	0	0	-29	129	17	-155	12	-89	0	0	14	152	505	3	4	2	0
275	18	59	0	0	-26	-111	0	0	-61	-161	29	-51	51	-178	0	0	-27	130	19	-155	14	-89	0	0	17	152	511	4	3	2	0
275	19	4	0	0	-24	-111	0	0	-60	-157	31	-51	52	-176	0	0	-24	130	22	-154	16	-89	0	0	19	152	518	4	3	2	0
275	19	9	0	0	-22	-111	0	0	-59	-154	33	-52	54	-174	0	0	-22	130	24	-154	18	-89	0	0	21	152	525	4	3	2	0
275	19	14	0	0	-19	-111	0	0	-57	-151	35	-52	56	-172	0	0	-20	130	27	-153	21	-89	0	0	23	152	532	4	3	2	0
275	19	19	0	0	-17	-111	0	0	-56	-149	38	-53	57	-169	0	0	-18	130	29	-153	23	-89	0	0	25	152	540	4	3	2	0
275	19	24	0	0	-15	-111	0	0	-54	-147	40	-54	58	-166	0	0	-16	130	32	-152	25	-89	0	0	28	152	548	4	3	2	0
275	19	29	0	0	-13	-111	0	0	-52	-145	42	-55	59	-163	0	0	-13	130	34	-152	27	-89	0	-35	30	152	185	3	2	3	0
275	19	34	0	0	-11	-111	0	0	-51	-143	44	-56	60	-160	0	0	-11	130	37	-152	29	-88	2	-35	32	153	188	3	2	3	0
275	19	39	0	0	-8	-111	0	0	-49	-142	46	-58	61	-156	0	0	-9	130	39	-152	31	-88	4	-35	34	153	189	3	3	3	0
275	19	44	0	0	-6	-111	0	0	-47	-140	48	-60	62	-152	0	0	-7	129	42	-151	34	-88	7	-35	36	154	185	3	3	3	0
275	19	49	0	0	-4	-111	0	0	-45	-139	50	-62	62	-148	0	0	-4	129	44	-151	36	-87	9	-35	38	154	178	3	3	3	0
275	19	54	0	0	-2	-111	0	0	-43	-138	52	-65	63	-144	0	0	-2	129	47	-151	38	-87	11	-34	40	155	167	3	3	3	0
275	19	59	0	-134	0	-112	0	0	-41	-138	54	-67	63	-140	0	0	0	129	49	-151	40	-86	13	-35	42	156	39	3	0	4	0
275	20	4	2	-133	2	-112	0	0	-39	-137	55	-71	62	-135	0	0	1	129	52	-152	42	-85	15	-35	44	157	37	3	0	4	0
275	20	9	4	-132	4	-112	0	0	-37	-136	57	-74	62	-131	0	0	4	129	54	-152	44	-85	18	-35	46	158	34	3	0	4	0
275	20	14	6	-132	6	-112	0	0	-35	-136	58	-79	61	-127	0	0	6	129	57	-153	46	-84	20	-35	48	159	32	3	0	4	0
275	20	19	9	-131	8	-112	0	0	-33	-135	59	-83	61	-124	0	0	8	129	60	-154	48	-82	22	-36	50	160	31	3	0	4	0
275	20	24	11	-130	11	-112	0	0	-31	-135	59	-88	60	-120	0	0	10	128	62	-155	49	-81	24	-36	52	162	29	3	0	4	0
275	20	29	13	-129	13	-112	0	0	-28	-135	60	-93	58	-117	0	0	13	128	65	-157	51	-79	27	-37	53	164	27	3	0	4	0
275	20	34	15	-129	15	-112	0	0	-26	-135	60	-98	57	-114	0	0	15	128	67	-159	53	-78	29	-38	55	166	26	4	0	4	0
275	20	39	18	-128	17	-112	0	0	-24	-135	59	-103	56	-111	0	0	17	128	69	-162	54	-76	31	-39	56	169	25	4	0	4	0
275	20	44	20	-127	20	-112	0	0	-22	-135	59	-108	54	-109	0	0	19	128	72	-166	56	-73	33	-40	58	171	23	4	0	4	0
275	20	49	22	-126	22	-112	0	0	-20	-135	58	-112	53	-107	0	0	22	128	74	-172	57	-71	35	-41	59	175	22	4	0	4	0
275	20	54	25	-126	24	-112	0	0	-17	-135	57	-116	51	-105	0	0	24	128	75	-179	59	-68	37	-43	60	178	21	4	359	4	0
275	20	59	27	-125	26	-112	0	0	-15	-135	55	-120	49	-104	0	0	26	129	77	171	60	-65	39	-44	61	-177	20	4	359	4	0
275	21	4	29	-124	28	-112	0	0	-13	-135	54	-124	47	-102	0	0	28	129	78	160	61	-61	41	-46	62	-174	19	5	359	4	0
275	21	9	32	-124	30	-112	0	0	-11	-135	52	-127	46	-101	0	0	30	129	78	147	62	-57	43	-48	62	-169	18	5	359	4	0
275	21	14	34	-123	32	-111	0	0	-8	-135	50	-130	44	-100	0	0	33	129	77	135	62	-53	44	-51	62	-165	18	5	359	4	0
275	21	19	36	-122	35	-111	0	0	-6	-135	48	-132	42	-99	2	-15	35	130	76	124	63	-49	46	-53	62	-161	17	3	358	5	0
275	21	24	39	-122	37	-110	0	0	-4	-135	46	-134	40	-99	4	-15	37	130	75	116	63	-45	47	-56	62	-157	16	3	358	5	0
275	21	29	41	-121	39	-110	0	0	-2	-135	44	-136	38	-98	6	-15	39	131	73	109	63	-41	48	-60	62	-152	16	3	358	5	0
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275	21	39	46	-120	43	-108	0	0	2	-136	39	-140	33	-97	10	-16	43	132	69	100	62	-32	50	-67	61	-145	14	3	358	5	0
275	21	44	49	-120	45	-107	0	0	4	-136	37	-141	31	-97	12	-16	45	133	67	97	61	-28	50	-71	60	-141	14	3	358	5	0
275	21	49	51	-120	47	-106	0	0	6	-136	35	-142	29	-96	15	-17	47	134	64	95	61	-25	51	-74	59	-138	13	3	358	5	0
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275	22	4	59	-120	52	-102	6	-105	13	-136	28	-145	23	-96	21	-19	52	139	57	92	57	-15	50	-86	54	-130	10	3	355	6	0
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275	22	34	74	-130	60	-86	19	-100	26	-136	13	-148	9	-96	32	-27	61	155	42	92	47	-4	43	-106	44	-120	9	3	355	6	0
275	22	39	76	-135	61	-83	21	-99	29	-136	11	-148	7	-96	34	-29	62	159	40	93	45	-3	41	-108	42	-119	8	3	356	6	0
275	22	44	78	-143	62	-79	23	-98	31	-136	9	-148	5	-96	36	-32	62	163	37	93	43	-2	39	-111	40	-119	8	3	356	6	0
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275	22	54	80	-167	63	-71	28	-97	35	-135	4	-149	0	-96	38	-36	63	171	33	94	39	0	35	-114	36	-117	8	3	356	6	0
275	22	59	81	175	63	-66	30	-96	37	-135	2	-149	-1	-96	40	-39	63	176	30	95	37	0	33	-116	34	-117	8	3	356	6	0
275	23	4	80	160	63	-62	33	-95	39	-134	0	-149	-3	-97	41	-42	63	-179	28	96	35	0	31	-118	31	-117	8	3	356	6	0
275	23	9	79	147	62	-58	35	-95	41	-133	0	0	-5	-97	41	-45	62	-174	26	96	33	0	29	-119	29	-116	8	5	4	5	0
275	23	14	77	138	62	-54	37	-94	43	-132	0	0	-7	-97	42	-48	62	-170	23	97	31	1	27	-120	27	-116	8	5	6	5	0
275	23	19	75	131	61	-50	40	-93	45	-132	0	0	-10	-97	42	-51	61	-166	21	98	29	1	24	-121	25	-116	7	5	8	5	0
275	23	24	73	126	60	-46	42	-93	47	-130	0	0	-12	-97	43	-55	60	-163	19	99	27	1	22	-122	23	-116	7	5	10	5	0
275	23	29	70	123	59	-43	45	-92	49	-129	0	0	-14	-97	43	-58	59	-160	17	99	25	1	20	-123	21	-116	7	6	12	5	0
275	23	34	68	121	58	-40	47	-92	51	-128	0	0	-16	-97	42	-61	58	-157	14	100	22	1	18	-124	18	-116	7	6	14	5	0
275	23	39	66	119	56	-37	50	-92	52	-126	0	0	-19	-97	42	-65	56	-154	12	101	20	1	15	-125	16	-116	7	6	17	5	0
275	23	44	63	118	55	-35	52	-92	54	-124	0	0	-21	-97	41	-68	55	-152	10	102	18	1	13	-125	14	-116	7	6	20	5	0
275	23	49	61	118	53	-33	55	-92	56	-122	0	0	-23	-97	40	-71	53	-150	8	103	16	1	11	-126	12	-116	7	6	24	5	0
275	23	54	58	117	52	-31	57	-92	57	-120	0	0	-25	-97	39	-74	51	-148	6	104	14	1	9	-127	10	-116	7	6	27	5	0
275	23	59	55	117	50	-29	60	-93	58	-117	0	0	-27	-97	38	-77	49	-146	4	105	11	1	6	-127	7	-116	7	6	32	5	0

GPS PERFORMANCE PRE-ANALYSIS

LATITUDE = 70.0000 LONGITUDE =292.0000

BAFFIN BAY

C/A - Code

OPTIONS USED FOR THIS RUN

CODE : C/A

SIGMA PSEUDO-RANGE = 16.00 (M)

SIGMA LORAN-RANGE = 100/SQRT(0.5) (M)

SATELLITE NO.	4	5	6	7	8	9
REF. TIME - TIME OF WEEK (SEC)	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.22528000D+06
JULIAN DATE (DDD HH MM SS)	145 18 42 8	145 18 42 8	145 18 42 8	145 18 42 8	145 18 42 8	169 14 34 40
SEMI - MAJOR AXIS (M)	0.26560399D+08	0.26560943D+08	0.26560254D+08	0.26560449D+08	0.26560017D+08	0.26560147D+08
MEAN ANOMALY @ TREF (RADIANS)	-0.21159685D+01	0.12833393D+01	0.85431182D+00	-0.32870960D+00	0.17212573D+01	-0.91869777D+00
ECCENTRICITY	0.14967920D-02	0.19474030D-02	0.59700012D-03	0.69551468D-02	0.91743469D-03	0.69322591D-02
ARG OF PERIGEE (RADIANS)	0.31187789D+01	-0.10636019D+01	0.17242581D+01	0.13419558D+01	0.53818911D-01	0.14604583D+01
INCLINATION (RADIANS)	0.11035115D+01	0.11125715D+01	0.11011986D+01	0.11076880D+01	0.11036613D+01	0.10981785D+01
RIGHT ASCENSION (RADIANS)	-0.57879102D+00	-0.58088678D+00	-0.26814451D+01	-0.26411774D+01	-0.57803953D+00	0.31143453D+01
RATE OF RA (RADIANS/SEC)	-0.62631171D-08	-0.61831158D-08	-0.62059708D-08	-0.63774079D-08	-0.62173999D-08	-0.62288299D-08
MEAN MOTION (RADIANS/SEC)	0.14585361D-03	0.14584913D-03	0.14585481D-03	0.14585320D-03	0.14585676D-03	0.14585568D-03

			SAT # 4				SAT # 5				SAT # 6				SAT # 7				SAT # 8				SAT # 9				ERROR ELLIPSE				
DAY	HH	MM	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	AA	BB	PHI		
275	0	0	58	117	51	-31	58	-92	57	-119	0	0	-26	-97	39	-74	51	-148	5	104	13	1	8	-127	9	-116	30	25	28	5	0
275	0	4	55	117	50	-29	60	-93	59	-116	0	0	-28	-97	38	-77	49	-146	3	105	11	1	6	-127	7	-116	30	26	32	5	0
275	0	9	52	117	48	-28	63	-94	60	-113	0	0	-30	-96	37	-80	47	-145	1	106	9	1	4	-128	5	-116	30	26	37	5	0
275	0	14	50	118	46	-27	65	-95	61	-110	0	0	-32	-96	35	-82	45	-144	0	0	7	1	2	-128	2	-116	42	28	6	4	0
275	0	19	47	118	44	-25	67	-97	62	-106	0	0	-34	-96	34	-84	43	-143	0	0	4	1	0	0	0	-116	833	35	51	3	0
275	0	24	45	118	42	-25	70	-100	62	-102	0	0	-36	-95	32	-86	41	-142	0	0	2	1	0	0	-1	-116	576	35	52	3	0
275	0	29	42	119	40	-24	72	-104	63	-98	0	0	-38	-95	30	-88	39	-141	0	0	0	1	0	0	-3	-116	391	34	53	3	0
275	0	34	40	119	38	-23	74	-109	63	-93	0	0	-40	-94	28	-90	37	-140	0	0	-1	1	0	0	-6	-116	296	34	53	3	0
275	0	39	37	120	36	-23	76	-116	63	-89	0	0	-42	-93	26	-92	35	-140	0	0	-4	0	0	0	-8	-117	243	34	54	3	0
275	0	44	35	120	34	-22	77	-125	63	-85	0	0	-44	-92	24	-93	33	-139	0	0	-6	0	0	0	-10	-117	210	34	55	3	0
275	0	49	33	121	32	-22	78	-136	63	-80	0	0	-46	-91	22	-95	31	-139	0	0	-8	0	0	0	-12	-117	188	33	56	3	0
275	0	54	30	122	30	-22	79	-150	62	-76	0	0	-48	-90	20	-96	29	-139	0	0	-10	0	0	0	-14	-117	174	33	56	3	0
275	0	59	28	122	27	-21	78	-163	61	-73	0	0	-50	-89	18	-97	27	-139	0	0	-13	0	0	0	-17	-117	165	33	57	3	0
275	1	4	25	123	25	-21	77	-175	60	-69	0	0	-52	-87	16	-98	24	-139	0	0	-15	0	0	0	-19	-117	159	33	57	3	0
275	1	9	23	124	23	-21	76	175	59	-66	0	0	-53	-85	14	-99	22	-138	0	0	-17	0	0	0	-21	-117	155	32	58	3	0
275	1	14	21	125	21	-21	74	167	58	-63	0	0	-55	-83	12	-100	20	-138	0	0	-19	0	0	0	-23	-117	155	32	58	3	0
275	1	19	18	125	19	-21	72	162	57	-60	0	0	-56	-81	9	-101	18	-138	0	0	-21	0	0	0	-25	-117	156	32	58	3	0
275	1	24	16	126	16	-21	70	158	55	-58	0	0	-58	-78	7	-102	15	-138	0	0	-24	0	0	0	-27	-116	159	32	58	3	0
275	1	29	14	127	14	-21	67	155	53	-56	0	0	-59	-75	5	-103	13	-139	0	0	-26	0	0	0	-30	-116	163	32	58	3	0
275	1	34	12	128	12	-21	65	153	52	-54	0	0	-60	-72	3	-103	11	-139	0	0	-28	0	0	0	-32	-116	170	32	58	3	0

