NETHERLANDS GEODETIC COMMISSION
PUBLICATIONS ON GEODESY NEW SERIES
VOLUME 6 NUMBER 3

DEVIATIONS OF THE VERTICAL IN THE NETHERLANDS FROM GEODETIC-ASTRONOMICAL OBSERVATIONS

by

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1978
RIJKSCOMMISSIE VOOR GEODESIE, THIJSSEWEG 11, DELFT, NETHERLANDS

PRINTED BY W. D. MEINEMA B.V., DELFT, NETHERLANDS

ISBN 90 6132 224 3

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PREFACE

In the years 1974–1977 the Netherlands Geodetic Commission had the opportunity to increase the number of astronomical latitude and longitude determinations at 25 stations of the first order triangulation. Together with the results of 7 Laplace stations, the deviations of the vertical of in total 32 stations are now known, thus allowing determination of the geoid in a more or less detailed way. A report on this subject will be published in the near future.

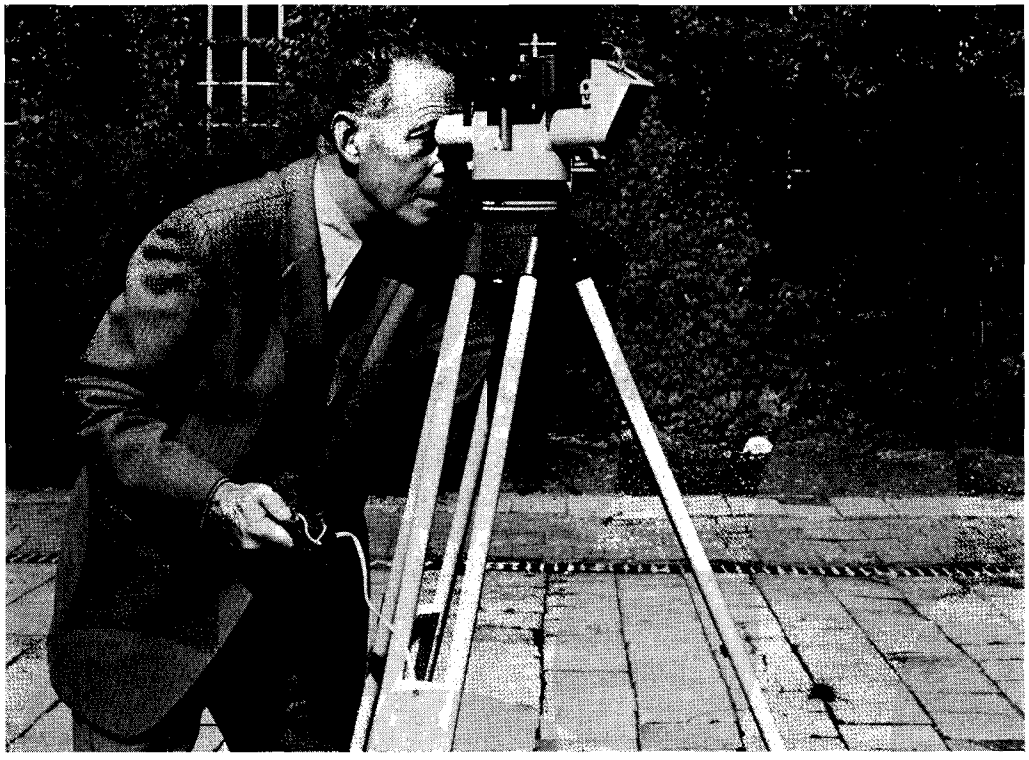
The Netherlands Geodetic Commission has special interest in this matter since on the Eastern border of the Netherlands, in Western Germany, a detailed map of the deviations of the vertical and of the geoid were published by S. HEITZ (1969) while on the Western and Northern border of our country the North Sea becomes more and more an object of scientific geodetic investigation (detailed gravity measurements, Seasat A altimetry, etc.).

The latitude and longitude determinations were done by Mr. C. DE VRIES, who in 1974, in his early sixties, retired as a chief technician of the Department of Geodesy of the Delft University of Technology. With his wife, Mrs. M. J. DE VRIES, as his booker he carried out the measurements during the summer of the years 1974–1977.

When in the late summer of 1977 the measurements were nearly finished, we were all shocked by the passing away of Mr. DE VRIES, after a short illness.

Thanks of our Commission are due to Mr. DE VRIES for carrying out the measurements with the utmost care and accuracy and to his brave wife who will miss him the more so as they formed, one may say, a unique astronomic-geodetic measuring team.

G. J. BRUINS



Mr. C. de Vries

DEVIATIONS OF THE VERTICAL IN THE NETHERLANDS FROM GEODETIC-ASTRONOMICAL OBSERVATIONS

1 Introduction

Deviations of the vertical in The Netherlands were until recently known from latitude and azimuth observations carried out in the years 1893–1899 [1], [2], [3], [6], from gravimetrical measurements carried out by VENING MEINESZ in the years 1913–1921 [5], and from a number of Laplace stations measured in the period 1947–1973 [8].

This publication deals with the latitude and longitude determinations carried out by Mr. C. DE VRIES at a number of stations of the primary network in the years 1974–1977, using a Zeiss Ni2 Astrolabe. At every station two independent measurements were performed in different periods, from which the mean external accuracy for the latitude and longitude per station amounts to $\sigma_\varphi = 0''.2$ and $\sigma_\lambda = 0''.3$. The final results are given in section 6, table 8.

The observer's personal error was determined from similar observations, carried out regularly at a reference station. As such served the observation pillar of the Satellite Observatory at Kootwijk, and, in one case, that of the Laplace station Goedereede. The results of the latitude and longitude determinations of Kootwijk using a Wild T4 instrument are also included in this report. The longitude of this station was used as reference value for determining the observer's personal error from time to time. See section 4, table 2.

The deviations of the vertical related to the ED50 reference system, are shown in section 6, table 8 and in Fig. 4.

2 The method of simultaneous latitude and longitude determination. Mathematical model

In the period 1974–1977 astronomical latitude and longitude were determined at 25 stations, applying the Gauss method and using a Zeiss Ni2 Astrolabe. In some cases a universal instrument (Wild T4 or DKM 3A) was used. Taking provisional values for the latitude, longitude and for the instruments zenith distance, we have:

$$\left.\begin{aligned} \varphi &= \varphi_0 + \Delta\varphi \\ \lambda &= \lambda_0 + \Delta\lambda \\ z &= z_0 + \Delta z \end{aligned}\right\} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (1)$$

The quantities $\Delta\varphi$, $\Delta\lambda$, Δz are now the unknowns, to be determined from zenith distances of stars, regularly distributed in azimuth. Hence the observation equations are:

$$\cos a_i \Delta\varphi - \sin a_i \Delta\lambda \cos\varphi_0 + \Delta z = l_i + \varepsilon_i \quad \ldots\ldots\ldots\ldots\ldots\ldots \quad (2)$$

$i = 1, 2, \ldots s$ (number of stars)

in which

a_i = azimuth of the star, counted clockwise from the North
l_i = observation vector
ε_i = least square adjustment correction

The observation vector l_i is the difference between the zenith distance computed and the zenith distance observed:

$$l_i = z_i^0 - z_i \quad \ldots \quad (3)$$

The star's zenith distance z_i^0 in (3) and the azimuth a_i in (2) are computed with the provisional values from the following formulae:

$$\left.\begin{aligned} \cos z_i^0 &= \sin\varphi_0 \sin\delta_i + \cos\varphi_0 \cos\delta_i \cos t_i \\ \tan a_i &= -\cos\delta_i \sin t_i / (\sin\delta_i \cos\varphi_0 - \cos\delta_i \sin\varphi_0 \cos t_i) \end{aligned}\right\} \quad \ldots \quad (4)$$

in which

δ_i = apparent declination of the star
t_i = hour angle of the stars

The hour angle of the star is computed from the time observations. In the case a number of fixed wires or a number of contacts is used, the mean value of the star's transit times measured in chronometer time scale are:

$$\overline{T} = [T_k]/N \qquad k = 1, 2, \ldots N \text{ (number of wires or contacts)} \quad \ldots \quad (5)$$

from which the hour angle follows:

$$\left.\begin{aligned} UT1 &= \overline{T} + (UTC - T_0) + (\overline{T} - T_0)\Delta_1 T + (UT1 - UTC) + \Delta T_d \\ GAST &= UT1 \times 1.00273791 + GMST(0^h UT) + ee_0 + (ee_1 - ee_0) \times UT1/24 \\ t_i &= GAST - \alpha - \lambda_0/15 \end{aligned}\right\} \quad \ldots \quad (6)$$

in which:

$UT1$ = Universal Time referring to the Conventional International Origin (C.I.O.)
$(UTC - T_0)$ = chronometer correction from radio time signals at T_0 (usually: $T_0 < \overline{T}$)
$\Delta_1 T$ = rate of the chronometer (usually in sec/hour)
$(UT1 - UTC)$ = correction to the time signals according to the circulars of the Bureau International de l'Heure (B.I.H.) or Royal Greenwich Observatory (R.G.O.)
ΔT_d = time delay of the radio time signal (with the HBG receiver used, average: $+0^s.006$)
$GMST$ = Greenwich Mean Sidereal Time
$GAST$ = Greenwich Apparent Sidereal Time
ee_0, ee_1 = equation of equionoxes at $0^h UT$ at the day of the observation and at the next day
α = apparent right ascension of the star

The "observed" zenith distance in (3) is obtained by applying some corrections to the provisional zenith distance (z_0) of the instrument:

$$z_i = z_0 + r + \Delta z_A + \Delta z_1 + \Delta z_2 + \Delta z_N + \frac{\sin a_i}{|\sin a_i|} \cdot \tfrac{1}{2}(\beta'' + \tau'') \quad \ldots\ldots\ldots \quad (7)$$

in which:

r = correction for the refraction
Δz_A = correction for the diurnal aberration
Δz_1 = correction for the curvature of the star's path in the field of view
Δz_2 = correction for the distorsion of the horizontal (straighth) wires (= 0, if the star crossed all the horizontal fixed wires close to the vertical centre wire)
Δz_N = correction for the levelling with Horrebow-Talcott levels of a universal instrument (= 0, if an astrolabe is used)
$(\beta'' + \tau'')$ = sum of the contact width and the lost motion of the self-recording micrometer (= 0, if fixed wires are used)

The various quantities in (7) are defined by the following formulae:

$$r = \frac{p}{270+t} \cdot \frac{270}{760}(60''.1 \tan z^0 - 0''.072 \tan^3 z^0)$$

p = pressure of the air, in mm mercury
t = temperature of the air, in degrees Celsius

$$\Delta z_A = -0''.32 \cos \varphi_0 \sin a \cos z^0$$

$$\Delta z_1 = \cot a (\tan \varphi_0 \operatorname{cosec} a - \cot a \cot z) F$$

$$\Delta z_2 = (\cot z^0 (\cos z^0 \cos a \tan \varphi \sin z^0)^2 / \sin^2 a) F$$

F = $[dz_k^2]/2N\varrho$ instrumental constant, depending on the number of fixed wires or contacts used; $\varrho = 206265''$
dz_k = wire distances with respect to the horizontal centre wire in seconds of arc; $k = 1, 2, \ldots N$

$$\Delta z_N = \tfrac{1}{2}(M_1^0 - M_1)p_1 + \tfrac{1}{2}(M_2^0 - M_2)p_2$$

M_1^0, M_2^0 = reference (mean) positions of the H.T. levels
$M_1, M_2 = \frac{1}{2}(r+l)$; mean of the level reading
p_1, p_2 = level value (positive, if zero point of the level on the opposite side of the line of sight)

The three unknowns in the observation equations (3) can be solved by a least square adjustment. Writing these equations in matrix form, we have:

$$AX = L + E \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (8)$$

and using equal weights, we obtain the following normal equations:

$$A^*AX = A^*L \quad \ldots \quad (9)$$

from which follows the vector of the unknowns:

$$X = \begin{pmatrix} \Delta\varphi \\ \Delta\lambda\cos\varphi_0 \\ \Delta z \end{pmatrix} = (A^*A)^{-1}A^*L = QA^*L \quad \ldots \quad (10)$$

in which Q is the weight coefficient matrix of the unknowns. It is approximately a diagonal matrix (with elements Q_{11}, Q_{22}, Q_{33}), if the stars selected are regularly distributed in azimuth. The adjusted latitude and longitude, including polar motion corrections, are then obtained from:

$$\left.\begin{aligned} \varphi &= \varphi_0 + \Delta\varphi - (x\cos\lambda_0 + y\sin\lambda_0) \\ \lambda &= \lambda_0 + \Delta\lambda - (x\sin\lambda_0 - y\cos\lambda_0)\tan\varphi_0 \end{aligned}\right\} \quad \ldots \quad (11)$$

in which x and y are the coordinates of the true pole (usually expressed in seconds of arc) referring to the C.I.O. These data have to be taken from the circulars of B.I.H. or R.G.O.

The estimate of the variance of the observation vector follows from:

$$\hat{\sigma}^2 = \frac{E^*E}{s-3} \quad \ldots \quad (12)$$

in which the vector E is determined from (8) by substituting the unknowns. The estimated standard deviations of the unknowns are then:

$$\left.\begin{aligned} \hat{\sigma}_\varphi &= \hat{\sigma}\sqrt{Q_{11}} \\ \hat{\sigma}_{\lambda\cos\varphi} &= \hat{\sigma}\sqrt{Q_{22}} \\ \hat{\sigma}_z &= \hat{\sigma}\sqrt{Q_{33}} \end{aligned}\right\} \quad \ldots \quad (13)$$

3 Computer programmes

The computations were carried out using the IBM 370 of the Computing Centre of the Delft University of Technology. The programmes used are based on the formulae given in section 2. This programme is suitable for Ni2A measurements, and for measurements made by a universal instrument, such as Wild T4 or DKM 3A.

The astronomical data and the coordinates of the stars in the computation were taken from a data bank, which was placed at our disposal by the Astronomisches Recheninstitut, Heidelberg, in the form of punched cards. This data bank contains the following data (see [15], [16]):

a. date, A, B, C, D, E, $d\psi$, $d\varepsilon$, τ, $S.T.$, $GMST(0^hUT)$, ee, $J.D. - 0.5$, reference year – 1900; for every day.
b. Star No., Magnitude, α_{1950}, μ, δ_{1950}, μ', Π; for every FK4 and FK4 Sup. star.

The reduction of the star's position from 1950 to the moment of observation was established by procedure FK4 according to the formulae given in [15].

The reduction includes also the influence of the second order terms:

$$\left(\tfrac{1}{2}\frac{d^2\alpha}{dT^2}\right)_{75} \quad \text{and} \quad \left(\tfrac{1}{2}\frac{d^2\delta}{dT^2}\right)_{75}$$

These terms were determined by an iteration process. Thus, the star's coordinates obtained by procedure FK4 have the same precision as those given in the Apparent Place of Fundamental Stars.

The same procedure of reduction was used for the computation of star predictions. The resulting star list, used for the selection of the stars, contains information about the stars at equal zenith distances ($z = 30°$), such as FK4 number, magnitude, Local Sidereal Time, azimuth, parallactical angle (q), da/dt, dz/dt.

4 Latitude and longitude determination in Kootwijk using a Wild T4

The Satellite Observatory at Kootwijk was used as a reference station for the Zeiss Ni2A measurements (see sections 5 and 6) to determine the observer's personal time error. The longitude of the station Kootwijk had therefore to be determined using equipment suitable for first order measurements. This equipment consisted of the following instruments:

- universal instrument Wild T4, provided with Horrebow-Talcott levels and with a motor driven self-recording micrometer, see Fig. 1;
- chronoputer 2: digital quartz clock with a built-in microprocessor for computing the mean value of an arbitrary number of contact times (usually: $N = 27$);
- time recorder 3, for simultaneous recording of all the contact times (for check);
- HBG receiver for the radio time signals;
- signal converter "chronofix";
- barometer (mmHg scale);
- thermometer (°C scale).

For application of the Gauss method, as described in section 2, the Wild T4 was used as an astrolabe. It was set up on a stable observation pillar, and the telescope was fixed in instrument position face left at a constant zenith distance, approximately 30°. Small variations in this zenith distance during the observations, however, were not automatically eliminated, but recorded by a set of Horrebow-Talcott levels (see formula (7) in section 2). With this method care should be taken that the levels are adjusted a long time before the observations, to avoid after-effects of this adjustment. The stars were mainly selected regularly distributed in the neighbourhood of the prime vertical, i.e. in the azimuth sectors 45°–135° and 235°–315°. Thus the longitude to be determined has a higher accuracy than the latitude. Obviously this method is then very similar to the Zinger method, used for the determination of longitude only.

The stars, crossing the field of view about the centre point, were tracked at a fixed telescope position over $N = 27$ contacts, excluding 5 starting contacts. The self-recording micrometer was driven by a small step motor, the speed of which is controlled by the

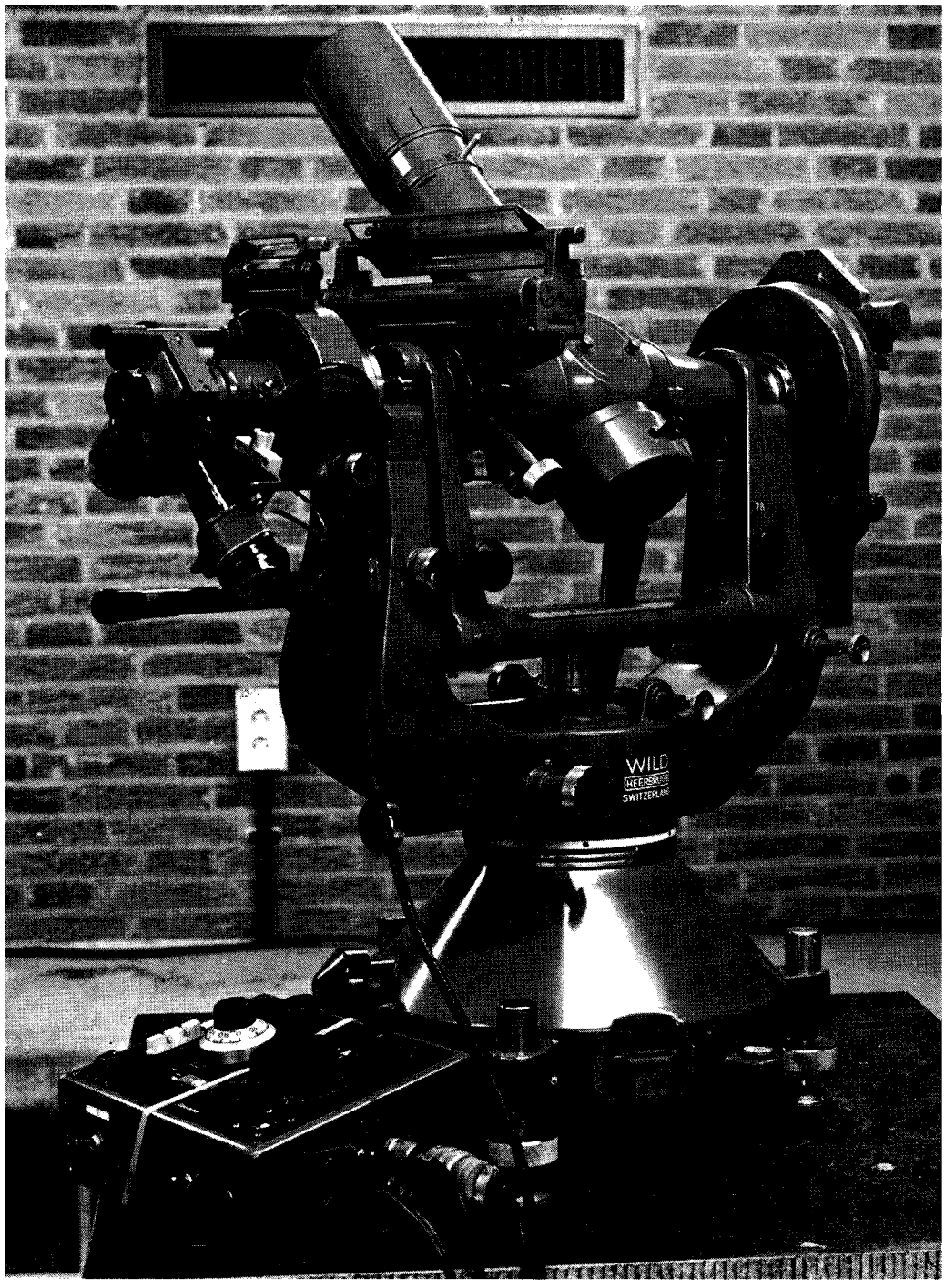


Fig. 1. The Wild T4 provided with a motor driven self-recording micrometer, as used in Kootwijk.

observer by means of an adjusting knob. Before starting the observations the mean velocity of every star was set on a calibrated scale.

The advantages of applying a micromotor for driving a self recording micrometer may summarised as follows (see [14]):

- the observations are practically free of the observer's personal error;
- the accuracy is about 25% better than using a manually operated micrometer;
- the tracking of the star is easy (also with slow moving stars);
- the instrument set up has a better stability since the observer doesn't have to touch the micrometer during the tracking of the star.

The computer input of the Wild T4 measurements, including the test measurements in Delft, are given in the first part of appendix II. The various instrument constants, defined in section 2 ($\beta+\tau$, F, p_1, p_2 in seconds of arc), and the star's coordinates reduced to the observation moment using procedure FK4, are also listed in this appendix. The corresponding computer output resulting from the above input are shown in the first part of appendix III. The dimensions of the various quantities, as defined in section 2, are indicated in the first pages of appendices II and III.

Table 1 Test measurement at station Delft, observation platform of the new building of the Department of Geodesy (Wild T4, big pillar)

date	number of stars	observer	φ	$\hat{\sigma}_\varphi$	λ	$\hat{\sigma}_\lambda$
1976 April 11	16	V	51°59′12″.09	0″.41	−4°23′14″.88	0″.40
11	14	H	12 .30	0 .37	15 .11	0 .25
mean value (ref.: C.I.O.)			51°59′12″.20	0″.28	−4°23′15″.00	0″.24

Table 2 Results of the Wild T4 measurements at station Kootwijk (pillar east)

date	number of stars	observer	φ	$\hat{\sigma}_\varphi$	λ	$\hat{\sigma}_\lambda$
1976 April 13	16	B	52°10′44″.19	0″.31	−5°48′35″.42	0″.25
20	16	H	45 .41	0 .45	35 .18	0 .34
21	16	H	45 .49	0 .39	35 .45	0 .31
21	16	V	44 .44	0 .30	35 .73	0 .19
21	16	B	44 .23	0 .22	35 .81	0 .18
22	16	V	44 .14	0 .30	35 .75	0 .22
weighted mean value (ref: C.I.O.)			52°10′44″.46	0″.21	−5°48′35″.64	0″.09

The results from appendix II, including polar motion corrections, are shown in tables 1 and 2. In Kootwijk six measurements were carried out by three observers. The longitudes obtained from this agree very well. The latitudes, however, may be seen as a by-product since most of the stars were selected close to the prime vertical.

On the other hand we have 21 latitudes, determined on the same pillar from the reference observations with the NiA Astrolabe, which can be considered to be free of the personal error of the observer. The mean value of these latitudes is: $\varphi = 52°10'44''.05$; $\hat{\sigma}_\varphi = 0''.04$; see section 5, tables 3, 4, 5 and 6.

Taking the weighted mean of all latitude observations we then have:

Kootwijk (pillar east):	$\varphi = \quad 52°10'44''.09$	$\hat{\sigma}_\varphi = 0''.05$
	$\lambda = -\ 5°48'35''.64$	$\hat{\sigma}_\lambda = 0''.09$

5 Latitude and longitude determinations using a Zeiss Ni2 Astrolabe

In the period 1974–1977 latitude and longitude were determined in a number of first order stations of the Netherlands' network using the following equipment:

- Zeiss Ni2 Astrolabe with tripod
- Omega-2 time recorder or time recorder 3 and tapkey
- signal converter "Chronofix" (with the Omega-2 only)
- HBG time signal receiver
- Local Sidereal Time chronometer
- barometer (mmHg scale)
- thermometer (C°)
- 2 batteries (12V)
- battery charges (220)

The Ni2 Astrolabe had two improvements. Firstly, a new illumination system was fitted for the cross wires, the horizontal circle, the plate level, and the level on the prism attachment. Secondly, an astronomical cross wire was mounted in the telescope with five horizontal wires (equidistances: 50 seconds of arc) and one vertical centre wire. Thus, the stars were observed when crossing the five horizontal wires using a tapkey for the time-recording. During the transit the observer kept the vertical wire close to the star by means of the horizontal fine motion knob of the instrument.

The Omega time recorder was in 1975 replaced by an other type of chronograph: time recorder 3. This home-made digital quartz clock, provided with a separate digital printer, has the following advantages:

- low current consumption
- continuous operation
- digital time display, approximately *UTC*
- socket for HBG time signal input

The time keeping equipment was permanently mounted into a passenger car, see Fig. 2. The full equipment as used in the field is shown in Fig. 3.

At every station two independent observation programmes were carried out, each consisting of 32 stars (FK4 or FK4 Supp. stars), regularly distributed in azimuth. One programme could be completed in about one and a half hour. To avoid correlation, the measurements were carried out in different periods of the year or even in different years. The instrument sites were chosen in a homogeneous surrounding as close as possible to the first order point and were marked by a steel pipe driven into the ground.

Bearing and distance from instrument site to one of the permanent marks of the primary

Fig 2. Equipment for time keeping.

Fig. 3. Mr. and Mrs. De Vries demonstrating the equipment.

point were measured and from these data the plane rectangular coordinates of the instrument site and the reduction of the latitude and longitude to the centre were computed (see appendix I).

The computer input of the observations with the Ni2A are given in the second part of appendix II, in accordance with the notation used in section 2. The corresponding computer output resulting from the above input are shown in appendix III. The dimensions of the various quantities, as defined in section 2, are indicated in the first pages.

The results of the latitude and longitude determinations, including polar motion corrections, are shown in chronological sequence in tables 3, 4, 5 and 6.

Table 3 The Zeiss Ni2A measurements of 1974

station (instrument site)	date	φ	$\hat{\sigma}_\varphi$	λ	$\hat{\sigma}_{\lambda\cos\varphi}$	$\Delta\lambda$(p)
Kootwijk	May 15	52°10′43″.76	0″.26	−5°48′32″.28	0″.24	−3″.23
Kootwijk	May 17	52 10 43 .94	0 .28	−5 48 32 .54	0 .26	
Amersfoort	June 14	52 09 25 .45	0 .19	−5 23 02 .68	0 .16	−3 .07
Bosberg	June 15	52 57 13 .62	0 .19	−6 20 25 .63	0 .17	−2 .99
Zaltbommel	June 20	51 48 42 .43	0 .15	−5 15 10 .68	0 .13	−2 .82
Nederweert	June 21	51 17 13 .67	0 .14	−5 44 52 .75	0 .13	−2 .74
Venray	June 22	51 31 44 .45	0 .23	−5 58 23 .17	0 .21	−2 .66
Kootwijk	Aug. 6	52 10 44 .02	0 .16	−5 48 32 .79	0 .15	−2 .58
Kootwijk	Aug. 15	52 10 43 .86	0 .17	−5 48 33 .34	0 .16	
Aardenburg	Aug. 21	51 16 22 .67	0 .23	−3 26 49 .13	0 .20	−2 .51
Oudgastel	Aug. 22	51 35 17 .14	0 .23	−4 27 39 .62	0 .20	−2 .44
Monnickendam	Aug. 28	52 27 26 .82	0 .21	−5 02 02 .59	0 .18	−2 .37
Workum	Aug. 30	52 58 45 .98	0 .15	−5 26 38 .46	0 .13	−2 .30
Winterswijk	Sep. 10	51 58 20 .00	0 .14	−6 43 15 .15	0 .13	−2 .24
Klifsberg	Sep. 18	51 09 53 .38	0 .16	−6 08 48 .42	0 .14	−2 .17
Rozendaal 3	Sep. 20	52 02 26 .09	0 .20	−5 59 13 .38	0 .18	−2 .10
Kootwijk	Oct. 10	52 10 43 .88	0 .21	−5 48 33 .63	0 .18	−2 .03
Kootwijk	Nov. 1	52 10 44 .13	0 .23	−5 48 33 .58	0 .18	

Remark. Two complete measurements (Berkheide/June 4 and Lemererberg/June 20) were rejected because of trouble with the recording of time signals. For the computation of the personal error, however, they are considered as valid observations.

In order to determine the influence of the observer's personal error on the astronomical longitude, measurements were also carried out applying the same method and using the same instruments at the reference station Kootwijk. In one case only, in 1976, two calibrations were made at the Laplace station Goedereede, from which the astronomical latitude of Goedereede was determined at the same time. From the calibration data the correction for the observer's personal error (see last columns) was computed from

$$\Delta\lambda(\mathrm{p}) = \lambda_R - \lambda$$

in which λ_R is the longitude of the reference station used:

Kootwijk: −5°48′35″.64
Goedereede (instrument site): −3°58′36″.43

Table 4 The Ni2A measurements of 1975

station (instrument site)	date	φ	$\hat{\sigma}_\varphi$	λ	$\hat{\sigma}_{\lambda\cos\varphi}$	$\Delta\lambda$(p)
Kootwijk	May 27	52°10′43″.88	0″.17	−5°48′34″.29	0″.13	−1″.66
Kootwijk	May 28	44 .07	0 .24	33 .67	0 .18	
Oudgastel	July 28	51 35 17 .35	0 .18	−4 27 40 .56	0 .15	−1 .57
Workum	July 29	52 58 46 .12	0 .15	−5 26 39 .40	0 .12	−1 .57
Bosberg	July 30	52 57 14 .02	0 .21	−6 20 27 .55	0 .17	−1 .57
Venray	Aug. 1	51 31 44 .74	0 .15	−5 58 24 .47	0 .12	−1 .57
Zaltbommel	Aug. 2	51 48 42 .42	0 .16	−5 15 12 .92	0 .13	−1 .57
Kootwijk	Aug. 3	52 10 44 .22	0 .15	−5 48 34 .14	0 .13	−1 .46
Kootwijk	Aug. 4	43 .99	0 .13	34 .22	0 .11	
Amersfoort	Aug. 6	52 09 25 .98	0 .13	−5 23 04 .68	0 .11	−1 .57
Berkheide	Aug. 7	52 10 35 .65	0 .15	−4 23 26 .23	0 .14	−1 .57
Monnickendam	Aug. 18	52 27 27 .07	0 .22	−5 02 03 .49	0 .18	−1 .57
Rozendaal 3	Aug. 26	52 02 26 .12	0 .21	−5 59 14 .08	0 .16	−1 .57
Winterswijk	Aug. 27	51 58 20 .45	0 .20	−6 43 16 .67	0 .16	−1 .57
Lemelerberg	Aug. 28	52 28 27 .30	0 .19	−6 24 27 .16	0 .16	−1 .57
Klifsberg	Sep. 21	51 09 53 .64	0 .19	−6 08 49 .37	0 .16	−1 .57
Nederweert	Sep. 22	51 17 13 .58	0 .16	−5 44 54 .60	0 .13	−1 .57
Aardenburg	Sep. 26	51 16 22 .50	0 .18	−3 26 50 .52	0 .15	−1 .57
Kootwijk	Oct. 9	52 10 44 .04	0 .24	−5 48 33 .94	0 .20	−1. 58
Kootwijk	Oct. 12	44 .03	0 .23	34 .18	0 .18	
Berkheide	Oct. 23	52 10 35 .83	0 .14	−4 23 26 .42	0 .11	−1 .57

Table 5 The Ni2A measurements of 1976

station (instrument site)	date	φ	$\hat{\sigma}_\varphi$	λ	$\hat{\sigma}_{\lambda\cos\varphi}$	$\Delta\lambda$(p)
Kootwijk	May 6	52°10′44″.49	0″.26	−5°48′34″.00	0″.19	−1″.74
Kootwijk	May 7/A	44 .38	0 .14	33 .49	0 .11	
Kootwijk	May 7/B	44 .17	0 .20	34 .22	0 .15	
Uithuizermeden	May 14	53 24 31 .99	0 .30	−6 42 30 .58	0 .24	−1 .74
Eierland	May 17	53 10 56 .96	0 .15	−4 51 20 .10	0 .11	−1 .74
Zaltbommel	May 22	51 48 41 .92	0 .18	−5 15 12 .01	0 .14	−1 .74
	In June–July the measurements were interrupted					
Beek	Aug. 7	51 31 35 .06	0 .14	−5 37 34 .19	0 .12	−2 .23
Ubachsberg	Aug. 8	50 50 50 .75	0 .18	−5 56 57 .57	0 .15	−2 .23
Goedereede	Aug. 16	51 49 08 .05	0 .12	−3 58 33 .78	0 .10	−2 .42
Goedereede	Aug. 17	8 .00	0 .16	34 .24	0 .13	
Uithuizermeden	Aug. 23	53 24 31 .81	0 .14	−6 42 30 .64	0 .10	−2 .23
Lemelerberg	Aug. 24	52 28 27 .95	0 .16	−6 24 26 .40	0 .13	−2 .23
Ubachsberg	Sep. 6	50 50 50 .68	0 .19	−5 56 57 .67	0 .16	−2 .23
Beek	Sep. 19	51 31 34 .68	0 .16	−5 37 34 .28	0 .14	−2 .23
Eierland	Sep. 21	53 10 57 .39	0 .16	−4 51 18 .99	0 .12	−2 .23
Kootwijk	Sep. 22	52 10 43 .97	0 .18	−5 48 33 .32	0 .15	−2 .04
Kootwijk	Sep. 29	43 .98	0 .16	33 .87	0 .12	

A possible systematic error between these longitudes is neglected. When the personal error changed significantly during one observational period, the corrections were applied proportionally to the number of measurements between the calibrations. It may be noticed that the personal error changed only in the first year (1974) and in the following years it became more or less constant.

Table 6 The Ni2A measurements of 1977

station (instrument site)	date	φ	$\hat{\sigma}_\varphi$	λ	$\hat{\sigma}_{\lambda\cos\varphi}$	$\Delta\lambda$(p)
Kootwijk	May 18	52°10′44″.11	0″.15	−5°48′33″.58	0″.11	−2″.25
Kootwijk	May 24	44 .03	0 .20	33 .20	0 .16	
Urk	May 25	52 39 45 .50	0 .19	−5 35 32 .93	0 .15	−2 .22
Steenwijk	May 26	52 47 24 .67	0 .21	−6 06 51 .62	0 .16	−2 .22
Oosterhout	May 31	51 38 49 .20	0 .18	−4 51 39 .35	0 .13	−2 .22
Schoorl	June 13	52 41 54 .59	0 .11	−4 41 15 .77	0 .08	−2 .22
Groningen	July 2	53 13 16 .99	0 .20	−6 34 07 .84	0 .16	−2 .22
Harikerberg	July 3	52 14 17 .56	0 .16	−6 32 20 .85	0 .12	−2 .22
Kootwijk	July 4	52 10 43 .97	0 .17	−5 48 33 .28	0 .13	−2 .19
Kootwijk	July 5	44 .06	0 .11	33 .62	0 .09	
Urk	July 15	52 39 44 .98	0 .13	−5 35 33 .24	0 .10	−2 .22
Oosterhout	July 21	51 38 49 .36	0 .18	−4 51 39 .99	0 .14	−2 .22
Groningen	Aug. 29	53 13 17 .17	0 .15	−6 34 07 .92	0 .12	−2 .22
Schoorl	Sep. 1	52 41 54 .57	0 .16	−4 41 16 .14	0 .13	−2 .22
Harikerberg	Sep. 13	52 14 16 .95	0 .19	−6 32 21 .31	0 .15	−2 .22

Table 7 shows the differences in latitude and longitude between the first and the second measurements. It is remarkable that the majority of the longitude differences has a positive sign. No explanation could be found for this systematic error; the observations were generally carried out at different times and in arbritrary sequence.

The accuracy of the mean values of latitude and longitude obtained per station from this differences, are

$$\sigma_\varphi = 0''.16 \approx 0''.2$$

$$\sigma_\lambda = 0''.22 \approx 0''.3$$

which can be considered as a kind of average external accuracy for all the Ni2A measurements from 2×32 stars.

Table 7 Differences between the first and second measurements

station	$\Delta\varphi$	$\Delta\lambda$	station	$\Delta\varphi$	$\Delta\lambda$
Aardenburg	0″.17	0″.45	Kootwijk	0″.01	0″.24
Amersfoort	−0 .53	0 .50	Kootwijk	0 .11	−0 .51
Beek	0 .38	0 .09	Kootwijk	−0 .01	0 .55
Berkheide	−0 .18	0 .19	Kootwijk	0 .08	−0 .38
Bosberg	−0 .40	0 .50	Kootwijk	−0 .09	0 .34
Eierland	−0 .43	−0 .62	Nederweert	0 .09	0 .68
Goedereede	0 .05	0 .46	Oosterhout	−0 .16	0 .64
Groningen	−0 .18	0 .08	Oudgastel	−0 .21	0 .07
Harikerberg	0 .61	0 .46	Rozendaal	−0 .03	0 .17
Klifsberg	−0 .26	0 .35	Schoorl	0 .02	0 .37
Lemelerberg	−0 .65	−0 .10	Ubachsberg	0 .07	0 .10
Monnickendam	−0 .25	0 .10	Uithuizermeden	0 .18	0 .55
Kootwijk	−0 .18	0 .26	Urk	0 .52	0 .31
Kootwijk	0 .16	0 .55	Venray	−0 .29	0 .21
Kootwijk	−0 .25	−0 .05	Winterswijk	−0 .45	0 .85
Kootwijk	−0 .19	−0 .62	Workum	−0 .14	0 .21
Kootwijk	0 .23	0 .08	Zaltbommel	0 .01	0 .99

6 Final results and deviations of the vertical

The final astronomical latitudes and longitudes are given in table 8. These data were obtained from tables 3, 4, 5, and 6 by computing the mean value of two measurements (in case of station Zaltbommel the mean of three), and adding the reductions to the centre according to appendix I. Then the sign of the longitudes was changed to make it agree with geodetic notation. The average accuracy of the latitudes and the longitudes is estimated at 0″.2 and 0″.3 respectively, as discussed in section 5. From the final astronomical latitudes and longitudes the components of the deviation of the vertical can be computed according to

$$\left.\begin{aligned} \xi &= \varphi - \varphi_g \\ \eta &= (\lambda - \lambda_g)\cos\varphi \end{aligned}\right\} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (14)$$

in which φ_g and λ_g denotes geodetical latitude and longitude computed from triangulation data, in this case referring to the International Ellipsoide in the ED50 reference system.