275	1	39	9	128	10	-21	62	152	50	-52	0	0	-61	-68	1	-104	9	-139	0	0	-30	1	0	0	-34	-115	178	32	58	3	0
275	1	44	7	129	8	-21	60	151	48	-51	0	0	-62	-65	0	0	7	-139	0	0	-32	1	0	0	-36	-115	478	76	37	2	0
275	1	49	5	130	5	-21	57	150	46	-50	0	0	-62	-61	0	0	4	-139	0	0	-34	1	0	0	-38	-115	447	81	37	2	0
275	1	54	3	131	3	-21	55	149	44	-49	0	0	-62	-56	0	0	2	-139	0	0	-36	2	0	0	-40	-114	416	86	37	2	0
275	1	59	1	131	1	-21	52	149	42	-48	0	0	-63	-52	0	0	0	-139	0	0	-38	2	0	0	-42	-113	386	92	37	2	0
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275	20	54	25	-126	24	-112	0	0	-17	-135	57	-116	51	-105	0	0	24	128	75	-179	59	-68	37	-43	60	178	86	19	359	4	0
275	20	59	27	-125	26	-112	0	0	-15	-135	55	-120	49	-104	0	0	26	129	77	171	60	-65	39	-44	61	-177	82	19	359	4	0
275	21	4	29	-124	28	-112	0	0	-13	-135	54	-124	47	-102	0	0	28	129	78	160	61	-61	41	-46	62	-174	78	20	359	4	0
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275	21	19	36	-122	35	-111	0	0	-6	-135	48	-132	42	-99	2	-15	35	130	76	124	63	-49	46	-53	62	-161	69	13	358	5	0
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275	23	4	80	160	63	-62	33	-95	39	-134	0	-149	-3	-97	41	-42	63	-179	28	96	35	0	31	-118	31	-117	32	15	356	6	0
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275	23	29	72	123	59	-43	45	-92	49	-129	0	0	-14	-97	43	-58	59	-160	17	99	25	1	20	-123	21	-116	31	24	12	5	0
275	23	34	68	121	58	-40	47	-92	51	-128	0	0	-16	-97	42	-61	58	-157	14	100	22	1	18	-124	18	-116	31	24	14	5	0
275	23	39	66	119	56	-37	50	-92	52	-126	0	0	-19	-97	42	-65	56	-154	12	101	20	1	15	-125	16	-116	30	24	17	5	0
275	23	44	63	118	55	-35	52	-92	54	-124	0	0	-21	-97	41	-68	55	-152	10	102	18	1	13	-125	14	-116	30	25	20	5	0
275	23	49	61	118	53	-33	55	-92	56	-122	0	0	-23	-97	40	-71	53	-150	8	103	16	1	11	-126	12	-116	30	25	23	5	0
275	23	54	58	117	52	-31	57	-92	57	-120	0	0	-25	-97	39	-74	51	-148	6	104	14	1	9	-127	10	-116	30	25	27	5	0
275	23	59	55	117	50	-29	60	-93	58	-117	0	0	-27	-97	38	-77	49	-146	4	105	11	1	6	-127	7	-116	30	26	31	5	0

GPS PERFORMANCE PRE-ANALYSIS

LATITUDE = 70.0000   LONGITUDE =292.0000

BAFFIN BAY
C/A Code
Loran - C

OPTIONS USED FOR THIS RUN

CODE : C/A

SIGMA PSEUDO-RANGE = 16.00 (M)

SIGMA LORAN-RANGE = 100/SQRT(0.5) (M)

SATELLITE NO.	4	5	6	7	8	9
REF. TIME - TIME OF WEEK (SEC)	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.22528000D+06
JULIAN DATE (DDD HH MM SS)	145 18 42 8	145 18 42 8	145 18 42 8	145 18 42 8	145 18 42 8	169 14 34 40
SEMI - MAJOR AXIS (M)	0.26560399D+08	0.26560943D+08	0.26560254D+08	0.26560449D+08	0.26560017D+08	0.26560147D+08
MEAN ANOMALY @ TREF (RADIANS)	-0.21159685D+01	0.12833393D+01	0.85431182D+00	-0.32870960D+00	0.17212573D+01	-0.91869777D+00
ECCENTRICITY	0.14967920D-02	0.19474030D-02	0.59700012D-03	0.69551468D-02	0.91743469D-03	0.69322591D-02
ARG OF PERIGEE (RADIANS)	0.31187789D+01	-0.10636019D+01	0.17242581D+01	0.13419558D+01	0.53818911D-01	0.14604583D+01
INCLINATION (RADIANS)	0.11035115D+01	0.11125715D+01	0.11011986D+01	0.11076880D+01	0.11036613D+01	0.10981785D+01
RIGHT ASCENSION (RADIANS)	-0.57879102D+00	-0.58088678D+00	-0.26814451D+01	-0.26411774D+01	-0.57803953D+00	0.31143453D+01
RATE OF RA (RADIANS/SEC)	-0.62631171D-08	-0.61831158D-08	-0.62059708D-08	-0.63774079D-08	-0.62173999D-08	-0.62288299D-08
MEAN MOTION (RADIANS/SEC)	0.14585361D-03	0.14584913D-03	0.14585481D-03	0.14585320D-03	0.14585676D-03	0.14585568D-03

			SAT # 4				SAT # 5				SAT # 6				SAT # 7				SAT # 8				SAT # 9				ERROR ELLIPSE				
DAY	HH	MM	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	AA	BB	PHI		
275	0	0	58	117	51	-31	58	-92	57	-119	0	0	-26	-97	39	-74	51	-148	5	104	13	1	8	-127	9	-116	30	25	28	5	0
275	0	4	55	117	50	-29	60	-93	59	-116	0	0	-28	-97	38	-77	49	-146	3	105	11	1	6	-127	7	-116	30	26	32	5	0
275	0	9	52	117	48	-28	63	-94	60	-113	0	0	-30	-96	37	-80	47	-145	1	106	9	1	4	-128	5	-116	30	26	37	5	0
275	0	14	50	118	46	-27	65	-95	61	-110	0	0	-32	-96	35	-82	45	-144	0	0	7	1	2	-128	2	-116	42	28	6	4	0
275	0	19	47	119	44	-25	67	-97	62	-106	0	0	-34	-96	34	-84	43	-143	0	0	4	1	0	0	0	-116	271	34	49	3	2
275	0	24	45	118	42	-25	70	-100	62	-102	0	0	-36	-95	32	-86	41	-142	0	0	2	1	0	0	-1	-116	256	34	50	3	2
275	0	29	42	119	40	-24	72	-104	63	-98	0	0	-38	-95	30	-88	39	-141	0	0	0	1	0	0	-3	-116	231	34	51	3	2
275	0	34	40	119	38	-23	74	-109	63	-93	0	0	-40	-94	28	-90	37	-140	0	0	-1	1	0	0	-6	-116	207	33	52	3	2
275	0	39	37	120	36	-23	76	-116	63	-89	0	0	-42	-93	26	-92	35	-140	0	0	-4	0	0	0	-8	-117	187	33	53	3	2
275	0	44	35	120	34	-22	77	-125	63	-85	0	0	-44	-92	24	-93	33	-139	0	0	-6	0	0	0	-10	-117	172	33	54	3	2
275	0	49	33	121	32	-22	78	-136	63	-80	0	0	-46	-91	22	-95	31	-139	0	0	-8	0	0	0	-12	-117	160	33	55	3	2
275	0	54	30	122	30	-22	79	-150	62	-76	0	0	-48	-90	20	-96	29	-139	0	0	-10	0	0	0	-14	-117	152	33	55	3	2
275	0	59	28	122	27	-21	78	-163	61	-73	0	0	-50	-89	18	-97	27	-139	0	0	-13	0	0	0	-17	-117	146	32	56	3	2
275	1	4	25	123	25	-21	77	-175	60	-69	0	0	-52	-87	16	-98	24	-139	0	0	-15	0	0	0	-19	-117	143	32	57	3	2
275	1	9	23	124	23	-21	76	175	59	-66	0	0	-53	-85	14	-99	22	-138	0	0	-17	0	0	0	-21	-117	141	32	57	3	2
275	1	14	21	125	21	-21	74	167	58	-63	0	0	-55	-83	12	-100	20	-138	0	0	-19	0	0	0	-23	-117	142	32	57	3	2
275	1	19	18	125	19	-21	72	162	57	-60	0	0	-56	-81	9	-101	18	-138	0	0	-21	0	0	0	-25	-117	143	32	58	3	2
275	1	24	16	126	16	-21	70	158	55	-58	0	0	-58	-78	7	-102	15	-138	0	0	-24	0	0	0	-27	-116	147	32	58	3	2
275	1	29	14	127	14	-21	67	155	53	-56	0	0	-59	-75	5	-103	13	-139	0	0	-26	0	0	0	-30	-116	151	32	58	3	2
275	1	34	12	128	12	-21	65	153	52	-54	0	0	-60	-72	3	-103	11	-139	0	0	-28	0	0	0	-32	-116	157	31	58	3	2

275	18	39	0	0	-35	-112	0	0	-63	-177	20	-51	43	176	0	0	-35	128	10	-156	5	-89	0	0	8	152	242	14	4	2	2
275	18	44	0	0	-32	-112	0	0	-63	-173	22	-50	45	177	0	0	-33	129	12	-156	7	-89	0	0	10	152	242	15	4	2	2
275	18	49	0	0	-30	-111	0	0	-62	-168	24	-50	47	178	0	0	-31	129	15	-155	10	-89	0	0	12	152	243	15	4	2	2
275	18	54	0	0	-28	-111	0	0	-62	-164	26	-51	49	-179	0	0	-29	129	17	-155	12	-89	0	0	14	152	244	15	4	2	2
275	18	59	0	0	-26	-111	0	0	-61	-161	29	-51	51	-178	0	0	-27	130	19	-155	14	-89	0	0	17	152	245	15	4	2	2
275	19	4	0	0	-24	-111	0	0	-60	-157	31	-51	52	-176	0	0	-24	130	22	-154	16	-89	0	0	19	152	246	16	4	2	2
275	19	9	0	0	-22	-111	0	0	-59	-154	33	-52	54	-174	0	0	-22	130	24	154	18	-89	0	0	21	152	248	16	4	2	2
275	19	14	0	0	-19	-111	0	0	-57	-151	35	-52	56	-172	0	0	-20	130	27	-153	21	-89	0	0	23	152	250	17	4	2	2
275	19	19	0	0	-17	-111	0	0	-56	-149	38	-53	57	-169	0	0	-18	130	29	-153	23	-89	0	0	25	152	252	17	4	2	2
275	19	24	0	0	-15	-111	0	0	-54	-147	40	-54	58	-166	0	0	-16	130	32	-152	25	-89	0	0	28	152	255	18	4	2	2
275	19	29	0	0	-13	-111	0	0	-52	-145	42	-55	59	-163	0	0	-13	130	34	-152	27	-89	0	-35	30	152	245	13	3	3	2
275	19	34	0	0	-11	-111	0	0	-51	-143	44	-56	60	-160	0	0	-11	130	37	-152	29	-88	2	-35	32	153	248	14	3	3	2
275	19	39	0	0	-8	-111	0	0	-49	-142	46	-58	61	-156	0	0	-9	130	39	-152	31	-88	4	-35	34	153	251	14	3	3	2
275	19	44	0	0	-6	-111	0	0	-47	-140	48	-60	62	-152	0	0	-7	129	42	-151	34	-88	7	-35	36	154	254	14	3	3	2
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275	21	24	39	-122	37	-110	0	0	-4	-135	46	-134	40	-99	4	-15	37	130	75	116	63	-45	47	-56	62	-157	66	13	358	5	0
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275	6	39	0	0	-35	67	0	0	-63	0	37	95	43	-3	0	0	-36	-51	0	0	4	90	8	136	7	-27	359	34	357	2	2
275	6	44	0	0	-33	67	0	0	-63	5	39	93	45	-2	0	0	-34	-50	0	0	6	90	10	135	9	-27	367	33	357	2	2
275	6	49	0	0	-31	67	0	0	-63	9	40	90	46	-1	0	0	-32	-50	0	0	9	90	13	135	11	-27	376	32	358	2	2
275	6	54	0	0	-29	68	0	0	-62	13	42	87	48	0	0	0	-30	-50	0	0	11	90	15	134	14	-27	384	31	358	2	2
275	6	59	0	0	-27	68	0	0	-61	17	43	85	50	1	0	0	-27	-50	0	0	13	90	17	133	16	-27	392	30	359	2	2
275	7	4	0	0	-25	68	0	0	-60	20	44	81	52	2	0	0	-25	-49	0	0	15	90	20	133	18	-27	400	29	359	2	2
275	7	9	0	0	-23	68	0	0	-59	24	45	78	53	4	0	0	-23	-49	0	0	18	90	22	132	20	-27	408	29	359	2	2
275	7	14	0	0	-20	68	0	0	-58	27	45	75	55	6	0	0	-21	-49	0	0	20	90	24	131	22	-27	415	28	0	2	2

GPS PERFORMANCE PRE ANALYSIS

LATITUDE = 65.0000 LONGITUDE =300.0000

DAVIS STRATI
P - Code

OPTIONS USED FOR THIS RUN

CODE : PRECISE

SIGMA PSEUDO-RANGE = 4.00 (M)

SIGMA LORAN-RANGE = 100/SQRT(0.5) (M)

SATELLITE NO.	4	5	6	7	8	
REF. TIME - TIME OF WEEK (SEC)	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.22528000D+06
JULIAN DATE (DDD HH MM SS)	145 18 42 8	145 18 42 8	145 18 42 8	145 18 42 8	145 18 42 8	169 14 34 40
SEMI - MAJOR AXIS (M)	0.26560399D+08	0.26560943D+08	0.26560254D+08	0.26560449D+08	0.26560017D+08	0.26560147D+08
MEAN ANOMALY @ TREF (RADIANS)	-0.21159685D+01	0.12833393D+01	0.85431182D+00	-0.32870960D+00	0.17212573D+01	-0.91869777D+00
ECCENTRICITY	0.14967920D 02	0.19474030D-02	0.59700012D 03	0.69551468D-02	0.91743469D-03	0.69322591D-02
ARG OF PERIGEE (RADIANS)	0.31187789D+01	-0.10636019D+01	0.17242581D+01	0.13419558D+01	0.53818911D-01	0.14604583D+01
INCLINATION (RADIANS)	0.11035115D+01	0.11125715D+01	0.11011986D+01	0.11076880D+01	0.11036613D+01	0.10981785D+01
RIGHT ASCENSION (RADIANS)	-0.57879102D+00	-0.58088678D+00	0.26814451D+01	-0.26411774D+01	-0.57803953D+00	0.31143453D+01
RATE OF RA (RADIANS/SEC)	-0.62631171D-08	-0.61831158D-08	-0.62059708D-08	-0.63774079D-08	-0.62173999D-08	-0.62288299D-08
MEAN MOTION (RADIANS/SEC)	0.14585361D 03	0.14584913D-03	0.14585481D 03	0.14585320D-03	0.14585676D-03	0.14585568D-03

			SAT # 4				SAT # 5				SAT # 6			
DAY	HH	MM	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG
275	0	0	64	117	51	-31	53	-76	57	-119	0	0	-26	-97
275	0	4	61	118	50	-29	56	-75	59	-116	0	0	-28	-97
275	0	9	59	119	48	-28	58	-75	60	-113	0	0	-30	-96
275	0	14	55	120	46	-27	61	-75	61	-110	0	0	-32	-96
275	0	19	54	120	44	-25	63	-75	62	-106	0	0	-34	-96
275	0	24	51	121	42	-25	66	-76	62	-102	0	0	-36	-95
275	0	29	49	122	40	-24	68	-77	63	-98	0	0	-38	-95
275	0	34	46	123	38	-23	70	-79	63	-93	0	0	-40	-94
275	0	39	44	124	36	-23	73	-81	63	-89	0	0	-42	-93
275	0	44	41	125	34	-22	75	-85	63	85	0	0	-44	-92
275	0	49	39	126	32	-22	77	-91	63	-80	0	0	-46	-91
275	0	54	35	127	30	-22	79	-100	62	-76	0	0	-48	-90
275	0	59	34	128	27	-21	81	-112	61	73	0	0	-50	-89
275	1	4	32	129	25	-21	82	-129	60	-69	0	0	-52	-87
275	1	9	29	130	23	-21	82	-148	59	-66	0	0	-53	-85
275	1	14	27	131	21	-21	81	-164	58	-63	0	0	-55	-83
275	1	19	25	131	19	-21	79	-177	57	-60	0	0	-56	-81
275	1	24	22	132	16	-21	77	174	55	-58	0	0	-58	-78
275	1	29	20	133	14	-21	75	168	53	-56	0	0	-59	-75
275	1	34	18	134	12	-21	72	165	52	-54	0	0	-60	-72