Table 8 The final astronomical latitudes and longitudes (φ, λ) and the deviations of the vertical (ξ, η) related to the ED50 reference system

number	station (centre)	φ	λ	ξ	η	remark
NL 1	Aardenburg	51°16′23″.94	3°26′51″.88	−2″.14	−3″.38	
3	Amersfoort	52 09 21 .59	5 23 13 .59	0 .17	−3 .01	
5	Beek	51 31 36 .39	5 37 34 .89	−1 .17	−5 .68	
8	Berkheide	52 10 37 .39	4 23 20 .19	−0 .52	−3 .07	
9	Bosberg	52 57 09 .64	6 20 32 .88	2 .55	−0 .30	
	Delft, Geodesy (new)	51 59 12 .20	4 23 15 .00	−0 .60	−3 .07	Wild T4
13	Eierland	53 10 58 .78	4 51 19 .77	0 .38	−2 .34	
18	Goedereede	51 49 09 .46	3 58 34 .96	0 .28	−1 .50	Ni2A+ [10]
21	Groningen	53 13 13 .97	6 34 07 .66	1 .53	−1 .44	
23	Harikerberg	52 14 13 .04	6 32 22 .41	1 .80	−3 .58	
32	Klifsberg	51 09 53 .32	6 08 49 .84	0 .22	−8 .31	
	Kootwijk (Observatory)	52 10 44 .09	5 48 35 .64	−0 .15	−3 .37	Ni2A+Wild T4
36	Lemelerberg	52 28 27 .62	6 24 28 .68	2 .20	−1 .68	
40	Monnickendam	52 27 28 .23	5 01 57 .45	1 .21	−1 .82	
44	Nederweert	51 17 13 .16	5 44 49 .85	0 .47	−4 .73	
48	Oosterhout	51 38 45 .50	4 51 40 .84	0 .18	−1 .50	
50	Oudgastel	51 35 16 .53	4 27 37 .63	0 .17	−2 .08	
(30)	Rozendaal 3 (~Imbosch)	52 02 26 .15	5 59 13 .90	−0 .41	−3 .68	
56	Schoorl	52 41 54 .78	4 41 18 .60	−0 .08	−1 .90	
59	Steenwijk	52 47 20 .44	6 06 55 .27	1 .81	−1 .57	
61	Ubachsberg	50 50 53 .54	5 57 06 .05	4 .43	−5 .61	
63	Uithuizermeden	53 24 32 .27	6 42 35 .68	−0 .26	−2 .26	
65	Urk	52 39 42 .98	5 35 31 .42	0 .17	−2 .68	
68	Venray	51 31 42 .34	5 58 27 .05	0 .23	−5 .34	
72	Winterswijk	51 58 21 .76	6 43 11 .70	−0 .36	−3 .46	
73	Workum	52 58 48 .82	5 26 34 .40	1 .49	−1 .78	
75	Zaltbommel	51 48 43 .80	5 15 07 .08	−2 .25	−3 .09	
2	Ameland	53 27 30 .25	5 46 56 .55	0 .70	−0 .41	[1, 7, 10]
35	Leeuwarden	53 12 15 .28	5 47 23 .85	1 .85	−2 .18	[1, 7, 10]
37	Luyksgestel	51 17 29 .09	5 19 16 .62	2 .98	−0 .76	*DKM3A
49	Oss	51 46 10 .13	5 31 16 .76	−1 .96	−4 .54	*DKM3A
76	Zierikzee	51 39 03 .56	3 54 53 .66	−0 .37	−2 .58	[1, 7, 10]

* not yet published

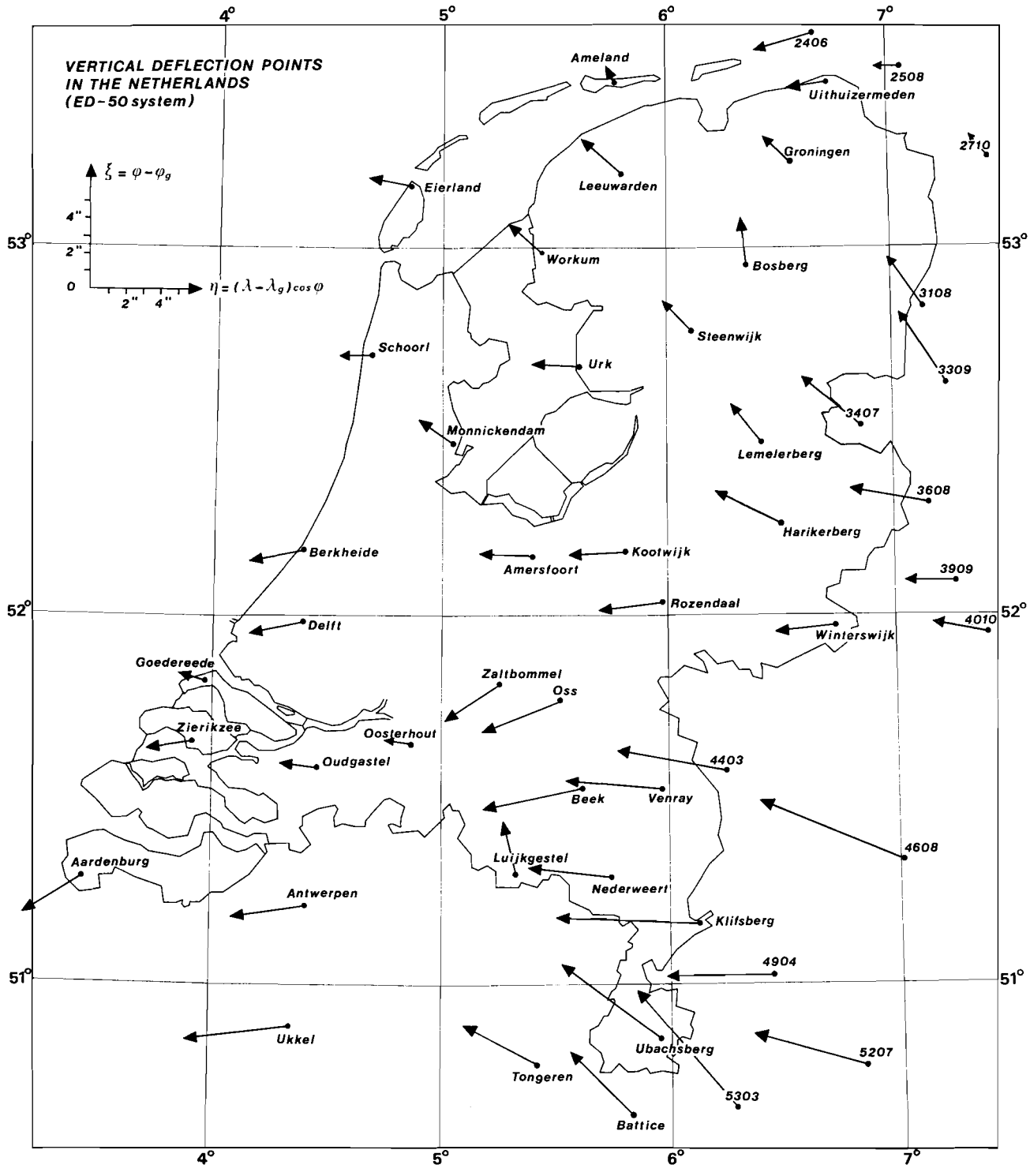

VERTICAL DEFLECTION POINTS
IN THE NETHERLANDS
(ED-50 system)
$\xi = \varphi - \varphi_g$
$\eta = (\lambda - \lambda_g)\cos\varphi$
4"
2"
0
2"
4"
4°
5°
6°
7°
53°
52°
51°
Ameland
2406
2508
Uithuizermeden
2710
Groningen
Leeuwarden
Eierland
Workum
Bosberg
3108
Steenwijk
Schoorl
Urk
3309
3407
Monnickendam
Lemelerberg
3608
Harikerberg
Berkheide
Amersfoort
Kootwijk
3909
Rozendaal
Delft
4010
Winterswijk
Goedereede
Zaltbommel
Oss
Zierikzee
Oosterhout
Oudgastel
4403
Beek
Venray
4608
Aardenburg
Luijkgestel
Nederweert
Antwerpen
Klifsberg
4904
Ukkel
Ubachsberg
5207
Tongeren
5303
Battice

Fig. 4.

The vectors of the deviations of the vertical are also plotted in Fig. 4, supplemented with a number of points along the German and Belgian border [11], [12], [13].

It shows that the stations at which the deviation of the vertical is determined are reasonably well distributed over the territory of The Netherlands. Different approaches of interpolation may be used for determining the geoid from these data. This subject will be treated in a subsequent publication. In addition it is expected that Doppler satellite observations will give an important support to the so-called geoid-spheroid separation in the near future [17]. In 1977 a great number of station were measured in Europe by Doppler satellites, amoung others two stations in The Netherlands (Leeuwarden and Kootwijk). It may be interesting to combine the two sorts of measurements.

At the same time a special study group of I.A.G. (SSG 5.50) started in 1976 collecting data of deviations of the vertical in Europe for determining the geoid in relation to the ED50 reference system. It is hoped that this publication will give a small contribution to this work.

Acknowledgements

The author wishes to thank all who contributed to this publication. Especially, Prof. G. J. BRUINS, president of the Netherlands Geodetic Commission, for supporting the measurements in many ways; Mr. C. OOMEN for writing the computer programme; Mr. G. L. STRANG VAN HEES and Mr. H. A. VERHOEF for checking the various computations.

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Appendix I

Plane rectangular coordinates in the Netherlands Triangulation system (Origin: Amersfoort)

	centre		instrument site		red. to centre	
station	X	Y	X	Y	$\Delta\varphi$	$\Delta\lambda$
Aardenburg	−135315.21	− 96338.52	−135316.56	− 96380.16	1″.35	−0″.01
Ameland	26177.21	144988.00				
Amersfoort	0	0	− 143.97	127.84	−4 .13	−7 .59
Beek	16686.29	− 69937.64	16716.92	− 69984.41	1 .52	1 .58
Berkheide	− 68274.51	2832.61	− 68129.00	2779.46	1 .65	7 .71
Bosberg	64126.26	89000.15	64049.83	89128.52	−4 .18	−4 .01
Delft, Geodesy (new)	− 68664.83	− 18339.00	− 68664.83	− 18339.00	0	0
Eierland	− 35561.49	114404.33	− 35529.17	114354.70	1 .60	1 .76
Goedereede	− 97314.98	− 36522.59	− 97287.79	− 36567.36	1 .43	1 .47
Groningen	78883.13	119065.17	78926.77	119161.94	−3 .11	2 .44
Harikerberg	78741.77	9584.12	78756.62	9714.80	−4 .22	0 .89
Klifsberg	53331.08	−109999.22	53349.02	−109993.22	−0 .19	0 .93
Kootwijk (P.E.)	28930.17	2644.26	28930.17	2644.26	0	0
Leeuwarden	26894.38	116668.84				
Lemelerberg	69322.69	35847.56	69322.69	35847.56	0	0
Luyksgestel	− 4661.74	− 96276.81				
Monnickendam	− 24131.79	33611.70	− 23989.63	33571.26	1 .28	7 .56
Oosterhout	− 36438.38	− 56614.71	− 36417.42	− 56498.01	−3 .78	1 .05
Nederweert	25173.46	− 96630.71	25289.08	− 96615.90	−0 .46	5 .98
Oss	9311.90	− 42929.67				
Oudgastel	− 64250.03	− 62795.87	− 64163.83	− 62774.84	−0 .72	4 .47
Schoorl	− 47261.07	60604.92	− 47268.92	60598.79	0 .20	−0 .42
Steenwijk	49085.17	70632.97	49057.05	70763.57	−4 .23	−1 .43
Rozendaal (Imbosch)	41194.05	− 12650.92	41225.89	− 12651.86	0 .04	1 .67
Ubachsberg	39845.62	−145477.29	39725.34	−145565.54	2 .82	−6 .20
Uithuizermeden	87947.67	140252.68	87891.20	140240.29	0 .37	−3 .08
Urk	13856.84	56315.16	13929.55	56385.27	−2 .26	3 .89
Venray	40812.65	− 69659.36	40790.69	− 69589.70	−2 .26	−1 .11
Winterswijk	91596.45	− 19534.66	91713.72	− 19579.82	1 .53	6 .11
Workum	3708.86	91675.36	3829.40	91589.73	2 .77	6 .47
Zaltbommel	− 9317.10	− 38171.70	− 9186.70	− 38219.40	1 .54	6 .83
Zierikzee	−101897.97	− 55142.05				

Appendix II

COMPUTER OUTPUT OF THE MEASUREMENTS

LATITUDE AND LONGITUDE BY EQUAL ZENITH DISTANCES OF STARS

STATION....: DELFT,GEODESY APRIL 11,1976

TO.....:	18h 33m	60s0000	J.D.....: 2442879
UTC-TO.....:	0 0	.2960	REF.YEAR.....: 1976
DIT.....:		.001	NUMBER OF STARS: 16
UT1-UTC.....:		.427	P(1).....: 1.09 "/2 mm
BETAU.....:		1.808	P(2).....: 1.11
F.....:		.042	
X.....:		-.075	
Y.....:		.396	

FK4 NO.	TIME		M1,M2,P,T	ALFA			DELTA		
425	19h	29m 28s0730	35.8,135,753, 8.8	11h	17m	13s7298	33°	13	19".9511
2563	19	35 41.7120	32.6,131.4,753, 8.7	7	16	33.7175	30	59	55.7425
225	19	43 20.2740	31.2,130.2,753, 8.4	5	57	34.5840	54	17	8.4576
286	19	51 41.8080	30.6,129.7,753, 8.2	7	27	35.5241	31	49	54.4196
2938	19	59 39.4360	35.6,134.4,753, 8.2	11	40	22.0650	31	52	32.0861
233	20	9 20.0060	31.4,130.2,753, 8.2	6	10	28.1217	65	43	38.0688
2537	20	17 18.4390	29.2,127.9,753, 8.2	6	55	53.5243	45	7	36.3605
2641	20	22 30.8760	28.2,127.4,753, 8.2	8	11	41.7024	29	43	38.1863
2983	20	27 9.3070	36.4,135.4,753, 8.2	12	15	20.5155	33	11	31.5590
511	20	35 28.0150	36.4,135.4,753, 7.9	13	50	46.6632	64	50	18.7001
1190	20	42 4.6960	28.2,127,753, 7.9	7	14	5.3048	47	17	2.7806
2523	20	46 32.6980	30.1,129.2,753, 7.9	6	48	29.6322	67	36	8.5773
2555	20	50 46.7810	27.4,126.4,753, 7.9	7	11	33.2736	51	28	13.8003
1337	21	2 24.6960	37.6,136.6,753, 7.9	13	4	39.8440	35	55	24.4854
2558	21	8 33.3840	26.5,125.4,753, 7.5	7	13	51.6772	59	40	58.6990
3064	21	19 6.9280	36.3,137.8,753, 7.9	13	18	.7032	35	15	.1542

LATITUDE AND LONGITUDE BY EQUAL ZENITH DISTANCES OF STARS

STATION....: DELFT,GEODESY 11 APRIL 1976

TO.....:	18 33	60.0000	J.D.....: 2442879
UTC-TO.....:	0 0	.2960	REF.YEAR.....: 1976
DIT.....:		.001	NUMBER OF STARS: 14
UT1-UTC.....:		.427	P(1).....: 1.09
BETAU.....:		1.808	P(2).....: 1.11
F.....:		.042	
X.....:		-.075	
Y.....:		.396	

FK4 NO.	TIME		M1,M2,P,T	ALFA			DELTA		
3303	22	6 59.2000	31.2,130.2,753, 7.6	9	58	15.7613	29	45	28.4666
1370	22	16 11.5240	33.4,132.4,753, 7.6	14	17	1.4479	35	36	57.6794
3210	22	21 55.3130	33.3,131.9,753, 7.6	15	19	25.0623	52	2	26.7137
346	22	27 17.0490	31.7,130.2,753, 7.7	9	12	16.7429	43	18	58.4622
2762	22	35 14.3370	31.5,130.2,753, 7.7	9	33	36.7491	39	43	35.9853
3182	22	41 21.0970	35.7,133.5,753, 7.8	14	58	44.0897	39	21	22.3840
340	22	47 44.8210	30.9,129.5,753, 7.8	9	2	18.0137	54	22	44.9081
1412	22	53 48.2400	34,132.6,753, 7.8	15	37	32.2782	46	52	21.0363
534	22	58 12.4000	35.1,133.7,753, 7.8	14	30	50.2126	30	28	21.0930
3291	23	4 57.8920	32.3,131.3,753, 7.7	16	16	53.1736	59	48	32.9866
359	23	10 24.1220	30.4,129.3,753, 7.6	9	31	18.2010	51	47	11.7602
390	23	15 43.6150	32.2,131.2,753, 7.6	10	26	32.5103	36	49	41.1120
1416	23	22 21.4430	35.1,133.8,753, 7.5	15	51	52.8975	42	30	52.1363
355	23	27 19.8760	29.5,128.3,753, 7.5	9	29	42.1968	63	10	4.0724

LATITUDE AND LONGITUDE BY EQUAL ZENITH DISTANCES OF STARS

STATION....:KOOTWIJK P.EAST APRIL 13, 1976

TO.....:	19 55	60.0000	J.D.....: 2442881
UTC-TO.....:	-0 0	.2990	REF.YEAR.....: 1976
DIT.....:		.001	NUMBER OF STARS: 16
UT1-UTC.....:		.420	P(1).....: 1.09
BETAU.....:		1.808	P(2).....: 1.11
F.....:		.042	
X.....:		-.075	
Y.....:		.400	

FK4 NO.	TIME		M1,M2,P,T	ALFA			DELTA		
2491	20	1 11.7100	38.4,138.2,759, 5.8	6	24	26.0183	56	18	2.4430
497	20	5 9.4260	38.8,138.6,759, 5.8	13	23	.5243	55	2	50.9645
1191	20	14 43.9060	38.3,137.6,759, 5.8	7	22	30.6870	40	43	9.2487
511	20	20 36.6250	38.5,137.8,759, 5.8	13	50	46.8691	64	50	19.3752
1199	20	24 12.6450	37.4,137,759, 5.9	7	45	5.2082	37	34	32.2685
3083	20	29 49.9680	38.4,138.4,759, 5.7	13	33	31.1930	49	8	6.7332
2523	20	34 36.4260	38.8,138.3,759, 5.6	6	48	29.5163	67	36	8.4590
494	20	40 43.2080	39.6,139.8,759, 5.6	13	16	30.7254	40	41	43.2106
2572	20	45 15.2390	37.8,138,759, 5.4	7	24	56.3388	49	15	38.4967
1337	20	49 26.6560	39.8,139.6,759, 5.3	13	4	39.8381	35	55	24.9756
2999	20	55 22.9720	39.2,139.4,759, 5.2	12	25	47.1868	28	23	53.2461
2719	21	2 56.1470	37.2,137.2,759, 5.1	9	6	35.9156	29	44	56.8481
3039	21	11 19.2700	38.8,139,759, 5.0	12	59	10.2752	30	54	38.0687
1368	21	19 10.2680	39.7,139.5,759, 4.8	14	7	.7965	43	57	53.1448
314	21	22 41.6660	37,137,759, 4.9	8	21	13.9530	43	15	55.3106
2723	21	28 58.6620	37,136.4,759, 4.9	9	7	25.1491	33	58	42.3263

LATITUDE AND LONGITUDE BY EQUAL ZENITH DISTANCES OF STARS

STATION....:KOOTWIJK P.EAST APRIL.20,1976

TO.....:	18	38	60.0000	J.D.....:	2442888
UTC-TO.....:	-0	0	.2490	REF.YEAR.....:	1976
DIT.....:			.001	NUMBER OF STARS:	16
UT1-UTC.....:			.396	P(1).....:	1.09
BETAU.....:			1.808	P(2).....:	1.11
F.....:			.042		
X.....:			-.073		
Y.....:			.416		

FK4 NO.	TIME			M1,M2,P,T	ALFA			DELTA		
2491	19	33	39.1980	38.8,137.6,767, 10.6	6	24	25.8502	56	18	1.7523
497	19	37	39.0410	40.8,139.4,767, 10.2	13	23	.5290	55	2	52.8707
1191	19	47	11.5700	36.6,137.5,767, 9.7	7	22	30.5590	40	43	9.0673
511	19	53	6.5980	40.6,136.8,767, 9.5	13	50	46.6885	64	50	21.4733
1199	19	56	40.2900	38.4,136.6,767, 9.4	7	45	5.0849	37	34	32.2273
3083	20	2	19.5560	41,139.1,767, 9.2	13	33	31.2174	49	8	8.5474
494	20	13	12.6550	40.6,136.7,767, 8.9	13	16	30.7449	40	41	44.7840
2572	20	17	42.8530	38,135.6,767, 8.8	7	24	56.1828	49	15	38.2639
1337	20	21	56.2250	40.8,139,767, 8.7	13	4	39.8535	35	55	26.3670
2999	20	27	52.8540	40.9,136.9,767, 8.6	12	25	47.1816	28	23	54.3210
2719	20	35	23.5570	37.6,135.3,767, 8.5	9	6	35.8130	29	44	57.1920
3039	20	43	48.9920	40.5,138.6,767, 8.4	12	59	10.2913	30	54	39.3344
1368	20	51	39.7830	40.8,138.6,767, 8.2	14	7	.8573	43	57	54.8892
314	20	55	9.3060	37.1,134.8,767, 8.0	8	21	13.6144	43	15	55.4615
2723	21	1	26.2860	37.4,135,767, 7.9	9	7	25.0393	33	58	42.6986
302	21	15	1.0110	38.2,135.8,767, 7.9	7	59	42.1101	60	23	32.2135

LATITUDE AND LONGITUDE BY EQUAL ZENITH DISTANCES OF STARS

STATION....:KOOTWIJK P.EAST APRIL.21,1976

TO.....:	19	5	60.0000	J.D.....:	2442889
UTC-TO.....:	-0	0	.2310	REF.YEAR.....:	1976
DIT.....:			.000	NUMBER OF STARS:	16
UT1-UTC.....:			.392	P(1).....:	1.09
BETAU.....:			1.808	P(2).....:	1.11
F.....:			.042		
X.....:			-.072		
Y.....:			.419		

FK4 NO.	TIME			M1,M2,P,T	ALFA			DELTA		
2491	19	29	42.9910	36.1,135,763, 9.7	6	24	25.8252	56	18	1.6653
497	19	33	43.2830	38,136.6,763, 8.8	13	23	.5302	55	2	53.1377
1191	19	43	15.5390	35,133.7,763, 8.7	7	22	30.5399	40	43	9.0797
511	19	49	10.8120	37.3,136.1,763, 8.6	13	50	46.8929	64	50	21.7634
1199	19	52	44.2810	34.8,133,763, 8.4	7	45	5.0665	37	34	32.2598
3083	19	58	23.6900	37.5,136.4,763, 8.3	13	33	31.2208	49	8	8.8011
2523	20	3	7.6320	34.9,133.7,763, 8.2	6	48	29.1901	67	36	7.7172
494	20	9	16.8250	37.6,136.4,763, 8.0	13	16	30.7470	40	41	45.0064
2572	20	13	46.9440	33.6,132.3,763, 7.8	7	24	56.1598	49	15	38.2659
1337	20	18	.3460	37.4,136.4,763, 7.6	13	4	39.8547	35	55	26.5892
2999	20	23	56.7570	35.9,134.3,763, 7.4	12	25	47.1795	28	23	54.4826
2719	20	31	27.6690	32.8,131.5,763, 7.8	9	6	35.7973	29	44	57.2651
3039	20	39	52.9390	34.5,133.8,763, 7.7	12	59	10.2923	30	54	39.5149
1368	20	47	43.8210	36.2,134.4,763, 7.6	14	7	.8653	43	57	55.1298
314	20	51	13.4720	31.6,130.3,763, 7.5	8	21	13.7938	43	15	55.5175
2723	20	57	30.4590	31.7,130.4,763, 7.4	9	7	25.0226	33	58	42.7859

LATITUDE AND LONGITUDE BY EQUAL ZENITH DISTANCES OF STARS

STATION....:KOOTWIJK P.EAST APRIL.21,1976

TO.....:	21	4	60.0000	J.D.....:	2442889
UTC-TO.....:	-0	0	.2300	REF.YEAR.....:	1976
DIT.....:			.000	NUMBER OF STARS:	16
UT1-UTC.....:			.392	P(1).....:	1.09
BETAU.....:			1.808	P(2).....:	1.11
F.....:			.042		
X.....:			-.072		
Y.....:			.419		

FK4 NO.	TIME			M1,M2,P,T	ALFA			DELTA		
540	21	16	47.6380	35,133.3,763, 7.0	14	37	59.2222	44	30	16.8014
2803	21	23	2.6240	32.8,131.4,763, 6.6	9	58	15.6192	29	45	29.3968
1370	21	31	38.5800	33.8,132.1,763, 6.2	14	17	1.5425	35	36	59.9175
3210	21	36	29.1680	34,132,763, 6.0	15	19	25.2440	52	2	29.4568
346	21	42	18.7170	30.7,129.3,763, 5.8	9	12	16.5359	43	18	59.2699
2762	21	50	4.4870	30.8,129.6,763, 5.8	9	33	36.5660	39	43	36.9330
3182	21	56	34.1640	33.6,132.3,763, 5.7	14	58	44.2329	39	21	24.7724
340	22	3	20.4300	30.3,129,763, 5.6	9	2	17.7341	54	22	45.6862
1412	22	8	37.9280	34,132.5,763, 5.6	15	37	32.4757	46	52	23.5923
534	22	14	5.6900	34.3,133.1,763, 5.5	14	50	50.3238	30	28	23.1245
3291	22	19	4.5710	33.3,131.7,763, 5.5	16	16	53.4690	59	48	35.6467
358	22	26	21.4410	29.7,128.3,763, 5.4	9	31	17.9517	51	47	12.8089
390	22	30	23.5480	29.7,128.5,763, 5.4	10	26	32.3679	36	49	42.4003
1416	22	37	24.2790	33.3,131.9,763, 5.4	15	51	53.1055	42	30	54.5523
355	22	43	29.9100	30.1,128.9,763, 5.3	9	29	41.8318	63	10	5.1835
2844	22	51	26.9050	29,127.9,763, 5.3	10	31	52.5973	40	32	50.9318

LATITUDE AND LONGITUDE BY EQUAL ZENITH DISTANCES OF STARS

STATION....:KOOTWIJK P.EAST APRIL 21,1976

T0.....:	21	4	60.0000	J.D.....:	2442889
UTC-T0.....:	-0	0	.2330	REF.YEAR.....:	1976
DIT.....:			.000	NUMBER OF STARS:	16
UT1-UTC.....:			.392	P(1).....:	1.09
BETAU.....:			1.808	P(2).....:	1.11
F.....:			.042		
X.....:			-.072		
Y.....:			.419		

FK4 NO.	TIME			M1,M2,P,T		ALFA			DELTA		
639	23	6	27.7840	30.5,129.4,763,	5.2	17	8	44.9043	65	44	27.9240
3249	23	13	19.1660	31,129.6,763,	5.2	15	43	4.9680	32	35	16.5137
621	23	18	53.0450	31.4,130.2,763,	5.1	16	33	21.9526	42	28	58.6072
2870	23	22	24.3860	29.9,128.5,763,	5.1	10	52	38.7209	43	18	58.2190
1293	23	28	10.1890	30.1,129.1,763,	5.1	11	17	52.1843	38	18	53.8391
394	23	33	24.0580	30.6,129.5,763,	4.8	10	29	8.6894	56	6	12.1707
2999	23	40	22.1960	29.6,128.6,763,	4.6	12	25	47.1791	28	23	54.5049
693	23	45	58.2620	30.6,129.4,763,	4.5	17	29	55.3114	52	18	56.4466
650	23	52	46.8340	31.4,129.8,763,	4.4	17	26	8.0099	48	16	36.1132
432	23	58	52.8910	30.3,129.3,763,	4.1	11	29	16.0642	43	18	10.7072
593	0	6	6.7970	29.6,128.6,763,	4.0	15	56	38.0392	26	56	37.7519
663	0	12	13.5150	30.4,129.1,763,	3.9	17	38	49.1431	46	0	56.3223
1322	0	18	49.7790	30,128.8,763,	3.8	12	32	30.7160	33	22	37.1198
643	0	22	38.6110	29.4,128.2,763,	3.6	17	14	14.7468	36	49	58.0873
441	0	29	9.2510	29.6,128.8,763,	3.5	11	44	49.9683	47	54	38.1552
429	0	35	39.7460	30.1,129.3,763,	3.3	11	21	29.5573	64	27	40.6770

LATITUDE AND LONGITUDE BY EQUAL ZENITH DISTANCES OF STARS

STATION....:KOOTWIJK P.EAST APRIL 22,1976

T0.....:	0	38	60.0000	J.D.....:	2442890
UTC-T0.....:	-0	0	.2300	REF.YEAR.....:	1976
DIT.....:			.000	NUMBER OF STARS:	16
UT1-UTC.....:			.392	P(1).....:	1.09
BETAU.....:			1.808	P(2).....:	1.11
F.....:			.042		
X.....:			-.072		
Y.....:			.419		

FK4 NO.	TIME			M1,M2,P,T		ALFA			DELTA		
3497	1	12	46.9580	38.4,138.5,763,	2.8	16	47	39.7304	48	44	12.8243
2994	1	17	16.2250	35.7,135.2,763,	2.8	12	22	54.5604	51	41	35.2708
1327	1	21	3.3990	35.4,135,763,	2.7	12	44	3.0525	45	34	7.8417
726	1	30	.3910	38.2,138.1,763,	2.6	19	16	34.2965	53	19	15.8658
711	1	34	44.3570	38.8,136.8,763,	2.5	18	54	37.6881	43	54	41.1005
502	1	39	15.6470	35.2,134.9,763,	2.4	13	33	46.2246	37	18	7.1036
3102	1	43	6.6120	35.2,134.7,763,	2.3	13	50	46.0220	34	33	34.3982
674	1	47	51.5180	36,135.6,763,	2.2	17	56	51.9170	29	14	51.1107
478	1	53	37.7590	34.1,133.4,763,	2.0	12	40	34.3875	62	50	34.9495
3604	1	58	38.1540	36.7,136.2,763,	1.8	20	1	14.3661	54	45	3.5758
3063	2	6	38.4130	33.5,132.9,763,	1.5	13	17	16.1480	49	46	20.0269
724	2	18	2.2610	37,136.8,763,	1.4	19	15	33.6473	38	5	17.4328
713	2	27	24.3050	37.2,137.1,763,	1.3	18	58	4.4215	32	39	14.0539
3204	2	33	55.2860	33,132.4,763,	1.3	15	13	31.4929	29	14	58.5605
1368	2	38	29.6440	33.1,132.6,763,	1.2	14	7	.8669	43	57	55.1905
3584	2	42	7.3500	34.2,133.6,763,	1.6	19	49	49.3092	46	32	10.1325

STATION....:KOOTWIJK/P.EAST MAY 15, 1974.

T0,(UTC-T0)=
2h 58m 10.0000 16h 58m 49.9150

-.002,.307,0,.012,-.021,.206,2442182,1974,5,32,
DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=

FK4-NR.,T(K),PRESS.,TEMP.=
590,3h55m48.56,7.98,27.58,46.58,4.79,765,8.2,
390,3,59,7.13,12.84,18.37,24.22,29.85,765,8.2,
1432,4,1,21.35,28.01,34.96,41.98,49.01,765,8.2,
522,4,4,24.92,34.73,44.65,54.26,5.13,765,8.2,
3326,4,7,7.80,15.53,23.51,30.97,39.21,765,8.2,
1323,4,9,14.98,27.35,.18,21.78,43.47,765,8.2,
355,4,12,7.57,15.14,22.69,29.79,37.18,765,8.2,
3218,4,14,10.99,16.93,22.90,28.79,34.45,765,8.2,
2852,4,15,43.29,48.36,54.80,.10,5.66,765,8.2,
608,4,20,1.38,8.77,12.34,17.94,23.51,765,8.2,
1383,4,23,6.95,15.56,24.29,32.67,41.46,765,8.2,
3281,4,25,13.74,19.07,24.61,30.10,35.37,765,8.2,
368,4,27,26.41,33.13,39.47,46.15,52.50,765,8.2,
372,4,28,38.90,51.22,3.23,14.64,26.91,765,8.2,
425,4,31,39.34,45.78,51.60,57.70,3.88,765,8.2,
2976,4,33,21.28,30.82,39.75,48.69,57.56,765,8.2,
3314,4,35,32.95,38.47,44.26,49.24,54.77,765,8.2,
576,4,37,22.25,29.64,34.84,41.54,47.77,765,8.2,
3370,4,39,34.48,41.61,48.64,56.71,4.05,765,8.2,
3249,4,41,40.73,46.54,52.79,59.02,5.12,765,8.1,
1318,4,43,44.94,54.16,3.50,12.33,21.55,765,8.1,
1282,4,46,25.80,31.24,36.86,42.14,47.74,765,8.1,
395,4,50,18.43,33.76,48.92,3.87,18.91,765,8.1,
3305,4,54,13.11,34.77,57.51,21.40,44.13,765,8.1,
3185,4,57,12.07,22.05,32.44,42.70,53,765,8.1,
659,4,58,57.24,5.91,14.92,24.46,33.59,765,8.1,
2828,5,0,54.89,3.90,13.43,22.82,32.20,765,8,
2878,5,5,11.79,17.48,22.90,28.04,33.77,765,8,
398,5,8,35.40,42.19,47.95,54.59,1.27,765,8,
2839,5,11,45.70,54.07,1.87,9.59,17.21,765,8,
3151,5,16,39.51,14.75,49.32,28.79,7.41,765,8,
3072,5,22,25.85,38.68,51.62,4.12,17.39,765,8,

STATION....:KOOTWIJK/P.EAST MAY 17,1974

T0, (UTC-T0)=
1h 23m 7.0000 17h 32m 53.0770

.001,.304,0,.012,-.023,.207,2442184,1974,5,32,
DIT,(UT1-UTC),BETAU,F,X,Y,JUL.DATE-0.5,REF.YEAR,N,S=

FK4-NR, T(K), PRESSURE, TEMPERATURE =
590,3h13m55.35,14.74,33.87,52.60,11.71,766,14.5,
390,3,17,11.44,17.32,23.11,29,34.57,766,14.4,
1432,3,19,26.57,33.63,40.64,47.27,54.48,766,14.2,
522,3,22,30.28,40.23,50.54,.68,10.66,766,14.1,
3326,3,25,13.41,20.90,28.92,36.91,44.68,766,14.1,
1323,3,27,19.90,42.13,4.34,25.30,46.90,766,14.1,
355,3,30,12.09,19.33,27.11,34.42,41.87,766,14.1,
3218,3,32,16.18,22.06,28.17,33.78,40.09,766,14.1,
2852,3,33,47.54,53.42,58.94,4.48,10.05,766,14.1,
608,3,38,6.71,12.08,17.33,23.15,28.54,766,14,
1383,3,41,12.40,21.08,29.57,38.04,46.58,766,13.9,
3281,3,43,18.88,24.48,29.68,35.28,41,766,13.9,
368,3,45,31.01,37.38,44.34,50.91,57.68,766,13.8,
372,3,46,43.21,55.46,7.65,19.18,31.25,766,13.8,
425,3,49,44.35,50.19,56.14,2.25,8.60,766,13.7,
2976,3,51,25.71,35.29,43.78,53.17,2.41,766,13.6,
3314,3,53,38.25,43.60,49.19,54.80,.12,766,13.5,
576,3,55,27.49,33.91,40.43,46.85,53.04,766,13.5,
3370,3,57,39.76,47.19,54.56,1.80,9.40,766,13.4,
3249,3,59,45.82,52.04,58.04,4.50,10.67,766,13.4,
1318,4,1,49.18,58.82,7.67,16.76,25.88,766,13.3,
1282,4,4,30.60,36.27,41.37,47.21,52.62,766,13.2,
395,4,8,23.54,37.90,53.48,8.24,22.91,766,13.1,
3305,4,12,19.50,42.20,4.45,27.50,50.02,766,13.1,
3185,4,15,17.15,27.54,37.73,48.04,58.19,766,13.2,
659,4,17,2.87,11.75,20.63,29.76,38.78,766,13.2,
2828,4,18,59.18,7.75,18.28,27.04,36.88,766,13.3,
2878,4,23,16.52,21.81,27.47,32.97,38.34,766,13.3,
398,4,26,40.37,46.35,53.01,59.24,5.63,766,13.3,
2839,4,29,50.58,58.59,6.25,14.13,21.58,766,13.3,
3151,4,34,47.37,22.29,58.79,36.11,15.19,766,13.3,
3072,4,40,30.19,43.02,55.85,8.47,21.23,766,13.3,

STATION....:AMERSFOORT JUNI 14, 1974

T0,(UTC-T0)=
1 5 21.0000 19 37 44.2820

-.003,.225,0,.012,-.022,.214,2442212,1974,5,32,
DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=