			SAT # 7				SAT # 8				SAT # 9				ERROR ELLIPSE				
DAY	HH	MM	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	AA	BB	PHI		
275	0	0	34	-63	51	-148	10	110	13	1	8	-117	9	-116	7	4	42	5	0
275	0	4	33	-66	49	146	8	111	11	1	6	-118	7	-116	7	4	43	5	0
275	0	9	32	-68	47	-145	6	112	9	1	4	-119	5	-116	7	4	44	5	0
275	0	14	30	-71	45	-144	4	113	7	1	2	-119	2	-116	7	4	45	5	0
275	0	19	29	-73	43	-143	2	114	4	1	0	-120	0	-116	7	4	46	5	0
275	0	24	28	-75	41	-142	0	115	2	1	0	0	-1	-116	107	4	47	4	0
275	0	29	26	-77	39	141	0	0	0	1	0	0	-3	-116	81	6	46	3	0
275	0	34	24	-79	37	-140	0	0	-1	1	0	0	-6	-116	62	6	47	3	0
275	0	39	22	-81	35	-140	0	0	-4	0	0	0	-8	-117	51	6	47	3	0
275	0	44	21	-82	33	139	0	0	-6	0	0	0	-10	-117	44	6	48	3	0
275	0	49	19	-84	31	-139	0	0	-8	0	0	0	-12	-117	40	6	48	3	0
275	0	54	17	-85	29	-139	0	0	-10	0	0	0	-14	-117	37	6	49	3	0
275	0	59	15	-87	27	139	0	0	13	0	0	0	-17	-117	35	6	49	3	0
275	1	4	13	-88	24	-139	0	0	-15	0	0	0	-19	-117	34	6	49	3	0
275	1	9	11	-89	22	-138	0	0	-17	0	0	0	-21	-117	33	6	49	3	0
275	1	14	9	-90	20	-138	0	0	-19	0	0	0	-23	-117	32	6	50	3	0
275	1	19	7	-91	18	-138	0	0	-21	0	0	0	-25	-117	33	6	50	3	0
275	1	24	5	-93	15	-138	0	0	-24	0	0	0	-27	-116	33	6	50	3	0
275	1	29	3	-93	13	-139	0	0	-26	0	0	0	-30	-116	34	6	50	3	0
275	1	34	1	-94	11	-139	0	0	-28	0	0	0	-32	-116	36	6	50	3	0

275	1	39	15	135	10	-21	70	162	50	-52	0	0	-61	-68	0	0	9	-139	0	0	-30	1	0	0	-34	-115	707	12	33	2	0
275	1	44	13	136	8	-21	67	160	48	-51	0	0	-62	-65	0	0	7	-139	0	0	-32	1	0	0	-36	-115	652	13	33	2	0
275	1	49	11	137	5	-21	65	159	46	-50	0	0	-62	-61	0	0	4	-139	0	0	-34	1	0	0	-38	-115	599	14	33	2	0
275	1	54	9	137	3	-21	62	158	44	49	0	0	-62	-56	0	0	2	139	0	0	-36	2	0	0	-40	-114	547	15	34	2	0
275	1	59	6	138	1	-21	60	158	42	-48	0	0	-63	-52	0	0	0	-139	0	0	-38	2	0	0	-42	-113	498	16	34	2	0
275	2	4	4	139	0	-22	57	157	40	-47	0	0	-63	-48	0	0	-1	-139	0	0	-40	3	0	0	-44	-112	450	17	35	2	0
275	2	9	2	140	-3	-22	54	157	38	-47	0	0	-62	-44	0	0	-4	-139	0	0	-42	4	0	0	-46	-111	405	18	36	2	0
275	2	14	0	141	-5	-22	52	157	36	-46	0	0	-62	-40	0	0	-6	-140	0	0	-44	5	0	0	-47	-110	361	20	38	2	0
275	2	19	0	0	-7	-22	49	158	34	-46	0	0	-61	-36	0	0	-8	140	0	0	-46	6	0	0	-49	-109	0	0	0	1	0
275	2	24	0	0	-9	-22	46	158	32	-45	0	0	-60	-32	0	0	-10	-140	0	0	-48	7	0	0	-51	-107	0	0	0	1	0
275	2	29	0	0	-12	-22	44	158	30	-45	0	0	-59	-29	0	0	-13	-140	0	0	-50	8	0	0	-53	-105	0	0	0	1	0
275	2	34	0	0	-14	-22	41	158	28	-45	0	0	-58	-26	0	0	-15	-140	0	0	-52	10	0	0	-54	-103	0	0	0	1	0
275	2	39	0	0	-16	-22	39	159	26	-45	0	0	-57	-23	0	0	-17	-140	0	0	-53	12	0	0	-56	-101	0	0	0	1	0
275	2	44	0	0	-18	-22	36	159	23	-45	0	0	-55	-21	0	0	-19	-140	0	0	-55	14	0	0	-57	-99	0	0	0	1	0
275	2	49	0	0	-21	-22	34	160	21	45	0	0	-54	-18	0	0	21	-140	0	0	-56	16	0	0	-58	-96	0	0	0	1	0
275	2	54	0	0	-23	-22	31	160	19	-45	0	0	-52	-16	0	0	-24	-140	0	0	-58	19	0	0	-59	-93	0	0	0	1	0
275	2	59	0	0	-25	-22	29	161	17	-45	0	0	-50	-15	0	0	-26	-140	0	0	-59	22	0	0	-60	-89	0	0	0	1	0
275	3	4	0	0	27	-22	26	161	15	45	0	0	-49	-13	0	0	-28	-140	0	0	-60	25	0	0	-61	-86	0	0	0	1	0
275	3	9	0	0	-29	-22	24	162	12	-45	0	0	-47	-12	0	0	-30	-140	0	0	-61	29	0	0	-62	-82	0	0	0	1	0
275	3	14	0	0	-31	-21	21	162	10	-45	0	0	-45	-11	0	0	-32	139	0	0	62	33	0	0	-62	-78	0	0	0	1	0
275	3	19	0	0	-34	-21	19	162	8	-45	0	0	-43	-10	0	0	-34	-139	0	0	-62	37	0	0	-62	-74	0	0	0	1	0
275	3	24	0	0	-36	-21	16	163	6	-45	0	0	-41	-9	0	0	-36	-138	0	0	-63	41	0	0	-62	-70	0	0	0	1	0
275	3	29	0	0	-38	-20	14	163	3	-45	0	0	-39	-8	0	0	-38	138	0	0	-63	45	0	0	-62	-66	0	0	0	1	0
275	3	34	0	0	-40	-19	12	164	1	-45	0	0	-37	-8	0	0	-40	-137	0	0	-63	50	0	0	-62	-62	0	0	0	1	0
275	3	39	0	0	-42	-19	9	164	0	-46	0	0	-35	-7	0	0	-42	-137	0	0	-62	54	0	0	-61	-58	0	0	0	1	0
275	3	44	0	0	-44	-18	7	165	-2	-46	0	0	-33	7	0	0	-44	-136	0	0	-62	58	0	0	-60	-54	0	0	0	1	0
275	3	49	0	0	-46	-17	5	165	-5	-46	0	0	-31	-7	0	0	-46	-135	0	0	-61	62	0	0	-60	-51	0	0	0	1	0
275	3	54	0	0	-48	-16	3	166	-7	-46	0	0	-28	-6	0	0	-48	134	0	0	-60	65	0	0	-58	-48	0	0	0	1	0
275	3	59	0	0	49	-14	0	166	9	-46	0	0	-26	-6	0	0	-50	-132	0	0	-59	69	0	0	-57	-45	0	0	0	1	0
275	4	4	0	0	-51	-13	0	0	-11	-46	0	0	-24	-6	0	0	-52	-131	0	0	-58	72	0	0	-56	-42	0	0	0	0	0
275	4	9	0	0	-53	-11	0	0	-14	-46	0	0	-22	6	0	0	53	129	0	0	-57	74	0	0	-54	-40	0	0	0	0	0
275	4	14	0	0	-54	-9	0	0	-16	-46	0	0	-20	-6	0	0	-55	-127	0	0	-55	77	0	0	-53	-38	0	0	0	0	0
275	4	19	0	0	-56	-7	0	0	-18	-46	0	0	-18	-6	0	0	-56	-125	0	0	-54	79	0	0	-51	-36	0	0	0	0	0
275	4	24	0	0	-57	-4	0	0	-20	-46	0	0	-15	-6	0	0	58	122	0	0	52	81	0	0	-49	-35	0	0	0	0	0
275	4	29	0	0	-59	-1	0	0	-22	-46	0	0	-13	-6	0	0	-59	-119	0	0	-50	83	0	0	-48	-33	0	0	0	0	0
275	4	34	0	0	-60	1	0	0	-25	-46	0	0	-11	-6	0	0	-60	-116	0	0	-48	84	0	0	-46	-32	0	0	0	0	0
275	4	39	0	0	-61	5	0	0	-27	-46	0	0	-9	6	0	0	-61	113	0	0	-47	85	0	0	-44	-31	0	0	0	0	0
275	4	44	0	0	-62	8	0	0	-29	-46	0	0	-6	-6	0	0	-62	-109	0	0	-45	86	0	0	-42	-30	0	0	0	0	0
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275	4	54	0	0	63	16	0	0	-33	45	0	0	-2	-6	0	0	-63	-101	0	0	-41	88	0	0	-38	-29	0	0	0	0	0
275	4	59	0	0	-63	21	0	0	-35	-45	0	124	0	-6	0	0	-63	-97	0	0	-39	89	0	0	-36	-28	0	0	0	1	0
275	5	4	0	0	-63	25	0	0	-38	-45	2	123	2	-7	0	0	63	-92	0	0	-37	89	0	0	-34	-28	0	0	0	1	0
275	5	9	0	0	-62	29	0	0	-40	-44	4	122	4	-7	0	0	-63	-88	0	0	-35	90	0	0	-32	-27	0	0	0	1	0
275	5	14	0	0	-62	33	0	0	-42	-43	7	122	6	-7	0	0	-62	-84	0	0	-32	90	0	0	-30	-27	0	0	0	1	0
275	5	19	0	0	-61	37	0	0	-44	-42	9	121	8	-7	0	0	62	80	0	0	-30	91	0	0	-28	-27	0	0	0	1	0
275	5	24	0	0	-61	41	0	0	-46	-42	11	120	10	-7	0	0	-61	-76	0	0	-28	91	0	0	-25	-27	0	0	0	1	0
275	5	29	0	0	-60	44	0	0	-47	-40	13	119	13	-7	0	0	-60	-73	0	0	-26	91	0	0	-23	-26	0	0	0	1	0
275	5	34	0	0	-58	48	0	0	-49	-39	15	118	15	7	0	0	59	-70	0	0	-24	91	0	0	-21	-26	0	0	0	1	0
275	5	39	0	0	-57	50	0	0	-51	-38	18	117	17	-7	0	0	-57	-67	0	0	-22	91	0	0	-19	-26	0	0	0	1	0
275	5	44	0	0	-56	53	0	0	-53	-36	20	116	19	-7	0	0	-56	-64	0	0	-19	91	0	0	-17	-26	0	0	0	1	0
275	5	49	0	0	54	55	0	0	-55	-34	22	115	22	-7	0	0	-55	-62	0	0	-17	91	0	0	-14	-26	0	0	0	1	0
275	5	54	0	0	-53	57	0	0	-56	-32	24	114	24	-7	0	0	-53	-60	0	0	-15	91	0	0	-12	-26	0	0	0	1	0
275	5	59	0	0	-51	59	0	0	-58	-29	26	113	26	-7	0	0	-51	-58	0	0	-13	91	0	0	-10	-26	0	0	0	1	0
275	6	4	0	0	-49	60	0	0	-59	-26	28	111	28	-7	0	0	-50	-57	0	0	-11	91	0	0	-8	-27	0	0	0	1	0
275	6	9	0	0	-47	62	0	0	-60	-23	31	110	30	-6	0	0	-48	-56	0	0	-8	91	1	146	-6	-27	255	10	349	2	0
275	6	14	0	0	-45	63	0	0	-61	20	33	108	32	-6	0	0	-46	54	0	0	-6	91	3	145	-3	-27	264	9	350	2	0
275	6	19	0	0	-43	64	0	0	-62	-16	34	106	34	-6	0	0	-44	-53	0	0	-4	91	5	145	-1	-27	274	9	351	2	0
275	6	24	0	0	-41	65	0	0	-63	-12	36	104	36	-5	0	0	-42	-53	0	0	-2	91	7	144	0	-27	283	9	352	2	0
275	6	29	0	0	39	66	0	0	-63	7	38	102	39	-5	0	0	-40	-52	0	0	0	91	10	144	2	-27	292	8	352	2	0
275	6	34	0	0	-37	66	0	0	-63	-3	40	99	41	-4	0	0	-38	-51	0	0	2	91	12	143	5	-27	302	8	353	2	0
275	6	39	0	0	-35	67	0	0	-63	0	41	97	43	-3	0	0	-36	51	0	0	4	90	14	143	7	-27	311	8	354	2	0
275	6	44	0	0	-33	67	0	0	-63	5	43	94	45	-2	0	0	-34	-50	0	0	6	90	16	142	9	-27	321	8	355	2	0
275	6	49	0	0	-31	67	0	0	-63	9	44	91	46	-1	0	0	-32	-50	0	0	9	90	19	141	11	-27	330	7	355	2	0
275	6	54	0	0	-29	68	0	0	-62	13	45	88	48	0	0	0	-30	-50	0	0	11	90	21	141	14	-27	339	7	356	2	0
275	6	59	0	0	-27	68	0	0	-61	17	46	85	50	1	0	0	-27	-50	0	0	13	90	24	140	16	-27	349	7	356	2	0
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275	16	54	0	0	-63	-161	0	0	-34	134	0	0	-1	173	0	0	63	80	0	0	-40	-91	0	0	-37	151	0	0	0	0	0
275	16	59	0	0	-63	-157	0	0	-36	134	0	0	0	172	0	0	63	84	0	0	-38	-90	0	0	-35	151	0	0	0	0	0
275	17	4	0	0	-63	-152	0	0	-38	135	0	0	2	172	0	0	-63	88	0	0	-36	-89	0	0	-33	152	0	0	0	0	0
275	17	9	0	0	-62	-148	0	0	-40	135	0	0	5	172	0	0	-63	93	0	0	-34	-89	0	0	-31	152	0	0	0	0	0
275	17	14	0	0	-62	-144	0	0	-42	136	0	0	7	172	0	0	-62	97	0	0	-32	-89	0	0	-29	152	0	0	0	0	0
275	17	19	0	0	-61	-140	0	0	-44	137	0	0	9	172	0	0	61	101	0	0	-29	-88	0	0	-27	152	0	0	0	0	0
275	17	24	0	0	-60	-137	0	0	-46	138	0	0	11	172	0	0	60	104	0	0	-27	-88	0	0	-25	152	0	0	0	0	0
275	17	29	0	0	-59	-133	0	0	-48	139	0	0	14	172	0	0	-59	107	0	0	-25	-88	0	0	-22	153	0	0	0	0	0
275	17	34	0	0	-58	-130	0	0	-50	141	0	0	16	172	0	0	58	110	0	0	-23	-88	0	0	-20	153	0	0	0	0	0
275	17	39	0	0	-57	-128	0	0	-52	142	0	0	18	172	0	0	-57	113	0	0	-21	-88	0	0	-18	153	0	0	0	0	0
275	17	44	0	0	-55	-125	0	0	-54	144	0	0	20	172	0	0	-55	115	0	0	-19	-88	0	0	-16	153	0	0	0	0	0
275	17	49	0	0	-54	-123	0	0	-55	146	0	0	22	172	0	0	-54	118	0	0	-16	-88	0	0	-14	153	0	0	0	0	0
275	17	54	0	0	-52	-121	0	0	-57	148	0	0	25	172	0	0	-52	120	0	0	-14	-88	0	0	-11	153	0	0	0	0	0
275	17	59	0	0	-50	-119	0	0	-58	151	0	0	27	172	0	0	-51	121	0	0	-12	-88	0	0	-9	153	0	0	0	0	0
275	18	4	0	0	-48	-118	0	0	-59	154	0	0	29	172	0	0	-49	123	0	0	-10	-88	0	0	-7	152	0	0	0	0	0
275	18	9	0	0	-47	-117	0	0	-60	157	1	-44	31	173	0	0	-47	124	0	-150	-7	-88	0	0	-5	152	388	3	3	2	0
275	18	14	0	0	-45	-116	0	0	-61	161	3	-44	33	173	0	0	45	125	2	150	-5	-88	0	0	-2	152	389	3	3	2	0
275	18	19	0	0	-43	-115	0	0	-62	165	5	-43	35	173	0	0	-43	126	4	-149	-3	-88	0	0	0	152	389	3	2	2	0
275	18	24	0	0	-41	-114	0	0	-63	169	7	-43	37	174	0	0	-41	127	6	-149	-1	-88	0	0	1	152	390	3	2	2	0
275	18	29	0	0	-39	-113	0	0	-63	173	9	-43	39	175	0	0	-39	127	9	-149	1	-88	0	0	3	152	391	3	2	2	0
275	18	34	0	0	-37	-113	0	0	-63	178	11	-42	41	175	0	0	-37	128	11	-147	3	-89	0	0	6	152	392	3	2	2	0

275	18	39	0	0	-35	-112	0	0	-63	-177	13	-42	43	176	0	0	-35	128	13	-147	5	-89	0	0	8	152	394	3	2	2	0
275	18	44	0	0	-32	-112	0	0	-63	173	16	-42	45	177	0	0	-33	129	15	-146	7	-89	0	0	10	152	396	3	1	2	0
275	18	49	0	0	-30	-111	0	0	-62	-168	18	-42	47	178	0	0	-31	129	13	-145	10	-89	0	0	12	152	398	3	1	2	0
275	18	54	0	0	-28	-111	0	0	-62	-164	20	-42	49	179	0	0	-29	129	20	144	12	-89	0	0	14	152	400	3	1	2	0
275	18	59	0	0	-26	-111	0	0	-61	-161	22	-42	51	-178	0	0	-27	130	22	-144	14	-89	0	0	17	152	403	3	1	2	0
275	19	4	0	0	-24	-111	0	0	-60	-157	24	-42	52	-176	0	0	-24	130	25	-143	16	-89	0	0	19	152	406	4	1	2	0
275	19	9	0	0	-22	-111	0	0	-59	-154	27	-43	54	-174	0	0	-22	130	27	142	18	-89	0	0	21	152	410	4	1	2	0
275	19	14	0	0	-19	-111	0	0	-57	-151	29	-43	56	-172	0	0	-20	130	30	-141	21	-89	0	0	23	152	414	4	1	2	0
275	19	19	0	0	-17	-111	0	0	-56	-149	31	-44	57	-169	0	0	-18	130	32	-141	23	-89	0	0	25	152	419	4	1	2	0
275	19	24	0	0	-15	-111	0	0	-54	-147	33	44	58	-166	0	0	16	130	34	-140	25	-89	0	0	28	152	424	4	1	2	0
275	19	29	0	0	-13	-111	0	0	-52	-145	36	-45	59	-163	0	0	-13	130	37	-139	27	-89	0	0	30	152	429	4	1	2	0
275	19	34	0	0	-11	-111	0	0	-51	-143	38	-46	60	-160	0	0	-11	130	39	138	29	-88	0	0	32	153	436	5	1	2	0
275	19	39	0	0	8	-111	0	0	-49	-142	40	-48	61	-156	0	0	-9	130	42	137	31	-88	0	0	34	153	443	5	1	2	0
275	19	44	0	0	-6	-111	0	0	-47	-140	42	-49	62	-152	0	0	-7	129	44	-137	34	-88	1	-27	36	154	123	3	0	3	0
275	19	49	0	0	-4	-111	0	0	-45	-139	44	-51	62	-148	0	0	-4	129	47	136	36	-87	3	-27	38	154	120	4	0	3	0
275	19	54	0	0	-2	-111	0	0	-43	-138	46	-53	63	-144	0	0	-2	129	50	135	38	-87	5	-27	40	155	116	4	0	3	0
275	19	59	1	125	0	-112	0	0	-41	-138	47	-55	63	-140	0	0	0	129	52	135	40	-86	7	-27	42	156	35	3	356	4	0
275	20	4	3	124	2	-112	0	0	-39	-137	49	-58	62	-135	0	0	1	129	55	134	42	-85	9	-27	44	157	33	3	356	4	0
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275	20	14	7	122	6	-112	0	0	-35	-136	52	-64	61	-127	0	0	6	129	60	-133	46	-84	14	-28	48	159	29	3	356	4	0
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275	20	24	11	120	11	-112	0	0	-31	-135	54	-71	60	-120	0	0	10	128	65	-132	49	-81	18	-29	52	162	25	3	356	4	0
275	20	29	13	119	13	-112	0	0	-28	-135	55	-75	58	-117	0	0	13	128	68	132	51	-79	20	-29	53	164	24	4	356	4	0
275	20	34	16	118	15	-112	0	0	-26	-135	56	-80	57	-114	0	0	15	128	70	133	53	-78	22	-30	55	166	22	4	356	4	0
275	20	39	18	-117	17	-112	0	0	-24	-135	56	-84	56	-111	0	0	17	128	73	-134	54	-76	24	-31	56	169	21	4	356	4	0
275	20	44	20	116	20	-112	0	0	-22	-135	56	89	54	-109	0	0	19	128	75	135	56	-73	26	-32	58	171	20	4	356	4	0
275	20	49	22	115	22	-112	0	0	-20	-135	55	-93	53	-107	0	0	22	128	78	138	57	-71	28	-33	59	175	19	4	356	4	0
275	20	54	24	-114	24	-112	0	0	-17	-135	55	-97	51	-105	0	0	24	128	80	142	59	-68	30	-34	60	178	18	4	356	4	0
275	20	59	27	113	26	-112	0	0	-15	-135	54	-102	49	-104	0	0	26	129	83	151	60	65	32	-36	61	-177	17	5	356	4	0
275	21	4	29	112	28	-112	0	0	-13	-135	53	105	47	-102	0	0	28	129	84	-168	61	-61	34	-38	62	-174	16	5	356	4	0
275	21	9	31	111	30	-112	0	0	-11	-135	52	-109	46	-101	0	0	30	129	85	161	62	-57	36	-39	62	-169	15	5	356	4	0
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275	21	19	36	108	35	-111	0	0	-6	-135	49	-116	42	-99	0	[illegible]	35	130	83	108	63	-49	39	-44	62	-161	14	5	356	4	0
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275	22	44	78	-98	62	-79	20	-87	31	-136	11	-138	5	-96	29	-24	62	163	42	95	43	-2	37	-97	40	-119	7	3	355	6	0
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275	22	54	83	105	63	-71	25	-85	35	-135	6	-140	0	-96	32	-29	63	171	37	97	39	0	34	-101	36	-117	6	3	357	6	0
275	22	59	85	-116	63	-66	27	-84	37	-135	4	-140	-1	-96	33	-31	63	176	35	98	37	0	32	-103	34	-117	6	3	358	6	0
275	23	4	87	147	63	-62	29	-83	39	-134	2	-141	-3	97	34	-34	63	-179	32	99	35	0	30	-105	31	-117	6	3	359	6	0
275	23	9	86	161	62	-58	31	-82	41	-133	0	-141	-5	-97	35	-36	62	-174	30	100	33	0	28	-106	29	-116	6	3	359	6	0
275	23	14	85	134	62	-54	34	-81	43	-132	0	0	-7	-97	35	-39	62	-170	28	101	31	1	26	-108	27	-116	7	5	30	5	0
275	23	19	82	124	61	-50	36	-80	45	-132	0	0	-10	-97	36	-42	61	-166	25	102	29	1	24	-109	25	-116	7	5	32	5	0
275	23	24	80	120	60	-46	38	-80	47	-130	0	0	-12	-97	36	-45	60	-163	23	103	27	1	22	-111	23	-116	7	5	34	5	0
275	23	29	77	118	59	-43	41	-79	49	-129	0	0	-14	-97	36	-48	59	-160	21	104	25	1	20	-112	21	-116	7	5	36	5	0
275	23	34	75	117	58	-40	43	-78	51	-128	0	0	-16	-97	36	-51	58	-157	19	105	22	1	17	-113	18	-116	7	5	37	5	0
275	23	39	72	116	56	-37	45	-77	52	-126	0	0	-19	-97	36	-54	56	-154	17	106	20	1	15	-114	16	-116	7	5	39	5	0
275	23	44	70	116	55	-35	48	-77	54	-124	0	0	-21	-97	35	-57	55	152	15	107	18	1	13	-115	14	-116	7	5	40	5	0
275	23	49	67	117	53	-33	50	-76	56	-122	0	0	-23	-97	35	-60	53	-150	12	108	16	1	11	-116	12	-116	7	5	41	5	0
275	23	54	64	117	52	-31	53	-76	57	-120	0	0	-25	-97	34	-62	51	-148	10	110	14	1	9	-117	10	-116	7	4	42	5	0
275	23	59	62	118	50	-29	55	-75	58	-117	0	0	-27	-97	33	-65	49	-146	8	111	11	1	7	-118	7	-116	7	4	43	5	0

GPS PERFORMANCE PRE-ANALYSIS

LATITUDE = 65.0000 LONGITUDE =300.0000

DAVIS STRAIT
C/A - Code

OPTIONS USED FOR THIS RUN

CODE : C/A

SIGMA PSEUDO-RANGE = 16.00 (M)

SIGMA LORAN-RANGE = 100/SQRT(0.5) (M)

SATELLITE NO.	4	5	6	7	8	9
REF. TIME TIME OF WEEK (SEC)	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.22528000D+06
JULIAN DATE (DDD HH MM SS)	145 18 42 8	145 18 42 8	145 18 42 8	145 18 42 8	145 18 42 8	169 14 34 40
SEMI MAJOR AXIS (M)	0.26560399D+08	0.26560943D+08	0.25560254D+08	0.26560449D+08	0.26560017D+08	0.26560147D+08
MEAN ANOMALY @ TREF (RADIANS)	-0.21159685D+01	0.12833393D+01	0.85431182D+00	-0.32870960D+00	0.17212573D+01	-0.91869777D+00
ECCENTRICITY	0.14967920D-02	0.19474030D-02	0.59700012D-03	0.69551468D-02	0.91743469D-03	0.69322591D-02
ARG OF PERIGEE (RADIANS)	0.31187789D+01	0.10636019D+01	0.17242581D+01	0.13419558D+01	0.53818911D-01	0.14604583D+01
INCLINATION (RADIANS)	0.11035115D+01	0.11125715D+01	0.11011986D+01	0.11076880D+01	0.11036613D+01	0.10981785D+01
RIGHT ASCENSION (RADIANS)	-0.57879102D+00	-0.58088678D+00	-0.26814451D+01	-0.26411774D+01	-0.57803953D+00	0.31143453D+01
RATE OF RA (RADIANS/SEC)	-0.62631171D-08	-0.61831158D-08	0.62059708D 08	0.63774079D-08	-0.62173999D-08	-0.62288299D-08
MEAN MOTION (RADIANS/SEC)	0.14585361D-03	0.14584913D-03	0.14585481D 03	0.14585320D-03	0.14585676D-03	0.14585568D-03

			SAT # 4				SAT # 5				SAT # 6				SAT # 7				SAT # 8				SAT # 9				ERROR ELLIPSE				
DAY	HH	MM	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	AA	BB	PHI		
275	0	0	64	117	51	-31	53	-76	57	-119	0	0	-26	-97	34	-63	51	148	10	110	13	1	8	-117	9	-116	30	19	42	5	0
275	0	4	61	118	50	-29	56	-75	59	-116	0	0	-28	-97	33	-66	49	146	8	111	11	1	6	-118	7	-116	30	19	43	5	0
275	0	9	59	119	48	-28	58	-75	60	-113	0	0	-30	-96	32	-68	47	-145	6	112	9	1	4	-119	5	-116	30	19	44	5	0
275	0	14	56	120	46	-27	61	-75	61	-110	0	0	-32	-96	30	-71	45	144	4	113	7	1	2	-119	2	-116	31	19	45	5	0
275	0	19	54	120	44	-25	63	-75	62	-106	0	0	-34	-96	29	-73	43	-143	2	114	4	1	0	-120	0	-116	31	19	46	5	0
275	0	24	51	121	42	-25	66	-76	62	-102	0	0	-36	-95	28	-75	41	-142	0	115	2	1	0	0	-1	-116	414	19	47	4	0
275	0	29	49	122	40	-24	68	-77	63	98	0	0	-38	-95	26	-77	39	-141	0	0	0	1	0	0	-3	-116	315	27	46	3	0
275	0	34	46	123	38	-23	70	-79	63	-93	0	0	-40	-94	24	-79	37	-140	0	0	-1	1	0	0	-6	-116	242	26	47	3	0
275	0	39	44	124	36	-23	73	-81	63	-89	0	0	-42	-93	22	-81	35	140	0	0	-4	0	0	0	-8	-117	201	26	47	3	0
275	0	44	41	125	34	-22	75	-85	63	-85	0	0	-44	-92	21	-82	33	-139	0	0	-6	0	0	0	-10	-117	175	26	48	3	0
275	0	49	39	126	32	-22	77	-91	63	-80	0	0	-46	-91	19	-84	31	-139	0	0	-8	0	0	0	-12	-117	157	25	48	3	0
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275	19	39	0	0	-8	-111	0	0	-49	-142	40	-48	61	-156	0	0	-9	130	42	-137	31	-88	0	0	34	153	445	21	1	2	0
275	19	44	0	0	-6	-111	0	0	-47	-140	42	-49	62	-152	0	0	-7	129	44	137	34	-88	1	-27	36	154	346	15	0	3	0
275	19	49	0	0	-4	-111	0	0	-45	-139	44	51	62	-148	0	0	-4	129	47	-136	36	-87	3	-27	38	154	347	16	0	3	0
275	19	54	0	0	-2	-111	0	0	-43	-138	46	-53	63	-144	0	0	-2	129	50	-135	38	-87	5	-27	40	155	344	16	0	3	0
275	19	59	1	125	0	-112	0	0	-41	-138	47	-55	63	-140	0	0	0	129	52	135	40	-86	7	-27	42	156	135	13	356	4	0
275	20	4	3	124	2	-112	0	0	-39	-137	49	-59	62	-135	0	0	1	129	55	134	42	-85	9	-27	44	157	127	13	356	4	0
275	20	9	5	-123	4	-112	0	0	-37	-136	51	-60	62	-131	0	0	4	129	57	-133	44	-85	11	-28	46	158	119	14	356	4	0
275	20	14	7	122	6	-112	0	0	-35	-136	52	-64	61	-127	0	0	6	129	60	133	46	-84	14	-28	48	159	112	14	356	4	0
275	20	19	9	121	8	-112	0	0	-33	-135	53	-67	61	-124	0	0	8	129	62	-133	48	-82	16	-28	50	160	106	15	356	4	0
275	20	24	11	120	11	-112	0	0	-31	-135	54	-71	60	-120	0	0	10	128	65	-132	49	-81	18	-29	52	162	100	15	356	4	0
275	20	29	13	119	13	-112	0	0	-28	-135	55	-75	58	-117	0	0	13	128	68	-132	51	-79	20	-29	53	164	94	16	356	4	0
275	20	34	16	118	15	-112	0	0	-26	-135	56	-80	57	-114	0	0	15	128	70	-133	53	-78	22	-30	55	166	89	16	356	4	0
275	20	39	18	117	17	-112	0	0	-24	-135	56	-84	56	-111	0	0	17	128	73	-134	54	-76	24	-31	56	169	85	17	356	4	0
275	20	44	20	116	20	-112	0	0	-22	-135	56	-89	54	-109	0	0	19	128	75	-135	56	-73	26	-32	58	171	80	18	356	4	0
275	20	49	22	115	22	-112	0	0	-20	-135	55	-93	53	-107	0	0	22	128	78	138	57	-71	28	-33	59	175	76	18	356	4	0
275	20	54	24	114	24	-112	0	0	-17	-135	55	-97	51	-105	0	0	24	128	80	142	59	-68	30	-34	60	178	72	19	356	4	0
275	20	59	27	113	26	-112	0	0	-15	-135	54	-102	49	-104	0	0	26	129	83	151	60	-65	32	-36	61	-177	69	20	356	4	0
275	21	4	29	-112	28	-112	0	0	-13	-135	53	-105	47	-102	0	0	28	129	84	-168	61	-61	34	-38	62	-174	65	21	356	4	0
275	21	9	31	111	30	-112	0	0	-11	-135	52	109	46	-101	0	0	30	129	85	161	62	-57	36	-39	62	-169	62	22	356	4	0
275	21	14	34	110	32	-111	0	0	-8	-135	50	-112	44	-100	0	0	33	129	85	128	62	-53	37	-41	62	-165	60	22	356	4	0
275	21	19	36	108	35	-111	0	0	-6	-135	49	-116	42	-99	0	0	35	130	83	108	63	-49	39	-44	62	-161	57	23	356	4	0
275	21	24	38	107	37	-110	0	0	-4	-135	47	-118	40	-99	0	0	37	130	81	98	63	-45	40	-46	62	-157	54	24	356	4	0
275	21	29	41	106	39	-110	0	0	-2	-135	45	-121	38	-98	0	-8	39	131	78	93	63	-41	42	-49	62	-152	52	14	354	5	0
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275	21	39	45	104	43	-108	0	0	2	-136	41	-125	33	-97	4	-9	43	132	74	89	62	-32	44	-55	61	-145	48	14	354	5	0
275	21	44	48	103	45	-107	0	0	4	-136	39	-127	31	-97	7	-10	45	133	71	88	61	-28	44	-58	60	-141	46	14	354	5	0
275	21	49	50	102	47	-106	0	0	6	-136	36	-128	29	-96	9	-10	47	134	68	87	61	-25	45	-62	59	-138	45	14	354	5	0
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275	22	24	68	97	58	-93	12	-91	22	-136	20	-136	14	-96	22	-17	58	148	51	91	51	-7	43	-86	48	-123	30	14	353	6	0
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275	22	34	73	96	60	-86	16	-89	26	-136	16	-137	9	-96	26	-21	61	155	46	93	47	-4	40	-91	44	-120	29	14	354	6	0
275	22	39	75	97	61	-83	18	-88	29	-136	13	-138	7	-96	27	-22	62	159	44	94	45	-3	39	-94	42	-119	28	14	355	6	0
275	22	44	78	98	62	-79	20	-87	31	-136	11	-138	5	-96	29	-24	62	163	42	95	43	-2	37	-97	40	-119	28	14	355	6	0
275	22	49	80	100	62	-75	22	-86	33	-135	9	-139	3	-96	30	-27	63	167	39	96	41	-1	36	-99	38	-118	27	14	356	6	0
275	22	54	83	105	63	-71	25	-85	35	-135	6	-140	0	-96	32	-29	63	171	37	97	39	0	34	-101	36	-117	27	14	357	6	0
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275	23	4	87	-147	63	-62	29	-83	39	-134	2	-141	-3	-97	34	-34	63	-179	32	99	35	0	30	-105	31	-117	26	15	359	6	0
275	23	9	85	161	62	-58	31	-82	41	-133	0	-141	-5	-97	35	-36	62	-174	30	100	33	0	28	-106	29	-116	25	15	359	6	0
275	23	14	85	134	62	-54	34	-81	43	-132	0	0	-7	-97	35	-39	62	-170	28	101	31	1	26	-108	27	-116	28	21	30	5	0
275	23	19	82	124	61	-50	36	-80	45	-132	0	0	-10	-97	36	-42	61	-166	25	102	29	1	24	-109	25	-116	28	20	32	5	0
275	23	24	80	120	60	-46	38	-80	47	-130	0	0	-12	-97	36	-45	60	-163	23	103	27	1	22	-111	23	-116	29	20	34	5	0
275	23	29	77	118	59	-43	41	-79	49	-129	0	0	-14	-97	36	-48	59	-160	21	104	25	1	20	-112	21	-116	29	20	36	5	0
275	23	34	75	117	58	-40	43	-78	51	-128	0	0	-16	-97	36	-51	58	-157	19	105	22	1	17	-113	18	-116	29	20	37	5	0
275	23	39	72	116	56	-37	45	-77	52	-126	0	0	-19	-97	36	-54	56	-154	17	106	20	1	15	-114	16	-116	29	20	39	5	0
275	23	44	70	116	55	-35	48	-77	54	-124	0	0	-21	-97	35	-57	55	-152	15	107	18	1	13	-115	14	-116	29	20	40	5	0
275	23	49	67	117	53	-33	50	-76	56	-122	0	0	-23	-97	35	-60	53	-150	12	108	16	1	11	-116	12	-116	30	20	41	5	0
275	23	54	64	117	52	-31	53	-76	57	-120	0	0	-25	-97	34	-62	51	148	10	110	14	1	9	-117	10	-116	30	19	42	5	0
275	23	59	62	118	50	-29	55	-75	58	-117	0	0	-27	-97	33	-65	49	-146	8	111	11	1	7	-118	7	-116	30	19	43	5	0