FK4-NR.,T(K),PRESS.,TEMP.=
1337,1,57,29.78,35.66,41.40,46.98,52.87,764,18.1,
1316,1,59,51.30,56.95,2.63,8.07,13.70,764,18.1,
2986,2,2,58.11,12.13,27.07,41.28,54.85,764,18.1,
3451,2,5,19.74,25.25,30.72,36.37,41.55,764,18,
3064,2,7,32.98,38.59,44.79,50.49,56.33,764,18,
3397,2,9,29.68,36.41,42.76,49.49,56.24,764,18,
3547,2,11,16.85,24.59,32.85,41.21,49.23,764,18,
3172,2,13,1.21,13.97,26.32,39.20,51.67,764,18,
1440,2,16,.11,10.92,21.72,32.90,43.71,764,17.9,
729,2,18,45.14,57.15,9.38,21.43,33.81,764,17.9,
3000,2,23,24.89,31.16,37.35,43.30,49.57,764,17.9,
3493,2,27,52.30,57.72,3.28,8.75,14.23,764,17.8,
494,2,29,48.99,54.33,.02,5.25,10.88,764,17.7,
3536,2,31,54.50,10.62,26.91,43.05,59.13,764,17.7,
1338,2,34,47.45,52.89,58.28,4.07,9.37,764,17.6,
3075,2,36,1.67,23.64,46.10,7.25,29.49,764,17.5,
3185,2,38,47.52,57.79,8.22,18.36,28.06,764,17.5,
667,2,41,2.51,10.22,17.96,25.92,33.59,764,17.4,
738,2,50,15.99,21.73,27.40,33.17,38.71,764,17.4,
1380,2,52,1.77,8.64,15.85,22.69,29.29,764,17.4,
3020,2,53,59.33,7.48,16.19,24.96,33.60,764,17.4,
3586,2,57,38.66,44.46,50.30,56.29,2.14,764,17.3,
557,3,0,18.30,26.55,34.72,42.92,51.01,764,17.3,
486,3,2,6.56,14.44,22.82,30.91,38.90,764,17.3,
1468,3,4,48.92,58.14,7.06,16.09,25.09,764,17.3,
3575,3,8,16,21.42,26.97,32.45,37.99,764,17.3,
3631,3,12,2.17,11.48,20.62,30.04,39.37,764,17.3,
3383,3,14,55.50,13.15,31.35,49.65,9.39,764,17.2,
767,3,20,49.22,56.51,3.82,11.45,18.64,764,17.2,
3204,3,27,38.42,45.41,52.84,59.81,7.09,764,17.1,
3554,3,29,13.05,18.47,24.36,30.07,35.66,764,17.1,
500,3,31,9.93,17,23.64,30.36,37.12,764,17.1,

STATION....:BOSBERG JUNE 15,1974

T0, (UTC-T0)=
4 46 17.0000 15 44 47.8130

-.002,.224,0,.012,-.022,.214,2442213,1974,5,32,
DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=

FK4-NR.,T(K),PRESS.,TEMP.=
440,5,40,4.71,13.09,21.93,30.68,38.80,763,14.6,
2953,5,41,32.01,38.46,44.94,50.93,57.56,763,14.6,
485,5,43,11.92,17.59,23.31,29.19,34.51,763,14.6,
3172,5,45,30.70,46.78,3.95,20.83,36.67,763,14.5,
3547,5,50,47.70,55.81,3.95,12.16,20.41,763,14.5,
3535,5,53,13.49,19.89,26.23,32.61,39.07,763,14.5,
3375,5,54,51.99,59.86,7.60,15.63,23.65,763,14.4,
3096,5,57,12.42,19.45,26.02,32.80,39.32,763,14.4,
3463,5,59,32.04,37.76,43.32,49.06,54.73,763,14.4,
2986,6,0,25.85,41.64,55.85,9.50,23.25,763,14.3,
3536,6,3,5.71,21.53,36.89,52.69,7.83,763,14.3,
726,6,6,25.29,31.32,37.31,43.23,49.24,763,14.2,
1440,6,11,10.24,23.28,36.22,49.86,2.85,763,14.2,
3185,6,14,53.22,5.67,17.56,29.11,40.98,763,14.1,
502,6,16,37.87,43.70,49.66,55.34,1.08,763,14.1,
467,6,19,1.26,7.82,14.59,20.95,27.71,763,14,
1338,6,20,24.75,30.15,35.82,41.05,46.72,763,14,
3541,6,24,12.71,18.47,23.94,29.68,35.04,763,13.9,
472,6,29,55.64,6.02,15.91,25.79,34.94,763,13.8,
1460,6,31,54.58,4.52,14.68,25.03,34.51,763,13.8,
738,6,34,1.53,7.16,12.91,18.66,24.41,763,13.8,
557,6,39,15.29,24.52,33.70,42.27,51.08,763,13.7,
3075,6,40,27.19,47.68,8.56,28.60,49,763,13.6,
3063,6,46,43.80,49.33,55.16,1.01,6.52,763,13.5,
3631,6,50,7.68,17.65,26.59,36.28,45.28,763,13.4,
1479,6,54,32.14,39.30,46.25,53.79,1.24,763,13.4,
3415,6,55,40.53,51.57,2.08,12.90,23.68,763,13.4,
3572,7,1,20.22,25.78,31.30,37.33,42.09,763,13.3,
713,7,8,39.83,46.35,52.89,59.37,5.67,763,13.2,
759,7,11,28.85,45.75,3.28,20.68,38.40,763,13.2,
3252,7,14,58.64,8.65,18.70,28.48,38.72,763,13.1,
1368,7,17,23.65,28.95,34.68,40.09,45.79,763,13.1,

STATION....:ZALTBOMMEL JUNE 20,1974

T0, (UTC-T0)=
2 8 49.0000 18 56 16.2340

-.002,.213,0,.012,-.019,.215,2442218,1974,5,32,
DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=

FK4-NR., T(K), PRESS.,TEMP.=
2986,2,15,53.69,7.85,22.34,37.25,51.45,768,14.1,
485,2,18,.48,6.02,11.74,17.16,22.29,768,14.1,
3375,2,21,25.77,32.40,39.83,46.93,53.93,768,14,
3451,2,23,18.70,24.27,29.64,35.34,40.80,768,14,
723,2,25,4.23,13.46,22.23,30.90,39.71,768,14,
2994,2,28,23.10,28.83,34.48,40.37,46.17,768,13.9,
1440,2,30,40.76,50.98,1.42,11.56,21.98,768,13.8,
3172,2,35,54.02,5.16,17.18,28.64,40.12,768,13.8,
3000,2,40,36.85,43.08,49.41,55.35,1.52,768,13.8,
711,2,46,31.38,36.90,42.30,47.41,53.12,768,13.9,
494,2,48,26,31.56,37.03,42.35,47.94,768,13.9,
472,2,52,1.63,11.68,21.73,31.19,41.24,768,13.9,
1460,2,55,2.60,10.80,19.23,28.03,36.78,768,13.9,
3536,2,56,35.62,52.59,8.22,24.75,41.30,768,13.9,
733,2,58,55.85,1.76,7,13.07,18.92,768,13.9,
3185,3,0,37.73,47.47,57.42,6.96,16.42,768,14,
478,3,3,23.05,30.22,37.69,44.97,52.32,768,14,
534,3,13,17.93,24.30,30.92,37.78,44.29,768,13.9,
486,3,18,2.37,9.95,18.15,26.17,34.16,768,13.8,
557,3,21,9.70,17.65,25.85,33.45,41.48,768,13.7,
705,3,25,19.89,25.72,31.67,37.51,43.81,768,13.6,
1370,3,27,21.61,27.23,33.02,38.68,44.40,768,13.6,
3360,3,29,12.96,41.27,9.35,40.76,10.10,768,13.5,
3572,3,34,22.83,28.30,33.42,38.86,44.05,768,13.4,
767,3,41,16.40,23.70,31.09,38.39,45.71,768,13.5,
524,3,44,17.99,37.33,56.05,15.11,33.77,768,13.6,
1368,3,50,23.72,28.96,34.22,39.78,45.05,768,13.6,
757,3,55,55.61,.85,6.33,11.98,17.22,768,13.5,
3252,3,58,19.26,27.70,36.65,45.22,53.63,768,13.5,
3457,4,0,56.60,7.67,18.07,28.92,39.69,768,13.5,
782,4,2,51.30,57.68,4.03,10.53,16.51,768,13.4,
770,4,5,25.43,39.35,53.15,6.96,21.38,768,13.4,

STATION....:NEDERWEERT JUNE 21,1974

T0, (UTC-T0)=
4 51 11.0000 15 56 54.1730

-.002,.213,0,.012,-.019,.215,2442219,1974,5,32,
DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=

FK4-NR, T(K), PRESS.,TEMP.=
3172,5,35,22.97,33.50,43.81,54.52,4.90,763,13.1,
726,5,37,37.54,43.33,49.22,55.02,.85,763,13.1,
472,5,40,16.89,27.17,37.03,47.17,56.64,763,13,
729,5,42,.48,13.20,25.70,38.05,50.71,763,13,
1460,5,44,31.61,39.90,47.91,55.99,3.93,763,13,
1338,5,46,3.96,9.05,14.63,20.24,25.36,763,13,
674,5,48,23.41,30.12,36.78,43.48,50.12,763,12.9,
3102,5,50,48.87,54.41,59.94,6.16,11.69,763,12.9,
3541,5,52,34.19,40.01,44.73,50.55,56.13,763,12.9,
3185,5,58,52.15,1.20,10.16,18.91,27.58,763,12.8,
3536,5,59,52.53,9.86,26.39,43.44,.44,763,12.7,
3506,6,4,11.31,16.81,22.15,27.66,33.23,763,12.6,
486,6,7,42.45,50.78,59.01,7.04,15.03,763,12.5,
3360,6,9,22.23,40.56,58.26,17.02,35.45,763,12.4,
3608,6,13,8.16,16.98,25.96,34.94,43.86,763,12.3,
3171,6,15,51.36,58.04,5.17,11.60,18.58,763,12.2,
705,6,17,15.87,21.94,27.71,33.40,39.47,763,12.2,
1370,6,21,54.58,.25,6.07,11.37,17.07,763,12.1,
524,6,26,5.25,25.51,45.75,5.71,25.21,763,11.9,
3572,6,27,51.04,56.26,1.45,7.06,12.45,763,11.8,
500,6,38,47.13,53.92,.61,7.48,13.90,763,11.8,
505,6,40,18.25,29.23,40.05,50.84,1.71,763,11.8,
1368,6,43,40.68,48.01,51.55,56.61,2.03,763,11.9,
3584,6,46,44.31,49.57,54.92,.29,5.88,763,11.9,
3654,6,50,3.65,10.48,17.11,24.12,31.08,763,11.9,
3427,6,52,5.74,20.45,36.54,51.73,7.62,763,11.9,
3252,6,55,46.78,54.70,2.96,10.90,19.05,763,11.8,
3124,6,59,54.84,.43,6.31,11.26,17.20,763,11.7,
734,7,4,35.30,4.01,33.53,3.45,33.98,763,11.5,
3166,7,7,47.55,52.80,58.30,3.50,9.01,763,11.4,
593,7,10,23.97,31.29,38.95,46.54,54.03,763,11.3,
3472,7,12,16.90,27.72,39.03,50.25,1.74,763,11.2,

STATION....:VEMRAY JUNE 22 1974

T0,(UTC-T0)=
8 6 10.0000 12 44 55.2280

-.002,.209,0,.012,-.017,.215,2442220,1974,5,32,
DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=

FK4-NR.,T(K),PRESS.,TEMP.=
3000,8,40,13.83,19.83,26.21,32.44,38.73,762,15.1,
711,8,47,13.55,18.75,24.18,29.69,35.09,762,15.1,
494,8,49,12.17,17.67,23.05,28.45,33.89,762,15.1,
502,8,52,54.88,.35,6.07,11.36,16.99,762,15.1,
674,8,56,42.70,49.25,56.14,2.81,9.65,762,15,
1383,8,59,18.85,26.92,34.66,42.75,50.95,762,14.9,
3536,9,2,27.92,44.17,.99,17.70,34.73,762,14.8,
3185,9,3,52.08,1.60,11.25,20.35,30,762,14.7,
3020,9,8,2.23,10.55,19.50,28.12,36.63,762,14.6,
738,9,10,28.52,34.50,39.28,45.42,50.89,762,14.5,
3604,9,15,15.46,23.23,31,39.30,47.07,762,14.6,
1468,9,18,45.26,53.84,2.30,10.58,19.11,762,14.7,
3360,9,21,54.10,15.12,36.41,58.48,20.16,762,14.8,
705,9,25,6.59,12.55,18.50,24.45,29.87,762,14.7,
3575,9,27,42.24,47.60,53.03,58.57,4.05,762,14.6,
719,9,29,8.79,14.49,20.25,88,31.39,762,14.6,
3083,9,32,33.39,39.19,44.29,49.84,55.67,762,14.5,
3631,9,36,43.70,52.82,2.36,11.81,21.22,762,14.5,
524,9,38,42.03,1.01,20.94,40.34,59.33,762,14.4,
757,9,43,34.69,42.15,49.12,56.71,4.07,762,14.4,
500,9,47,7.19,14.01,20.73,27.59,34.30,762,14.3,
3457,9,58,34.16,44.30,54.41,5.05,14.99,762,14.2,
3252,10,1,7.90,16.25,24.70,32.88,41.03,762,14.2,
572,10,2,46.34,52.97,59.70,6.85,13.48,762,14.2,
770,10,10,21.96,36.36,50.53,4.67,18.33,762,14.1,
593,10,15,57.38,4.92,12.81,20.39,28.39,762,14,
1379,10,17,26.42,41.33,56.99,12.02,27.70,762,13.9,
576,10,21,50.75,56.92,3.20,9.24,15.42,762,13.8,
540,10,23,32.30,37.70,42.98,48.67,53.82,762,13.8,
3128,10,29,31.90,41.35,51.49,1.41,10.52,762,13.6,
3655,10,41,10.81,16.03,21.41,27.08,32.37,762,13.5,
690,10,49,51.34,23.44,56.12,30.12,4.85,762,13.6,

STATION....:KOOTWIJK/P.EAST AUG.6,1974

T0,(UTC-T0)=
5 10 49.0000 14 41 50.9300

.002,.119,0,.012,.018,.219,2442265,1975,5,32,
DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=

FK4-NR.,T(K),PRESS.,TEMP.=
795,6,8,32.78,51.46,10.77,29.96,48.60,768,11.8,
3427,6,11,5.01,36.50,6.56,37.51,7.41,768,11.8,
580,6,14,41.10,46.76,52.10,57.54,2.87,768,11.9,
549,6,19,12.27,18.92,25.60,32.30,39.08,768,12,
3508,6,20,35.81,1.30,25.86,50.61,16.84,768,12,
3229,6,25,5.82,23.70,41.52,59.22,16.84,768,12.1,
821,6,28,23.33,28.94,34.53,40.10,45.97,768,12.2,
1534,6,30,57.14,3.41,10.25,17.15,23.90,768,12.2,
837,6,33,18.88,29.96,41.19,52.65,3.93,768,12.1,
1416,6,37,23.50,28.89,34.32,39.91,45.33,768,12,
3587,6,39,3.08,13.43,24.26,34.76,45.33,768,12,
3730,6,40,37.91,43.38,48.73,54.33,59.89,768,12,
1460,6,43,29.06,37.93,46.96,55.99,5.01,768,11.9,
569,6,46,33.22,43.82,55.32,6.23,17.17,768,11.9,
811,6,48,2.68,8.28,13.57,19.22,24.64,768,11.8,
847,6,50,43.33,49.47,56.39,2.87,9.50,768,11.8,
3714,6,52,23.85,29.22,35.08,40.81,46.37,768,11.8,
853,6,54,22.59,29.92,37.42,44.98,52.48,768,11.7,
3415,6,56,28.37,37.91,47.38,56.77,6.24,768,11.7,
601,7,2,3.09,8.53,14.18,19.43,24.94,768,11.7,
851,7,3,39.10,51.30,3.61,15.65,28.50,768,11.7,
1446,7,6,57.83,4.02,10.05,15.99,22.12,768,11.7,
3240,7,8,31.94,41,39,51.26,.50,10.16,768,11.7,
848,7,10,3.98,9.57,14.87,20.78,26.62,768,11.7,
786,7,12,40.19,47.79,54.88,3.14,10.48,768,11.8,
3508,7,14,41.72,6.15,33.68,57.40,21.62,768,11.8,
595,7,17,29.02,35.31,41.14,47.28,53.36,768,11.8,
3585,7,18,45.51,12.50,38.76,6.92,34.10,768,11.8,
3397,7,25,31.64,38.13,44.62,51.55,58.05,768,11.9,
3384,7,28,31.02,59.66,29.56,58.40,27.31,768,12,
3800,7,31,16.99,22.37,27.81,33.31,38.58,768,12,
3314,7,34,43.52,49.12,54.59,.01,5.70,768,12.1,

STATION....:KOOTWIJK/P.EAST AUGUST 15, 1974

TO,(UTC-TO)=
1 10 5.0000 18 36 59.5510

.001,.099,0,.012,.020,.219,2442274,1975,5,32,
DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=

FK4-NR.,T(K),PRESS.,TEMP.=
795,1,38,2.65,22.34,41.48,.84,20.33,764,20.6,
3427,1,40,30.71,2.31,33.28,3.11,32.37,764,20.5,
580,1,44,8.56,14.17,19.55,25.16,30.72,764,20.4,
549,1,48,39.46,46.09,52.90,59.52,6.17,764,20.3,
3508,1,50,6.70,30.40,54.20,20.82,46.11,764,20.3,
3229,1,54,31.30,49,7.16,25,42.97,764,20.2,
821,1,57,51.99,57.33,3.07,8.78,14.19,764,20.1,
1534,2,0,25.40,31.94,38.81,45.59,52.23,764,20,
837,2,2,48.10,59.30,10.42,22.03,32.99,764,19.9,
1416,2,6,51.01,56.42,1.86,7.29,12.75,764,19.8,
3587,2,8,31.56,41.75,52.56,3.05,13.69,764,19.8,
3730,2,10,6.55,11.99,17.31,22.78,28.36,764,19.7,
1460,2,12,56.41,5.53,14.53,23.53,32.38,764,19.7,
569,2,15,59.20,10.56,21.75,33.05,43.70,764,19.6,
811,2,17,31.46,36.72,42.13,47.63,53.43,764,19.5,
837,2,20,12.06,18.56,25.20,31.68,38.26,764,19.5,
3714,2,21,52.32,57.89,3.08,9.08,14.69,764,19.6,
853,2,23,51.41,58.93,6.30,13.92,21.39,764,19.7,
3415,2,25,56.10,5.24,15.04,24.37,33.82,764,19.8,
801,2,31,30.69,36.09,41.60,47.02,52.50,764,19.9,
851,2,33,9.01,21.19,33.34,46.01,57.87,764,19.9,
3446,2,36,25.67,31.47,37.70,43.63,49.73,764,19.9,
3340,2,37,58.28,8.37,17.91,27.43,37.33,764,20,
838,2,39,32.71,38.08,43.73,49.62,55.33,764,20,
786,2,42,8.51,16.08,23.78,31.44,39.11,764,20,
3508,2,44,8.61,34.61,58.99,25.14,48.51,764,20,
595,2,46,56.46,2.57,8.86,14.67,20.47,764,20.1,
3535,2,48,14.10,40.95,8.33,36.48,3.77,764,20.1,
3397,2,54,59.41,5.86,12.74,19.02,25.63,764,20,
3384,2,57,54.48,24.69,52.68,22.46,51.52,764,19.9,
3800,3,0,45.54,51.06,56.50,2,7.34,764,19.8,
3814,3,4,11.23,16.82,22.30,27.76,32.99,764,19.7,

STATION....:AARDENBURG AUGUST21,1974

TO,(UTC-TO)=
2 16 31.0000 17 40 33.8210

-.002,.083,0,.012,.020,.218,2442280,1975,5,32,
DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=

FK4-NR.,T(K),PRESS.,TEMP.=
641,2,34,56.58,5.75,14.93,23.95,33.17,768,15.2,
3587,2,42,.26,9.59,18.52,27.64,36.57,768,15.2,
3305,2,44,25.72,53.06,15.44,45.05,11.21,768,15.1,
1412,2,48,19.14,24.58,30.10,35.46,40.80,768,15.1,
3730,2,52,26.77,32.30,37.18,42.93,48.17,768,15.1,
690,2,56,36.82,.71,24,46.93,11.10,768,15.1,
3797,3,0,14.99,22.84,30.69,38.78,46.45,768,15,
1559,3,3,6.34,11.84,17.50,23.21,29.08,768,15,
3384,3,5,1.72,40.22,18.21,55.19,32.20,768,15,
3585,3,11,1.56,15.69,29.54,45.53,.22,768,15,
601,3,13,15.46,21.10,26.40,32,37.13,768,15,
3415,3,15,58,6.58,15.01,23.21,31.85,768,14.9,
786,3,18,59.37,6.34,13.57,20.88,27.89,768,14.9,
1446,3,21,18.22,23.57,30.01,35.70,41.56,768,14.9,
587,3,24,32.51,39.85,47.36,54.54,7.01,768,14.9,
595,3,26,18.81,24.81,30.89,36.95,42.90,768,14.8,
3778,3,27,55.73,.92,6.46,11.76,17.14,768,14.8,
621,3,30,27.45,32.63,37.95,43.27,48.80,768,14.8,
3657,3,32,12.44,21.24,30.14,38.93,47.52,768,14.8,
1583,3,38,34.51,39.83,45.28,50.77,56.05,768,14.7,
3397,3,41,1.22,7.49,13.75,20.09,26.43,768,14.7,
1594,3,42,44.64,1.19,17.30,33.09,49.33,768,14.6,
3508,3,45,44.02,58.27,12.97,27.95,43.33,768,14.6,
875,3,51,45.73,52.16,58.36,4.66,10.57,768,14.5,
3833,3,53,10.43,15.96,21.57,27.13,32.80,768,14.5,
3862,3,56,3.16,14.39,24.54,34.88,45.68,768,14.4,
3373,4,1,17.46,22.83,28.20,33.54,39.04,768,14.4,
619,4,2,59.92,9.46,19.18,28.61,37.90,768,14.5,
3852,4,9,59.33,4.78,10.18,15.48,21.16,768,14.5,
1593,4,16,34.70,59.02,22.24,47.15,10.55,768,14.5,
1549,4,23,46.71,3.31,20.26,36.90,54.39,768,14.5,
3377,4,28,28.81,34.29,39.67,45.27,50.52,768,14.5,

STATION....:OUDGASTEL AUGUST22,1974

TO,(UTC-TO)=
5 23 14.0000 14 50 51.0190

.001,.080,0,.012,.020,.218,2442281,1975,5,32,
DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=

FK4-NR.,T(K),PRESS.,TEMP.=
844,5,52,22.34,28.11,34.15,39.90,45.47,768,15,
601,5,55,11.72,17.24,22.32,27.85,33.29,768,14.9,
3585,5,58,16.90,33.90,50.60,8,24.76,768,14.6,
606,6,1,13.09,28.25,44.17,.24,15.28,768,14.3,
587,6,8,8.98,15.94,23.57,30.69,37.95,768,14.2,
3778,6,9,38.66,43.96,49.56,54.65,.22,768,14.3,
621,6,12,11.26,16.68,22.13,27.54,32.89,768,14.5,
3657,6,16,40.14,49.52,58.11,7.86,17.26,768,14.5,
1594,6,18,50.81,6.23,22.04,38.37,54,768,14.5,
3508,6,21,58.93,14.87,31.32,48.08,4.24,768,14.4,
3276,6,27,5.96,15.53,24.80,33.19,42.36,768,14.2,
643,6,30,56.68,2.10,7.66,13.35,18.95,768,14.1,
3862,6,34,26.87,37.53,47.17,58.17,8.28,768,14,
1434,6,36,37.48,43.17,49.12,53.86,59.58,768,13.9,
3715,6,39,0,7.67,14.97,22.36,30.01,768,13.9,
3776,6,41,43.48,49.38,55.17,.96,6.70,768,13.8,
858,6,42,50.15,55.52,.86,6.31,11.71,768,13.7,
852,6,48,28.56,34.03,39.48,45.02,50.70,768,13.7,
1593,6,49,44.70,8.31,30.33,54.20,17.57,768,13.8,
869,6,58,47.92,53.31,58.67,4.18,9.55,768,13.9,
3448,7,0,14.88,20.97,27.60,33.53,39.93,768,13.9,
1488,7,1,16.02,24.62,32.47,40.53,48.86,768,14,
3326,7,3,2.82,10.65,18.37,26.29,34.07,768,14,
1462,7,6,42.60,48.21,53.30,58.86,4.18,768,14.1,
3377,7,10,30.95,36.51,42.13,47.40,53.14,768,14.1,
899,7,12,41.76,48.42,54.59,.75,7.19,768,14.1,
3585,7,16,47.25,4.38,21.18,38.36,55.28,768,14,
2005,7,18,26.58,34.55,41.98,49.67,57.12,768,14,
1565,7,20,53.41,5,17.07,29.72,41.72,768,13.9,
1508,7,24,17.39,27.31,37.53,47.41,57.36,768,13.9,
675,7,29,55.29,13.05,31.20,48.86,5.81,768,14.1,
891,7,31,37.01,42.34,47.84,53.25,58.51,768,14.2,

STATION....:MONNICKENDAM AUGUST28,1974

TO,(UTC-TO)=
8 35 11.0000 11 19 53.7700

.001,.066,0,.012,.020,.218,2442287,1975,5,32,
DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=

FK4-NR.,T(K),PRESS.,TEMP.=
569,8,48,14.40,25.74,36.73,48.14,59.03,770,16.2,
3415,8,52,20.55,30.42,40.74,49.92,.18,770,16.2,
3281,8,54,39.80,45.69,51.27,56.70,2.23,770,16.3,
851,8,58,34.69,46.70,58.73,11.30,23.36,770,16.3,
601,9,0,43.13,48.63,54.10,59.57,5.06,770,16.3,
3305,9,3,56.52,18.58,40.83,1.90,24.47,770,16.2,
3472,9,7,53.01,9.12,25.42,40.87,56.37,770,16.2,
3649,9,9,43.15,52.21,1.20,10.30,19.35,770,16.2,
626,9,11,53.53,58.97,4.53,10.06,15.75,770,16.2,
3799,9,13,43.48,49.05,54.32,59.94,5.56,770,16.1,
3778,9,14,46.07,51.40,57.06,2.48,8.15,770,16.1,
3611,9,16,10.98,27.41,43.75,.10,16.55,770,16.1,
3839,9,21,25.50,31.84,38.17,44.53,50.68,770,16.1,
598,9,28,15.91,22.69,29.13,35.86,42.23,770,16.1,
3657,9,30,16.14,26.84,37.34,47.78,58.54,770,16,
1593,9,33,3.67,24.71,44.75,6.05,26.98,770,16,
3384,9,36,16.29,44.19,12.18,40.34,8.68,770,16,
614,9,44,25.63,32.08,38.08,44.23,50.52,770,16,
3365,9,46,4.04,9.47,15.07,20.61,26.10,770,16,
1604,9,47,7.16,12.83,18.50,24.12,29.71,770,16,
3776,9,49,5.99,12.09,17.58,23.92,29.96,770,16,
835,9,54,1.94,8.07,14.12,20.45,26.62,770,16,
895,9,59,7.36,16.03,25.14,34.06,42.97,770,16,
3448,10,1,50.41,56.90,3.48,10.25,16.51,770,15.9,
3857,10,8,7.99,13.64,18.80,24.43,29.92,770,15.8,
3518,10,11,10.60,19.43,28.89,38.22,47.12,770,15.8,
3326,10,13,56,4.20,11.86,19.53,27.62,770,15.8,
3377,10,16,19.67,25.36,31.02,36.25,41.92,770,15.7,
2005,10,17,56.43,4.17,11.53,19.08,26.77,770,15.7,
1508,10,19,36.26,47.35,.01,11.07,23.58,770,15.7,
3870,10,22,52.54,58.36,3.71,9.26,14.43,770,15.7,
3704,10,26,22.90,38.06,53.06,8.23,23.23,770,15.6,

STATION....:WORKUM AUGUST30,1974

T0,(UTC-T0)=
2 48 60.0000 16 50 4.1710

0,.065,0,.012,.019,.218,2442289,1975,5,32,
DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=

FK4-NR,T(K),PRESS.,TEMP.=

565,3,12,25.77,35.06,43.75,52.40,1.30,761.3,19.6,
3281,3,14,49.73,55.06,.90,6.74,12.15,761.3,19.3,
3472,3,17,9.89,31.65,53.43,14.74,36.23,761.3,19.1,
1594,3,20,36.82,51.50,5.96,21.04,36.68,761.3,18.8,
1446,3,23,14.33,20.34,26.63,33.16,39.23,761.3,18.6,
667,3,26,38.90,47.76,56.35,4.39,12.86,761.3,18.2,
3844,3,31,10.77,19.34,27.95,36.33,44.88,761.3,18.3,
3799,3,33,29.14,34.72,40.36,46,51.57,763.1,18.2,
3649,3,34,44.43,53.57,3.55,13.30,22.99,761.3,18.2,
3305,3,37,9.51,30.31,51.84,12.18,32.79,761.4,18.2,
3839,3,39,49.91,56.28,2.81,9.07,15.25,761.4,18.1,
3862,3,45,25.56,35.86,45.70,56.14,6.59,761.4,18,
3611,3,47,33.29,55.49,17.43,40,3.14,761.4,18,
3800,3,50,15.01,20.67,26.01,31.69,37.05,761.4,17.9,
3314,3,54,16.44,22.29,27.83,33.49,38.96,761.4,17.8,
612,3,57,20.96,36.08,50.46,5.04,19.72,761.4,17.7,
3863,4,4,49.80,55.89,1.97,7.85,13.80,761.4,17.5,
3373,4,6,20.64,26.39,32.07,37.92,43.49,761.5,17.5,
3291,4,8,11.55,18.42,25.43,32.17,38.90,761.5,17.4,
3776,4,10,57.16,3.12,9.13,15.50,21.45,761.5,17.3,
3715,4,14,4.75,13.41,21.49,30.20,39.02,761.5,17.2,
1488,4,15,31.03,40.92,50.21,59.81,8.73,761.5,17.1,
619,4,25,29.78,39.14,48.88,58.03,7.22,761.5,17.2,
3857,4,28,28.87,34.46,39.95,45.52,51.28,761.5,17.2,
1462,4,31,20.72,26.23,32.04,37.36,43.02,761.5,17.2,
893,4,37,11.09,27.99,45.19,2.57,19.92,761.5,17,
1590,4,39,49.24,55.66,2.25,8.57,15.05,761.5,17,
890,4,45,13.50,19.17,24.51,30.11,35.72,761.5,17.2,
3611,4,49,30.72,54.08,16.99,39.31,.80,761.5,17.4,
663,4,55,16.56,22.25,27.52,33.46,38.94,761.6,17.7,
3704,4,56,31.97,49.99,9.31,29.24,48.94,761.6,17.8,
3381,4,59,21.11,26.82,33.23,38.93,44.95,761.6,17.9,

STATION....:WINTERSWIJK SEPT.10,1974

T0,(UTC-T0)=
0 28 45.0000 18 33 20.1200

-.001,.036,0,.012,.018,.218,2442300,1975,5,32,
DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=

FK4-NR,T(K),PRESS.,TEMP.=

3303,0,58,28.92,34.37,39.87,44.97,50.30,772,13.3,
3585,1,0,19.82,42.28,4.06,26.08,48.47,772,13.2,
1594,1,5,57.56,12.76,28.28,43.76,59.40,772,13.1,
1456,1,7,49.47,55.54,1.82,7.95,14.25,772,13.1,
612,1,9,15.74,30.60,45.63,.74,15.82,772,13.1,
3839,1,11,57.60,3.85,10.05,16.63,22.92,772,13,
3657,1,14,2.26,11.76,21.73,31.59,41.45,772,13,
3800,1,18,32.33,37.65,43.03,48.57,54.01,772,13,
3314,1,21,46.76,52.08,57.66,3.20,8.65,772,13,
3276,1,24,7.40,16.54,25.53,34.31,43.05,772,13.1,
681,1,30,49.64,56.93,4.21,11.08,18.24,772,13,
1593,1,33,41.59,3.69,25.12,47.67,9.58,772,12.9,
858,1,36,45.31,50.47,55.92,1.57,6.82,772,12.8,
1575,1,38,52.21,59.04,5.62,12.45,18.96,772,12.7,
619,1,44,52.67,1.99,11.39,20.61,29.98,772,12.6,
1432,1,48,16.05,22.95,29.76,36.80,43.66,772,12.5,
895,1,51,51.74,.46,9.14,18.23,27.10,772,12.4,
3857,1,56,53.04,58.62,3.98,9.39,14.85,772,12.2,
3585,2,1,59.56,21.31,44.01,5.68,26.91,772,12.1,
3377,2,4,38.57,44.02,49.54,54.92,.46,772,12.1,
672,2,7,1.97,7.42,13.17,18.70,24.32,772,12,
2005,2,9,46.65,54.33,1.90,9.33,17.32,772,11.9,
1508,2,14,1.82,12.42,23.33,33.89,44.70,772,11.8,
823,2,15,33.16,42.22,51.19,.28,9.04,772,11.8,
1549,2,16,43.50,14.23,45.49,17.99,51.17,772,11.7,
891,2,25,23.41,28.83,34.02,39.79,45.06,772,11.6,
1610,2,27,47.52,52.87,58.53,4.32,9.69,772,11.5,
675,2,31,13.04,30.20,47.50,4.52,21.09,772,11.5,
3611,2,37,26.18,40.28,53.40,7.26,20.38,772,11.3,
3433,2,41,44.99,50.28,55.78,1.44,6.74,772,11.3,
2022,2,44,13.83,19.67,25.60,31.63,37.41,772,11.3,
684,2,46,1.89,7.14,12.71,18.04,23.32,772,11.2,

STATION....:KLIFSBERG SEPT.18,1974

T0,(UTC-T0)=
9 18 41.0000 9 41 24.0150

0,.015,0,.012,.020,.219,2442308,1975,5,32,
DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=

FK4-NR.,T(K),PRESS.,TEMP.=

3472,9,37,42.82,54.09,4.97,15.74,26.71,766,7.4,
3800,9,41,21.37,27.13,32.65,37.98,43.30,766,7.4,
1594,9,43,1.18,17.69,33.46,50.08,6.28,766,7.4,
3508,9,45,46.41,.27,14.60,28.64,42.50,766,7.5,
3389,9,50,23.35,28.80,34.64,40.26,45.72,766,7.4,
3833,9,51,38.61,44.14,49.37,55.04,.43,766,7.4,
3715,9,53,0,7.61,14.73,21.93,29.35,766,7.4,
3862,9,55,31.34,41.81,52.16,2.39,13.09,766,7.3,
882,9,56,58.87,6.26,13.24,20.48,27.58,766,7.3,
3365,9,58,17.26,22.45,27.99,33.08,38.46,766,7.2,
619,10,0,17.75,27.35,36.69,46,55,766,7.2,
3320,10,6,32.60,38.78,44.89,50.88,57,766,7.2,
3634,10,10,48.17,25.65,2.26,42.36,22.85,766,7.3,
3326,10,16,43.43,51.50,59.23,6.88,14.73,766,7.3,
3448,10,18,22.14,28.34,34.42,40.76,46.69,766,7.3,
1488,10,20,44.91,52.99,.75,8.08,15.88,766,7.3,
1462,10,23,25.11,30.54,35.95,41.27,46.50,766,7.2,
1590,10,24,35.31,41.25,47.33,52.96,59.24,766,7.2,
3377,10,26,40.47,46.07,51.60,56.73,2,766,7.2,
823,10,31,51.05,58.76,6.99,15.44,23.76,766,7.1,
3870,10,34,2.20,7.48,13.06,18.23,23.71,766,7,
675,10,37,51.77,9.89,28.15,46.33,3.98,766,6.9,
3585,10,40,49.41,4.13,18.90,32.65,46.67,766,6.8,
3381,10,45,30.51,36.21,42.10,47.94,53.85,766,6.8,
831,10,51,1.37,9.95,18.71,27.60,36.20,766,6.9,
1616,10,55,16.13,21.43,27.02,32.34,37.92,766,7.1,
3739,10,57,43.96,56.66,9.35,22.70,35.63,766,7.2,
3433,11,3,56.06,1.63,6.93,12.35,17.64,766,7.3,
893,11,5,48.14,7.93,27.20,46.77,6.25,766,7.3,
2022,11,9,9.25,15.21,20.84,26.50,32.57,766,7.2,
700,11,10,36.53,56.33,16.19,35.91,55.40,766,7.2,
2016,11,13,13.65,19.29,24.50,30.06,35.66,766,7.2,

STATION....:ROZENDAAL3 SEPT.20,1974

T0,(UTC-T0)=
2 0 59.4110 16 39 5.5900

0,.015,0,.012,.020,.219,2442310,1975,5,32,
DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=