GPS PERFORMANCE PRE-ANALYSIS

LATITUDE = 65.0000 LONGITUDE =300.0000

DAVIS STRAIT
C/A - Code
Loran - C

OPTIONS USED FOR THIS RUN

CODE : C/A

SIGMA PSEUDO-RANGE = 16.00 (M)

SIGMA LORAN-RANGE = 100/SQRT(0.5) (M)

SATELLITE NO.	4	5	6	7	8	9
REF. TIME - TIME OF WEEK (SEC)	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.22528000D+06
JULIAN DATE (DDD HH MM SS)	145 18 42 8	145 18 42 8	145 18 42 8	145 18 42 8	145 18 42 8	169 14 34 40
SEMI - MAJOR AXIS (M)	0.26560399D+08	0.26560943D+08	0.26560254D+08	0.26560449D+08	0.26560017D+08	0.26560147D+08
MEAN ANOMALY @ TREF (RADIANS)	-0.21159685D+01	0.12833393D+01	0.85431182D+00	-0.32870960D+00	0.17212573D+01	-0.91869777D+00
ECCENTRICITY	0.14967920D-02	0.19474030D-02	0.59700012D-03	0.69551468D-02	0.91743469D-03	0.69322591D-02
ARG OF PERIGEE (RADIANS)	0.31187789D+01	-0.10636019D+01	0.17242581D+01	0.13419558D+01	0.53818911D-01	0.14604583D+01
INCLINATION (RADIANS)	0.11035115D+01	0.11125715D+01	0.11011986D+01	0.11076880D+01	0.11036613D+01	0.10981785D+01
RIGHT ASCENSION (RADIANS)	-0.57879102D+00	-0.58088678D+00	-0.26814451D+01	-0.26411774D+01	-0.57803953D+00	0.31143453D+01
RATE OF RA (RADIANS/SEC)	-0.62631171D-08	-0.61831158D-08	-0.62059708D-08	-0.63774079D-08	-0.62173999D-08	-0.62288299D-08
MEAN MOTION (RADIANS/SEC)	0.14585361D-03	0.14584913D-03	0.14585481D-03	0.14585320D-03	0.14585676D-03	0.14585568D-03

			SAT # 4				SAT # 5				SAT # 6				SAT # 7				SAT # 8				SAT # 9				ERROR ELLIPSE				
DAY	HH	MM	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	AA	BB	PHI		
275	0	0	64	117	51	-31	53	-76	57	-119	0	0	-26	-97	34	-63	51	-148	10	110	13	1	8	-117	9	-116	30	19	42	5	0
275	0	4	61	118	50	-29	56	-75	59	-116	0	0	-28	-97	33	-66	49	-146	8	111	11	1	6	-118	7	-116	30	19	43	5	0
275	0	9	59	119	48	-28	58	-75	60	-113	0	0	-30	-96	32	-68	47	-145	6	112	9	1	4	-119	5	-116	30	19	44	5	0
275	0	14	56	120	46	-27	61	-75	61	-110	0	0	-32	-96	30	-71	45	-144	4	113	7	1	2	-119	2	-116	31	19	45	5	0
275	0	19	54	120	44	-25	63	-75	62	-106	0	0	-34	-96	29	-73	43	-143	2	114	4	1	0	-120	0	-116	31	19	46	5	0
275	0	24	51	121	42	-25	66	-76	62	-102	0	0	-36	-95	28	-75	41	-142	0	115	2	1	0	0	-1	-116	414	19	47	4	0
275	0	29	49	122	40	-24	68	-77	63	-98	0	0	-38	-95	26	-77	39	-141	0	0	0	1	0	0	-3	-116	203	26	45	3	2
275	0	34	46	123	38	-23	70	-79	63	-93	0	0	-40	-94	24	-79	37	-140	0	0	-1	1	0	0	-6	-116	180	26	46	3	2
275	0	39	44	124	36	-23	73	-81	63	-89	0	0	-42	-93	22	-81	35	-140	0	0	-4	0	0	0	-8	-117	162	25	47	3	2
275	0	44	41	125	34	-22	75	-85	63	-85	0	0	-44	-92	21	-82	33	-139	0	0	-6	0	0	0	-10	-117	148	25	47	3	2
275	0	49	39	126	32	-22	77	-91	63	-80	0	0	-46	-91	19	-84	31	-139	0	0	-8	0	0	0	-12	-117	137	25	47	3	2
275	0	54	36	127	30	-22	79	-100	62	-76	0	0	-48	-90	17	-85	29	-139	0	0	-10	0	0	0	-14	-117	130	25	48	3	2
275	0	59	34	128	27	-21	81	-112	61	-73	0	0	-50	-89	15	-87	27	-139	0	0	-13	0	0	0	-17	-117	124	25	48	3	2
275	1	4	32	129	25	-21	82	-129	60	-69	0	0	-52	-87	13	-88	24	-139	0	0	-15	0	0	0	-19	-117	120	24	49	3	2
275	1	9	29	130	23	-21	82	-148	59	-66	0	0	-53	-85	11	-89	22	-138	0	0	-17	0	0	0	-21	-117	118	24	49	3	2
275	1	14	27	131	21	-21	81	-164	58	-63	0	0	-55	-83	9	-90	20	-138	0	0	-19	0	0	0	-23	-117	117	24	49	3	2
275	1	19	25	131	19	-21	79	-177	57	-60	0	0	-56	-81	7	-91	18	-138	0	0	-21	0	0	0	-25	-117	117	24	49	3	2
275	1	24	22	132	16	-21	77	174	55	-58	0	0	-58	-78	5	-93	15	-138	0	0	-24	0	0	0	-27	-116	119	24	50	3	2
275	1	29	20	133	14	-21	75	168	53	-56	0	0	-59	-75	3	-93	13	-139	0	0	-26	0	0	0	-30	-116	121	24	50	3	2
275	1	34	18	134	12	-21	72	165	52	-54	0	0	-60	-72	1	-94	11	-139	0	0	-28	0	0	0	-32	-116	124	24	50	3	2

275	1	39	15	135	10	-21	70	162	50	-52	0	0	-61	-68	0	0	9	-139	0	0	-30	1	0	0	-34	-115	360	49	31	2	2
275	1	44	13	136	8	-21	67	160	48	-51	0	0	-62	-65	0	0	7	-139	0	0	-32	1	0	0	-36	-115	356	51	31	2	2
275	1	49	11	137	5	-21	65	159	46	-50	0	0	-62	-61	0	0	4	-139	0	0	-34	1	0	0	-38	-115	350	54	31	2	2
275	1	54	9	137	3	-21	62	158	44	-49	0	0	-62	-56	0	0	2	-139	0	0	-36	2	0	0	-40	-114	343	57	31	2	2
275	1	59	6	138	1	-21	60	158	42	-48	0	0	-63	-52	0	0	0	-139	0	0	-38	2	0	0	-42	-113	333	60	31	2	2
275	2	4	4	139	0	-22	57	157	40	-47	0	0	-63	-48	0	0	-1	-139	0	0	-40	3	0	0	-44	-112	321	64	31	2	2
275	2	9	2	140	-3	-22	54	157	38	-47	0	0	-62	-44	0	0	-4	-139	0	0	-42	4	0	0	-46	-111	309	68	31	2	2
275	2	14	0	141	-5	-22	52	157	36	-46	0	0	-62	-40	0	0	-6	-140	0	0	-44	5	0	0	-47	-110	294	73	32	2	2
275	2	19	0	0	-7	-22	49	158	34	-45	0	0	-61	-36	0	0	-8	-140	0	0	-46	6	0	0	-49	-109	0	0	0	1	0
275	2	24	0	0	-9	-22	46	158	32	-45	0	0	-60	-32	0	0	-10	-140	0	0	-48	7	0	0	-51	-107	0	0	0	1	0
275	2	29	0	0	-12	-22	44	158	30	-45	0	0	-59	-29	0	0	-13	-140	0	0	-50	8	0	0	-53	-105	0	0	0	1	0
275	2	34	0	0	-14	-22	41	158	28	-45	0	0	-58	-26	0	0	-15	-140	0	0	-52	10	0	0	-54	-103	0	0	0	1	0
275	2	39	0	0	-16	-22	39	159	26	-45	0	0	-57	-23	0	0	-17	-140	0	0	-53	12	0	0	-56	-101	0	0	0	1	0
275	2	44	0	0	-18	-22	36	159	23	-45	0	0	-55	-21	0	0	-19	-140	0	0	-55	14	0	0	-57	-99	0	0	0	1	0
275	2	49	0	0	-21	-22	34	160	21	-45	0	0	-54	-18	0	0	-21	-140	0	0	-56	16	0	0	-58	-96	0	0	0	1	0
275	2	54	0	0	-23	-22	31	160	19	-45	0	0	-52	-16	0	0	-24	-140	0	0	-58	19	0	0	-59	-93	0	0	0	1	0
275	2	59	0	0	-25	-22	29	161	17	-45	0	0	-50	-15	0	0	-26	-140	0	0	-59	22	0	0	-60	-89	0	0	0	1	0
275	3	4	0	0	-27	-22	26	161	15	-45	0	0	-49	-13	0	0	-28	-140	0	0	-60	25	0	0	-61	-86	0	0	0	1	0
275	3	9	0	0	-29	-22	24	162	12	-45	0	0	-47	-12	0	0	-30	-140	0	0	-61	29	0	0	-62	-82	0	0	0	1	0
275	3	14	0	0	-31	-21	21	162	10	-45	0	0	-45	-11	0	0	-32	-139	0	0	-62	33	0	0	-62	-78	0	0	0	1	0
275	3	19	0	0	-34	-21	19	162	8	-45	0	0	-43	-10	0	0	-34	-139	0	0	-62	37	0	0	-62	-74	0	0	0	1	0
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275	22	14	62	-98	55	-98	8	-94	18	-136	25	-134	18	-96	19	-15	56	143	56	89	54	-11	44	-79	51	-126	32	14	352	6	0
275	22	19	65	-97	57	-95	10	-93	20	-136	23	-135	16	-96	21	-16	57	146	54	90	53	-9	44	-82	49	-124	31	14	353	6	0
275	22	24	68	-97	58	-93	12	-91	22	-136	20	-136	14	-96	22	-17	58	148	51	91	51	-7	43	-86	48	-123	30	14	353	6	0
275	22	29	70	-96	59	-90	14	-90	24	-136	18	-137	12	-96	24	-19	60	152	49	92	49	-5	42	-89	46	-121	30	14	354	6	0
275	22	34	73	-96	60	-85	16	-89	26	-136	16	-137	9	-96	26	-21	61	155	46	93	47	-4	40	-91	44	-120	29	14	354	6	0
275	22	39	75	-97	61	-83	18	-88	29	-136	13	-138	7	-96	27	-22	62	159	44	94	45	-3	39	-94	42	-119	28	14	355	6	0
275	22	44	78	-98	62	-79	20	-87	31	-136	11	-138	5	-96	29	-24	62	163	42	95	43	-2	37	-97	40	-119	28	14	355	6	0
275	22	49	80	-100	62	-75	22	-86	33	-135	9	-139	3	-96	30	-27	63	167	39	96	41	-1	36	-99	38	-118	27	14	356	6	0
275	22	54	83	-105	63	-71	25	-85	35	-135	6	-140	0	-96	32	-29	63	171	37	97	39	0	34	-101	36	-117	27	14	357	6	0
275	22	59	85	-116	63	-66	27	-84	37	-135	4	-140	-1	-96	33	-31	63	176	35	98	37	0	32	-103	34	-117	26	14	358	6	0
275	23	4	87	-147	63	-62	29	-83	39	-134	2	-141	-3	-97	34	-34	63	-179	32	99	35	0	30	-105	31	-117	26	15	359	6	0
275	23	9	86	161	62	-58	31	-82	41	-133	0	-141	-5	-97	35	-36	62	-174	30	100	33	0	28	-106	29	-116	25	15	359	6	0
275	23	14	85	134	62	-54	34	-81	43	-132	0	0	-7	-97	35	-39	62	-170	28	101	31	1	26	-108	27	-116	28	21	30	5	0
275	23	19	82	124	61	-50	36	-80	45	-132	0	0	-10	-97	36	-42	61	-166	25	102	29	1	24	-109	25	-116	28	20	32	5	0
275	23	24	80	120	60	-46	38	-80	47	-130	0	0	-12	-97	36	-45	60	-163	23	103	27	1	22	-111	23	-116	29	20	34	5	0
275	23	29	77	118	59	-43	41	-79	49	-129	0	0	-14	-97	36	-48	59	-160	21	104	25	1	20	-112	21	-116	29	20	36	5	0
275	23	34	75	117	58	-40	43	-78	51	-128	0	0	-16	-97	36	-51	58	-157	19	105	22	1	17	-113	18	-116	29	20	37	5	0
275	23	39	72	116	56	-37	45	-77	52	-126	0	0	-19	-97	36	-54	56	-154	17	106	20	1	15	-114	16	-116	29	20	39	5	0
275	23	44	70	116	55	-35	48	-77	54	-124	0	0	-21	-97	35	-57	55	-152	15	107	18	1	13	-115	14	-116	29	20	40	5	0
275	23	49	67	117	53	-33	50	-76	56	-122	0	0	-23	-97	35	-60	53	-150	12	108	16	1	11	-116	12	-116	30	20	41	5	0
275	23	54	64	117	52	-31	53	-76	57	-120	0	0	-25	-97	34	-62	51	-148	10	110	14	1	9	-117	10	-116	30	19	42	5	0
275	23	59	62	118	50	-29	55	-75	58	-117	0	0	-27	-97	33	-65	49	-146	8	111	11	1	7	-118	7	-116	30	19	43	5	0