FK4-NR.,T(K),PRESS.,TEMP.=

3472,2,21,19.36,33.33,47.21,.76,14.12,759,5.9,
621,2,23,46.53,51.82,57.20,2.92,8.40,759,5.9,
3844,2,24,48.16,56.64,5.12,13.96,22.41,759,5.8,
3384,2,28,42.88,13.16,44.08,13.59,42.99,759,5.7,
3657,2,32,31.86,41.52,51.82,1.91,11.57,759,5.6,
3800,2,36,23.09,28.21,33.74,39.30,44.64,759,5.6,
3314,2,39,41.95,47.16,52.87,58.45,3.92,759,5.6,
643,2,41,47.53,53.02,58.50,4.01,9.88,759,5.7,
3389,2,43,21.18,26.96,32.84,38.79,44.56,759,5.7,
3833,2,45,23.85,29.57,34.99,40.63,46.38,759,5.7,
3874,2,47,4.47,10.97,17.83,24.47,31.71,759,5.7,
681,2,48,18.37,25.49,32.46,39.84,47.23,759,5.7,
1593,2,49,49.16,10.87,31.85,54.02,16.12,759,5.8,
3373,2,53,50.13,55.23,.92,6.29,11.95,759,5.8,
1575,2,57,1.72,8.66,15.10,21.77,28.68,759,5.8,
835,2,59,12.39,18.58,24.51,30.88,36.64,759,5.8,
619,3,3,20.97,30.30,39.86,49.14,58.44,759,5.9,
1432,3,6,28.12,35.28,42.25,49.26,56.24,759,5.9,
895,3,9,8.14,17.04,25.54,34.52,43.50,759,6,
627,3,13,25.06,31.44,37.40,43.97,50.26,759,6,
3857,3,14,43.33,48.60,54.07,59.62,4.91,759,5.9,
3585,3,18,3.19,27.42,50.33,13.99,36.28,759,5.9,
3377,3,22,33.44,38.69,44.47,49.87,55.38,759,5.8,
3704,3,26,35.87,48.60,1.52,14.82,28.21,759,5.8,
3870,3,29,17.96,23.37,28.91,34.45,39.70,759,5.8,
1508,3,31,7.84,18.70,30.10,40.68,51.03,759,5.9,
823,3,33,58.60,7.77,16.83,25.96,35.24,759,5.9,
1549,3,37,5.79,39.28,15.60,53.95,32.06,759,5.9,
1622,3,40,45.39,50.80,56.26,1.86,7.36,759,6,
893,3,42,6.28,25.22,42.97,1.72,20.11,759,6,
639,3,45,43.47,51.46,59.98,7.95,16.14,759,6,
675,3,50,23.11,40.10,57.36,14.52,32.09,759,6.1,

STATION....:KOOTWIJK/P.EAST OCT. 10, 1974

T0,(UTC-T0)=
7 23 30.0000 10 25 35.2290

0,-.046,0,.012,.010,.232,2442330,1975,5,32,
D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=

FK4-NR.,T(K),PRESS.,TEMP.=

1593,7,41,57.57,19.10,40.92,1.93,23.62,758,4.8,
3291,7,46,15.28,21.79,28.70,35.18,42.01,758,4.8,
3365,7,48,23.60,29.09,34.77,40.06,45.60,758,4.8,
858,7,50,14.38,19.92,25.31,30.87,36.43,758,4.8,
1575,7,53,15.40,22.02,28.81,35.87,42.65,758,4.8,
3852,7,58,7.27,12.62,18.09,23.62,29.29,758,4.7,
619,8,0,10.02,19.33,28.40,37.91,47.03,758,4.6,
895,8,3,34,42.83,51.60,.37,9.36,758,4.5,
3448,8,5,9.03,15.51,21.91,28.26,34.80,758,4.5,
3585,8,9,30.23,58.42,26.05,53.21,19.96,758,4.3,
1462,8,13,39.22,44.88,50.30,55.67,1.25,758,4.2,
3518,8,15,43.05,52.10,1.09,9.65,18.81,758,4.1,
3377,8,18,14.68,20.34,25.75,31.08,36.83,758,4,
2005,8,21,51.89,59.54,7.19,14.83,22.72,758,3.9,
3704,8,24,8.08,22.04,35.77,49.52,3.07,758,3.8,
893,8,34,52.17,10.29,28.06,46.04,4.37,758,3.4,
1619,8,37,22.65,28.07,33.63,39.15,44.50,758,3.3,
3381,8,39,.09,6.12,12.07,18.14,24.13,758,3.3,
1498,8,40,44.97,52.22,59.77,6.94,14.41,758,3.2,
3370,8,44,47.93,55,2.89,10.18,17.55,758,3.1,
675,8,48,36.50,53.37,10.26,27.62,44.79,758,3,
831,8,50,50.65,.54,10.63,20.44,30.67,758,3.1,
3433,8,55,18.69,24.21,29.65,35.07,40.44,758,3,
2022,8,57,6.63,12.45,18.43,24.37,30.14,758,3,
1589,8,58,48.12,56.37,4.92,13.59,22.19,758,2.9,
3923,8,59,48.53,53.93,59.57,4.97,10.40,758,2.9,
3739,9,6,16.34,35.47,56.19,16.83,38,758,2.9,
760,9,12,48.88,59.85,11.07,22.39,33.48,758,2.9,
3506,9,16,.38,6.03,11.59,17.39,22.96,758,3,
3914,9,18,5.74,11.55,17.14,22.99,28.65,758,3,
2046,9,20,12.87,18.53,24.13,29.94,35.72,758,3,
700,9,23,5.48,22.83,42.13,59.40,18.08,758,3,

STATION....:KOOTWIJK/P.EAST NOV. 1 , 1974

T0,(UTC-T0)=
8 13 29.0000 8 36 30.9480

0,-.113,0,.012,-.012,.255,2442352,1975,5,16,
D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=

FK4-NR.,T(K),PRESS.,TEMP.=
869,8,28,41.38,46.61,52.27,57.52,2.91,760,1.7,
3909,8,30,59.86,6.20,12.46,19.29,25.51,760,1.6,
1462,8,36,13.32,18.78,23.99,29.51,34.82,760,1.4,
3518,8,38,17.30,26.23,34.75,43.62,52.51,760,1.3,
3704,8,46,41.08,55.51,8.86,22.78,36.99,760,1.1,
893,8,57,26.01,44.07,1.81,19.71,38.05,760,.8,
1619,8,59,56.48,1.80,7.40,12.90,18.33,760,.7,
891,9,1,21.64,27.04,32.69,38.12,43.65,760,.6,
1610,9,4,3.56,9.35,14.58,20.23,26.29,760,.6,
3370,9,7,21.51,29.05,36.44,43.71,51.11,760,.5,
675,9,11,8.90,26.45,43.94,.80,16.95,760,.3,
831,9,13,24.29,33.80,43.58,53.56,3.99,760,.2,
3433,9,17,52.56,57.82,3.53,8.93,14.43,760,.2,
760,9,35,22.70,33.89,45.27,56.26,7.49,760,.1,
3506,9,38,34.41,40.04,45.88,51.46,56.82,760,.1,
671,9,40,15.75,21.98,28.86,34.89,40.92,760,.1,

STATION....:KOOTWIJK/P.EAST NOV. 1 , 1974

T0,(UTC-T0)=
10 28 29.0000 8 36 30.9480

0,-.113,0,.012,-.012,.255,2442352,1975,5,16,
D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=

FK4-NR.,T(K),PRESS.,TEMP.=
2075,10,37,21.97,27.48,32.83,38.39,43.59,760,-.1,
3541,10,39,6.85,12.48,18.17,23.60,29.07,760,-.2,
3572,10,47,43.61,49.18,54.77,.12,5.43,760,-.4,
2112,10,58,5.17,10.55,16.27,21.80,27.06,760,-.5,
729,10,59,45.57,57.68,9.94,21.84,33.94,760,-.6,
42,11,4,10.16,16.12,21.58,27.46,33.16,760,-.6,
1629,11,6,14.30,24.40,35.35,45.47,55.51,760,-.6,
2139,11,17,50.21,7.75,24.99,42.61,59.66,760,-.7,
3668,11,20,24.66,30.84,36.70,42.76,48.82,760,-.7,
823,11,25,4.04,13.20,22.53,31.81,40.87,760,-.8,
2201,11,34,50.53,57.39,4.57,11.73,18.69,760,-.9,
43,11,37,29.87,36.76,43.67,50.48,57.25,760,-.9,
859,11,47,28.60,43.84,58.45,13.91,29.05,760,-1,
758,11,58,56.22,2.44,8.89,15.05,21.50,760,-1.1,
3666,12,2,19.18,24.60,30.26,35.66,40.96,760,-1.1,
2222,12,3,46.72,.06,13.48,26.41,39.13,760,-1.1,

STATION....:KOOTWIJK P.EAST MAY 27,1975

T0,(UTC-T0)=
5 9 5.0000 15 24 .2550

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
-.003,.292,0,.012,.075,.299,2442559,1975,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
557,5,29,7.41,15.70,23.68,31.94,40.12,766,15.1,
1282,5,35,3.06,8.67,14.15,19.47,25.16,766,14.9,
621,5,35,57.04,2.38,7.88,13.43,18.91,766,14.9,
2870,5,39,45.26,50.83,56.15,1.56,6.94,766,14.8,
3185,5,45,52.57,2.39,12.32,22.70,33.27,766,14.6,
659,5,47,33.25,42.42,51.26,.33,9.32,766,14.5,
2828,5,49,34.04,43.28,52.83,2.25,11.35,766,14.5,
3381,5,51,48.94,54.63,.53,6.50,12.35,766,14.4,
387,5,54,19.79,27.99,35.84,44.16,52.07,766,14.3,
398,5,57,13.81,20.11,26.51,32.93,39.24,766,14.3,
2839,6,0,24.98,32.23,40.04,48.35,55.90,766,14.2,
3151,6,5,28.20,3.18,39.18,17.77,56.26,766,14,
3377,6,9,28.70,34.03,39.60,45.09,50.55,766,13.9,
3072,6,10,59.72,12.90,25.79,38.82,51.67,766,13.9,
432,6,16,14.30,19.64,25.17,30.47,36.02,766,13.7,
3365,6,17,35,40.56,46.05,51.75,57.16,766,13.6,
2963,6,18,23.36,29.42,34.90,40.74,46.35,766,13.6,
3330,6,21,59.62,5.65,11.45,17.57,23.32,766,13.5,
3287,6,24,20.30,27.30,34.50,41.46,48.53,766,13.5,
685,6,28,34.73,42.66,50.33,57.97,5.99,766,13.5,
3045,6,32,49.71,57.39,4.99,12.83,20.64,766,13.4,
3373,6,34,18.30,23.97,29.20,34.79,40.54,766,13.4,
1322,6,36,12.18,18.12,24.33,30.12,36.16,766,13.4,
675,6,39,58.74,15.16,32.18,49.11,6.01,766,13.4,
3151,6,41,52.34,30.66,9.98,45.75,20.78,766,13.4,
3433,6,51,21.30,26.88,32.46,37.73,43.26,766,13.3,
458,6,52,34.35,39.73,45.14,50.75,56.09,766,13.2,
3484,6,53,15.95,23.34,30.56,37.81,44.95,766,13.2,
3475,6,55,21.48,27.64,33.84,40.17,46.63,766,13.1,
454,6,58,55.64,14.56,33.15,51.77,10.90,766,13.1,
447,7,9,21.26,27.07,33.24,39.14,45.30,766,13,
522,7,11,52.15,2.32,12.41,22.34,32.90,766,13,

STATION....:KOOTWIJK P.EAST MAY 28,1975

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TO,(UTC-TO)=
   8     1    50.0000     12    28    12.3240

DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
-.002,.285,0,.012,.078,.296,2442560,1975,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
557,8,20,59.33,7.24,15.44,23.53,31.87,764,11.3,
1318,8,24,12.59,21.52,31.37,40.21,48.83,764,11.2,
1282,8,26,55.48,.94,6.55,11.71,17.40,764,11.2,
621,8,27,48.81,54.24,59.86,5.30,10.69,764,11.1,
2870,8,31,37.41,42.74,48.44,53.94,59.44,764,11,
3185,8,37,43.74,52.93,3.92,14.74,24.66,764,10.9,
659,8,39,25.02,34.12,42.97,52.19,1.01,764,10.9,
2828,8,41,26.48,35.50,45.54,-4.70,4.19,764,10.8,
3381,8,43,40.63,46.63,52.39,58.33,4.35,764,10.8,
387,8,46,11.87,20.56,28.52,36.54,44.58,764,10.7,
398,8,49,6.03,12.38,18.79,24.87,31.33,764,10.6,
2839,8,52,17.33,24.98,32.79,40.63,48.28,764,10.5,
3151,8,57,18.18,52.70,30.29,8.04,46.50,764,10.4,
3377,9,1,20.39,25.79,31.19,36.81,42.35,764,10.3,
3072,9,2,52.65,5.27,18,31.38,44.24,764,10.2,
432,9,8,6.62,12.07,17.44,22.76,28.40,764,10.2,
3365,9,9,26.82,32.42,37.90,43.53,48.87,764,10.2,
2963,9,10,15.46,21.41,27.25,33.13,38.74,764,10.2,
3330,9,13,51.17,57.17,3.18,9.07,15,764,10.1,
3287,9,16,11.98,19.01,25.98,33.13,40.59,764,10.1,
685,9,20,26.61,34.48,41.93,49.66,57.62,764,10,
3373,9,26,10.24,15.91,21.32,26.85,32.34,764,9.9,
1322,9,28,4.43,10.66,16.52,22.82,28.55,764,9.9,
675,9,31,49.66,6.26,23.63,40.28,56.99,764,9.8,
3151,9,33,45.85,25.09,3.10,39.90,14.99,764,9.7,
2929,9,37,58.45,4.05,9.78,15.48,20.96,764,9.6,
3039,9,40,16.28,22.75,29.42,35.85,42.41,764,9.6,
3433,9,43,13.20,18.64,24.15,29.53,35.09,764,9.5,
458,9,44,26.50,32.04,37.57,43.18,48.59,764,9.5,
3484,9,45,7.59,14.76,22.11,27.77,36.65,764,9.5,
3475,9,47,13.08,19.43,25.78,32.02,38.44,764,9.4,
454,9,50,48.55,7.96,26.15,45.13,3.78,764,9.3,
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STATION....:OUD GASTEL JULY 28,1975

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TO,(UTC-TO)=
  21     5     5.0000     -0     0      .1980

DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.001,.154,0,.012,.136,.203,2442621,1976,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
3161,21,18,20.33,26.31,32.07,38.12,44.09,770,16.5,
1535,21,19,59.87,5.39,10.91,16.46,22.19,770,16.5,
3150,21,22,38.46,45.87,53.60,.86,8.13,770,16.5,
3179,21,26,26.66,32.01,37.99,43.51,48.93,770,16.5,
813,21,28,14.13,20.67,26.84,33.31,39.48,770,16.5,
573,21,33,36.23,41.68,46.97,52.32,57.82,770,16.5,
3633,21,35,40.62,46.81,52.86,59.15,5.03,770,16.5,
3294,21,38,11.08,17.35,23.75,30.05,36.24,770,16.5,
3701,21,40,22.91,28.34,33.75,39.38,44.61,770,16.5,
1523,21,41,27.55,35.01,42.57,49.99,57.42,770,16.5,
795,21,45,33.54,53.53,14.05,34.72,55.02,770,16.5,
3427,21,50,24.59,42.53,.84,18.73,35.79,770,16.5,
1423,21,53,52.59,58.18,3.77,9.30,14.86,770,16.4,
3587,21,56,44.46,53.34,2.87,12.52,22.02,770,16.4,
3400,22,0,13.83,24.07,34.87,45.44,56.08,770,16.3,
3730,22,4,15.72,21.32,26.70,32.30,37.52,770,16.3,
565,22,5,52.27,.87,10.16,18.59,27.24,770,16.2,
3797,22,9,55.70,3.59,11.48,19.55,27.23,770,16.1,
811,22,11,13.10,18.56,23.87,29.32,34.70,770,16.1,
3774,22,13,25.77,31.40,37.30,43.05,48.54,770,16,
3794,22,15,10.23,20.53,30.88,41.39,51.37,770,15.9,
3281,22,19,52.10,57.30,2.69,8.28,13.64,770,15.9,
3271,22,22,44.73,50.22,55.52,1,6.61,770,15.9,
760,22,24,59.81,9.85,19.66,29.76,40.06,770,15.8,
3240,22,26,32.31,41.60,51.73,1.06,11.02,770,15.8,
3585,22,28,25.10,42.02,58.92,16.06,33.10,770,15.8,
606,22,31,19.47,35.20,50.88,6.44,21.76,770,15.8,
851,22,35,7.18,19.64,31.98,44.55,57.01,770,15.8,
3778,22,39,46.41,52.18,57.32,2.81,8.21,770,15.8,
667,22,40,47.12,54.81,1.85,9.25,16.51,770,15.8,
621,22,42,18.81,24.15,29.74,34.99,40.42,770,15.8,
3472,22,46,7.25,19.15,31.60,43.58,55.32,770,15.8,
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STATION....:WORKUM JULY 29,1975

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TO,(UTC-TO)=
  20    28     5.0000     -0     0      .1700

DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.002,.151,0,.012,.136,.201,2442622,1976,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
3218,20,49,33.54,39.74,46.03,52.12,58.25,769,17.2,
3550,20,50,46.27,53.58,1,8.40,15.67,769,17.2,
3718,20,53,2.80,10.90,19.18,28.24,36.63,769,17.1,
1440,20,54,26.20,39.30,52.55,5.05,18.84,769,17.1,
3518,20,57,24.09,34.14,43.90,54.16,3.95,769,17,
1551,21,1,34.84,40.44,46.04,51.60,57.13,769,17,
1379,21,3,52.78,7.28,22.31,36.70,51.30,769,17.1,
3128,21,5,46.59,56.23,6.02,15.61,25.11,769,17.1,
795,21,7,13.53,31.71,50,8.19,26.52,769,17.2,
3627,21,11,51.09,57.04,3.15,9.20,15.20,769,17.2,
813,21,14,56.66,3.20,9.51,15.84,22.31,769,17.1,
3356,21,16,32.45,43.26,54.52,5.66,16.41,769,17.1,
792,21,18,52.84,58.20,3.54,9.41,14.82,769,17.1,
3179,21,20,58.78,4.48,10.24,15.73,21.55,769,17.1,
3150,21,23,13.49,20.76,28.46,35.73,43.26,769,17,
1395,21,25,33.97,39.99,45.21,50.76,56.68,769,17,
580,21,29,44.23,49.94,55.39,1.27,6.79,769,17,
3701,21,32,17.90,23.28,28.73,34.38,39.95,769,17.1,
3633,21,33,3.88,10.73,17.27,23.84,30.52,769,17.1,
3259,21,37,4.22,10,15.69,21.34,27.21,769,17.1,
837,21,39,47.28,58.15,9.38,20.38,31.37,769,17.1,
821,21,42,53.99,59.70,5.46,11.27,16.63,769,17.1,
1397,21,43,48.54,54.67,.87,6.70,12.98,769,17.1,
1508,21,45,39.31,53.12,6.60,19.90,33.80,769,17.1,
1460,21,51,50.27,.15,10.37,20.39,30.22,769,17.1,
1416,21,52,55.22,.84,6.46,11.86,17.60,769,17.1,
1412,21,54,.96,6.72,12.28,17.96,23.59,769,17,
3730,21,56,25.92,31.50,37.19,42.79,48.29,769,17,
634,22,2,24.62,31.62,38.37,45.34,52.07,769,17,
3587,22,4,16.33,29.05,41.42,53.91,6.80,769,17,
851,22,9,3.28,14.86,26.87,39.14,51.12,769,17,
569,22,11,20.50,31.44,42.09,53.16,4.08,769,17,
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STATION....:BOSSERG JULY 30,1975

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TO,(UTC-TO)=
  20    30     5.0000     -0     0      .1420

DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.001,.149,0,.012,.136,.199,2442623,1976,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
3218,20,42,8.48,14.26,20.41,26.53,32.54,768,18,
3718,20,45,43.76,51.93,.81,8.66,17.33,768,17.9,
1440,20,47,18.22,31.44,44.03,57.87,10.64,768,17.9,
3518,20,49,39.53,48.80,58.93,7.98,18.01,768,17.8,
1551,20,54,5.47,11.23,16.77,22.36,28,768,17.7,
1379,20,55,58.80,13.42,28.16,42.67,57.10,768,17.7,
3128,20,58,1.95,11.61,21.28,30.82,40.60,768,17.6,
795,21,0,14.34,32.76,50.99,8.99,27.86,768,17.6,
3627,21,4,15.96,21.83,27.81,34.16,39.99,768,17.5,
813,21,7,32.07,38.13,44.38,51.03,57.70,768,17.4,
3356,21,9,19.66,30.68,41.93,52.61,3.92,768,17.3,
792,21,11,21.90,27.40,32.89,38.64,44.18,768,17.2,
3179,21,13,26,31.53,37.51,43.06,48.72,768,17.2,
3150,21,15,33.70,41.42,48.87,56.30,3.99,768,17.1,
1395,21,18,1.92,7.53,13.04,18.68,24.42,768,17,
580,21,22,15.44,21.01,26.55,32.28,37.60,768,16.9,
3701,21,24,46.63,52.52,58.06,3.70,9.10,768,16.8,
3633,21,25,27.10,33.49,39.91,46.63,53.38,768,16.8,
3259,21,29,36.61,42.43,48.20,53.91,59.28,768,16.6,
837,21,32,33.51,44.60,55.99,7.14,18.07,768,16.5,
821,21,35,25.31,31.06,36.88,42.23,48.10,768,16.4,
1397,21,36,13.43,19.76,25.72,31.81,37.68,768,16.4,
1508,21,37,45.69,59.02,12.28,26,39.50,768,16.3,
1534,21,43,.08,6.91,14.11,20.98,28.08,768,16.2,
1460,21,44,35.25,45.66,55.37,5.36,15.42,768,16.2,
1412,21,46,29.37,35.10,40.82,46.36,51.97,768,16.1,
3730,21,48,54.86,.52,5.82,11.67,17.23,768,16.1,
634,21,55,1.65,8.71,15.52,22.46,29.26,768,16.1,
3587,21,56,25.24,37.49,50.2,14.64,768,16,
851,22,1,51.43,3.41,15.32,27.49,39.67,768,16,
569,22,3,32.88,44.10,55.20,5.72,17.02,768,16,
3271,22,8,25.90,31.59,37.14,42.71,48.32,768,15.9,
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STATION....:VENRAY AUG.1,1975

TO,(UTC-TO)=
20 40 5.0000 -0 0 .0870

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.001,.145,0,.012,.136,.195,2442625,1976,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
3161,20,56,24.18,30.07,36.11,41.85,47.86,768,18.1,
1535,20,58,7.45,12.78,18.45,23.75,29.71,768,18.1,
3150,21,0,31.22,38.53,46.07,53.44,.75,768,18,
3179,21,4,34.67,40.14,45.92,51.50,57.08,768,17.9,
813,21,6,42.52,48.92,55.16,1.45,7.67,768,17.8,
573,21,11,52.45,57.86,3.35,8.73,14.10,768,17.7,
3633,21,13,42.30,48.53,54.68,.90,6.83,768,17.7,
3294,21,16,39.63,46.19,52.44,58.47,5.18,768,17.6,
3701,21,18,38.14,43.45,48.80,54.20,59.54,768,17.5,
1523,21,19,20.18,27.53,34.72,42.09,49.46,768,17.5,
795,21,25,9.60,30.59,51.11,11.08,31.74,768,17.5,
3427,21,29,51.77,8.95,26.50,43.29,.54,768,17.4,
1423,21,32,13.60,18.96,24.48,30.20,35.83,768,17.4,
3587,21,34,24.47,33.71,43.36,53.01,2.48,768,17.4,
3400,21,39,6.91,17.35,27.66,37.82,48.67,768,17.4,
3730,21,42,30.48,35,80,41.18,46.51,52.07,768,17.4,
565,21,43,37.64,46.41,55.35,4.08,12.59,768,17.4,
3797,21,48,34.38,42.02,49.72,57.94,5.75,768,17.3,
811,21,49,24.81,30.14,35.62,41.14,46.39,768,17.3,
1460,21,50,33.59,42,50.32,58.63,6.88,768,17.2,
3794,21,54,1.12,11.52,22.15,32.60,43.09,768,17.2,
3281,21,58,6.87,12.27,17.71,23.05,28.20,768,17.2,
3271,22,0,56.24,1.82,7.09,12.35,18.02,768,17.1,
760,22,2,37.86,47.98,58.23,8.06,18.01,768,17.1,
3240,22,4,13.28,22.79,32.50,42.48,51.91,768,17,
3585,22,5,31.64,48.35,4.83,21.62,37.98,768,17,
606,22,8,32.18,48.18,3.76,19.54,34.77,768,16.9,
848,22,13,7.89,13.66,19.13,24.87,30.21,768,16.9,
851,22,14,8.25,20.69,33.43,46.32,58.91,768,16.8,
3778,22,18,.94,6.20,11.59,16.90,22.33,768,16.8,
621,22,20,33.71,38.90,44.36,49.70,55.24,768,16.8,
3472,22,25,7.92,19.68,31.60,43.66,55.40,768,16.7,

STATION....:ZALTBOMMEL AUG.2,1975

TO,(UTC-TO)=
20 43 5.0000 -0 0 .0590

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.002,.143,0,.012,.136,.194,2442626,1976,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
3594,20,55,28.11,34.46,40.98,47.41,53.70,771,17.6,
3287,20,57,52.13,59.27,6.49,13.20,20.37,771,17.5,
3150,21,1,11.51,18.80,26.84,34.23,41.33,771,17.4,
792,21,4,4.40,9.56,15.13,20.48,26.22,771,17.4,
1572,21,6,19.02,26.29,33.12,40.03,46.81,771,17.4,
573,21,10,40.40,45.85,51.34,56.73,2.02,771,17.4,
3508,21,12,31.04,49.13,7.07,26.34,44.90,771,17.4,
795,21,17,32.71,53.07,12.48,32.82,52.96,771,17.3,
1523,21,20,.18,7.91,15.41,22.90,30.62,771,17.2,
3427,21,22,39.37,.09,20.56,41.19,.96,771,17.2,
590,21,25,28.46,48.10,7.74,26.98,46.57,771,17.1,
554,21,28,29.03,37.24,45.27,53.87,2.03,771,17,
821,21,29,45,50.64,56.42,2.01,7.48,771,17,
1423,21,30,39.31,44.89,50.63,56.14,1.87,771,16.9,
1558,21,33,3.01,8.23,13.60,18.96,24.62,771,16.9,
3400,21,34,57.14,8.19,18.82,30.08,40.96,771,16.8,
3587,21,36,2.31,11.82,22,32.13,41.94,771,16.8,
1412,21,37,57.20,2.50,7.96,13.53,19.13,771,16.7,
3730,21,41,24.87,30.24,35.48,41.17,46.49,771,16.8,
569,21,43,5,16.10,27.53,38.49,49.54,771,16.8,
3797,21,45,33.23,41.03,48.96,57.12,4.66,771,16.9,
811,21,48,32.48,37.78,43.30,48.51,54.09,771,16.9,
3794,21,50,.87,10.72,20.86,31.47,41.25,771,17,
1559,21,53,24.21,30.08,35.87,41.69,47.42,771,17,
3293,21,55,9.93,15.52,20.88,26.13,31.87,771,16.9,
3247,21,57,5.42,11.21,16.85,22.88,28.76,771,16.9,
844,21,59,8.08,13.86,19.80,25.57,31.29,771,16.9,
3415,22,0,34.26,43.21,52.69,1.56,10.50,771,16.8,
601,22,2,38.02,43.50,48.96,54.39,59.62,771,16.8,
760,22,4,27.72,37.50,48.06,58.65,8.97,771,16.7,
3240,22,5,50.53,.04,9.42,19.32,28.82,771,16.7,
1446,22,8,50.56,56.67,2.71,8.65,14.44,771,16.6,

STATION....:KOOTWIJK P.EAST AUG.3,1975

TO,(UTC-TO)=
20 4 5.0000 -0 0 .0280

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.001,.141,0,.012,.136,.192,2442627,1976,5,31,

FK4-NR,T(K),PRESS.,TEMP.=
1498,20,14,53.74,1.43,8.65,15.85,23.39,767,21.6,
511,20,18,36.91,44.67,52.81,.55,8.06,767,21.5,
3599,20,20,4.36,9.94,15.59,21.20,27.02,767,21.5,
528,20,22,52.40,58.08,3.92,9.84,15.53,767,21.4,
540,20,25,12.86,18.27,23.85,29.30,34.78,767,21.3,
3182,20,26,49.90,55.54,1.06,6.47,12.01,767,21.2,
1379,20,29,45.53,.38,15.38,30.28,44.82,767,21.2,
3472,20,32,47.87,1.95,16.17,30.91,45.01,767,21.1,
3155,20,36,7.29,12.82,18.58,24.18,29.97,767,21,
3718,20,38,3.36,11.76,20.50,28.54,37.35,767,21,
1551,20,41,18.75,24.44,29.62,35.42,40.92,767,20.9,
3655,20,42,48.87,54.07,59.49,5.04,10.63,767,20.9,
1440,20,43,33.91,44.70,56.03,6.90,17.88,767,20.8,
3287,20,49,47.16,53.95,1.17,8.01,15.22,767,20.7,
817,20,57,32.83,43.49,54.02,4.94,15.28,767,20.4,
788,21,0,4.77,10.18,15.60,21.14,26.61,767,20.4,
795,21,3,11.76,30.74,49.93,9.09,28.03,767,20.3,
3427,21,5,42.83,14.42,45.54,15.72,44.35,767,20.3,
580,21,9,18.31,23.69,29.41,34.76,40.21,767,20.2,
549,21,13,48.91,55.52,2.39,9.02,15.76,767,20.1,
3508,21,15,12.62,36.96,1.54,26.92,52.50,767,20.1,
3229,21,19,41.11,58.80,16.49,34.76,52.62,767,20,
821,21,23,.70,6.39,12.07,17.66,23.53,767,19.9,
1534,21,25,33.79,40.47,47.32,54.20,.82,767,19.8,
837,21,27,57.23,8.56,19.58,30.83,42.19,767,19.8,
1416,21,32,.61,6.09,11.70,17.09,22.49,767,19.7,
3587,21,33,39.65,49.87,.35,11.01,21.88,767,19.7,
3730,21,35,15.14,20.73,26.15,31.59,36.99,767,19.6,
1460,21,38,6.97,16.02,25.21,33.79,43.18,767,19.6,
569,21,41,9.02,19.81,31.36,42.15,53.39,767,19.5,
1441,21,42,25.68,32.16,38.33,44.69,51.02,767,19.5,

STATION....:KOOTWIJK P.EAST AUG.4,1975

TO,(UTC-TO)=
20 0 5.0000 0 0 .0060

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.002,.139,0,.012,.136,.190,2442628,1976,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
1498,20,10,58.27,5.46,12.56,19.86,27.74,764,23.8,
511,20,14,40.69,48.15,56.75,4.35,12.45,764,23.7,
3599,20,16,8.44,14.25,19.75,25.43,31.11,764,23.7,
528,20,18,56.36,1.98,7.94,13.59,19.42,764,23.6,
540,20,21,16.75,22.20,27.60,33.22,38.60,764,23.6,
3182,20,22,53.87,59.44,4.88,10.76,16,764,23.5,
1379,20,25,48.75,4.20,18.85,33.78,48.36,764,23.4,
3472,20,28,52.17,6.04,20.46,35,49.11,764,23.3,
3155,20,32,11.31,16.68,22.52,28.16,33.54,764,23.3,
3718,20,34,7.78,16.10,24.74,33.46,41.56,764,23.2,
1551,20,37,23.09,28.69,33.99,39.80,45.22,764,23.2,
3655,20,38,52.81,58.50,3.85,9.55,14.60,764,23.2,
1440,20,39,38.20,48.88,59.73,10.73,21.81,764,23.2,
817,20,53,37.88,47.85,58.59,9.43,19.51,764,23.1,
788,20,56,8.90,14.18,19.69,25.48,30.69,764,23.1,
795,20,59,15.81,35.54,54.46,13.65,33.45,764,23,
3427,21,1,46.35,17.70,48.52,19.13,47.25,764,23,
580,21,5,22.07,27.43,33.30,38.51,44.11,764,23,
549,21,9,52.74,59.38,6.14,12.98,19.55,764,23,
3508,21,11,17.02,41.60,5.98,31.36,57.33,764,23,
3229,21,15,44.26,2.01,19.64,38.01,55.66,764,23.1,
821,21,19,5.02,10.66,16.29,21.71,27.50,764,23.1,
1534,21,21,38.34,44.74,51.46,58.48,5.11,764,23.1,
837,21,24,2.04,12.98,23.89,35.35,46.78,764,23.1,
1416,21,28,4.39,9.84,15.47,20.79,26.39,764,23,
3587,21,29,43.92,54.20,5.07,15.27,26.10,764,23,
3730,21,31,19.37,24.97,30.39,35.62,41.38,764,23,
1460,21,34,10.56,19.57,28.56,37.70,46.66,764,23,
569,21,37,12.44,23.24,34.68,45.51,56.43,764,23,
1441,21,38,29.33,35.87,41.97,48.56,54.85,764,23,
847,21,41,35.45,32.31,30.36,45.22,51.63,764,22.9,
3375,21,45,9.12,16.06,23.43,30.44,37.68,764,22.9,

STATION....:AMERSFOORT AUG.6,1975

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TO,(UTC-T0)=
  20   49     4.0000      0     0      .0910

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.003,.139,0,.012,.136,.190,2442630,1976,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
795,20,53,33.68,53.44,12.19,31.66,51.25,769,25.3,
3427,20,56,24.76,55.38,24.78,54.54,23.02,769,25.2,
580,20,59,12.86,18.42,23.96,29.52,35.01,769,25.2,
549,21,3,36.81,43.50,50.18,56.81,3.46,769,25.1,
3508,21,4,29.90,54.26,17.81,42.94,7.26,769,25,
3229,21,9,7.60,25.78,43.74,1.26,19.44,769,24.8,
821,21,12,56.30,2.16,7.78,13.56,19.30,769,24.7,
1534,21,15,21.51,28.20,34.98,41.78,48.41,769,24.6,
837,21,18,6.37,17.84,28.96,40.35,51.21,769,24.5,
1416,21,21,54.65,.02,5.46,10.90,16.50,769,24.5,
3587,21,23,19.33,29.82,40.21,50.85,1.36,769,24.5,
3730,21,25,9.17,14.64,19.96,25.41,30.97,769,24.5,
1460,21,28,11.96,20.93,30.11,38.64,48.09,769,24.4,
569,21,30,47.41,58.34,9.89,20.77,31.56,769,24.4,
811,21,32,32.83,38.41,43.77,49.44,54.98,769,24.4,
847,21,35,20.60,27.20,33.87,40.36,46.66,769,24.4,
3714,21,36,52.42,58.24,3.60,9.39,15.05,769,24.5,
853,21,39,2.72,10.27,17.52,24.58,32.63,769,24.5,
3415,21,41,12.84,22.20,31.89,41.24,50.74,769,24.6,
601,21,46,33.49,38.92,44.29,49.72,55.07,769,24.5,
851,21,48,29.58,41.99,53.53,6.09,18.86,769,24.4,
1446,21,51,33.31,39.44,45.52,51.37,57.35,769,24.3,
3240,21,52,49.32,58.80,8.45,18.22,27.43,769,24.2,
848,21,54,37.94,43.56,49.36,54.82,.58,769,24.2,
786,21,57,2.10,9.45,17.33,25.09,32.55,769,24.1,
3508,21,59,55.25,20.49,44.85,9.22,32.87,769,24,
595,22,1,55.52,1.61,7.69,13.62,19.62,769,24,
3397,22,10,9.08,15.79,22.31,28.62,35.39,769,24.1,
3657,22,13,6.69,16.79,27.02,37.12,47.03,769,24.1,
3800,22,15,48.03,53.43,59.12,4.53,9.90,769,24.1,
3314,22,19,13.18,18.66,24.47,29.82,35.46,769,24.1,
3276,22,22,56.79,5.96,14.69,23.51,32.55,769,24.1,
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STATION....:BERKHEIDE AUG.7,1975

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TO,(UTC-T0)=
  20   33     4.0000      0     0      .1430

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.002,.133,0,.012,.136,.185,2442631,1976,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
795,20,53,9.28,28.37,47.90,8.27,26.41,768,22.1,
3427,20,55,45.99,17.30,47.24,17.68,45.84,768,21.9,
580,20,59,14.17,19.76,25.27,30.75,36.28,768,21.8,
549,21,3,44.12,51.17,57.79,4.36,10.97,768,21.6,
3508,21,5,3.56,27.59,51.93,17.18,42.89,768,21.6,
3229,21,9,33.92,51.72,10.04,28.02,45.68,768,21.5,
821,21,12,56.43,2.19,7.56,13.38,18.90,768,21.4,
1534,21,15,28.60,35.28,42.01,48.88,55.68,768,21.3,
837,21,17,54.53,5.46,16.86,28.33,39.52,768,21.3,
1416,21,21,56.48,2.04,7.61,13.23,18.44,768,21.3,
3587,21,23,33.34,43.64,54.06,4.91,15.26,768,21.3,
3730,21,25,10.78,16.21,21.84,27.09,32.60,768,21.3,
1460,21,28,4.09,13.06,22.40,31.59,40.39,768,21.2,
569,21,31,3.43,14.41,25.23,36.44,47.06,768,21.2,
811,21,32,35.47,40.85,46.55,52.05,57.60,768,21.2,
847,21,35,17.50,23.86,30.30,37.04,43.72,768,21.2,
3714,21,36,56.36,1.97,7.47,13.23,18.87,768,21.3,
853,21,38,57.14,4.40,12.05,19.67,27.23,768,21.3,
3415,21,41,3.80,13.22,23.08,32.64,42.06,768,21.4,
601,21,46,35.98,41.75,47.10,52.44,57.79,768,21.3,
851,21,48,16.07,28.27,40.20,52.98,4.98,768,21.3,
1446,21,51,32.05,38.14,44.20,50.25,55.85,768,21.2,
3240,21,53,2.15,11.88,21.59,31.53,41.23,768,21.2,
848,21,54,37.62,43.17,48.74,54.49,59.90,768,21.2,
786,21,57,11.12,18.69,26.25,34.04,41.71,768,21.1,
3508,21,59,23.89,49.39,15,39.68,3.63,768,21.1,
595,22,2,1.44,7.35,13.56,19.32,25.48,768,21.1,
3585,22,3,8.65,35.85,2,29.76,56.78,768,21,
3397,22,10,6.39,12.80,19.33,26.19,32.54,768,21,
3384,22,12,53.86,22.89,52.03,20.57,49.38,768,21.1,
3800,22,15,50.02,55.32,.86,6.28,11.63,768,21.1,
3314,22,19,16.66,22.15,27.46,33.06,38.56,768,21.2,
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STATION....:MONNICKENDAM AUG.18,1975

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TO,(UTC-T0)=
  20    6    60.0000      0     0      .9450

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.002,.109,0,.012,.136,.167,2442642,1976,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
1523,20,22,12.33,20.07,28.28,35.94,44.29,767,12.1,
3400,20,24,51.16,4.60,17.50,29.88,42.33,767,12.1,
1423,20,27,20.28,25.91,31.50,37.37,43,767,12.2,
837,20,28,48.84,59.70,10.95,22.03,33.53,767,12.2,
836,20,30,25.77,32.40,38.82,45.35,51.73,767,12.2,
554,20,31,10.40,18.59,26.74,34.94,43.26,767,12.2,
3763,20,32,21.02,26.88,32.90,38.88,44.52,767,12.2,
1416,20,36,2.78,8.45,14,19.52,25.09,767,12.2,
3730,20,39,21.13,26.73,32.18,37.81,43.40,767,12.2,
3587,20,40,49.50,.26,11.39,22.69,33.39,767,12.2,
1441,20,45,24.77,31.55,37.74,44.20,50.68,767,12.1,
811,20,46,59.53,4.96,10.69,16.21,21.66,767,12.1,
569,20,48,24.75,35.47,46.88,58.09,8.37,767,12.1,
3714,20,51,37.20,43.02,48.55,54.46,.17,767,12.1,
3281,20,54,51.05,56.33,1.95,7.40,12.85,767,12,
3247,20,56,37.33,43.16,49.11,54.93,.77,767,12,
851,20,58,46.40,58.67,11,23.20,35.13,767,11.9,
601,21,0,53.64,59.04,4.89,10.29,15.66,767,11.9,
1468,21,3,38.01,47.34,56.76,5.86,15.56,767,11.8,
3457,21,8,.64,13.33,25.35,37.85,50.14,767,11.8,
1594,21,9,9.14,24.45,39.07,55,9.74,767,11.7,
626,21,12,4.56,9.81,15.61,21.18,26.57,767,11.7,
3799,21,13,54.06,59.78,5.18,10.90,16.33,767,11.8,
3778,21,14,56.66,2.09,7.62,13.21,18.47,767,11.8,
3611,21,16,19.66,36.02,52.27,8.28,23.96,767,11.9,
3716,21,17,56.97,3.45,9.57,15.80,22.58,767,11.9,
606,21,21,12.12,26.90,41.73,56.82,11.63,767,12.1,
598,21,28,26.13,32.37,39.54,45.92,52.48,767,12,
3657,21,30,25.69,35.73,46.63,57.22,7.88,767,11.9,
674,21,33,25.31,32.70,39.82,46.59,54.05,767,11.9,
882,21,38,23.77,30.65,38.10,45.30,52.27,767,11.8,
3276,21,39,39.49,48.24,56.94,6.13,15.21,767,11.8,
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STATION....:RODSENDAAL3 AUG.26,1975

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TO,(UTC-TC)=
  19   58    60.0000      0     0     1.4740

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.002,.092,0,.012,.134,.157,2442650,1976,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
3714,20,15,35.48,41.18,46.80,52.64,58.14,767,11.2,
3305,20,17,56.20,18.79,42.51,5.75,29.79,767,11.1,
3247,20,20,19.80,25.66,31.81,37.46,43.15,767,11.1,
3415,20,21,13.67,23.07,32.50,41.86,51.20,767,11.1,
601,20,25,25.68,31.07,36.70,42.49,47.78,767,11,
851,20,28,58.20,10.46,23.17,35.54,47.90,767,10.9,
3303,20,34,40.18,45.63,50.79,56.43,2.09,767,10.7,
3585,20,38,12.05,34.76,57.76,21.25,44.52,767,10.6,
612,20,46,35.15,50.58,5.43,20.38,35.32,767,10.6,
3839,20,47,53.74,.42,6.55,12.92,19.30,767,10.5,
3397,20,49,36.12,42.72,48.96,55.82,2.58,767,10.5,
1583,20,50,57.67,3.24,8.82,14.18,19.81,767,10.5,
3800,20,54,43.88,49.34,54.70,59.94,5.61,767,10.6,
3314,20,58,2.75,8.39,13.74,19.40,24.84,767,10.7,
3862,20,59,43.19,53.34,3.77,14.45,24.39,767,10.7,
882,21,5,27.77,34.87,42.11,49.17,56.38,767,10.8,
681,21,6,39.99,47.03,54.21,1.82,8.78,767,10.8,
1593,21,8,12.11,34.26,55.83,17.91,39.45,767,10.7,
3715,21,11,53.06,.69,8.63,16.29,24.35,767,10.7,
858,21,12,58.01,3.43,8.97,14.52,19.88,767,10.7,
835,21,17,33.23,38.93,45.22,51.24,57.39,767,10.6,
619,21,21,41.10,50.42,59.99,9.37,18.32,767,10.5,
1432,21,24,48.78,55.87,2.71,9.53,16.56,767,10.4,
1488,21,27,57.66,6.07,14.54,22.99,31.40,767,10.3,
627,21,31,46.02,52.31,58.74,4.76,11.22,767,10.3,
3857,21,33,4.18,10.05,15.23,20.87,25.95,767,10.3,
1462,21,36,30.25,35.71,41.09,46.80,52.29,767,10.3,
3768,21,39,23.80,30.92,38.26,45.09,52.12,767,10.2,
3897,21,40,47.93,53.57,59.44,5,10.86,767,10.2,
672,21,43,7.70,13.43,19.30,24.78,30.22,767,10.2,
3704,21,44,55.09,7.46,21.38,33.49,47.46,767,10.2,
1508,21,49,30.92,41.55,52.56,3.42,14,767,10.2,
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STATION....:WINTERSWIJK AUG.27,1975

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TO,(UTC-TO)=
  20     4     3.0000       0     0     1.5420

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.002,.088,0,.012,.133,.155,2442651,1976,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
3714,20,8,36.73,42.50,48,53.77,59.56,771,16.8,
3305,20,9,13.68,37.43,.83,24.65,47.38,771,16.9,
3247,20,13,18.11,24.02,29.70,35.41,41.26,771,16.9,
3415,20,14,58.70,8.24,17.64,26.56,35.90,771,16.9,
601,20,18,31.97,37.58,42.97,48.53,53.88,771,17,
851,20,23,.89,13.32,25.63,38.16,49.59,771,16.9,
3303,20,27,49.46,54.85,.38,5.70,11.16,771,16.8,
3585,20,29,36.17,58.35,20.53,42.53,4.62,771,16.8,
3778,20,32,46.34,51.70,57.11,2.66,7.98,771,16.7,
3472,20,33,51.17,4.63,18.14,31.34,44.62,771,16.7,
3508,20,36,57.93,18.97,39.80,.71,20.73,771,16.7,
612,20,38,35.36,50.32,5.31,20.22,35.30,771,16.6,
3839,20,41,17.98,24.14,30.30,36.62,43.14,771,16.6,
3397,20,43,2.13,8.48,15.36,21.40,28.39,771,16.6,
1583,20,44,2.26,7.70,13.12,18.64,24.16,771,16.5,
3800,20,47,52.21,57.67,2.93,8.43,13.85,771,16.5,
3314,20,51,7.10,12.49,18.22,23.73,29.32,771,16.5,
3862,20,53,34.81,44.68,54.97,5.32,15.83,771,16.5,
882,20,58,59.24,6.34,13.44,20.85,27.87,771,16.5,
681,21,0,11,18.16,25.37,32.60,39.64,771,16.5,
1593,21,3,3.65,26.04,47.40,9.61,31.57,771,16.4,
1575,21,8,11.42,18.24,24.90,31.40,37.98,771,16.4,
835,21,10,28.30,34.31,40.34,46.46,52.49,771,16.3,
619,21,14,12.24,21.71,30.83,40.56,49.57,771,16.2,
1432,21,17,35.75,42.58,50.12,56.82,3.92,771,16.1,
627,21,24,38.69,45.09,51.15,57.60,3.95,771,15.8,
3857,21,26,12.98,18.63,23.99,29.35,34.81,771,15.7,
1462,21,29,40.44,46.03,51.46,56.93,2.19,717,15.7,
3768,21,32,9.44,16.49,23.53,30.57,37.76,771,15.7,
3897,21,34,4.22,9.89,15.60,21.33,26.90,771,15.7,
672,21,36,23.11,28.42,34.25,39.73,45.67,771,15.8,
3704,21,37,6.79,19.20,31.81,45.13,57.92,771,15.8,
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STATION....:LEMELERBERG AUG.28,1975

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TO,(UTC-TO)=
  19    43    60.0000       0     0     1.6090

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.003,.087,0,.012,.133,.153,2442652,1976,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
1460,19,54,49.40,58.94,8.34,17.55,26.97,760.5,20,
3794,19,56,19.05,29.91,40.22,50.02,.43,760.5,20,
1441,20,0,32.34,38.97,45.12,51.97,58.16,760.5,19.8,
811,20,2,11.88,17.04,23.01,28.25,33.84,760.5,19.8,
847,20,3,24.32,30.67,37.16,43.92,50.66,760.5,19.7,
3714,20,6,50.47,56.25,1.98,7.79,13.48,760.5,19.7,
3415,20,7,34.05,43.84,54.06,4.05,13.94,760.5,19.7,
3281,20,10,2.21,7.66,13.16,18.42,24.18,760.5,19.7,
3247,20,11,51.02,56.80,2.94,8.54,14.56,760.5,19.7,
851,20,13,45.42,57.46,9.56,21.90,34.01,760.5,19.7,
601,20,16,5.54,11,16.53,22.16,27.54,760.5,19.7,
3305,20,19,40.56,2.58,25.09,46.83,8.54,760.5,19.6,
3457,20,22,59.64,11.58,23.85,36.56,49.07,760.5,19.6,
760,20,25,10.78,22.65,34.98,46.55,58.74,760.5,19.5,
626,20,27,14.39,20.04,25.91,31.09,36.86,760.4,19.5,
3799,20,29,4.47,10.17,15.65,21.06,26.90,760.4,19.4,
3778,20,30,8.23,13.79,19.22,24.86,30.24,760.4,19.4,
3611,20,31,48.08,4.38,20.90,37.70,54.40,760.4,19.4,
3716,20,33,12.86,18.59,24.91,31.51,37.83,760.4,19.3,
606,20,36,39.03,54.78,9.25,23.94,39.56,760.4,19.3,
3397,20,38,7.69,14.30,20.93,27.60,34.39,760.4,19.4,
612,20,44,12.50,27.04,42,56.74,11.22,760.4,19.5,
3657,20,45,47.49,58.19,8.87,19.64,30.39,760.4,19.5,
1593,20,48,5.34,26.39,47.03,7.97,28.88,760.3,19.4,
643,20,49,46.66,52.64,58.33,3.95,9.82,760.3,19.4,
882,20,53,29.78,36.96,44.16,51.23,58.79,760.3,19.4,
3276,20,54,58.94,7.66,16.62,25.72,34.64,760.3,19.5,
614,20,59,50.93,56.96,3.04,9.11,15.46,760.3,19.4,
3365,21,1,25.67,31.14,36.67,42.14,47.59,760.3,19.3,
1604,21,2,28.17,33.55,39.31,44.94,50.67,760.2,19.3,
858,21,3,36.33,41.66,47.32,52.78,58.38,760.2,19.2,
3715,21,5,19.83,27.83,36.03,44.22,52.08,760.2,19.1,
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STATION....:KLIFSBERG SEPT.21,1975

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TO,(UTC-TO)=
  18    25    60.0000       0     0     3.5280

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.003,.030,0,.012,.097,.125,2442676,1976,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
1594,19,13,35.68,52.06,8.47,25.07,41.30,769,8.5,
3508,19,16,21.01,34.90,49.08,2.71,16.79,769,8.3,
643,19,18,43.50,49.12,54.33,59.52,5.38,769,8.1,
875,19,21,1.59,7.71,13.93,20.09,26.61,769,7.9,
1434,19,23,.06,5.55,11.12,16.55,21.94,769,7.8,
3862,19,26,4.61,15.05,25.96,36.13,46.93,769,7.7,
3776,19,27,46.85,52.75,58.38,4.07,9.69,769,7.8,
3365,19,28,48.99,54.40,59.62,5.06,10.33,769,7.8,
858,19,29,49.47,54.66,.03,5.37,10.76,769,7.8,
619,19,30,47.74,56.67,6.22,15.70,25.27,769,7.8,
835,19,31,59.10,4.88,10.63,16.59,22.52,769,7.8,
3320,19,37,3.31,9.55,15.79,21.93,28.14,769,7.9,
869,19,45,50.72,56.01,1.33,6.76,12.23,769,7.7,
3326,19,47,13.89,21.45,29.44,37.47,45.30,769,7.7,
3448,19,48,54.88,.73,7.06,13.15,19.20,769,7.6,
3857,19,50,19.79,25.06,30.39,35.65,40.95,769,7.5,
1488,19,51,18.37,26,33.77,41.42,48.76,769,7.5,
1462,19,53,57.06,2.56,7.72,13.09,18.36,769,7.4,
3377,19,57,12.12,17.29,22.62,28.26,33.70,769,7.3,
3897,19,59,37.86,43.31,48.79,54.67,.34,769,7.3,
1565,20,2,43.75,54.63,5.37,16.68,28.04,769,7.2,
675,20,8,18.98,37.06,55.40,12.85,31.33,769,7.2,
3585,20,11,25.77,39.93,54.18,8.21,22.61,769,7.2,
1508,20,15,31.12,40.67,50.46,59.53,8.68,769,7.2,
891,20,18,46.31,51.80,57.01,2.62,8.02,769,7.2,
831,20,21,31.06,39.60,48.71,57.22,5.90,769,7.2,
3739,20,28,11.57,24.32,37.77,50.83,3.78,769,7.2,
1589,20,31,24.53,32.27,39.97,47.72,55.27,769,7.1,
16,20,34,55.65,2.80,10.21,17.30,24.70,769,7.1,
893,20,36,25.44,44.60,4.45,24.13,43.52,769,7.1,
684,20,39,27.80,33.02,38.45,43.65,48.89,769,7,
700,20,41,2.97,22.83,42.69,2.18,22.05,769,7,
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STATION....:NEDERWEERT SEPT.22,1975

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TO,(UTC-TO)=
  18    40    60.0000       0     0     3.6240

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.004,.027,0,.012,.095,.123,2442677,1976,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
3778,18,54,24.17,29.57,34.74,40.17,45.55,772,13.5,
621,18,56,56.05,1.26,6.66,12.05,17.46,772,13.4,
3657,18,58,45.71,54.81,3.75,12.68,21.16,772,13.2,
3289,19,1,35.10,47.93,.41,12.89,25.61,772,13.2,
3472,19,4,30.05,41.26,52.56,4.08,15.04,772,13.2,
3397,19,7,27.66,34.19,40.30,46.57,52.81,772,13.1,
1594,19,9,2.94,18.64,34.96,51.02,7.03,772,13.1,
3508,19,12,3.48,17.98,32.75,47.23,2.01,772,13.1,
643,19,16,11.06,16.58,22.16,27.64,33.14,772,13.1,
875,19,18,12.31,18.61,24.80,31.32,37.67,772,13.1,
3833,19,19,38.30,43.71,49.26,54.86,.26,772,13.2,
1434,19,20,51.74,57.11,2.76,8.25,13.72,772,13.2,
3862,19,22,26.44,36.25,46.87,57.60,7.96,772,13.2,
3365,19,26,25.04,30.14,35.81,40.90,46.26,772,13.2,
858,19,27,30.23,35.58,40.82,46.30,51.58,772,13.2,
619,19,29,34.19,43.46,52.80,2.17,11.52,772,13.3,
1432,19,35,39.47,46.38,53.27,.35,7.18,772,13.2,
1593,19,42,48.16,11.88,36.23,59.83,24.85,772,12.8,
3857,19,47,57.45,2.70,8,13.20,18.70,772,12.7,
3704,19,50,12.40,23.44,33.83,44.98,55.57,772,12.6,
1462,19,51,33.87,39.38,44.78,50,55.18,772,12.6,
1590,19,53,8.66,14.64,20.57,26.61,32.66,772,12.6,
3377,19,54,58.47,3.83,9.20,14.47,20.03,772,12.6,
1600,19,56,41.47,47.10,52.41,57.89,3.41,772,12.5,
3518,20,0,9.26,17.25,28.28,33.23,41.16,772,12.5,
1565,20,1,49.17,.49,11.84,23.47,34.81,772,12.5,
2005,20,5,11.35,18.69,26.38,34.30,41.76,772,12.6,
3585,20,7,4.04,19.41,34.55,49.83,4.40,772,12.6,
675,20,8,28.30,46.68,4.32,22.60,40.28,772,12.6,
3381,20,14,1.71,7.58,13.40,19.38,25.22,772,12.7,
891,20,16,24.75,29.98,35.42,40.73,46.04,772,12.8,
831,20,20,11.55,20.28,29.11,38.14,47.05,772,12.9,
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STATION....:AARDENBURG SEPT.26,1975

TO,(UTC-TO)=
18 32 60.0000 0 0 4.0340

DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.003,.016,0,.012,.087,.119,2442681,1976,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
3778,18,47,50.85,56.40,1.70,7,12.09,757,12,
621,18,50,22.54,27.98,33.34,38.78,43.96,757,11.9,
3472,18,58,6.66,17.81,29.32,40.32,51.82,757,11.7,
3397,19,0,57.66,4.04,10.48,16.46,22.74,757,11.7,
1594,19,2,45.08,1.15,17.83,33.52,49.72,757,11.6,
3508,19,5,43.93,58.76,13.24,27.59,41.78,757,11.6,
643,19,9,39.02,44.55,49.94,55.51,1.03,757,11.5,
875,19,11,42.49,48.60,54.77,1.16,7.63,757,11.4,
3833,19,13,6.15,11.90,17.36,23.05,28.17,757,11.4,
1434,19,14,16.79,22.21,27.78,33.34,38.79,757,11.4,
3862,19,16,1.67,12.22,23.26,33.60,43.82,757,11.3,
3365,19,19,51.50,57.06,2.55,8,13.40,757,11.3,
858,19,20,56.93,2.14,7.43,12.91,18.07,757,11.3,
619,19,22,52.59,2.09,11.45,20.49,30.12,757,11.2,
1432,19,29,1.60,8.23,15.18,22.28,29.38,757,11.1,
1593,19,36,39.56,3.49,27.46,52.01,15.34,757,11,
3857,19,41,24.39,29.58,34.93,40.26,45.53,757,10.9,
3704,19,43,29.42,40.18,51.30,2.23,13.18,757,10.9,
1462,19,45,.80,6.15,11.45,17.03,22.09,757,10.9,
1590,19,46,32.53,38.46,44.80,50.69,56.63,757,10.9,
3377,19,48,23.93,29.38,34.98,40.29,45.70,757,10.8,
1600,19,50,7.05,12.35,17.92,23.42,28.56,757,10.8,
3518,19,53,41.99,49.68,58.04,5.93,13.97,757,10.8,
2005,19,58,43.43,51.17,58.71,6.52,14.44,757,11,
3585,20,0,45.76,.41,15.33,30.14,44.75,757,11,
3381,20,7,25.97,31.62,37.65,43.50,49.48,757,11.1,
891,20,9,51.62,56.95,2.25,7.71,12.96,757,11.1,
831,20,13,30.93,39.84,48.57,57.73,6.26,757,11,
3739,20,20,50.70,4.24,17.55,31.69,44.90,757,10.9,
1589,20,23,14.21,21.94,29.51,37.22,45.14,757,10.9,
670,20,27,58.07,9.40,21.02,32.38,43.50,757,10.8,
700,20,34,33.78,52.75,12.96,32.85,51.97,757,10.8,

STATION....:KOOTWIJK,P.EAST OCT.9,1975

TO,(UTC-TO)=
19 19 60.0000 0 0 5.3040

DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.004,-.020,0,.012,.060,.108,2442694,1976,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
3739,19,36,36.34,56.35,16.70,37.25,58.13,765,2.9,
664,19,39,29.38,38.80,48.29,57.43,6.77,765,2.8,
760,19,43,16.36,27.64,38.85,49.91,1.20,765,2.9,
3506,19,46,25.58,31.10,37.07,42.77,48.38,765,2.8,
24,19,49,50.39,3.96,17.64,31.07,44.95,765,2.7,
3429,19,51,47.33,58.74,10.19,21.43,32.83,765,2.7,
2027,19,55,10.85,16.32,21.71,27.37,32.42,765,2.6,
3493,19,57,33.60,38.86,44.45,49.89,55.32,765,2.5,
25,19,59,25.46,31.05,36.79,42.40,47.98,765,2.4,
1030,20,6,9.77,15.78,21.78,27.73,33.95,765,2.3,
3577,20,11,54.32,.17,6.74,13.15,19.10,765,2.2,
862,20,13,1.49,12.60,24.18,35.86,46.76,765,2.2,
711,20,15,40.29,45.83,51.24,56.69,2.27,765,2.1,
3657,20,18,16.96,27.36,37.26,47.34,57.41,765,2,
3848,20,19,53.69,3.48,13.44,23.45,33.82,765,2,
3497,20,23,43.28,49.10,54.66,.05,5.60,765,2,
2043,20,26,24.34,29.84,35.62,41.01,46.38,765,2,
55,20,27,38.85,47.50,56.42,5.38,14.62,765,2,
1021,20,28,36.71,42.25,47.65,53.12,58.56,765,2,
51,20,33,22.15,34.17,45.68,57.55,9.52,765,1.9,
3704,20,35,30.52,44.32,57.90,11.76,25.48,765,1.8,
63,20,39,45.25,53.08,.49,7.98,15.36,765,1.7,
3536,20,42,21.28,37.63,53.62,9.77,25.45,765,1.6,
2075,20,45,13.63,18.99,24.48,30.14,35.51,765,1.6,
3541,20,46,58.13,3.71,9.13,14.71,20.38,765,1.5,
18,20,49,3.26,9.22,14.93,21.28,27.12,765,1.5,
1040,20,50,55.42,1.6.26,11.92,17.40,765,1.4,
3513,20,52,43.30,49.82,56.29,2.77,8.98,765,1.4,
786,20,53,56.67,4.26,12.16,20.09,27.53,765,1.3,
880,20,55,58.58,12.61,26.84,40.94,55.28,765,1.3,
3584,20,58,22.45,28.02,33.35,38.73,44.37,765,1.2,
3514,20,59,58.57,6.60,14.74,22.74,30.46,765,1.1,

STATION....:KOOTWIJK,P.EAST OCT.12,1975

TO,(UTC-TO)=
19 7 60.0000 0 0 5.6110

DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.004,-.028,0,.012,.052,.106,2442697,1976,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
3739,19,24,47.72,7.70,28.02,48.58,9.48,768,3.8,
664,19,27,41.24,50.92,.31,9.48,18.67,768,3.8,
760,19,31,28.82,39.86,51.37,2.13,13.52,768,3.8,
3506,19,34,37.63,43.48,49.30,54.71,.52,768,3.7,
24,19,38,2.03,15.73,29.54,43.49,57.01,768,3.7,
3429,19,39,59.89,10.97,21.92,33.04,43.99,768,3.6,
2027,19,43,22.63,28.07,33.36,39,44.47,768,3.6,
3493,19,45,45.34,50.72,56.42,1.78,7.26,768,3.5,
25,19,47,37.35,43.07,48.38,53.96,59.78,768,3.5,
1030,19,54,21.78,27.54,33.62,39.53,46.16,768,3.4,
3577,20,0,5.96,12.27,18.81,24.84,31.14,768,3.4,
862,20,1,13.24,18.35,24.94,47.54,59.13,768,3.4,
711,20,3,52.29,57.53,3.04,8.56,14.18,768,3.4,
3657,20,6,29.11,38.72,49.26,58.89,9.80,768,3.3,
3848,20,8,5.59,15.38,25.32,35.56,44.96,768,3.3,
3497,20,11,55.17,.62,6.42,11.88,17.48,768,3.4,
2043,20,14,36.25,41.79,47.22,52.99,58.30,768,3.4,
55,20,15,51.07,59.73,8.70,17.64,26.44,768,3.5,
1021,20,16,48.76,54.10,59.57,4.95,10.50,768,3.5,
51,20,21,34.38,46.08,57.82,9.48,21.37,768,3.5,
3704,20,23,42.49,56.85,9.93,23.81,37.66,768,3.4,
63,20,27,57.40,4.78,12.54,20.10,27.45,768,3.4,
3536,20,30,32.76,49.05,5.39,21.46,37.17,768,3.4,
2075,20,33,25.54,30.92,36.37,41.94,47.31,768,3.4,
3541,20,35,10,15.64,21.10,26.67,32.17,768,3.4,
18,20,37,14.91,21.02,27.11,32.90,39.09,768,3.4,
1040,20,39,7.41,12.67,18.17,23.65,29.40,768,3.4,
3513,20,40,55.39,1.99,8.41,14.74,21.22,768,3.4,
786,20,42,8.61,16.03,23.99,31.92,39.39,768,3.4,
880,20,44,9.98,24.36,38.45,53.37,7.33,768,3.4,
3584,20,46,24.15,39.81,45.38,50.76,56.40,768,3.4,
3514,20,48,10.40,18.63,26.85,34.60,42.37,768,3.4,

STATION....:BERKHEIDE OCT.23,1975

TO,(UTC-TO)=
18 32 58.0000 0 0 6.7870

DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF,YEAR,N,S=
.005,-.064,0,.012,.024,.102,2442708,1976,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
3739,18,47,7.62,28.23,48.70,9.37,30.29,771,9,
664,18,50,2.81,12.03,21.43,30.65,39.86,771,9,
760,18,53,53.33,4.30,15.83,26.87,37.71,771,9,
3506,18,57,.94,6.42,12.15,18.15,23.68,771,8.9,
24,19,0,28.29,42.27,55.74,9.50,23.04,771,8.8,
3429,19,2,20.40,31.46,42.56,53.95,4.97,771,8.7,
2027,19,5,45.94,51.69,56.98,2.44,8.18,771,8.7,
3493,19,8,8.66,13.75,19.49,24.80,30.50,771,8.6,
25,19,10,1.10,6.90,12.03,17.84,23.56,771,8.6,
1030,19,16,45.55,51.60,57.75,3.82,10.08,771,8.4,
3577,19,22,29.63,36.03,42.05,48.55,54.64,771,8.3,
862,19,23,35.16,46.53,57.77,9.40,21.32,771,8.3,
711,19,26,14.90,20.77,26.22,31.58,36.96,771,8.2,
3657,19,28,53.61,3.73,13.96,23.35,33.48,771,8.1,
3848,19,30,27.85,37.85,47.74,57.39,7.62,771,8.1,
3497,19,34,17.98,23.40,29.02,34.64,40.29,771,8,
2043,19,36,59.69,5.25,10.51,16.22,21.93,771,7.9,
55,19,38,16.41,24.79,33.40,42.55,51.34,771,7.9,
1021,19,39,11.97,17.61,22.85,28.58,34.04,771,7.8,
51,19,44,.18,12.02,23.83,35.66,47.19,771,7.7,
3704,19,46,7.78,21.26,35.44,48.61,2.49,771,7.6,
63,19,50,22,22,29.62,36.99,44.57,52.25,771,7.4,
3536,19,52,52.58,8.14,24.33,40.38,56.83,771,7.3,
2075,19,55,48.88,54.38,59.90,5.57,10.87,771,7.2,
3541,19,57,32.81,38.39,44.20,49.48,54.81,771,7.1,
18,19,59,38.31,44.28,50.16,56.22,2.15,771,7.1,
1040,20,1,30.88,36.41,41.88,47.50,52.84,771,7,
3513,20,3,17.40,23.95,30.48,36.90,43.32,771,6.9,
786,20,4,32.42,40.35,48.19,55.47,3.24,771,6.9,
880,20,6,31.66,45.86,59.88,14.12,28.96,771,6.8,
3584,20,8,57.48,2.94,8.45,13.86,19.26,771,6.7,
3514,20,10,32.17,40.02,48.30,56.33,4.10,771,6.6,

STATION....:KOOTWIJK/P.EAST MAY 6,1976

TO,(UTC-TO)=
19 43 60.0000 -0 0 .1560

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
-.001,.343,0,.012,-.039,.442,2442904,1976,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
540,20,17,34.63,40.03,45.74,51.15,56.73,765,16,
2755,20,19,3.44,9.50,15.74,21.76,27.78,765,15.9,
2649,20,21,41.85,48.17,54.14,.07,6.02,765,15.8,
2700,20,23,5.56,10.92,16.33,21.96,27.46,765,15.8,
339,20,24,53.79,59.30,4.76,10.27,15.90,765,15.7,
569,20,26,43.97,54.93,5.99,17.29,28.31,765,15.6,
571,20,28,33.90,40.64,46.98,53.82,.35,765,15.5,
2897,20,31,55.58,11.94,29.10,45.45,2.03,765,15.4,
3166,20,36,42.29,47.63,53.14,58.76,4.24,765,15.3,
1323,20,39,45.74,7.74,29.93,52.03,14.60,765,15.2,
2662,20,42,52.48,1.34,9.88,18.53,27.52,765,15.1,
341,20,45,44.28,49.83,55.54,.93,6.38,765,15,
3106,20,48,.71,8.03,15.45,22.71,29.96,765,14.9,
2889,20,49,6.52,17.27,28.29,39.15,50.15,765,14.9,
2762,20,50,57.94,3.36,8.97,14.45,19.98,765,14.8,
1386,20,52,59.96,5.47,10.81,16.44,22.16,765,14.7,
555,20,55,10.85,16.30,21.67,27.29,32.78,765,14.7,
3247,20,59,4.58,10.32,16.10,22.28,27.92,765,14.6,
3255,21,1,8.84,14.99,21.16,27.38,33.33,765,14.5,
2812,21,3,53.26,58.89,4.66,10.62,16.63,765,14.5,
2751,21,6,.43,5.75,11.21,16.88,22.34,765,14.4,
3072,21,7,17.12,29.98,43.06,55.70,8.33,765,14.4,
1412,21,9,25.02,30.49,35.95,41.68,47.12,765,14.3,
3229,21,10,26.89,44.40,2.03,20,38.23,765,14.3,
338,21,15,27.81,36.69,45.57,54.35,3.02,765,14.2,
619,21,28,2.66,12.36,21.55,30.84,40.25,765,13.9,
568,21,30,17.20,22.78,28.50,33.90,39.59,765,13.8,
390,21,31,16.54,22.40,27.98,33.67,39.33,765,13.8,
1323,21,40,53.99,16.91,38.73,1.04,22.33,765,13.6,
355,21,44,20.32,27.83,34.97,42.37,49.97,765,13.6,
2772,21,47,34.26,45.82,56.93,8.77,19.88,765,13.6,
3204,22,5,40.15,47.50,54.68,1.50,8.53,765,13.4,

STATION....:KOOTWIJK/P.EAST MAY 7,1976/A

TO,(UTC-TO)=
20 22 60.0000 -0 0 .1510

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
0,.340,0,.012,-.037,.443,2442905,1976,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
1323,20,35,52.19,14.34,35.98,59.09,21.16,762,20.7,
2662,20,38,55.55,4.26,13,21.47,30.34,762,20.7,
341,20,41,47.55,53.38,58.82,4.34,9.82,762,20.6,
3106,20,44,5.77,13.23,20.30,27.82,34.96,762,20.6,
2889,20,45,8.94,20.29,31.55,42.15,52.70,762,20.5,
2677,20,49,39.28,46.94,54.71,2.43,9.97,762,20.4,
555,20,51,15.74,20.96,26.53,32.27,37.37,762,20.4,
3182,20,53,25.74,31.54,36.86,42.20,48.19,762,20.3,
2738,20,54,40.37,45.99,51.45,57.02,2.42,762,20.3,
340,21,0,16.36,22.39,28.50,34.29,40.32,762,20.2,
3276,21,1,36.26,45.55,54.33,3.19,12.04,762,20.2,
3072,21,3,22.60,35.51,48.16,.80,14.08,762,20.2,
1412,21,5,30.03,35.27,40.85,46.20,51.71,762,20.2,
338,21,11,30.91,39.59,48.74,57.54,6.23,762,20.2,
407,21,13,2.95,9.56,16.01,22.71,29.40,762,20.2,
374,21,15,16.49,21.87,27.46,32.89,38.41,762,20.1,
3260,21,17,33.96,39.72,45.06,50.70,56.60,762,20.1,
573,21,18,32.09,37.62,42.99,48.81,54.11,762,20.1,
1255,21,23,18.31,23.70,29.33,34.98,40.47,762,20.1,
590,21,24,17.97,37.21,55.92,14.98,33.68,762,20.1,
390,21,27,20.07,25.96,31.56,37.18,42.97,762,20,
606,21,32,30.23,44.90,0,15.50,30.62,762,20,
3326,21,35,32.95,40.72,48.58,56.41,4.34,762,19.9,
1323,21,36,55.99,17.78,40.21,2.86,24.03,762,19.9,
412,21,40,39.14,45.22,51,57.17,2.95,762,19.9,
383,21,41,30.40,35.89,41.29,47.05,52.48,762,19.9,
3218,21,42,39.50,45.37,51.24,57.14,3.35,762,19.8,
2982,21,43,11.51,23.97,36.70,49.32,2.03,762,19.8,
627,21,48,29.03,35.55,41.58,47.97,54.29,762,19.8,
1383,21,51,41.49,50.20,58.63,7.21,15.68,762,19.8,
3281,21,53,40.25,45.66,51.03,56.64,2.04,762,19.8,
372,21,56,53.71,5.44,17.44,29.35,41.37,762,19.8,

STATION....:KOOTWIJK,P.EAST MAY 7,1976/8

TO,(UTC-TO)=
22 4 60.0000 -0 0 .1510

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
0,.340,0,.012,-.037,.443,2442905,1976,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
557,22,9,1.08,9.06,17.21,25.45,33.77,761,19.7,
1318,22,11,49.81,58.82,8.02,17.12,26.40,761,19.6,
1282,22,14,39.14,44.59,50.29,55.86,1.15,761,19.5,
621,22,15,45.22,50.64,55.96,1.57,6.95,761,19.4,
2870,22,19,21.24,26.78,32.08,37.65,43.17,761,19.2,
3185,22,25,48.51,58.61,8.94,19.45,30,761,19,
659,22,27,22.34,31.49,40.25,49.74,58.56,761,18.9,
2828,22,29,9.09,18.43,27.78,36.80,46.32,761,18.8,
3381,22,31,36.35,42.30,48.01,54.18,.16,761,18.6,
387,22,33,55.34,3.41,11.69,19.93,27.95,761,18.5,
398,22,36,50.42,56.54,2.84,9.10,15.60,761,18.3,
2839,22,40,.50,8.11,16.13,23.80,31.79,761,18.2,
3151,22,46,1.36,38.54,16.59,56.90,38.07,761,18,
3377,22,49,16.19,21.72,27.20,32.78,38.26,761,18,
3072,22,50,24.01,36.53,49.42,2.53,15.18,761,17.9,
432,22,55,50.09,55.82,1.22,6.61,11.93,761,17.8,
3365,22,57,23,28.53,34.01,39.70,44.92,761,17.7,
2963,22,57,58.42,4.04,9.83,15.57,21.27,761,17.7,
3330,23,1,48.67,54.66,.39,6.46,12.51,761,17.6,
3287,23,4,11.15,18.51,25.50,32.64,39.60,761,17.5,
685,23,8,23.22,30.86,38.50,46.27,54.16,761,17.4,
3373,23,14,6.31,11.82,17.24,23.12,28.52,761,17.2,
1322,23,15,45.91,52.34,58.55,4.61,10.55,761,17.2,
675,23,19,52.38,9.27,26.66,43.64,.57,761,17.1,
2929,23,25,42.13,47.65,53.49,59.06,4.72,761,16.9,
3039,23,27,57.15,3.49,10.14,16.87,23.39,761,16.9,
3433,23,31,8.75,14.14,19.67,25.21,30.54,761,16.8,
458,23,32,9.66,15.07,20.63,26.25,31.64,761,16.8,
3484,23,33,3.79,10.82,18.45,25.66,32.92,761,16.8,
3475,23,35,8.55,14.83,21.22,27.74,34.15,761,16.7,
454,23,38,23.15,41.38,.11,18.82,37.36,761,16.6,
522,23,51,20.04,30.26,40.45,50.59,.33,761,16.5,

STATION....:UITH.MEDEN MAY 14,1976

TO,(UTC-TO)=
20 49 60.0000 -0 0 .0940

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
0,.317,0,.012,-.018,.450,2442912,1976,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
412,21,5,50.16,56.34,2.96,9.17,15.54,766,6.3,
3320,21,7,13.95,19.90,26.18,32.64,38.88,766,6.3,
383,21,10,12.25,18.04,23.72,29.39,34.90,766,6.2,
2793,21,12,23.44,29.22,35.11,40.96,46.54,766,6.1,
3218,21,15,11.20,17.20,23.69,29.87,36.12,766,6,
608,21,16,24.07,29.72,35.47,41.11,46.64,766,5.9,
2976,21,18,5.32,16.38,27.54,38.37,49.70,766,5.9,
3305,21,21,29.73,49.45,9.75,29.67,50.10,766,5.8,
3259,21,26,5.13,11.03,16.70,22.66,28.33,766,5.6,
1318,21,28,24.95,36.33,47.42,58.62,9.55,766,5.5,
363,21,29,54.28,3.73,13.40,22.82,32.49,766,5.5,
1383,21,31,19.26,28.89,39,49.18,59.13,766,5.4,
2892,21,33,6.48,12.32,18.12,24.20,30.18,766,5.4,
2802,21,34,30.08,36.59,42.90,49.35,55.73,766,5.3,
3303,21,41,45.69,51.43,56.80,2.50,8.33,766,5.3,
621,21,45,.50,6.07,11.80,17.48,22.96,766,5.3,
659,21,45,50.20,59.48,8.08,17.29,26.24,766,5.3,
1276,21,48,40.56,46.30,51.70,57.63,3.37,766,5.3,
572,21,51,40.66,48.46,56.10,4.17,11.98,766,5.3,
3381,21,57,11.42,17.56,23.30,29.49,35.51,766,5.2,
2878,22,3,.80,6.22,11.79,17.50,23.28,766,5,
1262,22,5,9.52,17.78,25.88,33.69,42.12,766,5,
395,22,7,19.08,33.83,48.53,2.80,17.21,766,4.9,
3185,22,9,36.61,49.52,3.14,16.88,30.30,766,4.8,
3429,22,12,24,34.46,45.24,56.53,7.27,766,4.7,
1332,22,16,.62,9.45,18.27,27.34,36.08,766,4.7,
3377,22,17,15.32,20.92,26.67,32.40,37.88,766,4.6,
2908,22,18,7.42,13.13,18.76,24.36,29.72,766,4.6,
578,22,20,40.06,50.12,59.88,10.06,19.73,766,4.5,
3085,22,24,28.54,43.76,59.04,14.43,29.52,766,4.4,
675,22,26,11.86,28.01,43.87,59.93,15.26,766,4.3,
403,22,30,58.50,7.74,17.30,26.47,36.19,766,4.2,

STATION....:EIERLAND MAY17,196.