GPS PERFORMANCE PRE-ANALYSIS

LATITUDE = 55.0000 LONGITUDE =295.0000

LABRADOR
P -Code

OPTIONS USED FOR THIS RUN

CODE : PRECISE

SIGMA PSEUDO-RANGE = 4.00 (M)

SIGMA LORAN-RANGE = 100/SQRT(0.5) (M)

SATELLITE NO.	4	5	6	7	8	9
REF. TIME - TIME OF WEEK (SEC)	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.22528000D+06
JULIAN DATE (DDD HH MM SS)	145 18 42 8	145 18 42 8	145 18 42 8	145 18 42 8	145 18 42 8	169 14 34 40
SEMI - MAJOR AXIS (M)	0.26560399D+08	0.26560943D+08	0.26560254D+08	0.26560449D+08	0.26560017D+08	0.26560147D+08
MEAN ANOMALY @ TREF (RADIANS)	-0.21159685D+01	0.12833393D+01	0.85431182D+00	-0.32870960D+00	0.17212573D+01	-0.91869777D+00
ECCENTRICITY	0.14967920D-02	0.19474030D-02	0.59700012D-03	0.69551468D-02	0.91743469D-03	0.69322591D-02
ARG OF PERIGEE (RADIANS)	0.31187789D+01	-0.10636019D+01	0.17242581D+01	0.13419558D+01	0.53818911D-01	0.14604583D+01
INCLINATION (RADIANS)	0.11035115D+01	0.11125715D+01	0.11011986D+01	0.11076880D+01	0.11036613D+01	0.10981785D+01
RIGHT ASCENSION (RADIANS)	-0.57879102D+00	-0.58088678D+00	-0.26814451D+01	-0.26411774D+01	-0.57803953D+00	0.31143453D+01
RATE OF RA (RADIANS/SEC)	-0.62631171D-08	-0.61831158D-08	-0.62059708D-08	-0.63774079D-08	-0.62173999D-08	-0.62288299D-08
MEAN MOTION (RADIANS/SEC)	0.14585361D-03	0.14584913D-03	0.14585481D-03	0.14585320D-03	0.14585676D-03	0.14585568D-03

			SAT # 4				SAT # 5				SAT # 6				SAT # 7				SAT # 8				SAT # 9				ERROR ELLIPSE				
DAY	HH	MM	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	AA	BB	PHI		
275	0	0	63	84	51	-31	52	-61	57	-119	0	0	-26	-97	31	-58	51	-148	10	101	13	1	16	-118	9	-116	5	4	68	5	0
275	0	4	61	88	50	-29	54	-59	59	-116	0	0	-28	-97	30	-60	49	-146	8	102	11	1	13	-119	7	-116	5	4	68	5	0
275	0	9	59	91	48	-28	56	-57	60	-113	0	0	-30	-96	30	-63	47	-145	7	104	9	1	11	-120	5	-116	5	4	68	5	0
275	0	14	57	93	46	-27	58	-56	61	-110	0	0	-32	-96	29	-66	45	-144	5	105	7	1	9	-121	2	-116	5	4	69	5	0
275	0	19	55	96	44	-25	61	-54	62	-106	0	0	-34	-96	28	-68	43	-143	3	106	4	1	7	-122	0	-116	5	4	69	5	0
275	0	24	53	98	42	-25	63	-52	62	-102	0	0	-36	-95	27	-71	41	-142	1	108	2	1	5	-123	-1	-116	5	4	69	5	0
275	0	29	50	101	40	-24	65	-49	63	-98	0	0	-38	-95	26	-73	39	-141	0	0	0	1	3	-124	-3	-116	5	5	311	4	0
275	0	34	48	103	38	-23	67	-47	63	-93	0	0	-40	-94	25	-75	37	-140	0	0	-1	1	1	-125	-6	-116	5	5	292	4	0
275	0	39	46	105	36	-23	70	-44	63	-89	0	0	-42	-93	23	-78	35	-140	0	0	-4	0	0	0	-8	-117	25	5	64	3	0
275	0	44	44	107	34	-22	72	-41	63	-85	0	0	-44	-92	22	-80	33	-139	0	0	-6	0	0	0	-10	-117	23	5	65	3	0
275	0	49	42	109	32	-22	74	-38	63	-80	0	0	-46	-91	20	-82	31	-139	0	0	-8	0	0	0	-12	-117	21	5	65	3	0
275	0	54	40	111	30	-22	77	-34	62	-76	0	0	-48	-90	19	-84	29	-139	0	0	-10	0	0	0	-14	-117	19	5	66	3	0
275	0	59	37	113	27	-21	79	-28	61	-73	0	0	-50	-89	17	-85	27	-139	0	0	-13	0	0	0	-17	-117	18	5	66	3	0
275	1	4	35	114	25	-21	81	-20	60	-69	0	0	-52	-87	15	-87	24	-139	0	0	-15	0	0	0	-19	-117	17	5	67	3	0
275	1	9	33	116	23	-21	83	-7	59	-66	0	0	-53	-85	13	-89	22	-138	0	0	-17	0	0	0	-21	-117	17	5	67	3	0
275	1	14	31	118	21	-21	85	13	58	-63	0	0	-55	-83	12	-90	20	-138	0	0	-19	0	0	0	-23	-117	16	5	67	3	0
275	1	19	29	119	19	-21	85	47	57	-60	0	0	-56	-81	10	-92	18	-138	0	0	-21	0	0	0	-25	-117	16	5	68	3	0
275	1	24	27	121	16	-21	85	79	55	-58	0	0	-58	-78	8	-93	15	-138	0	0	-24	0	0	0	-27	-116	16	5	68	3	0
275	1	29	25	122	14	-21	83	98	53	-56	0	0	-59	-75	6	-95	13	-139	0	0	-26	0	0	0	-30	-116	16	5	68	3	0
275	1	34	22	124	12	-21	81	109	52	-54	0	0	-60	-72	4	-96	11	-139	0	0	-28	0	0	0	-32	-116	16	5	68	3	0

275	1	39	20	125	10	-21	78	117	50	-52	0	0	-61	-68	2	-97	9	-139	0	0	-30	1	0	0	-34	-115	16	5	69	3	0
275	1	44	18	126	8	-21	76	122	48	-51	0	0	-62	-65	0	-98	7	-139	0	0	-32	1	0	0	-36	-115	17	5	69	3	0
275	1	49	16	128	5	-21	73	126	46	-50	0	0	-62	-61	0	0	4	-139	0	0	-34	1	0	0	-38	-115	9458	10	35	2	0
275	1	54	14	129	3	-21	71	129	44	-49	0	0	-62	-56	0	0	2	-139	0	0	-36	2	0	0	-40	-114	80907	11	34	2	0
275	1	59	12	130	1	-21	68	131	42	-48	0	0	-63	-52	0	0	0	-139	0	0	-38	2	0	0	-42	-113	11097	11	34	2	0
275	2	4	10	131	0	-22	66	134	40	-47	0	0	-63	-48	0	0	-1	-139	0	0	-40	3	0	0	-44	-112	4914	12	34	2	0
275	2	9	8	132	-3	-22	63	136	38	-47	0	0	-62	-44	0	0	-4	-139	0	0	-42	4	0	0	-46	-111	3029	13	34	2	0
275	2	14	6	134	-5	-22	61	138	36	-46	0	0	-62	-40	0	0	-6	-140	0	0	-44	5	0	0	-47	-110	2114	13	34	2	0
275	2	19	4	135	-7	-22	58	139	34	-46	0	0	-61	-36	0	0	-8	-140	0	0	-46	6	0	0	-49	-109	1572	14	34	2	0
275	2	24	2	136	-9	-22	56	141	32	-45	0	0	-60	-32	0	0	-10	-140	0	0	-48	7	0	0	-51	-107	1213	16	34	2	0
275	2	29	0	137	-12	-22	53	142	30	-45	0	0	-59	-29	0	0	-13	-140	0	0	-50	8	0	0	-53	-105	958	17	35	2	0
275	2	34	0	0	-14	-22	51	144	28	-45	0	0	-58	-26	0	0	-15	-140	0	0	-52	10	0	0	-54	-103	0	0	0	1	0
275	2	39	0	0	-16	-22	48	145	26	-45	0	0	-57	-23	0	0	-17	-140	0	0	-53	12	0	0	-56	-101	0	0	0	1	0
275	2	44	0	0	-18	-22	46	146	23	-45	0	0	-55	-21	0	0	-19	-140	0	0	-55	14	0	0	-57	-99	0	0	0	1	0
275	2	49	0	0	-21	-22	43	147	21	-45	0	0	-54	-18	0	0	-21	-140	0	0	-56	16	0	0	-58	-96	0	0	0	1	0
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275	3	4	0	0	-27	-22	36	151	15	-45	0	0	-49	-13	0	0	-28	-140	0	0	-60	25	0	0	-61	-86	0	0	0	1	0
275	3	9	0	0	-29	-22	33	152	12	-45	0	0	-47	-12	0	0	-30	-140	0	0	-61	29	0	0	-62	-82	0	0	0	1	0
275	3	14	0	0	-31	-21	31	153	10	-45	0	0	-45	-11	0	0	-32	-139	0	0	-62	33	0	0	-62	-78	0	0	0	1	0
275	3	19	0	0	-34	-21	28	154	8	-45	0	0	-43	-10	0	0	-34	-139	0	0	-62	37	0	0	-62	-74	0	0	0	1	0
275	3	24	0	0	-36	-21	26	155	6	-45	0	0	-41	-9	0	0	-36	-138	0	0	-63	41	0	0	-62	-70	0	0	0	1	0
275	3	29	0	0	-38	-20	23	155	3	-45	0	0	-39	-8	0	0	-38	-138	0	0	-63	45	0	0	-62	-66	0	0	0	1	0
275	3	34	0	0	-40	-19	21	156	1	-45	0	0	-37	-8	0	0	-40	-137	0	0	-63	50	0	0	-62	-62	0	0	0	1	0
275	3	39	0	0	-42	-19	19	157	0	-46	0	0	-35	-7	0	0	-42	-137	0	0	-62	54	0	0	-61	-58	0	0	0	1	0
275	3	44	0	0	-44	-18	16	158	-2	-46	0	0	-33	-7	0	0	-44	-136	0	0	-62	58	0	0	-60	-54	0	0	0	1	0
275	3	49	0	0	-46	-17	14	158	-5	-46	0	0	-31	-7	0	0	-46	-135	0	0	-61	62	0	0	-60	-51	0	0	0	1	0
275	3	54	0	0	-48	-16	12	159	-7	-46	0	0	-28	-6	0	0	-48	-134	0	0	-60	65	0	0	-58	-48	0	0	0	1	0
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275	4	14	0	0	-54	-9	3	161	-16	-46	0	0	-20	-6	0	0	-55	-127	0	0	-55	77	0	0	-53	-38	0	0	0	1	0
275	4	19	0	0	-56	-7	1	162	-18	-46	0	0	-18	-6	0	0	-56	-125	0	0	-54	79	0	0	-51	-36	0	0	0	1	0
275	4	24	0	0	-57	-4	0	0	-20	-46	0	0	-15	-6	0	0	-58	-122	0	0	-52	81	0	0	-49	-35	0	0	0	0	0
275	4	29	0	0	-59	-1	0	0	-22	-46	0	0	-13	-6	0	0	-59	-119	0	0	-50	83	0	0	-48	-33	0	0	0	0	0
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275	4	54	0	0	-63	16	0	0	-33	-45	1	118	-2	-6	0	0	-63	-101	0	0	-41	88	0	0	-38	-29	0	0	0	1	0
275	4	59	0	0	-63	21	0	0	-35	-45	3	117	0	-6	0	0	-63	-97	0	0	-39	89	0	0	-36	-28	0	0	0	1	0
275	5	4	0	0	-63	25	0	0	-38	-45	5	116	2	-7	0	0	-63	-92	0	0	-37	89	0	0	-34	-28	0	0	0	1	0
275	5	9	0	0	-62	29	0	0	-40	-44	7	114	4	-7	0	0	-63	-88	0	0	-35	90	0	0	-32	-27	0	0	0	1	0
275	5	14	0	0	-62	33	0	0	-42	-43	9	113	6	-7	0	0	-62	-84	0	0	-32	90	0	0	-30	-27	0	0	0	1	0
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275	5	24	0	0	-61	41	0	0	-46	-42	13	111	10	-7	0	0	-61	-76	0	0	-28	91	0	0	-25	-27	0	0	0	1	0
275	5	29	0	0	-60	44	0	0	-47	-40	15	109	13	-7	0	0	-60	-73	0	0	-26	91	0	0	-23	-26	0	0	0	1	0
275	5	34	0	0	-58	48	0	0	-49	-39	17	108	15	-7	0	0	-59	-70	0	0	-24	91	0	0	-21	-26	0	0	0	1	0
275	5	39	0	0	-57	50	0	0	-51	-38	19	107	17	-7	0	0	-57	-67	0	0	-22	91	0	0	-19	-26	0	0	0	1	0
275	5	44	0	0	-56	53	0	0	-53	-36	21	105	19	-7	0	0	-56	-64	0	0	-19	91	0	0	-17	-26	0	0	0	1	0
275	5	49	0	0	-54	55	0	0	-55	-34	23	103	22	-7	0	0	-55	-62	0	0	-17	91	0	0	-14	-26	0	0	0	1	0
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275	15	44	0	0	-45	162	0	0	-3	133	0	0	-32	172	0	0	-45	44	0	0	-62	-120	0	0	-60	126	0	0	0	0	0
275	15	49	0	0	-46	163	0	0	-6	133	0	0	-30	173	0	0	-47	45	0	0	-61	-116	0	0	-59	130	0	0	0	0	0
275	15	54	0	0	-48	164	0	0	-8	133	0	0	-28	173	0	0	-49	46	0	0	-60	-112	0	0	-58	133	0	0	0	0	0
275	15	59	0	0	-50	165	0	0	-10	133	0	0	-25	173	0	0	-51	47	0	0	-59	-109	0	0	-57	135	0	0	0	0	0
275	16	4	0	0	-52	167	0	0	-12	133	0	0	-23	173	0	0	-52	49	0	0	-57	-106	0	0	-55	138	0	0	0	0	0
275	16	9	0	0	-53	169	0	0	-14	133	0	0	-21	173	0	0	-54	51	0	0	-56	-104	0	0	-54	140	0	0	0	0	0
275	16	14	0	0	-55	171	0	0	-17	133	0	0	-19	173	0	0	-55	53	0	0	-55	-101	0	0	-52	142	0	0	0	0	0
275	16	19	0	0	-57	173	0	0	-19	133	0	0	-17	173	0	0	-57	55	0	0	-53	-99	0	0	-50	144	0	0	0	0	0
275	16	24	0	0	-58	176	0	0	-21	133	0	0	-14	173	0	0	-58	58	0	0	-51	-97	0	0	-49	145	0	0	0	0	0
275	16	29	0	0	-59	179	0	0	-23	133	0	0	-12	173	0	0	-59	61	0	0	-50	-96	0	0	-47	146	0	0	0	0	0
275	16	34	0	0	-60	-177	0	0	-26	133	0	0	-10	173	0	0	-60	64	0	0	-48	-94	0	0	-45	147	0	0	0	0	0
275	16	39	0	0	-61	-173	0	0	-28	133	0	0	-8	173	0	0	-61	68	0	0	-46	-93	0	0	-43	148	0	0	0	0	0
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275	16	49	0	0	-62	-165	0	0	-32	133	0	0	-3	173	0	0	-63	76	0	0	-42	-91	0	0	-39	150	0	0	0	0	0
275	16	54	0	0	-63	-161	0	0	-34	134	0	0	-1	173	0	0	-63	80	0	0	-40	-91	0	0	-37	151	0	0	0	0	0
275	16	59	0	0	-63	-157	0	0	-36	134	0	0	0	172	0	0	-63	84	0	0	-38	-90	0	0	-35	151	0	0	0	0	0
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275	17	14	0	0	-62	-144	0	0	-42	136	0	0	7	172	0	0	-62	97	0	0	-32	-89	0	0	-29	152	0	0	0	0	0
275	17	19	0	0	-61	-140	0	0	-44	137	0	0	9	172	0	0	-61	101	0	0	-29	-88	0	0	-27	152	0	0	0	0	0
275	17	24	0	0	-60	-137	0	0	-46	138	0	0	11	172	0	0	-60	104	0	0	-27	-88	0	0	-25	152	0	0	0	0	0
275	17	29	0	0	-59	-133	0	0	-48	139	0	0	14	172	0	0	-59	107	0	0	-25	-88	0	0	-22	153	0	0	0	0	0
275	17	34	0	0	-58	-130	0	0	-50	141	0	0	16	172	0	0	-58	110	0	0	-23	-88	0	0	-20	153	0	0	0	0	0
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275	17	44	0	0	-55	-125	0	0	-54	144	0	0	20	172	0	0	-55	115	0	0	-19	-88	0	0	-16	153	0	0	0	0	0
275	17	49	0	0	-54	-123	0	0	-55	146	0	0	22	172	0	0	-54	118	1	-156	-16	-88	0	0	-14	153	0	0	0	1	0
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275	17	59	0	0	-50	-119	0	0	-58	151	0	0	27	172	0	0	-51	121	6	-155	-12	-88	0	0	-9	153	0	0	0	1	0
275	18	4	0	0	-48	-118	0	0	-59	154	0	0	29	172	0	0	-49	123	8	-155	-10	-88	0	0	-7	152	0	0	0	1	0
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275	18	14	0	0	-45	-116	0	0	-61	161	0	0	33	173	0	0	-45	125	12	-153	-5	-88	0	0	-2	152	0	0	0	1	0
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275	18	39	0	0	-35	-112	0	0	-63	-177	8	-43	43	176	0	0	-35	128	24	-149	5	-89	0	0	8	152	303	3	4	2	0
275	18	44	0	0	-32	-112	0	0	-63	-173	10	-42	45	177	0	0	-33	129	26	-148	7	-89	0	0	10	152	305	3	4	2	0
275	18	49	0	0	-30	-111	0	0	-62	-168	12	-42	47	178	0	0	-31	129	28	-147	10	-89	0	0	12	152	308	3	4	2	0
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275	19	4	0	0	-24	-111	0	0	-60	-157	18	-41	52	-176	0	0	-24	130	36	-144	16	-89	0	0	19	152	319	4	3	2	0
275	19	9	0	0	-22	-111	0	0	-59	-154	20	-41	54	-174	0	0	-22	130	38	-142	18	-89	0	0	21	152	323	4	3	2	0
275	19	14	0	0	-19	-111	0	0	-57	-151	23	-41	56	-172	0	0	-20	130	41	-141	21	-89	0	0	23	152	328	4	3	2	0
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275	21	44	52	-91	45	-107	0	-102	4	-136	48	-122	31	-97	0	0	45	133	64	55	61	-28	40	-50	60	-141	8	5	326	5	0
275	21	49	55	-89	47	-106	2	-101	6	-136	46	-124	29	-96	0	0	47	134	61	57	61	-25	41	-53	59	-138	8	5	324	5	0
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275	22	54	78	-18	63	-71	26	-81	35	-135	16	-142	0	-96	23	-27	63	171	34	82	39	0	38	-95	36	-117	5	3	347	6	0
275	22	59	79	-5	63	-66	28	-80	37	-135	14	-143	-1	-96	24	-29	63	176	32	83	37	0	37	-97	34	-117	4	3	348	6	0
275	23	4	79	7	63	-62	30	-78	39	-134	12	-143	-3	-97	26	-31	63	-179	30	85	35	0	35	-100	31	-117	4	3	348	6	0
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275	23	24	75	52	60	-46	38	-72	47	-130	3	-146	-12	-97	30	-41	60	-163	22	91	27	1	28	-108	23	-116	4	3	352	6	0
275	23	29	73	59	59	-43	40	-70	49	-129	1	-147	-14	-97	30	-43	59	-160	20	93	25	1	26	-110	21	-116	4	3	353	6	0
275	23	34	72	66	58	-40	43	-68	51	-128	0	0	-16	-97	31	-46	58	-157	18	94	22	1	24	-112	18	-116	5	4	70	5	0
275	23	39	70	71	56	-37	45	-67	52	-126	0	0	-19	-97	31	-49	56	-154	16	96	20	1	22	-113	16	-116	5	4	70	5	0
275	23	44	68	76	55	-35	47	-65	54	-124	0	0	-21	-97	31	-51	55	-152	14	97	18	1	20	-115	14	-116	5	4	69	5	0
275	23	49	66	80	53	-33	49	-63	56	-122	0	0	-23	-97	31	-54	53	-150	13	99	16	1	18	-116	12	-116	5	4	69	5	0
275	23	54	64	84	52	-31	51	-62	57	-120	0	0	-25	-97	31	-57	51	-148	11	100	14	1	16	-117	10	-116	5	4	68	5	0
275	23	59	62	87	50	-29	53	-60	58	-117	0	0	-27	-97	30	-60	49	-146	9	102	11	1	14	-119	7	-116	5	4	68	5	0