TO,(UTC-TO)=
20 26 60.0000 -0 0 .0620

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
0,.307,0,.012,-.009,.453,2442915,1976,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
606,20,40,32.25,47.02,,.99,15.10,30.50,766,15.9,
3072,20,44,52.47,10.73,30.03,50.34,8.57,766,15.8,
1255,20,48,29.93,35.45,41.28,46.68,52.31,766,15.7,
358,20,50,.68,6.50,12.48,18.19,24.12,766,15.7,
2982,20,50,59.83,18.24,36.79,55.03,13.33,766,15.7,
568,20,52,39.35,45.10,50.87,56.58,2.59,766,15.6,
3271,20,56,8.47,13.94,19.66,25.19,30.80,766,15.6,
1416,20,59,1.55,6.98,12.35,18.07,23.61,766,15.5,
563,21,5,4.46,10.64,17.10,23.39,29.76,766,15.3,
383,21,5,51.50,57.06,2.47,8.29,13.77,766,15.3,
2852,21,6,47.88,53.70,59.47,5.27,10.97,766,15.3,
522,21,8,59.76,12.09,24.60,37.08,49.68,766,15.2,
355,21,10,52.01,59.73,7.03,14.52,21.87,766,15.1,
357,21,15,9.42,18.69,28.66,38.56,47.85,766,15.1,
2976,21,16,11.54,22.28,33.33,43.29,53.84,766,15.1,
2772,21,19,52.45,3.57,15.06,26.20,37.23,766,15.1,
1434,21,22,49.32,54.92,,.48,6.51,12.12,766,15.1,
3370,21,26,35.52,42.67,49.82,57.40,4.73,766,15.1,
3314,21,27,36.13,41.88,47.53,53.06,58.61,766,15.1,
2802,21,29,15.61,21.98,28.58,34.58,41.22,766,15.1,
3204,21,32,.48,8.34,15.85,23.58,31.49,766,15.1,
372,21,33,47.76,59.54,11.12,22.58,34.34,766,15.2,
3303,21,37,13.93,19.60,25.08,30.79,36.30,766,15.2,
1282,21,38,17.51,23.17,28.71,34.46,40.17,766,15.2,
557,21,41,29.93,38.75,48.10,57.42,6.54,766,15.2,
1276,21,44,6.85,12.58,18.28,23.51,29.33,766,15.2,
2997,21,45,35.85,45.06,53.49,2.61,11.52,766,15.1,
664,21,48,32.20,41.51,50.82,59.93,9.24,766,15.1,
1300,21,49,48.62,54.99,1.04,7.13,13.36,766,15.1,
3381,21,53,23.55,29.34,35.14,41.24,47.38,766,15.1,
2999,21,55,13.17,21.34,29.30,37.28,45.57,766,15.1,
670,21,57,38.74,49.74,,.87,11.70,22.77,766,15,

STATION....:ZALTBOMMEL MAY22,1976

TO,(UTC-TO)=
20 7 5.0000 -0 0 .0260

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
-.006,,.290,0,.012,-.006,.458,2442920,1976,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
522,20,32,42.18,51.62,,.81,10.83,20.54,771,12.7,
3271,20,35,53.76,59.29,4.61,10.06,15.64,771,12.5,
1416,20,37,27.16,32.54,37.80,43.36,48.76,771,12.3,
563,20,39,19.77,25.68,31.70,37.86,43.82,771,12.2,
3326,20,41,14.62,22.55,30.23,37.95,45.79,771,12.1,
2793,20,43,58.54,4.23,10.02,15.51,21.12,771,12,
383,20,44,44.92,50.46,55.90,1.16,6.57,771,12,
612,20,47,38.04,52.91,8.16,23.39,38.28,771,11.9,
1323,20,48,34.54,51.66,8.74,25.79,43.16,771,11.9,
2844,20,51,53.35,58.97,4.35,9.65,15.33,771,11.8,
627,20,53,6.20,12.42,18.66,25.12,31.26,771,11.8,
372,20,55,29.41,41.25,53.39,5.24,17.27,771,11.8,
368,20,57,16.39,23.12,29.71,36.21,42.81,771,11.7,
1259,21,2,14.62,20.63,26.65,32.47,38.48,771,11.7,
1434,21,3,37.28,42.85,48.46,53.92,59.66,771,11.6,
2976,21,7,47.53,56,5.04,13.73,22.52,771,11.5,
557,21,9,38.32,45.97,54,1.98,9.85,771,11.5,
2892,21,10,52.81,58.40,4.05,9.57,15.21,771,11.4,
3370,21,13,24.06,31.30,38.61,46.04,53.36,771,11.3,
3293,21,14,51.69,57.19,2.38,7.58,13.55,771,11.3,
395,21,15,34.62,49.90,5.40,20.82,35.90,771,11.3,
1423,21,17,24.99,30.87,36.42,42.04,47.59,771,11.2,
1318,21,18,11.61,20.47,29.46,38.09,46.68,771,11.2,
2938,21,19,52.84,58.87,5.27,11.42,17.74,771,11.1,
2870,21,22,34.16,39.86,45.08,50.54,55.94,771,11.1,
3172,21,26,22.69,34.80,46.40,58.15,9.89,771,11.1,
2828,21,29,3.80,13.07,22.33,31.70,41.28,771,11.1,
2997,21,34,27.49,35.19,43.20,50.84,58.48,771,11.1,
3151,21,37,25.67,47.63,9.88,33.41,56.01,771,11.1,
664,21,39,29.97,39.02,48.32,57.52,6.90,771,11.1,
626,21,40,57.63,3.04,8.64,14.13,19.64,771,11.1,
420,21,42,35.46,40.65,46.37,51.70,57.04,771,11.1,

STATION....:BEEK EN DONK AUG.7,1976

TO,(UTC-TO)=
20 37 60.0000 -0 0 2.7100

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.001,.104,0,.012,.271,.285,2442997,1977,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
3733,20,56,59.05,4.62,10.30,15.88,21.63,769,16.2,
795,21,0,31.92,52.40,13,33.48,53.59,769,16.1,
554,21,2,8.75,16.80,24.87,33.12,41.36,769,16.1,
3427,21,4,30.45,47.91,5.29,22.58,40.03,769,16,
1423,21,7,.86,6.43,11.82,17.52,23.12,769,15.9,
3210,21,8,34.93,40.56,46.41,52.30,57.87,769,15.9,
3587,21,9,25.40,34.77,44.25,53.73,3.45,769,15.9,
3668,21,12,2.66,8.50,14.30,20.24,26.34,769,15.8,
1412,21,13,29.26,34.76,40.03,45.61,51.05,769,15.7,
1416,21,14,5,10.23,15.80,21.26,26.40,769,15.7,
569,21,15,28.98,39.87,51.30,2.28,13.58,769,15.7,
3730,21,17,29.56,34.91,40.20,45.48,50.87,769,15.6,
811,21,24,23.72,29.02,34.32,39.81,45.27,769,15.5,
1460,21,25,19.92,27.85,36.52,44.76,53.07,769,15.4,
1441,21,26,52.04,58.03,4.33,10.47,16.70,769,15.4,
1559,21,28,46.18,51.85,57.41,3.28,8.93,769,15.3,
847,21,30,20.87,27.34,33.83,40.28,46.77,769,15.3,
3247,21,32,12.03,17.82,23.73,29.36,35.01,769,15.3,
853,21,35,17.36,24.75,32.26,39.59,47.34,769,15.2,
760,21,37,39.35,48.92,58.72,8.45,18.88,769,15.2,
3240,21,38,52.67,2.41,12.18,21.63,31.42,769,15.2,
3585,21,40,37.20,53.60,9.70,26.54,43.62,769,15.2,
606,21,43,2.87,18.21,34.07,49.62,5.30,769,15.2,
786,21,45,31.68,38.89,46.26,53.31,.47,769,15.2,
3303,21,47,57.91,3.24,8.84,14.12,19.43,769,15.2,
851,21,49,19.73,32.32,44.84,57.22,10.13,769,15.2,
3778,21,52,59.94,5.22,10.75,16.04,21.55,769,15.2,
621,21,55,20.94,26.38,31.70,36.92,42.42,769,15.1,
3457,21,56,41.98,52,2.43,12.57,22.59,769,15.1,
3472,21,59,52.04,4,15.78,28.14,39.87,769,15,
1594,22,3,33.73,49.77,5.21,21.39,37.24,769,15,
3800,22,8,7.15,12.35,17.79,23.13,28.66,769,15,

STATION....:UBACHSBERG AUG.8,1976

TO,(UTC-TO)=
20 42 60.0000 -0 0 2.6850

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.001,.100,0,.012,.275,.284,2442998,1977,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
3587,20,58,18.02,26.68,35.14,43.87,52.37,751,16.9,
830,21,0,59.94,7.47,14.48,21.77,29.13,751,16.8,
569,21,2,14.27,25.60,37.19,48.44,59.52,751,16.7,
3668,21,4,56.69,2.65,8.23,14.06,19.74,751,16.6,
565,21,7,27.45,36.18,44.99,54.16,2.71,751,16.5,
1416,21,8,50.97,56.28,1.50,6.59,12.10,751,16.5,
3427,21,10,46.14,59.69,12.59,26.23,39.38,751,16.5,
795,21,12,.37,23.08,46.25,8.07,30.24,751,16.5,
3400,21,15,20.60,29.55,38.71,47.87,57.14,751,16.6,
571,21,17,31.10,37.78,44.37,50.72,57.54,751,16.6,
811,21,18,47.37,52.86,57.06,3.24,8.59,751,16.6,
837,21,21,.03,11.54,22.99,34.53,46.15,751,16.6,
3585,21,24,33.78,47.05,59.45,12.75,25.30,751,16.6,
3293,21,26,31.10,36.38,41.89,46.95,52.32,751,16.5,
3611,21,27,26.19,36.45,46.68,56.95,7.58,751,16.5,
3687,21,29,15.61,21.26,27.46,33.48,39.80,751,16.5,
3649,21,30,48.55,55.94,3.26,10.89,18.75,751,16.4,
3769,21,32,51.04,56.76,1.61,6.93,12.34,751,16.4,
612,21,33,38.37,54.65,10.83,26.94,43.12,751,16.4,
3260,21,36,1.86,7.25,12.73,18.29,23.82,751,16.3,
3415,21,38,51.44,59.43,7.52,15.81,23.86,751,16.3,
587,21,41,38.34,45.53,52.77,59.97,7.01,751,16.2,
3303,21,43,50.08,55.99,.83,6.08,11.37,751,16.2,
626,21,45,27.90,33.18,38.64,44.07,49.30,751,16.2,
3778,21,47,50.92,56.32,1.63,6.72,12.01,751,16.2,
3799,21,48,47.68,53.07,58.40,4.20,9.45,751,16.2,
621,21,50,7.15,12.61,17.81,23.16,28.52,751,16.2,
851,21,53,22.24,36.06,48.56,1.55,14.65,751,16.1,
1456,21,55,35.30,41.01,46.95,52.64,58.60,751,16.1,
1583,21,58,7.49,12.98,18.39,23.82,29.12,751,16.1,
3839,22,0,37.51,43.67,49.83,56.24,2.43,751,16,
3472,22,2,33.04,43.32,53.54,3.58,13.93,751,16,

STATION....:GOEDEREEDE AUG.16,1976

TO,(UTC-TO)=
20 15 .0000 -0 0 2.4140

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.001,.080,0,.012,.282,.275,2443006,1977,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
3508,20,20,4.79,23.21,41.96,1.03,20.19,769,19.1,
580,20,22,45.55,50.90,56.42,1.82,7.32,769,19,
795,20,24,54.36,14.78,34.57,54.73,15.02,769,18.9,
3733,20,27,32.13,37.68,43.38,49.12,54.67,769,18.8,
3427,20,29,17.49,38.42,59.64,20.74,41.05,769,18.7,
3259,20,30,56.79,2.41,7.81,13.36,18.72,769,18.7,
590,20,32,22.42,41.82,2,21.48,40.38,769,18.6,
1568,20,34,54.16,59.77,5.10,10.67,15.96,769,18.6,
3188,20,36,25.91,32.54,39.23,46.32,53.06,769,18.5,
1534,20,37,18.18,24.46,31.13,37.60,44.40,769,18.4,
3210,20,40,29.04,35.08,40.78,46.46,52.16,769,18.4,
3400,20,41,50.25,1.44,12.42,23.18,34.14,769,18.4,
3339,20,42,59.24,5.72,12.74,19.19,25.94,769,18.5,
3668,20,44,5.25,11.08,16.97,23.02,29.18,769,18.5,
1416,20,45,15.48,20.74,26.12,31.74,37.32,769,18.6,
3730,20,48,38.58,43.92,49.45,54.67,.04,769,18.6,
565,20,51,54.87,3.25,12.48,21.22,29.75,769,18.5,
811,20,55,46.33,51.75,57.19,2.55,8.19,769,18.5,
3794,20,57,16.62,26.44,36.97,47.31,57.62,769,18.4,
847,21,0,17.02,23.42,29.88,36.49,42.81,769,18.4,
3722,21,1,6.06,11.31,16.39,22.53,27.87,769,18.4,
3247,21,4,8.07,13.78,19.60,25.34,31.42,769,18.5,
3271,21,7,9.88,15.39,20.86,26.41,31.86,769,18.5,
760,21,11,49.59,59.62,9.88,20.13,30.80,769,18.4,
3611,21,15,37.68,50.23,3.48,16.78,29.62,769,18.3,
606,21,19,18.81,34.38,50.09,5.46,20.58,769,18.2,
3778,21,24,10.64,15.96,21.50,26.83,32.06,769,18.2,
621,21,26,31.29,36.70,42.10,47.50,52.83,769,18.1,
1594,21,29,35.09,50.35,6.21,21.84,37.64,769,18.1,
3508,21,31,31.70,50.37,10.02,28.45,47.02,769,18.1,
3839,21,33,18.44,24.46,30.80,37.31,43.49,769,18.
3397,21,34,54.16,.81,7.26,13.63,20.15,769,18,

STATION....:GOEDEREEDE AUG.17,1976

TO,(UTC-TO)=
20 3 60.0000 -0 0 2.3850

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.001,.078,0,.012,.282,.273,2443007,1977,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
3508,20,16,9.01,27.59,46.67,5.74,24,770,17.7,
580,20,18,49.24,54.76,.32,5.56,11.04,770,17.7,
795,20,20,58.78,18.49,38.96,59.08,19.55,770,17.7,
3733,20,23,36.18,41.86,47.36,53.33,58.94,770,17.7,
3427,20,25,20.41,42.56,3.85,24.20,44.43,770,17.7,
590,20,28,25.76,45.32,5.14,24.80,43.84,770,17.7,
1568,20,30,58.46,3.82,9.11,14.73,20.23,770,17.7,
3188,20,32,29.29,36.20,43.35,50,57.03,770,17.7,
1534,20,33,22.28,28.68,35.34,41.96,48.46,770,17.7,
3210,20,36,32.88,39.08,44.66,50.29,56.22,770,17.7,
3400,20,37,54.61,5.49,16.55,27.26,38.72,770,17.7,
3339,20,39,3.41,9.82,16.60,23.17,29.80,770,17.6,
3668,20,40,9.32,15.32,21.31,27.09,33.14,770,17.6,
1416,20,41,19.38,24.76,30.18,35.68,40.92,770,17.6,
3730,20,44,42.50,47.95,53.49,58.84,4.37,770,17.6,
565,20,47,58.95,7.56,16.47,25.06,33.66,770,17.5,
811,20,51,50.14,55.83,1.15,6.91,12.06,770,17.5,
3794,20,53,20.76,31.03,41.16,51.44,1.70,770,17.5,
847,20,56,21.10,27.62,34.21,40.68,46.96,770,17.4,
3722,20,57,10.03,15.60,20.83,26.56,31.97,770,17.4,
3247,21,0,11.87,17.81,23.59,29.35,35.22,770,17.4,
3271,21,3,13.72,19.35,25.02,30.29,35.55,770,17.3,
760,21,7,53.25,3.68,13.78,24.70,35.02,770,17.3,
3611,21,11,42,54.56,8.05,20.89,34.07,770,17.3,
606,21,15,22.71,38.32,53.09,9.27,24.02,770,17.2,
626,21,17,59.67,5.10,10.62,15.94,21.74,770,17.2,
3778,21,20,14.61,20.24,25.48,30.89,36.39,770,17.2,
621,21,22,35.24,40.56,45.90,51.43,56.86,770,17.2,
1594,21,25,39.17,54.79,10.59,26.28,42.07,770,17.2,
3508,21,27,35.06,54.64,13.02,32.16,50.72,770,17.2,
3839,21,29,22.66,28.87,34.98,41.33,47.58,770,17.1,
3397,21,30,58.32,4.82,11.21,17.58,23.80,770,17.1,

STATION....:UITHUIZERMEDEN AUG.23,1976

TO,(UTC-TO)=
20 1 60.0000 -0 0 2.1720

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.002,.066,0,.012,.281,.260,2443013,1977,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
634,20,13,54.08,1.30,8.57,15.70,22.56,768,14.3,
853,20,16,32.53,39.99,47.43,55.27,2.84,768,14,
851,20,17,33.82,46.30,58.56,10.83,22.64,768,13.9,
3457,20,23,27.28,44.26,1.62,18.22,35.55,768,13.8,
3722,20,25,1.07,6.93,12.58,18.30,24.23,768,13.9,
1559,20,26,36.18,42.13,48.36,54.92,1.04,768,13.9,
3769,20,29,37.28,42.82,48.44,54.06,59.77,768,14.1,
601,20,31,53.34,58.84,4.48,10.16,15.70,768,14.1,
667,20,33,46.82,55.82,4.58,13.22,22.06,768,14.2,
848,20,37,29.13,35,40.66,46.42,52.22,768,14.3,
3260,20,38,36.11,41.68,47.65,53.33,59.20,768,14.2,
3303,20,39,58.13,3.66,9.14,14.78,20.55,768,14.2,
626,20,41,24.17,30.09,35.76,41.32,47.22,768,14.2,
1593,20,42,40.45,59.36,18.76,37.75,57.25,768,14.2,
1456,20,44,28.89,35,41.62,48.49,55.16,768,14.1,
3778,20,46,2.08,7.48,13.21,18.73,24.21,768,14.1,
608,20,47,41.65,47.19,52.81,58.69,3.97,768,14,
3839,20,49,.68,7.02,13.41,19.80,26.768,14,
595,20,50,36.50,42.70,48.75,55.14,1.02,768,14,
3862,20,51,53.88,3.89,14.44,24.57,34.56,768,14,
760,20,54,41.56,57.71,13.61,29.61,45.75,768,13.9,
3305,20,57,26.78,47.30,7.46,27.20,47.84,768,13.8,
3800,21,1,3.84,9.63,15.17,20.86,26.38,768,13.8,
598,21,3,6.09,12.84,19.54,25.94,32.78,768,13.7,
606,21,7,5.18,19.34,34.03,48.63,2.93,768,13.6,
3365,21,16,7.26,12.76,18.59,24.15,29.86,768,13.5,
3276,21,18,6.17,14.86,24.26,32.95,41.67,768,13.4,
1488,21,21,56.96,6.94,17.23,26.73,37.06,768,13.4,
3776,21,22,59.66,5.64,11.71,18.09,24.35,768,13.4,
3852,21,26,8.99,14.66,20.31,25.91,31.37,768,13.5,
3715,21,28,15.47,24.52,33.46,42.75,51.82,768,13.6,
1508,21,36,17.10,32.82,49.14,4.70,20.44,768,13.7,

STATION....:LEMELERBERG AUG.24,1976

TO,(UTC-TO)=
19 40 60.0000 -0 0 2.1330

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.001,.063,0,.012,.280,.257,2443014,1977,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
3400,19,52,26.69,39.60,52.69,5.36,18.06,761,21,
780,19,54,24.66,30.70,36.75,42.83,48.86,761,20.9,
837,19,56,51.42,3.02,14.18,25.24,36.64,761,20.9,
1534,19,59,12.50,19.54,26.22,33.08,40.33,761,20.8,
3763,20,0,26.99,32.73,38.66,44.69,50.37,761,20.8,
1416,20,3,58.32,4.02,9.47,14.68,20.40,761,20.8,
590,20,5,24.62,43.73,1.92,20.75,39.27,761,20.8,
3730,20,7,29.15,34.59,40.03,45.59,50.95,761,20.7,
3587,20,9,13.46,24.20,35.45,46.86,58.05,761,20.7,
1441,20,13,15.80,22.09,28.85,35.23,41.61,761,20.7,
811,20,15,8.12,13.67,19.04,24.82,30.27,761,20.7,
847,20,16,22.32,28.69,35.12,41.67,48.27,761,20.6,
3714,20,19,46.90,52.61,58.42,4.27,9.99,761,20.6,
3215,20,23,2.48,10.08,17.84,25.32,32.70,761,20.5,
3247,20,24,34.70,40.56,46.34,52.35,58.16,761,20.5,
3271,20,26,30.63,36.24,41.54,47.19,52.54,761,20.5,
601,20,28,49.86,55.30,.58,6.19,11.81,761,20.5,
1468,20,31,21.06,30.73,40.38,49.51,59.01,761,20.4,
3260,20,34,17.71,23.51,29.06,34.83,40.52,761,20.4,
3457,20,35,37.36,49.83,2.29,14.65,26.77,761,20.3,
1594,20,37,13.63,28.43,43.54,59.07,14.22,761,20.3,
626,20,39,58.88,4.36,10.06,15.62,21.32,761,20.2,
3799,20,42,1.11,6.74,12.04,17.87,23.50,761,20.1,
3778,20,43,4.62,10.20,15.74,21.10,26.46,761,20.1,
3611,20,44,54.65,10.72,27.07,44.09,.95,761,20,
606,20,49,11.03,25.92,41.30,56.02,10.76,761,20,
612,20,56,44.34,59.09,13.76,28.19,43.10,761,19.8,
3657,20,58,48.09,58.88,9.32,20.28,31.11,761,19.8,
1593,21,1,22.63,43.41,4.22,24.88,45.31,761,19.7,
3389,21,3,44.33,50.73,57.08,3.03,8.99,761,19.6,
882,21,6,29.03,36.14,43.22,50.55,57.89,761,19.6,
681,21,7,18.84,26.17,33.70,41.51,48.64,761,19.5,

STATION....:UBACHSBERG SEPT.6,1976

TO,(UTC-TO)=
  18   52   60.0000   -0   0   1.5070

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.002,.031,0,.012,.275,.218,2443027,1977,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
1416,19,14,47.81,53.12,58.47,3.74,9.01,7.6,15.5,
3427,19,16,44.32,57.72,11.05,23.91,37.02,7.6,15.5,
3540,19,18,31.25,34.02,16.64,40.58,3.60,7.6,15.4,
3400,19,21,17.74,26.76,36.29,45.63,54.71,7.6,15.3,
811,19,24,44.37,49.60,54.92,.32,5.64,7.6,15.2,
837,19,26,58.47,10.16,21.65,33.07,44.88,7.6,15.2,
3797,19,29,7.21,15.07,22.81,30.84,38.62,7.6,15.1,
606,19,31,34.25,50.92,6.98,23.21,39.82,7.6,15,
3611,19,33,22.25,32.64,42.89,53.31,3.83,7.6,14.9,
3687,19,35,12.17,18.33,24.29,30.46,36.55,7.6,14.8,
3649,19,36,45.05,52.34,.24,7.93,15.39,7.6,14.7,
612,19,39,33.48,49.70,5.84,21.61,37.72,7.6,14.6,
3415,19,44,48.99,57.07,5.52,13.32,21.33,7.6,14.2,
587,19,47,34.57,41.79,49.15,56.29,3.62,7.6,13.9,
3303,19,48,47.13,52.46,57.74,2.99,8.20,7.6,13.8,
595,19,50,31.44,37.41,43.41,49.42,55.38,7.6,13.6,
863,19,52,11.59,20.12,27.96,36.41,44.77,7.6,13.5,
3778,19,53,48.32,53.29,58.76,4.22,9.24,7.6,13.2,
3657,19,54,34.62,43.39,51.71,.38,8.41,7.6,13.1,
621,19,56,4.30,9.52,14.90,20.01,25.37,7.6,13,
851,19,59,21.96,34.38,47.32,.13,13.14,7.6,12.9,
1456,20,1,32.43,38.25,44.10,49.94,55.65,7.6,12.9,
3276,20,4,31.87,40.87,49.78,58.78,7.86,7.6,13,
3839,20,6,34.84,41.24,47.45,53.83,59.84,7.6,13,
3800,20,8,57.03,2.32,7.64,13.07,18.10,7.6,13.1,
3314,20,10,41.88,47.22,52.93,58.05,3.62,7.6,13.2,
643,20,16,1.07,6.48,11.96,17.29,22.82,7.6,13.2,
3508,20,17,41.36,54.68,7.35,20.01,32.31,7.6,13.3,
3833,20,19,41.19,46.49,52.14,57.57,3.04,7.6,13.3,
3805,20,22,20.39,25.72,30.90,36.19,41.71,7.6,13.3,
3776,20,24,3.69,9.51,15.09,20.63,26.34,7.6,13.3,
3365,20,25,45.10,50.33,55.57,1.08,6.24,7.6,13.4,

STATION....:BEEK EN DONK SEPT.19,1976

TO,(UTC-TO)=
  18   38   60.0000   -0   0   .7070

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.002,-.009,0,.012,.275,.193,2443040,1977,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
606,18,53,54.68,9.86,26.03,40.83,56.80,770,11.2,
786,18,56,24,30.80,38.51,45.77,52.90,770,11.1,
3303,18,58,51.47,56.73,2.04,7.65,12.83,770,11,
851,19,0,14.90,27.38,39.95,52.39,4.59,770,10.9,
3778,19,3,52.93,58.43,3.76,9.15,14.50,770,10.9,
621,19,6,14.34,19.77,25.14,30.51,35.80,770,10.9,
3457,19,7,36.94,47.16,57.54,7.56,17.85,770,11,
3472,19,10,47.70,59.71,11.59,23.38,35.25,770,11,
1594,19,14,29.08,44.63,.63,16.86,32.79,770,11,
3508,19,17,5.68,22.42,38.45,54.59,10.52,770,10.9,
3276,19,20,30.75,39.60,48.21,57.44,6.21,770,10.8,
643,19,25,6.47,12.08,17.30,22.94,28.63,770,10.7,
3833,19,28,46.98,52.36,57.49,3.06,8.78,770,10.7,
3862,19,29,30.89,41.31,51.42,1.94,12.32,770,10.7,
1434,19,30,33.68,39.04,44.59,50.08,55.62,770,10.7,
869,19,53,2.30,7.73,12.99,18.50,23.94,770,10.9,
3448,19,54,33.18,39.41,45.40,51.89,58.30,770,11,
895,19,56,8.59,17.80,26.05,35.39,44.30,770,11.1,
3857,19,57,24.28,29.90,35.08,40.79,45.91,770,11.1,
3909,19,58,20.60,27,33.42,40.08,46.53,770,11.2,
1462,20,0,47.68,53.20,58.38,3.67,9.09,770,11.3,
3704,20,2,33.62,44.91,56.08,8.19,20,770,11.4,
3377,20,4,30.34,35.81,41.40,46.88,52.42,770,11.5,
1549,20,4,59.13,18.62,39.07,59.42,19.40,770,11.5,
3518,20,7,42.07,50.01,58.29,6.48,14.56,770,11.6,
3870,20,11,46.91,52.40,57.54,3.01,8.54,770,11.8,
1565,20,14,20.75,32.83,44.83,56.81,8.91,770,11.9,
675,20,22,20.02,38.02,55.62,12.96,30.88,770,12.3,
639,20,24,18.03,25.90,34.39,42.50,50.64,770,12.4,
1610,20,27,38.37,44.05,49.28,54.48,.31,770,12.5,
857,20,30,1.56,7.93,14.35,21.17,27.63,770,12.6,
655,20,37,50.18,56.26,2.24,8.28,14.49,770,13,

STATION....:EIERLAND SEPT.21,1976

TO,(UTC-TO)=
  18   36   60.0000   -0   0   .5860

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.002,-.015,0,.012,.275,.189,2443042,1977,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
848,18,51,12.76,18.34,24.16,29.91,35.63,770,14.9,
3303,18,53,25.64,31.10,36.99,42.75,48.16,770,14.9,
626,18,55,4.46,10.20,16.02,21.73,27.54,770,14.9,
3799,18,57,19.69,25.48,31.04,36.62,42.26,770,14.8,
3778,18,59,17.74,23.38,29.10,35.01,40.26,770,14.8,
608,19,0,52.49,58.05,3.86,9.33,14.60,770,14.8,
786,19,2,30.35,38.80,47.28,55.63,3.92,770,14.8,
760,19,4,14.54,28.86,42.96,57.99,12.53,770,14.8,
587,19,6,33.47,40.78,48.17,55.33,3.08,770,14.7,
3862,19,7,32.90,43.43,53.49,3.65,13.73,770,14.7,
1583,19,11,41.58,47.16,52.91,58.58,4.25,770,14.7,
674,19,13,7,14.52,22.30,29.86,37.68,770,14.7,
598,19,15,28.45,35,41.59,48.27,55.06,770,14.7,
606,19,16,45.59,.80,15.57,30.23,44.90,770,14.7,
3314,19,18,16.56,22.29,28.13,33.55,39.04,770,14.7,
3874,19,19,31.01,37.93,44.49,51.51,58.30,770,14.7,
3657,19,23,17.13,29.38,41.59,54.17,6.80,770,14.7,
3863,19,28,23.70,29.72,35.31,41.71,47.66,770,14.6,
3365,19,29,39.56,45.20,50.89,56.57,2.16,770,14.6,
3289,19,30,42.79,55.45,7.47,19.55,31.06,770,14.5,
858,19,33,.11,5.64,11.27,16.80,22.49,770,14.5,
3776,19,35,36.60,42.94,49.32,55.46,1.39,770,14.5,
895,19,37,42.66,51.56,.20,8.82,18.18,770,14.5,
3852,19,39,38.08,43.86,49.17,54.96,.72,770,14.6,
1575,19,40,41.99,49.37,56.62,3.72,11.06,770,14.6,
3448,19,42,47.82,54.56,1.45,8.22,14.66,770,14.6,
3320,19,46,16.85,22.99,29.36,35.74,41.93,770,14.6,
3518,19,48,28.88,39.47,49.66,59.85,9.51,770,14.5,
619,19,51,.80,9.70,19.53,28.62,37.74,770,14.5,
1508,19,53,28.50,42.81,57.39,11.91,26.14,770,14.5,
893,19,57,42.79,59.56,16.58,34.17,50.57,770,14.5,
672,20,0,16.24,21.91,27.83,33.60,39.26,770,14.4,

STATION....:KOOTWIJK/P.EAST SEPT.22,1976

TO,(UTC-TO)=
  19   1   60.0000   -0   0   .5290

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.002,-.009,0,.012,.275,.187,2443043,1977,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
1593,19,16,55.41,17.51,38.52,.19,21.62,765,13.7,
1434,19,19,3.01,8.59,14.23,19.92,25.55,765,13.7,
3291,19,20,29.69,36.57,43.59,50.20,56.88,765,13.6,
3365,19,22,41.81,47.40,52.87,58.35,3.82,765,13.6,
3715,19,24,33.90,41.60,49.76,57.77,5.57,765,13.5,
1575,19,27,46.27,53.11,59.79,6.74,13.39,765,13.5,
852,19,30,51.52,56.98,2.52,8.15,13.57,765,13.4,
3852,19,32,38.41,43.99,49.33,54.97,.38,765,13.4,
619,19,34,19.82,29.53,38.64,48.23,57.39,765,13.4,
895,19,38,12.04,20.47,29.35,38.17,46.78,765,13.4,
869,19,40,38.42,44.07,49.31,54.93,.24,765,13.3,
3585,19,43,34.26,1.99,30.21,57.03,23.78,765,13.3,
1462,19,47,57.52,3.23,8.64,14.11,19.50,765,13.3,
3518,19,50,.35,9.55,18.15,27.05,35.74,765,13.3,
3377,19,52,32.58,38.14,43.64,49.11,54.52,765,13.2,
2005,19,56,28.07,35.82,43.47,51.28,58.85,765,13.2,
1508,19,59,24.42,35.56,47.04,58.04,8.94,765,13.2,
823,20,5,18,27.09,36.35,45.43,54.92,765,13.2,
893,20,9,46.80,4.82,22.58,40.66,58.56,765,13.1,
1565,20,11,8.04,22.86,37.68,52.42,7.28,765,13.1,
891,20,13,19.18,24.60,30.17,35.53,41.06,765,13.1,
1498,20,15,3.70,11.02,18.28,25.68,32.98,765,13.1,
639,20,16,29.61,37.81,46.10,54.28,2.20,765,13.1,
3370,20,19,1.46,8.96,16.25,23.74,30.99,765,13.1,
675,20,22,32.78,49.13,6.71,23.91,40.25,765,13,
705,20,28,42.02,48.30,54.49,.49,6.52,765,13,
3433,20,29,36.90,42.35,47.81,53.24,58.62,765,13,
3463,20,31,57.42,2.82,8.64,14.05,19.48,765,12.9,
1589,20,33,19.51,27.96,36.43,45.12,53.85,765,12.9,
3923,20,34,20.06,25.38,30.79,36.38,41.74,765,12.9,
2016,20,37,5.64,10.94,16.70,22.26,27.77,765,12.9,
21,20,39,42.03,48.06,54.37,.75,7.02,765,12.8,

STATION....:KOOTWIJK P.EAST SEPT.29,1976

TO,(UTC-TO)=
18 12 60.0000 -0 0 .1450

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.002,-.043,0,.012,.272,.161,2443050,1977,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
3799,18,23,9.88,15.40,20.85,26.49,31.94,758,13.1,
608,18,24,49.87,55.48,.93,6.33,11.86,758,13,
621,18,26,5.06,10.61,16,21.43,26.98,758,13,
3585,18,26,36.2,6.86,30.08,57.42,25.47,758,12.9,
3839,18,31,37.09,43.20,49.35,55.91,2.01,758,12.8,
612,18,32,37.26,51.97,6.99,22.14,36.50,758,12.8,
1583,18,35,17.88,23.47,28.89,34.49,40.04,758,12.7,
3657,18,36,29.97,40.20,50.03,.42,10.35,758,12.7,
3800,18,38,56.20,1.69,7.16,12.67,18.16,758,12.6,
3862,18,42,37.84,48.03,58.13,8.70,18.81,758,12.6,
674,18,43,39.80,46.87,53.97,.92,8.01,758,12.6,
3276,18,45,56.21,4.87,14.07,22.54,31.56,758,12.6,
3833,18,47,46,51.39,57.06,2.92,8.18,758,12.6,
1593,18,49,25.43,46.86,8.02,29.54,51.31,758,12.6,
1434,18,51,30.80,36.37,42.12,47.70,53.20,758,12.6,
3365,18,55,9.76,15.26,20.74,26.17,31.59,758,12.6,
1575,19,0,14.51,21.01,28,34.95,41.74,758,12.5,
835,19,2,12.28,18.36,24.53,30.60,36.60,758,12.4,
619,19,6,47.42,56.68,6.14,15.60,24.84,758,12.3,
895,19,10,40.54,48.88,58.12,6.99,15.87,758,12.3,
3448,19,11,55.16,1.55,8.33,14.57,20.90,758,12.4,
869,19,13,7,12.15,17.79,23.28,28.65,758,12.4,
3585,19,16,1.37,29.04,57.80,24.33,50.18,758,12.4,
3326,19,20,53.04,.80,8.60,16.28,24.39,758,12.4,
3518,19,22,28.41,37.44,45.84,54.80,3.89,758,12.4,
3377,19,25,.15,5.80,11.30,16.72,22.38,758,12.4,
672,19,26,53.22,58.94,4.47,10.03,15.66,758,12.4,
2005,19,28,57.02,4.62,12.35,20.13,27.58,758,12.4,
1508,19,31,52.12,3.24,14.43,25.80,37.01,758,12.4,
890,19,34,39.03,44.46,50.03,55.56,1,758,12.4,
823,19,37,46.35,55.65,4.92,14.39,23.55,758,12.4,
663,19,43,18.37,23.91,29.11,34.66,40.02,758,12.4,

STATION....:KOOTWIJK,P.EAST MAY18,1977

TO,(UTC-TO)=
21 12 60.0000 -0 0 5.1450

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.004,.257,0,.012,-.140,.508,2443281,1977,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
557,21,26,50.76,58.78,7.01,15.38,23.30,769,13.3,
1318,21,29,38.68,47.83,56.59,5.86,15.25,769,13.2,
1282,21,32,29.54,34.76,40.40,45.77,51.32,769,13.2,
621,21,33,33.75,39.06,44.49,49.99,55.56,769,13.2,
2870,21,37,11.79,17.17,22.54,28.07,33.64,769,13.3,
3185,21,43,38.43,48.59,58.76,9.16,19.75,769,13.3,
659,21,45,8.68,17.68,26.38,35.37,44.77,769,13.3,
2828,21,47,1.69,11.20,20.26,29.70,39.12,769,13.3,
3381,21,49,24.28,30.07,35.89,41.95,47.72,769,13.2,
387,21,51,47.36,55.64,3.62,11.97,20.09,769,13.2,
398,21,54,41.43,47.64,54.12,.21,6.68,769,13.2,
2839,21,57,52.29,.28,7.73,15.71,23.26,769,13.2,
3151,22,3,53.21,29.74,8.24,47.92,28.98,769,13,
3377,22,7,4.37,9.76,15.33,20.72,26.37,769,13,
3072,22,8,12.47,25.56,38.32,51.15,4,769,12.9,
432,22,13,40.31,45.79,51.19,56.75,2.06,769,12.7,
2963,22,15,48.15,53.97,59.77,5.27,11.02,769,12.5,
3330,22,19,37.29,43.31,48.90,55.06,1.09,769,12.3,
3287,22,22,.34,7.34,14.47,21.55,28.61,769,12.3,
685,22,26,10.09,17.80,25.67,33.42,40.97,769,12.2,
3373,22,31,54.98,.38,5.92,11.46,17.04,769,12,
1322,22,33,35.82,42.08,48.08,54.12,.14,769,11.9,
1462,22,36,58.31,3.69,9.11,14.75,20.05,769,11.8,
3151,22,38,23.98,4.78,45.37,23.92,.97,769,11.7,
2929,22,43,32.24,37.92,43.74,49.36,55.25,769,11.6,
3039,22,45,46.64,53.35,59.88,6.31,12.98,769,11.5,
3433,22,48,56.80,2.36,7.78,13.22,18.72,769,11.4,
458,22,49,59.49,5.21,10.74,16.11,21.54,769,11.4,
3484,22,50,51.04,58.37,5.46,12.67,19.88,769,11.3,
3475,22,52,56.28,2.66,8.84,15.21,21.49,769,11.2,
454,22,56,18,37.07,55.33,13.87,32.78,769,11.2,
3384,22,58,18.52,48.43,17.61,47.22,15.90,769,11.1,

STATION....:KOOTWIJK,P.EAST MAY24,1977

TO,(UTC-TO)=
20 45 60.0000 -0 0 4.6250

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.004,.242,0,.012,-.114,.510,2443287,1977,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
557,21,3,14.60,22.88,31.03,39.22,47.34,765,14.7,
1318,21,6,1.88,11.93,20.87,30.20,39.51,765,14.6,
1282,21,8,53.27,58.73,4.25,9.78,15.31,765,14.6,
621,21,9,57.81,3.34,8.66,14.17,19.61,765,14.6,
2870,21,13,35.60,41.46,54.51,90,57.36,765,14.5,
3185,21,20,2.56,12.35,22.94,32.84,43.55,765,14.4,
659,21,21,32.52,41.85,50.59,59.79,8.60,765,14.4,
2828,21,23,25.44,34.89,44.15,53.37,2.76,765,14.4,
3381,21,25,48.33,54.22,.13,6.11,11.97,765,14.3,
387,21,28,11.13,19.23,27.34,35.50,43.82,765,14.3,
398,21,31,5.06,11.55,17.65,24.04,30.25,765,14.2,
2839,21,34,16.22,23.99,31.37,39.22,47.19,765,14.2,
3151,21,40,16.38,52.45,29.94,10.79,51.82,765,14.2,
3377,21,43,28.55,34.09,39.59,45.06,50.54,765,14.2,
3072,21,44,36.39,49.07,2.48,15.55,28.17,765,14.2,
432,21,50,4.35,9.67,15.13,20.71,26.04,765,14.2,
2963,21,52,13.24,17.86,23.50,29.24,35.11,765,14.1,
3330,21,56,1.41,7.49,13.03,19.02,25.17,765,14.1,
3287,21,58,24.48,31.46,38.42,45.66,52.84,765,14.1,
685,22,2,34.31,42.32,49.68,57.63,5.49,765,14,
3373,22,8,19.06,24.58,29.96,35.59,41.21,765,14,
1322,22,9,59.82,5.96,12,18.15,24.47,765,13.9,
1462,22,13,22.40,27.67,33.19,38.73,44.12,765,13.9,
3151,22,14,48.70,29.33,8.68,48.19,24.58,765,13.8,
2929,22,19,56.25,2.01,7.64,13.39,18.98,765,13.8,
3039,22,22,10.71,17.23,23.90,30.31,36.79,765,13.8,
3433,22,25,21.15,26.46,31.89,37.47,43.10,765,13.7,
458,22,26,23.64,28.93,34.62,40.23,45.51,765,13.7,
3484,22,27,15.32,22.59,29.72,36.93,44.30,765,13.7,
3475,22,29,20.48,26.64,33.03,39.45,45.90,765,13.6,
454,22,32,40.85,59.95,18.16,37.33,55.51,765,13.6,
3384,22,34,44.70,14,42.72,12.18,41.19,765,13.5,

STATION....:URK MAY25,1977

TO,(UTC-TO)=
20 45 60.0000 -0 0 4.5360

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.003,.239,0,.012,-.109,.511,2443288,1977,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
557,21,3,51.62,.16,8.87,17.57,26.01,766,16.8,
1282,21,5,26.42,31.95,37.62,43.16,48.53,766,16.7,
621,21,7,.34,5.86,11.41,16.99,22.46,766,16.7,
2870,21,10,31.19,36.66,42.24,47.85,53.30,766,16.7,
659,21,14,21.32,30.43,39.18,48.44,57.65,766,16.7,
2997,21,16,21.62,29.86,38.53,46.87,55.23,766,16.7,
395,21,17,42.06,57.16,12.06,27.05,41.88,766,16.7,
1262,21,22,19.61,27.96,36.11,43.82,51.93,766,16.6,
2828,21,24,42.08,50.96,.42,9.60,19.17,766,16.6,
3172,21,26,16.17,30.35,45.36,.31,15.21,766,16.5,
1396,21,29,14.06,25.66,37.11,48.60,.24,766,16.4,
420,21,30,50.33,55.78,1.30,6.92,12.16,766,16.4,
3072,21,34,6.75,21.93,37.26,52.52,7.25,766,16.3,
3264,21,37,38.35,45.47,52.27,59.32,6.53,766,16.3,
3377,21,40,1.67,7.15,12.50,18.19,23.78,766,16.3,
3429,21,43,2.19,12.83,23.87,35.12,45.73,766,16.2,
403,21,46,28.36,37.85,47.32,56.70,6,766,16.2,
2963,21,48,4.85,10.62,16.56,22.38,28.31,766,16.2,
3365,21,48,51.88,57.35,3.02,8.37,14.12,766,16.1,
2865,21,49,56.54,3.31,10.21,16.94,23.72,766,16.1,
424,21,53,28.57,34.48,40.14,45.93,51.46,766,16.1,
3416,21,55,20.72,26.54,32.23,37.97,43.84,766,16,
3085,21,57,43.56,55.41,7.80,19.67,31.37,766,16,
663,21,59,52.99,58.47,4.14,9.62,15.14,766,15.9,
675,22,1,54.42,10.55,26.80,42.97,59.68,766,15.9,
1322,22,5,20.87,27.16,33.29,39.65,45.74,766,15.8,
3447,22,8,8.38,14.37,20.02,26.44,32.43,766,15.8,
643,22,11,34.97,40.60,46.48,52.12,58.04,766,15.8,
1446,22,14,42.80,48.98,55.08,1.19,7.63,766,15.7,
3384,22,16,.38,26.77,53.15,20.65,47.02,766,15.7,
2965,22,18,7.25,12.69,18.32,23.72,29.10,766,15.7,
1358,22,20,52.97,3.01,12.90,23.28,33.07,766,15.7,

STATION....:STEENWIJK MAY26,1977

TO,(UTC-TO)=
20 42 60.0000 -0 0 4.4480

DLT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.004,.236,0,.012,-.104,.512,2443289,1977,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
557,20,58,51.55,.44,8.98,18.01,26.65,770,10.9,
621,21,1,1.29,6.72,12.22,18.13,23.60,770,10.8,
1276,21,4,30.50,36.11,41.63,47.30,52.85,770,10.7,
659,21,7,15.40,24.20,33.33,42.05,51.10,770,10.6,
1293,21,9,21.93,27.77,33.38,39.01,44.76,770,10.6,
1300,21,11,40.80,47.13,53.29,59.33,5.25,770,10.5,
395,21,13,46.75,1.43,15.74,30.54,45.13,770,10.5,
3381,21,15,3.98,9.75,15.48,21.50,27.56,770,10.5,
2999,21,18,32.81,40.72,48.73,56.51,4.22,770,10.5,
2828,21,19,49.90,58.82,8.40,17.56,26.75,770,10.5,
3172,21,22,22.16,37.22,52.90,8.43,24.32,770,10.6,
420,21,24,51.98,57.29,2.85,8.60,14.01,770,10.6,
3072,21,25,53.68,10.02,25.80,41.10,57.01,770,10.6,
3264,21,32,17.72,24.60,31.83,38.94,46,770,10.6,
3377,21,33,54.76,.35,5.74,11.44,16.92,770,10.6,
3429,21,35,33.86,44.71,55.92,6.73,17.72,770,10.6,
2869,21,37,35.64,41.66,47.80,53.85,59.70,770,10.5,
403,21,41,37.91,47.22,56.54,6.01,15.55,770,10.4,
2865,21,44,30.90,37.78,44.30,51.05,57.66,770,10.3,
424,21,47,40.33,46.15,51.86,57.61,2.91,770,10.2,
3416,21,49,4.61,10.50,16.16,21.95,27.54,770,10.2,
3252,21,52,55.93,5.70,15.34,24.79,34.88,770,10.1,
3373,22,0,1.57,7.13,12.68,18.52,24.21,770,10.1,
1462,22,4,38.46,44.09,49.80,55.20,.69,770,10,
3384,22,6,3.78,30.06,55.86,22.03,47.99,770,10,
1446,22,9,6.86,13.09,19.09,25.53,31.85,770,9.9,
3039,22,10,19.13,26.05,33.01,39.56,46.57,770,9.8,
2965,22,12,5.81,11.24,16.79,22.44,27.88,770,9.8,
1358,22,13,34.54,44.47,55.36,5.62,15.52,770,9.8,
3484,22,14,40.46,47.71,55.10,2.30,9.71,770,9.7,
3433,22,15,54.72,.34,5.78,11.34,16.88,770,9.7,
458,22,16,51.92,57.54,3.06,8.58,14.28,770,9.7,

STATION....:OOSTERHOUT MAY31,1977

TO,(UTC-TO)=
21 16 60.0000 -0 0 3.9470

DLT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.004,.223,0,.012,-.079,.513,2443294,1977,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
432,21,26,16.55,22.05,27.62,32.99,38.14,772,9.4,
3365,21,27,31.36,36.09,42.31,47.59,53.08,772,9.4,
3252,21,28,28.91,36.88,45.45,53.93,2.48,772,9.4,
593,21,29,32.35,40.35,48.01,56.09,3.53,772,9.4,
3330,21,30,47.93,53.57,59.69,5.44,11.34,772,9.4,
3287,21,31,52.74,56.60,6.39,13.38,20.03,772,9.4,
3429,21,34,3.36,14.16,25.46,36.66,47.95,772,9.4,
417,21,39,16.96,23.80,31.22,37.93,45.48,772,9.4,
685,21,42,19.15,26.85,34.71,42.39,50.10,772,9.4,
3045,21,46,13.24,20.68,28.13,35.43,43.17,772,9.3,
1322,21,47,52.77,58.88,4.80,10.68,16.46,772,9.2,
1462,21,49,22.26,27.63,32.96,38.43,43.70,772,9.1,
3447,21,50,29.14,35.09,40.96,47.12,53.02,772,9.1,
492,21,52,47.80,55.14,2.54,9.77,16.87,772,9,
2929,21,55,6.39,12.11,17.74,23.42,29.26,772,8.9,
2965,21,57,26.62,31.77,37.12,42.54,48.07,772,8.8,
451,21,59,8.97,26.63,44.55,1.83,19.55,772,8.8,
675,22,0,33.64,51.07,8.32,25.92,43.44,772,8.8,
3433,22,1,57.14,2.53,8.04,13.37,18.69,772,8.8,
458,22,2,58.05,3.35,8.74,14.27,19.76,772,8.8,
433,22,4,26.45,36.20,45.69,55.62,5.24,772,8.8,
3151,22,8,6.38,25.73,46.47,6.56,25.55,772,8.8,
3458,22,13,17.29,22.89,28.38,34.02,39.67,772,8.8,
2941,22,14,41.25,47.22,53.47,59.60,5.76,772,8.7,
1456,22,15,45.95,52.25,58.18,4.41,10.31,772,8.7,
440,22,18,35.30,44.11,52.41,1.10,9.47,772,8.6,
3268,22,20,14.70,29.76,45.07,.53,16.19,772,8.6,
470,22,23,8.84,14.11,19.47,25.06,30.43,772,8.6,
522,22,26,57.88,7.22,16.44,25.64,34.80,772,8.5,
684,22,28,35.66,41.16,46.44,51.72,57.31,772,8.5,
714,22,30,41.38,52.07,2.75,13.59,24.13,772,8.5,
1337,22,32,24.31,30.01,35.71,41.27,47.15,772,8.5,

STATION....:SCHOORL JUNE13,1977

TO,(UTC-TO)=
21 1 60.0000 -0 0 2.6240

DLT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.003,.189,0,.012,-.006,.508,2443307,1977,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
3484,21,10,5.94,13.14,20.52,27.61,35.14,754,21.9,
461,21,14,41.93,47.70,53.19,58.89,4.42,754,21.8,
3339,21,16,17.23,24.46,31.42,38.49,45.81,754,21.7,
2915,21,20,.77,7.91,15.16,22.17,29.31,754,21.7,
3458,21,21,12.26,17.77,23.43,29.23,34.84,754,21.7,
3389,21,22,47.45,53.40,59.46,5.54,11.46,754,21.6,
433,21,23,52.71,2.18,11.92,21.60,31.46,754,21.6,
522,21,25,42.86,54.18,5.13,16.35,27.65,754,21.6,
2941,21,27,48.88,55.12,1.38,7.40,13.64,754,21.6,
714,21,28,52.78,3.05,13.60,24.08,34.63,754,21.6,
470,21,32,12.02,17.40,23.06,28.47,34.13,754,21.5,
700,21,35,27.46,45.23,2.93,20.22,37.82,754,21.5,
684,21,38,26.79,32.35,37.71,43.26,48.92,754,21.4,
672,21,39,39.96,45.71,51.45,57.20,2.92,754,21.4,
3106,21,43,2.87,10.40,18.06,25.62,33.26,754,21.4,
1316,21,44,5.94,11.68,17.30,22.97,28.47,754,21.3,
3172,21,47,57.27,12.32,28.21,42.81,57.88,754,21.3,
3064,21,49,34.14,39.91,46.10,51.86,57.69,754,21.3,
3547,21,51,0,8.06,16.32,24.13,32.49,754,21.2,
2986,21,54,44.45,58.22,12.32,26.63,40.09,754,21.2,
3268,21,56,.53,38.92,18.89,.23,43.67,754,21.2,
726,22,5,29.15,34.71,40.67,46.86,52.74,754,21.1,
1440,22,6,19.30,30.87,43.68,55.88,8.58,754,21.1,
711,22,11,32.65,38.06,43.75,49.12,54.52,754,21.1,
3030,22,13,49.68,55.46,1.07,6.51,12.14,754,21.1,
502,22,15,18.51,24.08,30.03,35.52,41.48,754,21,
1338,22,18,29.72,35.10,40.50,46.16,51.56,754,21,
1396,22,19,23.04,35.06,46.94,58.27,9.74,754,21,
733,22,22,7.05,12.74,18.61,24.44,30.05,754,21,
3541,22,22,50.06,55.52,.91,6.74,12.03,754,21,
472,22,25,39.21,49.18,59.01,8.81,18.39,754,20.9,
641,22,27,12.11,23.59,35.72,47.59,59.20,754,20.9,

STATION....:GRONINGEN JULY 2,1977

TO,(UTC-TO)=
20 55 60.0000 -0 1 .7090

DLT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.008,.152,0,.012,-.069,.495,2443326,1978,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
3094,21,11,37.52,43.10,48.92,54.86,.38,768,14.7,
641,21,12,59.09,12.48,26.23,40.12,53.78,768,14.7,
478,21,15,23.08,30.42,37.89,45.17,52.50,768,14.7,
3586,21,17,16.67,22.54,28.71,34.60,40.37,768,14.7,
734,21,18,44.79,6.67,28.47,51.06,14.02,768,14.7,
3075,21,23,24.40,43.86,3.86,23.23,42.86,768,14.7,
1370,21,27,42.33,4E.39,54.37,.46,6.52,768,14.7,
3575,21,30,2.56,7.98,13.72,19.13,24.98,768,14.7,
1479,21,33,14.24,21.64,28.88,36.24,43.79,768,14.7,
724,21,35,20.59,26.28,32.21,37.81,43.56,768,14.7,
1468,21,37,22.72,33.13,43.50,54.44,5.07,768,14.7,
3572,21,38,33.94,39.34,45.07,50.64,56.29,768,14.7,
759,21,43,34.52,51.73,8.79,26.16,43.32,768,14.7,
713,21,46,52.91,59.40,5.90,12.39,18.89,768,14.7,
3252,21,49,5.68,16.20,27.12,37.44,47.64,768,14.7,
3654,21,51,.31,6.93,13.96,20.85,27.89,768,14.7,
509,21,52,17.66,23.34,29.12,34.63,40.58,768,14.7,
1368,21,54,21.38,26.93,32.51,38.08,43.64,768,14.7,
535,21,55,30.78,36.32,42.27,47.80,53.74,768,14.7,
572,21,56,23.28,30.73,38.84,46.31,54.01,768,14.7,
3584,21,58,39.16,44.88,50.55,56.25,1.73,768,14.7,
3087,21,59,57.93,4.14,10.28,16.56,22.63,768,14.7,
593,22,5,54.47,3.77,12.94,22.57,31.64,768,14.7,
3641,22,7,57.78,3.47,9.04,14.77,20.18,768,14.7,
527,22,10,44.68,50.20,55.78,1.35,7.07,768,14.7,
505,22,11,39.08,49.72,.23,10.71,21.19,768,14.7,
3693,22,13,24.14,34.60,45.22,55.84,6.37,768,14.7,
524,22,16,44.05,1.40,18.98,35.96,53.17,768,14.7,
3457,22,24,7.48,23.20,38.85,54.61,10.48,768,14.7,
540,22,27,13.39,18.92,24.58,30.12,35.71,768,14.7,
3662,22,29,10.38,15.99,21.55,27.14,32.94,768,14.7,
1440,22,31,13.71,27.78,42.17,56.60,10.67,768,14.7,

STATION....: HARTKERBERG JULY 3,1977

TO,(UTC-TO)=
20 35 60.0000 -0 1 .6110

DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.003,.150,0,.012,.072,.494,2443327,1978,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
478,21,5,50.60,57.83,5.33,12.44,19.71,763,18.3,
3094,21,9,13.64,19.16,24.96,30.37,35.85,763,18.2,
3604,21,9,59.50,7.24,14.89,23.02,30.59,763,18.2,
3608,21,11,49.51,58.53,7.38,16.31,25.20,763,18.2,
681,21,13,14.44,21.74,28.87,36.39,43.48,763,18.1,
557,21,17,59.28,7.20,15.37,23.39,31.73,763,18.1,
3268,21,20,24.37,46.15,7.78,28.80,49.18,763,18,
1468,21,24,7.27,16.40,25.20,34.51,43.57,763,18,
3575,21,26,44.34,49.77,55.34,.70,6.19,763,17.9,
724,21,29,56.36,2.17,7.71,13.37,18.90,763,17.8,
3083,21,33,2.19,7.88,13.61,19.06,24.71,763,17.8,
3572,21,34,31.98,37.58,42.92,48.20,53.99,763,17.8,
3383,21,35,26.45,45.61,4.99,25.12,44.70,763,17.8,
713,21,39,23.72,30.08,36.06,42.41,48.38,763,17.9,
3610,21,42,5.60,11.25,16.75,22.22,27.88,763,17.9,
509,21,46,56.01,1.74,7.45,13.14,18.57,763,17.8,
3640,21,48,10.46,16.82,22.86,29.16,35.35,763,17.8,
1368,21,50,26.23,31.79,37.06,42.71,48.11,763,17.7,
524,21,53,6.92,25.47,43.66,2.20,20.07,763,17.6,
3252,21,54,40.01,49.26,58.44,7.16,16.42,763,17.6,
757,21,55,38.72,44.13,49.50,54.87,.63,763,17.5,
505,21,57,13.75,24.66,34.99,45.54,56.45,763,17.4,
759,21,59,27.07,45.22,3.83,22.23,40.43,763,17.3,
3593,22,1,30.73,36.01,41.59,47.13,52.60,763,17.2,
3457,22,6,6.34,18.22,29.63,41.38,53.16,763,17.1,
1386,22,8,1.46,7.15,12.81,18.44,23.92,763,17,
593,22,10,11.90,20.31,28.80,37.09,45.41,763,16.9,
563,22,12,19.71,26.24,32.34,38.34,44.50,763,16.7,
3166,22,13,40.66,46.08,51.62,56.98,2.51,763,16.7,
511,22,16,55.01,2.63,10.71,18.48,26.42,763,16.7,
3693,22,20,10.30,20.58,30.93,41.74,52.31,763,16.8,
540,22,23,9.55,15.07,20.58,26.04,31.52,763,16.9,

STATION....:KOOTWYK,P.EAST JULY 4,1977

TO,(UTC-TO)=
21 5 60.0000 -0 1 .5240

DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.003,.147,0,.012,.075,.494,2443328,1978,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
3268,21,20,49.01,9.41,29.79,50.22,9.92,761,18.2,
1370,21,25,26.97,32.73,38.36,44.08,50.08,761,18.1,
3631,21,29,24.33,33.50,42.53,51.95,1.49,761,18,
3588,21,32,13.36,18.79,24.30,29.93,35.41,761,18,
3383,21,33,9.39,27.86,46.69,5.63,24.66,761,17.9,
767,21,38,13.83,21.04,28.34,35.82,43.20,761,17.8,
734,21,42,21.71,47.22,11.63,37.24,1.86,761,17.7,
3204,21,44,48.59,55.46,2.46,9.68,16.43,761,17.7,
1368,21,49,23.78,29.22,34.85,40.27,45.49,761,17.6,
524,21,50,49.84,8.67,26.82,45.34,3.66,761,17.6,
3584,21,52,56.54,2.04,7.34,12.77,18.25,761,17.6,
3252,21,54,8.99,17.78,27.09,35.70,44.59,761,17.5,
505,21,55,33.05,43.56,54.56,5,15.78,761,17.5,
770,21,59,8.25,21.82,36.03,49.97,3.20,761,17.5,
782,22,0,31.27,37.56,43.68,50.21,56.75,761,17.5,
3457,22,4,22.28,33.70,45.51,56.82,8.49,761,17.4,
1488,22,7,35.61,44.11,52.76,1.24,9.60,761,17.3,
593,22,9,36.89,44.90,53.35,1.69,9.93,761,17.3,
563,22,11,29.71,35.94,42.10,48.04,54.16,761,17.2,
3166,22,12,41.72,47.14,52.67,58.02,3.61,761,17.2,
511,22,15,29.16,37.07,45.06,52.81,.50,761,17.1,
528,22,19,46.27,51.92,57.69,3.37,9.23,761,17.1,
540,22,22,6.75,12.22,17.80,23.15,28.54,761,17,
3577,22,23,27.47,33.61,39.84,46.13,52.39,761,17,
3662,22,25,31.35,36.85,42.40,48.05,53.37,761,17,
3518,22,26,17.78,26.62,34.99,43.96,52.63,761,16.9,
1525,22,27,35.15,40.78,46.42,52.05,57.80,761,16.9,
555,22,30,34.68,40.26,45.99,51.42,56.78,761,16.8,
3155,22,33,1.18,6.68,12.33,18.07,23.68,761,16.8,
3128,22,33,57.69,7.06,16.88,26.67,36.13,761,16.8,
1551,22,38,24.01,29.43,34.92,40.67,46.24,761,16.6,
3655,22,39,53.87,59.25,4.84,10.27,15.79,761,16.6,

STATION....:KOOTWYK,P.EAST JULY 5,1977

TO,(UTC-TO)=
20 55 60.0000 -0 1 .4390

DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.003,.145,0,.012,.178,.494,2443329,1978,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
3268,21,16,52.72,14.05,34.84,54.61,14.57,760,19.6,
1370,21,21,30.98,36.75,42.44,48.27,54.09,760,19.5,
3631,21,25,27.85,37.10,46.39,55.81,5.14,760,19.4,
3588,21,28,17.25,22.66,28.27,33.85,39.14,760,19.4,
3383,21,29,12.78,31.38,50.31,9.53,29.19,760,19.3,
767,21,34,17.66,24.93,32.27,39.64,46.94,760,19.2,
734,21,38,25.12,50.61,15.50,40.46,5.98,760,19.1,
3204,21,40,52.48,59.75,6.69,13.62,20.71,760,19.1,
1368,21,45,27.90,33.43,38.94,44.32,49.88,760,18.9,
524,21,46,54.19,12.97,31.18,49.69,8.10,760,18.9,
3584,21,49,.32,5.90,11.28,16.82,22.17,760,18.8,
3252,21,50,12.85,22.02,31.03,39.90,48.67,760,18.8,
505,21,51,37.13,47.70,58.58,9.22,19.94,760,18.7,
770,21,55,12.44,26.36,39.66,53.47,7.03,760,18.7,
782,21,56,34.98,41.44,47.65,54.14,.65,760,18.7,
3457,22,0,26.60,37.54,49.24,.93,12.23,760,18.6,
1488,22,3,39.53,47.95,56.54,5.23,13.65,760,18.6,
593,22,5,40.80,49.39,57.61,5.89,14.16,760,18.6,
563,22,7,33.72,39.86,45.92,51.93,58.10,760,18.5,
3166,22,8,45.40,51.13,56.57,2.01,7.60,760,18.5,
511,22,11,33.15,41.14,48.83,56.75,4.62,760,18.4,
528,22,15,50.18,56.02,1.75,7.48,13.22,760,18.4,
540,22,18,10.83,16.21,21.88,27.10,32.77,760,18.3,
3577,22,19,31.24,37.48,43.90,50.07,56.18,760,18.3,
3662,22,21,35.34,40.95,46.28,51.97,57.41,760,18.3,
3518,22,22,21.64,30.14,38.91,47.87,56.54,760,18.2,
1525,22,23,39.22,44.62,50.34,56.04,1.77,760,18.2,
555,22,26,38.87,44.38,49.97,55.44,.99,760,18.2,
3155,22,29,5.04,10.72,16.52,21.94,27.82,760,18.2,
3128,22,30,1.34,11.41,20.73,30.59,40.07,760,18.2,
1551,22,34,27.88,33.44,39.04,44.44,50.17,760,18.2,
3655,22,35,57.74,3.18,8.64,14.23,19.60,760,18.2,

STATION....:URK JULY 15, 1977

TO,(UTC-TO)=
20 51 60.0000 -0 1 5.5410

DIT,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.007,.129,0,.012,.108,.479,2443339,1978,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
500,21,8,34.33,41.22,48.02,55.04,1.79,768,14,
770,21,9,41.07,54.04,7.77,21.66,34.72,768,14,
3584,21,11,.82,6.30,11.72,17.33,23.04,768,14,
757,21,11,56.77,2.45,7.91,13.53,19.14,768,14,
524,21,18,28.10,46.31,3.95,21.71,39.50,768,14,
1510,21,20,34.91,41.08,46.92,53.10,59.23,768,14,
3641,21,21,36.66,42.14,47.80,53.68,59.22,768,14,
527,21,23,13.35,18.84,24.58,30.09,35.45,768,14,
3191,21,25,25.08,30.68,36.83,42.82,48.81,768,14,
3088,21,26,31.79,39.65,47.60,55.46,3.16,768,14,
563,21,27,37.14,43.20,49.55,55.63,1.92,768,14,
3457,21,28,19.75,32.38,45.61,58.43,11.73,768,14,
3166,21,30,.48,6.20,11.55,17.22,22.80,768,14,
511,21,36,25.92,33.82,41.56,49.51,57.40,768,14,
528,21,38,30.65,36.49,42.36,48.06,53.87,768,14,
540,21,39,57.31,3,8.50,13.99,19.59,768,14,
3703,21,41,16.26,24.50,32.30,40.25,48.22,768,13.9,
3662,21,42,39.09,44.71,50.12,55.88,1.60,768,13.9,
3383,21,49,30.85,1.19,31.77,.91,29.32,768,13.9,
1379,21,52,7.04,22.11,36.56,50.67,5.55,768,13.9,
3570,21,54,10.55,17.48,24.44,31.40,38.71,768,13.9,
3472,21,56,12.20,29.76,47.30,4.91,22.73,768,13.8,
3627,22,4,38.42,44.42,50.48,56.48,2.38,768,13.8,
795,22,7,45.43,3.90,22.51,41.56,59.99,768,13.8,
3356,22,13,24.92,35.65,45.89,56.10,6.73,768,13.9,
788,22,15,9.79,15.31,21.04,26.52,32.08,768,13.9,
580,22,23,30.02,35.54,41.12,46.89,52.29,768,14,
3749,22,27,21.96,28.41,34.36,40.81,47.09,768,14,
3400,22,32,19.39,33.07,45.96,59.54,12.83,768,14,
1523,22,34,22.70,30.75,38.86,47.16,55.24,768,14.1,
837,22,37,13.19,24.40,35.47,46.69,57.70,768,14.1,
3339,22,40,7.69,14.86,21.98,28.99,36.03,768,14.1,

STATION....:OOSTERHOUT JULY21,1977

TO,(UTC-TO)=
20 45 .0000 -0 0 2.0020

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.008,.120,0,.012,.129,.464,2443345,1978,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
3457,20,54,20.40,30.47,40.66,51.31,1.84,768,13,
3593,20,56,1.33,6.82,12.31,17.60,23.10,768,13,
782,20,58,36.63,42.92,49.10,55.71,1.90,768,12.9,
527,21,0,40.18,45.64,51.06,56.52,2.02,768,12.9,
770,21,3,11.33,25.22,39.27,53.22,7.33,768,12.8,
3101,21,4,43.74,50.89,57.91,5.18,12.20,768,12.8,
3191,21,6,7.53,13.06,18.90,24.48,30.11,768,12.8,
759,21,7,1.59,20.30,39.40,58.49,17.85,768,12.7,
593,21,9,23.28,30.96,38.82,46.81,54.96,768,12.7,
3360,21,14,31.37,56.63,21.05,45.36,8.95,768,12.6,
540,21,17,51.58,56.90,2.33,7.74,13.07,768,12.6,
3472,21,18,25.58,37.82,49.88,2.40,14.67,768,12.6,
3182,21,20,13.63,19.20,24.57,30.07,35.55,768,12.6,
765,21,21,23.86,29.13,34.62,40.09,45.33,768,12.5,
3662,21,22,9.36,14.89,20.48,26.03,31.46,768,12.5,
3670,21,23,11.54,17.26,22.76,28.67,34.42,768,12.5,
3128,21,24,49.72,59.40,9.15,19.18,28.71,768,12.5,
555,21,26,54.58,.01,5.43,10.75,16.30,768,12.5,
3155,21,28,4.39,10.05,15.66,21.38,26.96,768,12.5,
732,21,33,58.15,5.24,12.79,20.17,27.38,768,12.4,
3666,21,35,47.11,52.44,58,3.25,8.70,768,12.3,
568,21,37,14.34,19.95,25.53,31,36.62,768,12.3,
809,21,41,23.64,34.10,44.35,54.24,4.86,768,12.2,
3161,21,42,23.49,29.35,35.48,41.36,47.14,768,12.1,
1535,21,44,11.02,16.54,22.12,27.84,33.28,768,12.1,
3287,21,45,23.49,30.33,37.22,44.09,50.81,768,12.1,
550,21,47,23.67,36.64,50.26,3.54,16.58,768,12.1,
3383,21,51,8.17,22.88,37.92,52.40,6.68,768,12,
1572,21,54,6.98,14.03,.0.78,27.95,34.88,768,12,
3508,21,56,20.75,37.20,54.45,11.97,29.08,768,11.9,
3633,21,59,57.83,4.04,10.17,16.39,22.62,768,11.9,
3229,22,1,14.94,33.16,52.14,10.34,29.07,768,11.9,

STATION....:GRONINGEN AUG.29,1977

TO,(UTC-TO)=
19 50 60.0000 -0 0 2.0550

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.007,.037,0,.012,.262,.350,2443384,1978,5,32,

FK4-NR,T(K),PRESS.,TEMP.=
3457,20,4,55.60,11.79,27.90,43.88,59.04,766,14.4,
3769,20,7,36.18,41.81,47.34,52.96,58.48,766,14.3,
601,20,9,47.13,52.60,58.40,3.88,9.37,766,14.2,
1446,20,10,52.19,58.49,4.88,11.20,17.49,766,14.1,
848,20,15,44.41,50.24,55.96,1.79,7.52,766,13.9,
3303,20,18,1.71,7.28,12.80,18.67,24.11,766,13.8,
626,20,19,38.40,44.24,49.85,55.63,1.21,766,13.8,
3778,20,23,54.27,59.86,5.33,10.97,16.66,766,13.7,
1593,20,24,48.60,7.76,26.97,46.38,7.06,766,13.6,
786,20,27,22.95,31.15,39.58,48.19,56.38,766,13.6,
797,20,28,15.01,22.13,29.24,36.41,43.82,766,13.5,
760,20,29,25.05,39.85,54.38,9.32,24.23,766,13.5,
587,20,31,23.65,31.08,38.52,45.85,53.24,766,13.5,
1583,20,36,20.05,25.69,31.34,37.03,42.74,766,13.4,
3800,20,38,56.92,2.41,7.89,13.67,19.12,766,13.4,
875,20,40,12.08,18.18,24.67,31.01,37.32,766,13.4,
3314,20,42,55.64,1.15,6.96,12.50,18.09,766,13.5,
3611,20,43,14.02,42.62,11.50,41.77,11.82,766,13.5,
612,20,49,23.89,38.14,52.66,6.88,21.43,766,13.5,
1434,20,52,55.70,1.13,6.87,12.52,18.31,766,13.6,
3365,20,54,14.80,20.48,26.13,31.84,37.30,766,13.6,
3289,20,55,49.68,1.67,14.01,25.74,37.84,766,13.7,
895,21,2,.01,8.84,17.59,26.28,35.12,766,13.6,
3852,21,4,12.28,17.94,23.44,29.38,34.87,766,13.5,
835,21,5,43.97,50.33,56.60,3.16,9.59,766,13.4,
3448,21,7,14.58,21.69,28.41,35.34,41.98,766,13.3,
3909,21,10,55.12,1.68,8.44,15.05,21.60,766,13.2,
3518,21,12,44,54.12,4.41,14.88,24.98,766,13.2,
619,21,15,57.56,7.04,16.40,25.73,34.95,766,13.2,
1508,21,17,30.43,45.54,.21,14.92,29.67,766,13.2,
627,21,19,58.31,4.75,11.18,17.42,23.86,766,13.2,
893,21,21,34.26,51.66,8.96,25.63,42.41,766,13.2,

STATION....:SCHOORL SEPT.1,1977

TO,(UTC-TO)=
19 30 60.0000 -0 0 1.5510

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
.007,.030,0,.012,.265,.338,2443387,1978,5,32,

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3587,19,48,12.91,24.05,35.69,47.96,59.32,761,13.8,
3774,19,50,50.30,55.93,1.63,7.50,13.15,761,13.8,
3296,19,51,47.32,53.23,58.92,4.62,10.34,761,13.8,
3330,19,53,18.08,24.11,30.52,36.50,42.36,761,13.7,
3415,19,54,21.42,31.62,41.90,52.12,2.76,761,13.7,
569,19,55,18.61,29.44,40.77,51.34,2.53,761,13.7,
3714,19,56,34.52,40.08,45.82,51.52,57.39,761,13.7,
1559,19,58,9.49,15.37,21.11,27.20,33.13,761,13.6,
3281,19,59,5.47,10.94,16.41,21.93,27.51,761,13.6,
851,20,0,19.15,30.88,43.08,55.03,7.42,761,13.6,
3247,20,1,29.74,35.65,41.46,47.37,53.32,761,13.6,
3769,20,3,28.42,33.85,39.38,45.03,50.53,761,13.5,
1468,20,5,39.51,49.12,59.24,8.79,18.59,761,13.5,
3472,20,7,38.94,57.09,15.32,68,50.52,761,13.5,
1594,20,9,51.37,6.34,21.14,36.36,51.39,761,13.6,
848,20,12,21.34,27.01,32.68,38.38,44.24,761,13.6,
3303,20,13,59.61,5.16,10.55,16.28,21.82,761,13.7,
3649,20,16,29.85,39.09,48.10,57.69,6.77,761,13.7,
3799,20,18,8.20,13.76,19.34,24.89,30.57,761,13.7,
786,20,19,18.87,26.52,34.34,42.52,50.82,761,13.8,
608,20,20,50.60,56.17,1.91,7.31,12.67,761,13.8,
595,20,22,5.43,11.70,17.68,23.83,29.77,761,13.8,
587,20,24,5.92,12.92,20.48,27.77,35.05,761,13.8,
3611,20,25,33.44,52.01,10.45,28.85,47.78,761,13.9,
606,20,29,13.26,28.70,43.64,58.13,13.31,761,13.9,
1583,20,31,24.56,30.17,35.71,41.28,46.94,761,14,
3800,20,34,32.73,38.33,43.83,49.45,54.83,761,14,
674,20,36,21.68,28.86,36.19,43.76,50.86,761,14,
3314,20,38,12.33,18,23.41,28.92,34.56,761,14,
882,20,41,37.08,44.13,51.44,58.53,5.91,761,13.9,