GPS PERFORMANCE PRE-ANALYSIS

LATITUDE = 55.0000 LONGITUDE =295.0000

OPTIONS USED FOR THIS RUN

CODE : C/A

SIGMA PSEUDO-RANGE = 16.00 (M)

SIGMA LORAN-RANGE = 100/SQRT(0.5) (M)

LABRADOR
C/A - Code

SATELLITE NO.	4	5	6	7	8	9
REF. TIME - TIME OF WEEK (SEC)	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.22528000D+06
JULIAN DATE (DDD HH MM SS)	145 18 42 8	145 18 42 8	145 18 42 8	145 18 42 8	145 18 42 8	169 14 34 40
SEMI - MAJOR AXIS (M)	0.26560399D+08	0.26560943D+08	0.26560254D+08	0.26560449D+08	0.26560017D+08	0.26560147D+08
MEAN ANOMALY @ TREF (RADIANS)	-0.21159685D+01	0.12833393D+01	0.85431182D+00	-0.32870960D+00	0.17212573D+01	-0.91869777D+00
ECCENTRICITY	0.14967920D-02	0.19474030D-02	0.59700012D-03	0.69551468D-02	0.91743469D-03	0.69322591D-02
ARG OF PERIGEE (RADIANS)	0.31187789D+01	-0.10636019D+01	0.17242581D+01	0.13419558D+01	0.53818911D-01	0.14604583D+01
INCLINATION (RADIANS)	0.11035115D+01	0.11125715D+01	0.11011986D+01	0.11076880D+01	0.11036613D+01	0.10981785D+01
RIGHT ASCENSION (RADIANS)	-0.57879102D+00	-0.58088678D+00	-0.26814451D+01	-0.26411774D+01	-0.57803953D+00	0.31143453D+01
RATE OF RA (RADIANS/SEC)	-0.62631171D-08	-0.61831158D-08	-0.62059708D-08	-0.63774079D-08	-0.62173999D-08	-0.62288299D-08
MEAN MOTION (RADIANS/SEC)	0.14585361D-03	0.14584913D-03	0.14585481D-03	0.14585320D-03	0.14585676D-03	0.14585568D-03

			SAT # 4				SAT # 5				SAT # 6				SAT # 7				SAT # 8				SAT # 9				ERROR ELLIPSE				
DAY	HH	MM	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	AA	BB	PHI		
275	0	0	63	84	51	-31	52	-61	57	-119	0	0	-26	-97	31	-58	51	-148	10	101	13	1	16	-118	9	-116	23	16	68	5	0
275	0	4	61	88	50	-29	54	-59	59	-116	0	0	-28	-97	30	-60	49	-146	8	102	11	1	13	-119	7	-116	23	16	68	5	0
275	0	9	59	91	48	-28	56	-57	60	-113	0	0	-30	-96	30	-63	47	-145	7	104	9	1	11	-120	5	-116	23	16	68	5	0
275	0	14	57	93	46	-27	58	-56	61	-110	0	0	-32	-96	29	-66	45	-144	5	105	7	1	9	-121	2	-116	23	16	69	5	0
275	0	19	55	96	44	-25	61	-54	62	-106	0	0	-34	-96	28	-68	43	-143	3	106	4	1	7	-122	0	-116	23	16	69	5	0
275	0	24	53	98	42	-25	63	-52	62	-102	0	0	-36	-95	27	-71	41	-142	1	108	2	1	5	-123	-1	-116	23	16	69	5	0
275	0	29	50	101	40	-24	65	-49	63	-98	0	0	-38	-95	26	-73	39	-141	0	0	0	1	3	-124	-3	-116	23	22	311	4	0
275	0	34	48	103	38	-23	67	-47	63	-93	0	0	-40	-94	25	-75	37	-140	0	0	-1	1	1	-125	-6	-116	23	22	292	4	0
275	0	39	46	105	36	-23	70	-44	63	-89	0	0	-42	-93	23	-78	35	-140	0	0	-4	0	0	0	-8	-117	103	22	64	3	0
275	0	44	44	107	34	-22	72	-41	63	-85	0	0	-44	-92	22	-80	33	-139	0	0	-6	0	0	0	-10	-117	92	22	65	3	0
275	0	49	42	109	32	-22	74	-38	63	-80	0	0	-46	-91	20	-82	31	-139	0	0	-8	0	0	0	-12	-117	84	22	65	3	0
275	0	54	40	111	30	-22	77	-34	62	-76	0	0	-48	-90	19	-84	29	-139	0	0	-10	0	0	0	-14	-117	78	21	66	3	0
275	0	59	37	113	27	-21	79	-28	61	-73	0	0	-50	-89	17	-85	27	-139	0	0	-13	0	0	0	-17	-117	73	21	66	3	0
275	1	4	35	114	25	-21	81	-20	60	-69	0	0	-52	-87	15	-87	24	-139	0	0	-15	0	0	0	-19	-117	70	21	67	3	0
275	1	9	33	116	23	-21	83	-7	59	-66	0	0	-53	-85	13	-89	22	-138	0	0	-17	0	0	0	-21	-117	68	21	67	3	0
275	1	14	31	118	21	-21	85	13	58	-63	0	0	-55	-83	12	-90	20	-138	0	0	-19	0	0	0	-23	-117	66	21	67	3	0
275	1	19	29	119	19	-21	85	47	57	-60	0	0	-56	-81	10	-92	18	-138	0	0	-21	0	0	0	-25	-117	65	21	68	3	0
275	1	24	27	121	16	-21	85	79	55	-58	0	0	-58	-78	8	-93	15	-138	0	0	-24	0	0	0	-27	-116	64	20	68	3	0
275	1	29	25	122	14	-21	83	98	53	-56	0	0	-59	-75	6	-95	13	-139	0	0	-26	0	0	0	-30	-116	64	20	68	3	0
275	1	34	22	124	12	-21	81	109	52	-54	0	0	-60	-72	4	-96	11	-139	0	0	-28	0	0	0	-32	-116	65	20	68	3	0

275	1	39	20	125	10	-21	78	117	50	-52	0	0	-61	-68	2	-97	9	-139	0	0	-30	1	0	0	-34	-115	66	20	69	3	0
275	1	44	18	126	8	-21	76	122	48	-51	0	0	-62	-65	0	-98	7	-139	0	0	-32	1	0	0	-36	-115	67	20	69	3	0
275	1	49	16	128	5	-21	73	126	46	-50	0	0	-62	-61	0	0	4	-139	0	0	-34	1	0	0	-38	-115	9693	42	35	2	0
275	1	54	14	129	3	-21	71	129	44	-49	0	0	-62	-56	0	0	2	-139	0	0	-36	2	0	0	-40	-114	83241	43	34	2	0
275	1	59	12	130	1	-21	68	131	42	-48	0	0	-63	-52	0	0	0	-139	0	0	-38	2	0	0	-42	-113	11475	45	34	2	0
275	2	4	10	131	0	-22	66	134	40	-47	0	0	-63	-48	0	0	-1	-139	0	0	-40	3	0	0	-44	-112	5112	47	34	2	0
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275	2	14	6	134	-5	-22	61	138	36	-46	0	0	-62	-40	0	0	-6	-140	0	0	-44	5	0	0	-47	-110	2235	53	33	2	0
275	2	19	4	135	-7	-22	58	139	34	-46	0	0	-61	-36	0	0	-8	-140	0	0	-46	6	0	0	-49	-109	1681	56	33	2	0
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275	2	29	0	137	-12	-22	53	142	30	-45	0	0	-59	-29	0	0	-13	-140	0	0	-50	8	0	0	-53	-105	1057	64	33	2	0
275	2	34	0	0	-14	-22	51	144	28	-45	0	0	-58	-26	0	0	-15	-140	0	0	-52	10	0	0	-54	-103	0	0	0	1	0
275	2	39	0	0	-16	-22	48	145	26	-45	0	0	-57	-23	0	0	-17	-140	0	0	-53	12	0	0	-56	-101	0	0	0	1	0
275	2	44	0	0	-18	-22	46	146	23	-45	0	0	-55	-21	0	0	-19	-140	0	0	-55	14	0	0	-57	-99	0	0	0	1	0
275	2	49	0	0	-21	-22	43	147	21	-45	0	0	-54	-18	0	0	-21	-140	0	0	-56	16	0	0	-58	-96	0	0	0	1	0
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275	2	59	0	0	-25	-22	38	150	17	-45	0	0	-50	-15	0	0	-26	-140	0	0	-59	22	0	0	-60	-89	0	0	0	1	0
275	3	4	0	0	-27	-22	36	151	15	-45	0	0	-49	-13	0	0	-28	-140	0	0	-60	25	0	0	-61	-86	0	0	0	1	0
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275	4	19	0	0	-56	-7	1	162	-18	-46	0	0	-18	-6	0	0	-56	-125	0	0	-54	79	0	0	-51	-36	0	0	0	1	0
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275	4	34	0	0	-60	1	0	0	-25	-46	0	0	-11	-6	0	0	-60	-116	0	0	-48	84	0	0	-46	-32	0	0	0	0	0
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275	6	49	0	0	-31	67	0	0	-63	9	40	74	46	-1	0	0	-32	-50	0	0	9	90	25	131	11	-27	242	28	357	2	0
275	6	54	0	0	-29	68	0	0	-62	13	40	71	48	0	0	0	-30	-50	0	0	11	90	27	130	14	-27	247	27	358	2	0
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275	7	14	0	0	-20	68	0	0	-58	27	40	58	55	6	0	0	-21	-49	0	0	20	90	36	124	22	-27	266	26	0	2	0

275	7	19	0	0	-18	68	0	0	-56	29	39	55	56	9	0	165	-19	-49	0	0	22	90	38	122	25	-27	123	15	352	3	0
275	7	24	0	0	-16	68	0	0	-55	31	39	52	58	11	3	164	-16	-49	0	0	24	90	40	120	27	-27	126	15	352	3	0
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275	7	34	0	0	-12	68	0	0	-51	35	37	47	60	18	7	164	-12	-49	0	0	28	90	44	115	31	-27	132	14	353	3	0
275	7	39	0	0	-9	68	0	0	-50	37	36	44	61	21	9	163	-10	-49	0	0	31	91	46	112	33	-26	135	14	354	3	0
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275	7	49	0	0	-5	68	0	0	-46	39	33	40	62	29	14	163	-5	-50	0	0	35	91	49	106	37	-25	142	14	354	3	0
275	7	54	0	0	-3	68	0	0	-44	40	31	38	63	33	16	162	-3	-50	0	0	37	92	50	102	39	-25	145	14	354	3	0
275	7	59	0	0	0	68	0	0	-42	41	30	36	63	38	19	162	-1	-50	0	0	39	93	52	99	42	-24	148	14	355	3	0
275	8	4	0	0	1	67	0	0	-40	42	28	34	63	42	21	162	0	-50	0	0	41	93	52	94	43	-23	152	14	355	3	0
275	8	9	0	0	3	67	0	0	-38	43	26	33	62	46	24	161	3	-50	0	0	43	94	53	90	45	-22	155	13	355	3	0
275	8	14	0	0	5	67	0	0	-36	43	24	32	62	50	26	161	5	-50	0	0	45	95	54	86	47	-21	159	13	355	3	0
275	8	19	0	0	8	67	0	0	-34	43	22	30	61	54	29	161	7	-50	0	0	47	96	54	82	49	-19	162	13	355	3	0
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275	18	24	0	0	-41	-114	0	0	-63	169	1	-45	37	174	0	0	-41	127	17	-152	-1	-88	0	0	1	152	298	14	5	2	0
275	18	29	0	0	-39	-113	0	0	-63	173	3	-44	39	175	0	0	-39	127	19	-151	1	-88	0	0	3	152	300	14	5	2	0
275	18	34	0	0	-37	-113	0	0	-63	178	5	-43	41	175	0	0	-37	128	21	-150	3	-89	0	0	6	152	302	14	4	2	0

275	18	39	0	0	-35	-112	0	0	-63	-177	8	-43	43	176	0	0	-35	128	24	-149	5	-89	0	0	8	152	305	14	4	2	0
275	18	44	0	0	-32	-112	0	0	-63	-173	10	-42	45	177	0	0	-33	129	26	-148	7	-89	0	0	10	152	307	15	4	2	0
275	18	49	0	0	-30	-111	0	0	-62	-168	12	-42	47	178	0	0	-31	129	28	-147	10	-89	0	0	12	152	310	15	4	2	0
275	18	54	0	0	-28	-111	0	0	-62	-164	14	-41	49	-179	0	0	-29	129	31	-146	12	-89	0	0	14	152	313	15	3	2	0
275	18	59	0	0	-26	-111	0	0	-61	-161	16	-41	51	-178	0	0	-27	130	33	-145	14	-89	0	0	17	152	317	16	3	2	0
275	19	4	0	0	-24	-111	0	0	-60	-157	18	-41	52	-176	0	0	-24	130	36	-144	15	-89	0	0	19	152	321	16	3	2	0
275	19	9	0	0	-22	-111	0	0	-59	-154	20	-41	54	-174	0	0	-22	130	38	-142	18	-89	0	0	21	152	325	16	3	2	0
275	19	14	0	0	-19	-111	0	0	-57	-151	23	-41	56	-172	0	0	-20	130	41	-141	21	-89	0	0	23	152	330	17	3	2	0
275	19	19	0	0	-17	-111	0	0	-56	-149	25	-41	57	-169	0	0	-18	130	43	-140	23	-89	0	0	25	152	335	18	3	2	0
275	19	24	0	0	-15	-111	0	0	-54	-147	27	-41	58	-166	0	0	-16	130	45	-138	25	-89	0	0	28	152	341	18	3	2	0
275	19	29	0	0	-13	-111	0	0	-52	-145	29	-41	59	-163	0	0	-13	130	48	-137	27	-89	0	0	30	152	348	19	3	2	0
275	19	34	0	0	-11	-111	0	0	-51	-143	31	-41	60	-160	0	0	-11	130	50	-135	29	-88	0	0	32	153	356	20	3	2	0
275	19	39	1	-131	-8	-111	0	0	-49	-142	34	-42	61	-156	0	0	-9	130	53	-134	31	-88	0	0	34	153	118	16	357	3	0
275	19	44	3	-130	-6	-111	0	0	-47	-140	36	-43	62	-152	0	0	-7	129	55	-132	34	-88	0	0	36	154	112	17	357	3	0
275	19	49	5	-129	-4	-111	0	0	-45	-139	38	-44	62	-148	0	0	-4	129	58	-130	36	-87	0	0	38	154	106	18	356	3	0
275	19	54	7	-128	-2	-111	0	0	-43	-138	40	-45	63	-144	0	0	-2	129	60	-128	38	-87	0	0	40	155	101	18	355	3	0
275	19	59	9	-127	0	-112	0	0	-41	-138	42	-46	63	-140	0	0	0	129	63	-126	40	-86	0	0	42	156	96	19	354	3	0
275	20	4	11	-126	2	-112	0	0	-39	-137	44	-47	62	-135	0	0	1	129	65	-124	42	-85	1	-29	44	157	89	14	356	4	0
275	20	9	13	-124	4	-112	0	0	-37	-136	46	-49	62	-131	0	0	4	129	68	-121	44	-85	4	-29	46	158	84	14	355	4	0
275	20	14	15	-123	6	-112	0	0	-35	-136	48	-51	61	-127	0	0	6	129	70	-118	46	-84	6	-29	48	159	79	14	355	4	0
275	20	19	17	-122	8	-112	0	0	-33	-135	50	-54	61	-124	0	0	8	129	72	-114	48	-82	8	-29	50	160	75	15	355	4	0
275	20	24	19	-120	11	-112	0	0	-31	-135	52	-57	60	-120	0	0	10	128	75	-110	49	-81	10	-29	52	162	71	16	355	4	0
275	20	29	21	-119	13	-112	0	0	-28	-135	53	-60	58	-117	0	0	13	128	77	-104	51	-79	12	-30	53	164	67	16	354	4	0
275	20	34	23	-117	15	-112	0	0	-26	-135	55	-63	57	-114	0	0	15	128	79	-96	53	-78	14	-30	55	166	64	17	354	4	0
275	20	39	25	-116	17	-112	0	0	-24	-135	56	-67	56	-111	0	0	17	128	81	-85	54	-76	16	-30	56	169	61	18	354	4	0
275	20	44	27	-114	20	-112	0	0	-22	-135	57	-71	54	-109	0	0	19	128	83	-69	56	-73	18	-31	58	171	58	18	354	4	0
275	20	49	29	-113	22	-112	0	0	-20	-135	57	-76	53	-107	0	0	22	128	84	-47	57	-71	20	-32	59	175	55	19	353	4	0
275	20	54	31	-111	24	-112	0	0	-17	-135	58	-81	51	-105	0	0	24	128	84	-21	59	-68	23	-32	60	178	53	20	353	4	0
275	20	59	34	-109	26	-112	0	0	-15	-135	58	-86	49	-104	0	0	26	129	83	0	60	-65	25	-33	61	-177	50	21	352	4	0
275	21	4	36	-108	28	-112	0	0	-13	-135	58	-90	47	-102	0	0	28	129	81	14	61	-61	27	-35	62	-174	48	21	352	4	0
275	21	9	38	-106	30	-112	0	0	-11	-135	58	-95	46	-101	0	0	30	129	79	24	62	-57	28	-36	62	-169	46	22	351	4	0
275	21	14	40	-104	32	-111	0	0	-8	-135	57	-100	44	-100	0	0	33	129	77	32	62	-53	30	-37	62	-165	44	23	350	4	0
275	21	19	42	-102	35	-111	0	0	-6	-135	56	-104	42	-99	0	0	35	130	75	37	63	-49	32	-39	62	-161	42	23	349	4	0
275	21	24	44	-100	37	-110	0	0	-4	-135	55	-109	40	-99	0	0	37	130	73	42	63	-45	34	-41	62	-157	41	24	347	4	0
275	21	29	46	-98	39	-110	0	0	-2	-135	53	-112	38	-98	0	0	39	131	70	46	63	-41	36	-43	62	-152	40	24	345	4	0
275	21	34	48	-96	41	-109	0	0	0	-135	52	-116	36	-97	0	0	41	131	68	49	62	-36	37	-45	61	-148	38	24	343	4	0
275	21	39	50	-94	43	-108	0	0	2	-136	50	-119	33	-97	0	0	43	132	66	52	62	-32	39	-47	61	-145	37	24	341	4	0
275	21	44	52	-91	45	-107	0	-102	4	-136	48	-122	31	-97	0	0	45	133	64	55	61	-28	40	-50	60	-141	34	20	326	5	0
275	21	49	55	-89	47	-106	2	-101	6	-136	46	-124	29	-96	0	0	47	134	61	57	61	-25	41	-53	59	-138	33	20	323	5	0
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275	22	39	74	-47	61	-83	20	-86	29	-136	23	-139	7	-96	18	-22	62	159	40	77	45	-3	42	-86	42	-119	21	14	345	6	0
275	22	44	76	-39	62	-79	22	-84	31	-136	21	-140	5	-96	20	-24	62	163	38	78	43	-2	41	-89	40	-119	21	14	346	6	0
275	22	49	77	-30	62	-75	24	-83	33	-135	19	-141	3	-96	22	-25	63	167	36	80	41	-1	40	-92	38	-118	20	13	346	6	0
275	22	54	78	-18	63	-71	26	-81	35	-135	16	-142	0	-96	23	-27	63	171	34	82	39	0	38	-95	36	-117	20	13	347	6	0
275	22	59	79	-5	63	-66	28	-80	37	-135	14	-143	-1	-96	24	-29	63	176	32	83	37	0	37	-97	34	-117	19	13	348	6	0
275	23	4	79	7	63	-62	30	-78	39	-134	12	-143	-3	-97	26	-31	63	-179	30	85	35	0	35	-100	31	-117	19	13	348	6	0
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275	23	14	78	32	62	-54	34	-75	43	-132	7	-145	-7	-97	28	-36	62	-170	26	88	31	1	32	-104	27	-116	18	14	350	6	0
275	23	19	76	43	61	-50	36	-73	45	-132	5	-145	-10	-97	29	-38	61	-166	24	90	29	1	30	-106	25	-116	18	14	351	6	0
275	23	24	75	52	60	-46	38	-72	47	-130	3	-146	-12	-97	30	-41	60	-163	22	91	27	1	28	-108	23	-116	18	14	352	6	0
275	23	29	73	59	59	-43	40	-70	49	-129	1	-147	-14	-97	30	-43	59	-160	20	93	25	1	26	-110	21	-116	18	14	353	6	0
275	23	34	72	66	58	-40	43	-68	51	-128	0	0	-16	-97	31	-46	58	-157	18	94	22	1	24	-112	18	-116	23	17	70	5	0
275	23	39	70	71	56	-37	45	-67	52	-126	0	0	-19	-97	31	-49	56	-154	16	96	20	1	22	-113	16	-116	23	17	69	5	0
275	23	44	68	76	55	-35	47	-65	54	-124	0	0	-21	-97	31	-51	55	-152	14	97	18	1	20	-115	14	-116	23	17	69	5	0
275	23	49	66	80	53	-33	49	-63	56	-122	0	0	-23	-97	31	-54	53	-150	13	99	16	1	18	-116	12	-116	23	17	69	5	0
275	23	54	64	84	52	-31	51	-62	57	-120	0	0	-25	-97	31	-57	51	-148	11	100	14	1	16	-117	10	-116	23	16	68	5	0
275	23	59	62	87	50	-29	53	-60	58	-117	0	0	-27	-97	30	-60	49	-146	9	102	11	1	14	-119	7	-116	23	16	68	5	0

GPS PERFORMANCE PRE-ANALYSIS

LATITUDE = 55.0000 LONGITUDE =295.0000

LABRADOR
C/A - Code
Loran - C

OPTIONS USED FOR THIS RUN

CODE : C/A

SIGMA PSEUDO-RANGE = 16.00 (M)

SIGMA LORAN-RANGE = 100/SQRT(0.5) (M)

SATELLITE NO.	4	5	6	7	8	9
REF. TIME - TIME OF WEEK (SEC)	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.58572800D+06	0.22528000D+06
JULIAN DATE (DDD HH MM SS)	145 18 42 8	145 18 42 8	145 18 42 8	145 18 42 8	145 18 42 8	169 14 34 40
SEMI - MAJOR AXIS (M)	0.26560399D+08	0.26560943D+08	0.26560254D+08	0.26560449D+08	0.26560017D+08	0.26560147D+08
MEAN ANOMALY @ TREF (RADIANS)	-0.21159685D+01	0.12833393D+01	0.85431182D+00	-0.32870960D+00	0.17212573D+01	-0.91869777D+00
ECCENTRICITY	0.14967920D-02	0.19474030D-02	0.59700012D-03	0.69551468D-02	0.91743469D-03	0.69322591D-02
ARG OF PERIGEE (RADIANS)	0.31187789D+01	-0.10636019D+01	0.17242581D+01	0.13419558D+01	0.53818911D-01	0.14604583D+01
INCLINATION (RADIANS)	0.11035115D+01	0.11125715D+01	0.11011986D+01	0.11076880D+01	0.11036613D+01	0.10981785D+01
RIGHT ASCENSION (RADIANS)	-0.57879102D+00	-0.58088678D+00	-0.26814451D+01	-0.26411774D+01	-0.57803953D+00	0.31143453D+01
RATE OF RA (RADIANS/SEC)	-0.62631171D-08	-0.61831158D-08	-0.62059708D-08	-0.63774079D-08	-0.62173999D-08	-0.62288299D-08
MEAN MOTION (RADIANS/SEC)	0.14585361D-03	0.14584913D-03	0.14585481D-03	0.14585320D-03	0.14585676D-03	0.14585568D-03

			SAT # 4				SAT # 5				SAT # 6				SAT # 7				SAT # 8				SAT # 9				ERROR ELLIPSE				
DAY	HH	MM	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	EL	AZ	LAT	LONG	AA	BB	PHI		
275	0	0	63	84	51	-31	52	-61	57	-119	0	0	-26	-97	31	-58	51	-148	10	101	13	1	16	-118	9	-116	23	16	68	5	0
275	0	4	61	88	50	-29	54	-59	59	-116	0	0	-28	-97	30	-60	49	-146	8	102	11	1	13	-119	7	-116	23	16	68	5	0
275	0	9	59	91	48	-28	56	-57	60	-113	0	0	-30	-96	30	-63	47	-145	7	104	9	1	11	-120	5	-116	23	16	68	5	0
275	0	14	57	93	46	-27	58	-56	61	-110	0	0	-32	-96	29	-66	45	-144	5	105	7	1	9	-121	2	-116	23	16	69	5	0
275	0	19	55	96	44	-25	61	-54	62	-106	0	0	-34	-96	28	-68	43	-143	3	106	4	1	7	-122	0	-116	23	16	69	5	0
275	0	24	53	98	42	-25	63	-52	62	-102	0	0	-36	-95	27	-71	41	-142	1	108	2	1	5	-123	-1	-116	23	16	69	5	0
275	0	29	50	101	40	-24	65	-49	63	-98	0	0	-38	-95	26	-73	39	-141	0	0	0	1	3	-124	-3	-116	23	22	311	4	0
275	0	34	48	103	38	-23	67	-47	63	-93	0	0	-40	-94	25	-75	37	-140	0	0	-1	1	1	-125	-6	-116	23	22	292	4	0
275	0	39	46	105	36	-23	70	-44	63	-89	0	0	-42	-93	23	-78	35	-140	0	0	-4	0	0	0	-8	-117	88	22	64	3	2
275	0	44	44	107	34	-22	72	-41	63	-85	0	0	-44	-92	22	-80	33	-139	0	0	-6	0	0	0	-10	-117	81	22	65	3	2
275	0	49	42	109	32	-22	74	-38	63	-80	0	0	-46	-91	20	-82	31	-139	0	0	-8	0	0	0	-12	-117	75	22	65	3	2
275	0	54	40	111	30	-22	77	-34	62	-76	0	0	-48	-90	19	-84	29	-139	0	0	-10	0	0	0	-14	-117	71	21	66	3	2
275	0	59	37	113	27	-21	79	-28	61	-73	0	0	-50	-89	17	-85	27	-139	0	0	-13	0	0	0	-17	-117	67	21	66	3	2
275	1	4	35	114	25	-21	81	-20	60	-69	0	0	-52	-87	15	-87	24	-139	0	0	-15	0	0	0	-19	-117	64	21	67	3	2
275	1	9	33	116	23	-21	83	-7	59	-66	0	0	-53	-85	13	-89	22	-138	0	0	-17	0	0	0	-21	-117	62	21	67	3	2
275	1	14	31	118	21	-21	85	13	58	-63	0	0	-55	-83	12	-90	20	-138	0	0	-19	0	0	0	-23	-117	61	21	67	3	2
275	1	19	29	119	19	-21	85	47	57	-60	0	0	-56	-81	10	-92	18	-138	0	0	-21	0	0	0	-25	-117	60	20	68	3	2
275	1	24	27	121	16	-21	85	79	55	-58	0	0	-58	-78	8	-93	15	-138	0	0	-24	0	0	0	-27	-116	59	20	68	3	2
275	1	29	25	122	14	-21	83	98	53	-56	0	0	-59	-75	6	-95	13	-139	0	0	-26	0	0	0	-30	-116	59	20	68	3	2
275	1	34	22	124	12	-21	81	109	52	-54	0	0	-60	-72	4	-96	11	-139	0	0	-28	0	0	0	-32	-116	59	20	68	3	2

275	1	39	20	125	10	-21	78	117	50	-52	0	0	-61	-68	2	-97	9	-139	0	0	-30	1	0	0	-34	-115	60	20	69	3	2
275	1	44	18	126	8	-21	76	122	48	-51	0	0	-62	-65	0	-98	7	-139	0	0	-32	1	0	0	-36	-115	61	20	69	3	2
275	1	49	16	128	5	-21	73	126	46	-50	0	0	-62	-61	0	0	4	-139	0	0	-34	1	0	0	-38	-115	206	41	33	2	2
275	1	54	14	129	3	-21	71	129	44	-49	0	0	-62	-56	0	0	2	-139	0	0	-36	2	0	0	-40	-114	205	42	32	2	2
275	1	59	12	130	1	-21	68	131	42	-48	0	0	-63	-52	0	0	0	-139	0	0	-38	2	0	0	-42	-113	204	44	31	2	2
275	2	4	10	131	0	-22	66	134	40	-47	0	0	-63	-48	0	0	-1	-139	0	0	-40	3	0	0	-44	-112	202	46	30	2	2
275	2	9	8	132	-3	-22	63	136	38	-47	0	0	-62	-44	0	0	-4	-139	0	0	-42	4	0	0	-46	-111	200	48	29	2	2
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