STATION....: HARIKERBERG SEPT.13,1977

TO,(UTC-TO)=
18 51 60.0000 0 0 .5000

D1T,(UT1-UTC),BETAU,F,X,Y,JD,REF.YEAR,N,S=
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FK4-NR,T(K),PRESS.,TEMP.=
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1468,19,15,16,24.90,33.88,43.19,52.54,774,8,
760,19,17,4.54,15.79,26.94,38.36,49.72,774,8,
3303,19,19,33.98,39.49,44.86,50.47,55.86,774,7.9,
3508,19,21,8.32,35.81,2.71,29.53,56.43,774,7.8,
1594,19,23,2.85,19.24,33.40,48.51,4.14,774,7.8,
3778,19,24,48.88,54.51,.08,5.37,10.82,774,7.7,
608,19,25,51.83,57.09,2.72,8.30,13.80,774,7.7,
606,19,26,56.96,12.51,27.79,42.88,57.54,774,7.7,
3585,19,29,21.92,50.86,20.20,50.70,20.59,774,7.6,
3839,19,32,21.81,28.02,34.33,40.76,47.20,774,7.5,
612,19,34,33.43,48.83,3.73,18.49,33.18,774,7.4,
1583,19,36,19.17,24.71,30.34,35.78,41.55,774,7.3,
3657,19,38,2.60,12.83,23.05,33.38,43.69,774,7.3,
3314,19,43,11.58,17.06,22.66,27.98,33.47,774,7.1,
643,19,44,45,50.74,56.44,2.23,7.71,774,7,
3389,19,46,10.05,15.74,21.88,27.61,33.62,774,6.9,
3276,19,47,24.14,32.85,41.80,50.81,59.70,774,6.8,
1593,19,48,56.65,18.26,38.69,1.21,21.97,774,6.7,
1434,19,52,34.94,40.66,46.25,51.80,57.56,774,6.6,
614,19,53,32.89,39.39,45.48,51.78,58.01,774,6.6,
3365,19,56,6.41,11.85,17.42,22.89,28.21,774,6.6,
1604,19,57,33.74,39.35,44.97,50.70,56.35,774,6.6,
1575,20,1,28.69,35.56,42.44,49.18,56.11,774,6.6,
835,20,3,21.64,27.48,33.45,39.83,46.12,774,6.6,
852,20,4,21.89,27.40,32.90,38.41,44.08,774,6.6,
3852,20,6,2.12,7.52,12.91,18.51,24.10,774,6.6,
619,20,8,17.74,26.98,36.51,45.55,55.20,774,6.6,
895,20,11,9.81,18.76,27.46,36.14,45.15,774,6.5,
3448,20,12,40.42,48.86,53.27,59.57,5.96,774,6.5,
3585,20,15,3.58,34.90,5.10,34.40,2.96,774,6.5,

Appendix III

COMPUTER OUTPUT OF THE MEASUREMENTS

LATITUDE AND LONGITUDE BY EQUAL ZENITH DISTANCES OF STARS

STATION....: DELFT,GEODESY
INSTRUMENT.:WILDT4
CHRONOMETER:CPR2
OBSERVER...:DE VRIES
DATE.....:APRIL 11,1976

APPROXIMATE VALUES

LATITUDE.....	51°	59'	12".0000
LONGITUDE.....	-4	23	15.0000
ZENITHDISTANCE.....	29	59	20.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1	AZIMUTH	L	E
425	3.71	19h 29m 28s.7973	115° 54'	-.4276	-.66
2563	6.00	19 35 42.4364	237 5	-5.43	-.35
225	3.88	19 43 20.9986	294 54	-3.80	-2.05
286	4.18	19 51 42.5328	239 48	-7.05	1.22
2938	5.70	19 59 40.1610	120 4	-5.08	-.34
233	5.39	20 9 20.7312	318 8	-5.92	.12
2537	4.80	20 17 19.1644	274 54	-6.22	.36
2641	5.60	20 22 31.6015	232 44	-5.90	.10
2983	5.10	20 27 10.0326	115 55	-6.07	.66
511	4.77	20 35 28.7408	43 35	-6.08	.55
1190	5.55	20 42 5.4220	279 48	-5.64	-.22
2523	5.00	20 46 33.4241	321 53	-6.27	.48
2555	5.70	20 50 47.5072	288 57	-6.13	.27
1337	5.11	21 2 35.4225	108 6	-5.06	-.35
2558	5.30	21 8 34.1106	305 59	-5.98	.15
3064	6.00	21 19 7.6549	109 55	-5.47	.06

NUMBER OF STARS: 16

ESTIMATE OF VARIANCE: .60

MATRIX OF WEIGHTCOEFFICIENTS

UNKNOWNS:				
		.2749		
		-.0570	.1008	
DELTA PHI.....	-".017			
DELTA LAMBDA COS(PHI):	-.232	.0085	-.0155	.0663
DELTA Z.....	-5.632			

RESULTS RELATED TO THE C.I.C.:

LATITUDE = 51° 59' 12".0884

LONGITUDE= -4 23 14.8784

ESTIMATE OF ST. DEV.:

".408

.247 *SEC PHI

LATITUDE AND LONGITUDE BY EQUAL ZENITH DISTANCES OF STARS

STATION....: DELFT,GEODESY
INSTRUMENT.:WILD T4
CHRONOMETER:CPR 2
OBSERVER...:HUSTI
DATE.....:11 APRIL 1976

APPROXIMATE VALUES

LATITUDE.....	51	59	12.0000
LONGITUDE.....	-4	23	15.0000
ZENITHDISTANCE.....	29	59	20.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1	AZIMUTH	L	E
2803	5.90	22 8 59.9280	232 50	-7.51	.77
1370	4.83	22 16 12.2522	108 57	-6.31	.27
3210	5.50	22 21 56.0413	69 50	-5.98	.06
346	5.30	22 27 17.7774	270 41	-6.55	-.14
2762	5.00	22 35 15.0656	261 56	-7.36	.63
3182	5.60	22 41 21.8258	99 0	-5.42	-.57
340	5.68	22 47 45.5499	295 5	-6.33	-.25
1412	5.78	22 53 48.9691	81 8	-5.40	-.53
534	3.78	22 58 13.1292	124 41	-5.99	-.14
3291	5.60	23 4 58.6213	53 46	-6.63	.72
358	3.26	23 10 54.8515	289 37	-6.20	-.41
390	4.41	23 15 44.3446	254 23	-5.95	-.79
1416	4.61	23 22 22.1727	91 13	-6.14	.18
355	3.75	23 27 20.6058	313 0	-6.68	.21

NUMBER OF STARS: 14

ESTIMATE OF VARIANCE: .29

MATRIX OF WEIGHTCOEFFICIENTS

UNKNOWNS:				
		.4680		
		-.0132	.0849	
DELTA PHI.....	.193			
DELTA LAMBDA COS(PHI):	-.372	-.0155	.0014	.0720
DELTA Z.....	-6.328			

RESULTS RELATED TO THE C.I.C.:

LATITUDE = 51 59 12.2984

LONGITUDE= -4 23 15.1068

ESTIMATE OF ST. DEV.:

.368

.157 *SEC PHI

LATITUDE AND LONGITUDE BY EQUAL ZENITH DISTANCES OF STARS

STATION....:KOOTWIJK P.EAST
INSTRUMENT.:WILD T4
CHRONOMETER:TIMERECORDER 3
OBSERVER...:BELGRAVER
DATE.....:APRIL 13, 1976

APPROXIMATE VALUES

LATITUDE.....	52	10	44.0000
LONGITUDE.....	-5	48	35.0000
ZENITHDISTANCE.....	29	59	20.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1	AZIMUTH	L	E
2491	5.60	20 1 11.8311	298 50	-.55	-.72
497	2.40	20 5 9.5471	63 46	.45	-.72
1191	5.28	20 14 44.0272	264 3	-1.28	-.10
511	4.77	20 20 36.7462	43 52	-1.02	.66
1199	5.45	20 24 12.7663	255 58	-1.47	.10
3083	4.60	20 29 50.0893	76 23	-.43	.19
2523	5.00	20 34 36.5474	321 39	-1.85	.75
494	4.66	20 40 43.3294	96 0	.11	-.36
2572	4.40	20 45 15.3605	283 53	-.56	-.78
1337	5.11	20 49 26.7775	108 31	.25	-.54
2999	4.60	20 55 23.0936	132 51	-.55	.10
2719	5.40	21 2 56.2687	232 12	-1.31	.00
3039	5.10	21 11 19.3918	123 46	-.56	.18
1368	5.44	21 19 10.3898	88 7	-.69	.45
314	4.43	21 22 41.7879	270 14	-1.42	.05
2723	5.90	21 28 58.7839	245 53	-2.09	.74

NUMBER OF STARS: 16

ESTIMATE OF VARIANCE: .30

MATRIX OF WEIGHTCOEFFICIENTS

UNKNOWNS:				
		.3155		
		-.0039	.0780	
DELTA PHI.....	.079			
DELTA LAMBDA COS(PHI):	-.565	.0017	-.0003	.0625
DELTA Z.....	-.808			

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 52 10 44.1940

LONGITUDE= -5 48 35.4190

ESTIMATE OF ST. DEV.:

.308

.153 *SEC PHI

LATITUDE AND LONGITUDE BY EQUAL ZENITH DISTANCES OF STARS

STATION....:KOOTWIJK P.EAST
INSTRUMENT.:WILD T4
CHRONOMETER:CPR2
OBSERVER...:HUSTI
DATE.....:APRIL.20,1976

APPROXIMATE VALUES

LATITUDE.....	52	10	44.0000
LONGITUDE.....	-5	48	35.0000
ZENITHDISTANCE.....	29	59	20.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1	AZIMUTH	L	E
2491	5.60	19 33 39.3458	298 50	-7.98	-.70
497	2.40	19 37 39.1889	63 46	-6.80	-1.16
1191	5.28	19 47 11.7180	264 3	-8.45	-1.04
511	4.77	19 53 6.7461	43 52	-8.02	.32
1199	5.45	19 56 40.4382	255 58	-8.59	-1.07
3083	4.60	20 2 19.7042	76 23	-8.02	-.18
494	4.66	20 13 12.8034	96 0	-8.52	-.12
2572	4.40	20 17 43.0015	283 53	-9.15	.12
1337	5.11	20 21 56.3735	108 32	-8.89	-.04
2999	4.60	20 27 53.0026	132 52	-9.55	.05
2719	5.40	20 35 23.7057	232 12	-10.38	.31
3039	5.10	20 43 49.1409	123 46	-9.36	.08
1368	5.44	20 51 39.9320	88 7	-9.40	.95
314	4.43	20 55 9.4550	270 14	-10.31	.96
2723	5.90	21 1 26.4351	245 53	-10.30	.44
302	6.00	21 15 1.1603	307 11	-9.58	1.09

NUMBER OF STARS: 16

ESTIMATE OF VARIANCE: .58

MATRIX OF WEIGHTCOEFFICIENTS

UNKNOWNS:				
		.3429		
		-.0041	.0765	
DELTA PHI.....	1.296			
DELTA LAMBDA COS(PHI):	-.433	.0057	-.0012	.0626
DELTA Z.....	-8.928			

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 52 10 45.4104

LONGITUDE= -5 48 35.1819

ESTIMATE OF ST. DEV.:

.446

.211 *SEC PHI

LATITUDE AND LONGITUDE BY EQUAL ZENITH DISTANCES OF STARS

STATION....:KOOTWIJK P.EAST

INSTRUMENT.:WILDT4

CHRONOMETER:CPR2

OBSERVER...:HUST1

DATE.....:APRIL.21,1976

APPROXIMATE VALUES

LATITUDE.....: 52 10 44.0000

LONGITUDE.....: -5 48 35.0000

ZENITHDISTANCE.....: 29 59 20.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
2491	5.60	19	29	43.1522	298	50	-8.82	-.16
497	2.40	19	33	43.4442	63	46	-7.20	-.77
1191	5.28	19	43	15.7002	264	3	-9.21	-.65
511	4.77	19	49	10.9733	43	52	-8.00	.29
1199	5.45	19	52	44.4423	255	58	-9.04	-.99
3083	4.60	19	58	23.8513	76	23	-7.84	-.37
2523	5.00	20	3	7.7934	321	39	-8.99	.58
494	4.66	20	9	16.9864	96	0	-8.22	-.44
2572	4.40	20	13	47.1055	283	53	-8.92	-.45
1337	5.11	20	18	.5075	106	32	-8.55	-.44
2999	4.60	20	23	56.9185	132	52	-9.67	.05
2719	5.40	20	31	27.8306	232	12	-10.63	.19
3039	5.10	20	39	53.1006	123	46	-9.69	.31
1368	5.44	20	47	43.9827	88	7	-9.72	1.25
314	4.43	20	51	13.6337	270	14	-10.63	.92
2723	5.90	20	57	30.6207	245	53	-10.88	.65

NUMBER OF STARS: 16

ESTIMATE OF VARIANCE: .47

MATRIX OF WEIGHTCOEFFICIENTS

.3154

UNKNOWNS:

-.0039 .0780

DELTA PHI.....:	1.377		
DELTA LAMBDA COS(PHI):	-.600	.0017	-.0005 .0625
DELTA Z.....:	-9.115		

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 52 10 45.4906

LONGITUDE= -5 48 35.4510

ESTIMATE OF ST. DEV.:

.386

.192 *SEC PHI

LATITUDE AND LONGITUDE BY EQUAL ZENITH DISTANCES OF STARS

STATION....:KOOTWIJK P.EAST

INSTRUMENT.:WILDT4

CHRONOMETER:CPR2

OBSERVER...:DE VRIES

DATE.....:APRIL.21,1976

APPROXIMATE VALUES

LATITUDE.....: 52 10 44.0000

LONGITUDE.....: -5 48 35.0000

ZENITHDISTANCE.....: 29 59 20.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
540	5.39	21	16	47.8001	86	51	-5.81	-.41
2803	5.90	21	23	2.7851	232	13	-7.69	-.13
1370	4.83	21	31	38.7422	109	23	-6.64	.24
3210	5.50	21	36	29.3302	70	6	-5.59	-.59
346	5.30	21	42	18.8792	270	21	-7.10	-.68
2762	5.00	21	50	4.6493	261	34	-7.74	-.09
3182	5.60	21	56	34.3463	99	23	-6.55	.24
340	5.68	22	3	20.5924	294	50	-7.69	.11
1412	5.78	22	8	38.0904	61	25	-5.89	-.31
534	3.78	22	14	5.8525	125	16	-6.51	-.07
3291	5.60	22	19	4.7335	53	59	-6.08	-.12
358	3.26	22	26	21.6035	289	21	-7.70	.06
390	4.41	22	30	23.7106	253	58	-7.84	-.00
1416	4.61	22	37	24.4416	91	34	-7.19	.94
355	3.75	22	43	30.0727	312	47	-7.83	.47
2844	4.80	22	51	27.0677	263	37	-8.17	.35

NUMBER OF STARS: 16

ESTIMATE OF VARIANCE: .19

MATRIX OF WEIGHTCOEFFICIENTS

.4583

UNKNOWNS:

-.0057 .0725

DELTA PHI.....:	.329		
DELTA LAMBDA COS(PHI):	-.771	-.0093	.0009 .0627
DELTA Z.....:	-7.015		

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 52 10 44.4434

LONGITUDE= -5 48 35.7303

ESTIMATE OF ST. DEV.:

.296

.118 *SEC PHI

LATITUDE AND LONGITUDE BY EQUAL ZENITH DISTANCES OF STARS

STATION....:KOOTWIJK P.EAST

INSTRUMENT.:WILDT4

CHRONOMETER:CPR2

OBSERVER...:BELGRAVER

DATE.....:APRIL 21,1976

APPROXIMATE VALUES

LATITUDE.....: 52 10 44.0000

LONGITUDE.....: -5 48 35.0000

ZENITHDISTANCE.....: 29 59 20.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
639	3.22	23	6	27.9468	42	4	-5.15	.03
3249	5.60	23	13	19.3289	118	20	-4.30	-.79
621	4.25	23	18	53.2079	91	38	-4.77	-.17
2870	4.80	23	22	24.5489	270	21	-6.26	-.31
1293	4.78	23	28	10.3520	257	55	-6.43	-.15
394	4.84	23	34	24.2210	298	25	-6.54	.11
2999	4.60	23	40	22.3590	227	9	-7.04	.60
653	2.99	23	45	58.4251	69	31	-5.08	.13
650	5.81	23	52	46.9971	78	17	-4.69	-.24
432	5.88	23	58	53.0542	270	19	-6.32	-.25
593	4.22	0	6	6.9602	138	54	-5.17	-.14
663	3.79	0	12	13.6782	83	22	-5.22	.29
1322	5.43	0	18	49.9423	244	5	-6.74	.19
643	3.36	0	22	38.7743	106	2	-5.72	.72
441	3.85	0	29	9.4144	280	54	-6.38	-.16
429	5.98	0	35	39.9094	315	22	-6.39	.14

NUMBER OF STARS: 16

ESTIMATE OF VARIANCE: .15

MATRIX OF WEIGHTCOEFFICIENTS

.3264

UNKNOWNS:

-.0022 .0773

DELTA PHI.....:	-.117		
DELTA LAMBDA COS(PHI):	-.820	.0012	-.0005 .0625
DELTA Z.....:	-5.757		

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 52 10 44.2308

LONGITUDE= -5 48 35.8092

ESTIMATE OF ST. DEV.:

.224

.109 *SEC PHI

LATITUDE AND LONGITUDE BY EQUAL ZENITH DISTANCES OF STARS

STATION....:KOOTWIJK P.EAST

INSTRUMENT.:WILDT4

CHRONOMETER:CPR2

OBSERVER...:DE VRIES.

DATE.....:APRIL 22,1976

APPROXIMATE VALUES

LATITUDE.....: 52 10 44.0000

LONGITUDE.....: -5 48 35.0000

ZENITHDISTANCE.....: 29 59 20.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3497	6.00	1	12	47.1202	77	16	-3.70	-.33
2994	5.00	1	17	16.3873	289	9	-5.06	-.54
1327	4.80	1	21	3.5613	275	37	-5.47	-.12
726	3.98	1	30	.5533	67	23	-4.02	-.09
711	4.00	1	34	44.5194	88	14	-3.60	-.42
502	4.96	1	39	15.8094	255	14	-4.88	-.69
3102	5.00	1	43	6.7744	247	36	-4.97	-.57
674	3.82	1	47	51.6805	129	38	-4.02	-.20
478	5.92	1	53	37.9215	312	8	-5.51	.14
3604	5.40	1	58	38.3165	44	3	-4.19	-.05
3063	5.10	2	6	38.5756	265	5	-4.11	.55
724	4.46	2	16	2.4237	102	40	-4.45	.40
713	3.30	2	27	24.4677	118	8	-4.18	.05
3204	5.30	2	33	55.4488	230	23	-5.88	.46
1368	5.44	2	38	29.8068	271	53	-6.41	.82
3584	5.60	2	42	7.5128	96	24	-4.56	.53

NUMBER OF STARS: 16

ESTIMATE OF VARIANCE: .24

MATRIX OF WEIGHTCOEFFICIENTS

.3770

UNKNOWNS:

-.0065 .0751

DELTA PHI.....:	.026		
DELTA LAMBDA COS(PHI):	-.783	-.0007	-.0004 .0625
DELTA Z.....:	-4.605		

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 52 10 44.1396

LONGITUDE= -5 48 35.7534

ESTIMATE OF ST. DEV.:

.299

.134 *SEC PHI

STATION....:KOOTWIJK/P.EAST

INSTRUMENT.:NI2 ASTROLABE.

CHRONOMETER:OMEGA.

OBSERVER...:C. DE VRIES.

DATE.....:MAY 15, 1974.

APPROXIMATE VALUES

LATITUDE.....:	52	10	45.0000
LONGITUDE.....:	-5	48	35.0000
ZENITHDISTANCE.....:	30	0	35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
590	4.34	20	55	17.3181	16	47	-1.48	-.80
390	4.41	20	58	8.7020	254	2	.39	.79
1432	5.85	21	0	25.2819	51	50	-2.55	-.04
522	4.82	21	3	34.9578	147	15	.63	-.99
3326	5.00	21	6	13.6237	44	17	-2.55	-.03
1323	4.78	21	8	49.7716	194	32	-.22	1.21
355	3.75	21	11	12.6935	312	48	-1.17	.78
3218	5.90	21	13	13.0315	112	46	-3.29	1.78
2852	5.80	21	14	44.7614	257	15	.70	.43
608	3.91	21	19	2.6073	82	32	-3.43	1.15
1383	4.93	21	22	14.4032	140	12	-1.19	.59
3281	6.00	21	24	14.7971	91	43	-1.55	-.54
368	3.89	21	26	29.7510	304	42	-1.50	1.39
372	5.96	21	27	53.1990	332	36	-1.75	.68
425	3.71	21	30	41.8789	243	42	1.92	-.63
2976	5.80	21	32	29.8608	216	52	.12	1.19
3314	5.90	21	34	34.1567	81	53	-2.43	.14
576	4.17	21	36	25.2267	121	57	-1.15	-.07
3370	5.50	21	38	39.3166	47	45	-2.99	.40
3249	5.60	21	40	43.0585	118	16	-.38	-.96
1318	4.78	21	42	53.5145	216	45	1.81	-.50
1282	5.14	21	45	26.9744	263	43	.44	.58
395	5.04	21	49	38.9962	338	38	-1.73	.47
3305	5.50	21	53	48.4021	13	57	-.99	-1.23
3185	4.90	21	56	22.6700	147	50	-1.05	.71
659	5.21	21	58	5.4420	37	15	-2.48	-.07
2828	5.80	22	0	3.6659	324	13	-.24	-.54
2878	5.70	22	4	13.0138	275	51	2.44	-1.69
398	5.16	22	7	38.4996	300	44	.55	-.53
2839	6.00	22	10	51.9055	315	14	.23	-.70
3151	6.00	22	16	42.1733	171	27	2.96	-2.54
3072	5.70	22	21	41.6812	205	15	1.57	-.39

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .98

UNKNOWNS:

DELTA PHI.....:	-1.279
DELTA LAMBDA COS(PHI):	1.505
DELTA Z.....:	-.621

MATRIX OF WEIGHTCOEFFICIENTS:

.0679		
-.0028	.0582	
-.0017	-.0006	.0313

RESULTS RELATED TO THE C.I.O.:

	ESTIMATE OF ST. DEV.:
LATITUDE = 52 10 43.7632	.257
LONGITUDE= -5 48 32.2849	.238 *SEC PHI

STATION....:KOOTWIJK/P.EAST

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:OMEGA

OBSERVER...:C DE VRIES

DATE.....:MAY 17,1974

APPROXIMATE VALUES

LATITUDE.....:	52	10	45.0000
LONGITUDE.....:	-5	48	35.0000
ZENITHDISTANCE.....:	30	0	35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
590	4.34	20	47	26.9969	16	47	-4.36	.17
390	4.41	20	50	16.4709	254	2	-2.38	1.24
1432	5.85	20	52	33.9009	51	50	-4.91	.42
522	4.82	20	55	43.8610	147	15	-2.74	.20
3326	5.00	20	58	22.3470	44	17	-5.16	.68
1323	4.78	21	0	57.0971	194	32	1.05	-2.38
355	3.75	21	3	20.3371	312	48	-3.60	1.09
3218	5.90	21	5	21.4392	112	46	-4.87	1.31
2852	5.80	21	6	52.2692	257	15	-4.50	3.31
608	3.91	21	11	10.9453	82	32	-4.29	.06
1383	4.93	21	14	22.9173	140	12	-2.93	.18
3281	6.00	21	16	23.2473	91	43	-3.53	-.53
368	3.89	21	18	37.6474	304	42	-2.52	.25
372	5.96	21	20	.7334	332	36	-3.28	.17
425	3.71	21	22	49.6894	243	42	-.49	-.56
2976	5.80	21	24	37.4555	216	52	-2.71	1.66
3314	5.90	21	26	42.5755	81	53	-4.04	-.20
576	4.17	21	28	33.7275	121	57	-3.38	.08
3370	5.50	21	30	47.9236	47	45	-5.04	.55
3249	5.60	21	32	51.5976	118	16	-2.99	-.42
1318	4.78	21	35	1.0457	216	45	-1.41	.35
1282	5.14	21	37	35.0377	263	43	.12	-1.41
395	5.04	21	41	46.5978	338	38	-2.52	-.77
3305	5.50	21	45	58.1178	13	57	-3.30	-.84
3185	4.90	21	48	31.1139	147	50	-2.18	-.34
659	5.21	21	50	14.1419	37	15	-4.39	-.05
2828	5.80	21	52	11.2099	324	13	-2.50	-.36
2878	5.70	21	56	20.8060	275	51	-.27	-1.25
398	5.16	21	59	46.3041	300	44	-1.39	-.76
2839	6.00	22	2	59.6101	315	14	-1.73	-.85
3151	6.00	22	8	53.3342	171	29	-.96	-.90
3072	5.70	22	13	49.1363	205	15	-1.04	-.13

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: 1.14

UNKNOWNS:

DELTA PHI.....:	-1.105
DELTA LAMBDA COS(PHI):	1.348
DELTA Z.....:	-2.745

MATRIX OF WEIGHTCOEFFICIENTS:

.0679		
-.0028	.0582	
-.0017	-.0006	.0313

RESULTS RELATED TO THE C.I.O.:

	ESTIMATE OF ST. DEV.:
LATITUDE = 52 10 43.9385	.279
LONGITUDE= -5 48 32.5398	.258 *SEC PHI

STATION....:AMERSFOORT

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:OMEGA

OBSERVER...:C. DE VRIES

DATE.....:JUNI 14, 1974

APPROXIMATE VALUES

LATITUDE.....:	52	9	24.0000
LONGITUDE.....:	-5	23	4.0000
ZENITHDISTANCE.....:	30	0	35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
1337	5.11	21	35	25.8424	251	36	2.75	.05
1316	5.56	21	37	47.0343	283	39	4.08	-.48
2986	5.40	21	41	11.1921	337	29	3.06	1.12
3451	5.90	21	43	15.2300	100	49	1.50	.24
3064	6.00	21	45	29.1399	249	43	3.21	-.45
3397	5.80	21	47	27.4198	124	1	-.29	1.60
3547	4.60	21	49	17.4497	42	12	3.25	-.01
3172	5.80	21	51	10.9776	205	37	2.37	-.73
1440	5.20	21	54	6.3754	150	2	.88	.21
729	4.63	21	56	53.8853	26	45	3.74	-.14
3000	5.80	22	1	21.7571	297	57	4.23	-.36
3493	5.90	22	5	47.7789	94	10	2.59	-.70
494	4.66	22	7	44.3968	264	6	2.87	.27
3536	5.10	22	10	11.3446	19	51	3.83	-.09
1338	5.72	22	12	42.9145	275	18	3.03	.38
3075	5.90	22	14	30.1324	345	29	3.03	1.13
3185	4.90	22	16	52.4923	212	18	.95	.84
667	3.48	22	19	2.5422	135	21	1.09	.09
738	4.64	22	28	11.9017	74	6	2.08	.32
1380	4.48	22	30	.1497	232	43	1.84	.45
3020	5.70	22	32	.8136	320	20	3.43	.70
3586	5.20	22	35	34.8714	68	11	2.95	-.39
557	4.67	22	38	19.2012	221	44	2.05	-.03
486	5.27	22	40	7.2271	317	38	4.70	-.59
1468	5.48	22	42	51.5610	142	49	.84	.28
3575	5.00	22	46	11.4668	84	34	1.43	.69
3631	6.00	22	50	5.2367	35	56	3.76	-.37
3383	5.70	22	53	16.3085	162	52	2.35	-1.25
767	4.28	22	58	48.4282	47	43	4.20	-1.09
3204	5.30	23	5	37.2139	230	33	2.32	-.08
3554	5.10	23	7	8.8218	107	29	2.15	-.56
500	5.41	23	9	8.1097	306	36	5.02	-1.03

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .48

UNKNOWNS:

DELTA PHI.....:	1.408
DELTA LAMBDA COS(PHI):	.646
DELTA Z.....:	2.635

MATRIX OF WEIGHTCOEFFICIENTS:

.0744		
.0017	.0540	
-.0015	-.0003	.0313

RESULTS RELATED TO THE C.I.O.:

	ESTIMATE OF ST. DEV.:
LATITUDE = 52 9 25.4501	.189
LONGITUDE= -5 23 2.6758	.161 *SEC PHI

STATION....:BOSBERG

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:OMEGA

OBSERVER...:C. DE VRIES

DATE.....:JUNE 15,1974

APPROXIMATE VALUES

LATITUDE.....:	52	57	12.0000
LONGITUDE.....:	-6	20	25.0000
ZENITHDISTANCE.....:	30	0	35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
440	5.48	21	25	9.8772	319	21	3.83	.02
2953	5.90	21	26	32.8152	298	47	3.74	-.46
485	2.90	21	28	11.3391	256	44	1.35	.76
3172	5.80	21	30	51.8210	199	32	1.06	.27
3547	4.60	21	35	52.0408	43	6	4.86	-.33
3535	5.20	21	38	14.2928	61	4	4.03	.21
3375	5.80	21	39	55.7807	133	47	2.91	-.60
3096	5.80	21	42	14.0366	235	22	1.32	.34
3463	5.00	21	44	31.4166	100	32	2.87	.38
2986	5.40	21	45	43.2525	336	24	3.21	1.01
3536	5.10	21	48	24.9644	21	1	4.75	-.08
726	3.98	21	51	25.3123	68	25	3.87	.22
1440	5.20	21	56	24.5242	155	2	1.94	-.14
3185	4.90	22	0	5.3420	207	45	.77	.58
502	4.96	22	1	37.5640	253	38	2.21	-.18
467	5.44	22	4	2.4999	302	31	3.85	-.46
1338	5.72	22	5	23.7319	274	0	2.68	-.11
3541	6.00	22	9	12.0017	82	26	2.92	.84
472	3.88	22	15	3.6935	325	26	2.42	1.57
1460	4.48	22	17	2.6975	146	16	1.72	.27
738	4.64	22	19	.9674	75	15	4.40	-.47
557	4.67	22	24	21.4052	218	21	1.56	-.13
3075	5.90	22	25	56.2392	344	3	3.17	1.20
3063	5.10	22	31	43.1970	284	0	3.96	-1.11
3631	6.00	22	35	14.7289	36	50	4.83	-.24
1479	5.71	22	39	34.5767	130	2	2.22	.18
3415	5.30	22	40	50.1847	149	3	1.58	.35
3572	5.40	22	46	19.3765	92	19	3.66	-.17
713	3.30	22	53	40.8542	120	11	3.36	-.68
759	4.43	22	56	51.4241	18	34	6.32	-1.65
3252	4.70	23	0	6.6700	213	49	1.49	-.11
1368	5.44	23	2	22.6640	270	38	3.76	-1.28

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .50

UNKNOWNS:

DELTA PHI.....:	1.577
DELTA LAMBDA COS(PHI):	-.547
DELTA Z.....:	3.002

MATRIX OF WEIGHTCOEFFICIENTS:

.0722		
-.0013	.0552	
-.0006	.0004	.0313

RESULTS RELATED TO THE C.I.O.:

	ESTIMATE OF ST. DEV.:
LATITUDE = 52 57 13.6228	.191
LONGITUDE= -6 20 25.6287	.167 *SEC PHI

STATION....:ZALTBOMMEL

INSTRUMENT.:N12 ASTROLABE

CHRONOMETER:OMEGA

OBSERVER...:C. DE VRIES

DATE.....:JUNE 20,1974

APPROXIMATE VALUES

LATITUDE.....: 51 48 42.0000

LONGITUDE.....: -5 15 9.0000

ZENITHDISTANCE.....: 30 0 35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
2986	5.40	21	12	38.9627	337	59	.90	1.23
485	2.90	21	14	27.9847	259	5	1.07	-.12
3375	5.80	21	17	56.2186	129	49	2.53	.36
3451	5.90	21	19	46.1965	100	8	3.31	.03
723	3.24	21	21	38.5524	37	53	2.95	.31
2994	5.00	21	24	51.0363	289	42	1.15	.05
1440	5.20	21	27	17.7863	148	8	2.61	-.10
3172	5.80	21	32	33.4701	207	50	1.23	.07
3000	5.80	21	37	5.6879	298	24	2.02	-.68
711	4.00	21	42	58.6677	87	35	3.70	-.26
494	4.66	21	44	53.4217	264	45	1.21	-.24
472	3.88	21	48	37.9395	326	46	1.85	.03
1460	4.48	21	51	35.9334	140	56	2.62	.04
3536	5.10	21	53	24.9414	19	19	2.52	.47
733	3.94	21	55	23.7653	70	22	2.74	.75
3185	4.90	21	57	13.6453	214	4	-.15	1.36
478	5.92	21	59	54.0952	312	35	1.63	-.04
534	3.78	22	9	47.4888	235	56	1.14	-.15
486	5.27	22	14	34.6047	318	2	1.56	.14
557	4.67	22	17	42.0706	223	6	.93	.17
705	3.40	22	21	48.1644	115	4	3.23	-.09
1370	4.83	22	23	49.4324	251	31	.74	.20
3360	5.70	22	26	27.3323	169	24	2.41	-.37
3572	5.40	22	30	49.9361	90	18	3.41	.01
767	4.28	22	37	47.5019	47	19	3.71	-.35
524	5.00	22	41	12.4938	343	23	1.93	.32
1368	5.44	22	46	50.7896	272	34	2.11	-1.08
757	3.95	22	52	22.8414	81	18	4.46	-1.00
3252	4.70	22	54	52.9353	219	9	1.36	-.22
3457	5.50	22	57	34.6333	149	38	2.48	.00
782	4.63	22	59	20.4532	58	16	3.21	.24
770	5.18	23	2	9.6971	22	59	4.12	-1.08

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .31

UNKNOWNS:

DELTA PHI.....:	.395		
DELTA LAMBDA COS(PHI):	-1.208	-.0007	-.0003 .0313
DELTA Z.....:	2.212		

MATRIX OF WEIGHTCOEFFICIENTS:

.0726

.0002 .0549

RESULTS RELATED TO THE C.I.O.: ESTIMATE OF ST. DEV.:

LATITUDE = 51 48 42.4333 .149

LONGITUDE= -5 15 10.6840 .130 *SEC PHI

STATION....:NEDERWEERT

INSTRUMENT.:N12 ASTROLABE

CHRONOMETER:OMEGA

OBSERVER...:C.DE VRIES

DATE.....:JUNE 21,1974

APPROXIMATE VALUES

LATITUDE.....: 51 17 13.0000

LONGITUDE.....: -5 44 54.7000

ZENITHDISTANCE.....: 30 0 35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3172	5.80	21	32	38.3245	210	51	2.30	.30
726	3.98	21	34	43.5764	66	11	1.11	.77
472	3.88	21	37	31.3644	327	25	3.34	.34
729	4.63	21	39	20.0123	25	34	2.13	.57
1460	4.48	21	41	42.2522	138	44	1.09	.33
1338	5.72	21	43	9.0322	276	42	3.15	.56
674	3.82	21	45	31.1661	126	42	.90	.47
3102	5.00	21	47	54.5980	249	46	3.11	.25
3541	6.00	21	49	39.5059	79	51	1.63	.03
3185	4.90	21	56	4.3837	216	35	1.94	.78
3536	5.10	21	57	20.9157	18	26	2.56	.29
3506	5.50	22	1	16.6156	103	48	3.08	-1.66
486	5.27	22	4	53.2454	318	40	3.94	-.18
3360	5.70	22	6	53.0874	162	55	1.89	-.21
3608	4.70	22	10	20.3633	36	53	2.20	.26
3171	5.70	22	12	59.3332	231	26	2.90	.13
705	3.40	22	14	22.0611	113	46	1.26	.11
1370	4.83	22	19	.2510	252	42	3.02	.39
524	5.00	22	23	39.8688	344	22	3.37	.11
3572	5.40	22	24	56.0348	89	24	1.51	.03
500	5.41	22	35	54.9904	307	39	3.92	-.11
505	5.67	22	37	34.3984	330	23	4.38	-.72
1368	5.44	22	40	45.7582	273	26	3.96	-.28
3584	5.60	22	43	49.3761	94	43	1.34	.14
3654	5.90	22	47	11.6700	51	41	2.12	.03
3427	5.70	22	49	30.7980	159	42	2.15	-.51
3252	4.70	22	52	57.2598	221	20	3.12	-.30
3124	5.40	22	57	.3897	285	54	4.77	-.99
734	6.00	23	2	28.4355	10	21	3.44	-.42
3166	5.80	23	4	52.6134	265	22	3.95	-.35
593	4.22	23	7	33.3374	224	43	2.57	.32
3472	6.00	23	9	33.5093	151	38	1.99	-.45

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .28

UNKNOWNS:

DELTA PHI.....:	.625		
DELTA LAMBDA COS(PHI):	1.056	-.0001	-.0021 .0313
DELTA Z.....:	2.591		

MATRIX OF WEIGHTCOEFFICIENTS:

.0710

.0009 .0560

RESULTS RELATED TO THE C.I.O.: ESTIMATE OF ST. DEV.:

LATITUDE = 51 17 13.6653 .142

LONGITUDE= -5 44 52.7464 .126 *SEC PHI

STATION....:VENRAY

INSTRUMENT.:N12 ASTROLABE

CHRONOMETER:OMEGA

OBSERVER...:C.DE VRIES

DATE.....:JUNE 22 1974

APPROXIMATE VALUES

LATITUDE.....: 51 31 42.6000

LONGITUDE.....: -5 58 25.0000

ZENITHDISTANCE.....: 30 0 35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3000	5.80	21	25	21.6439	298	45	1.99	1.55
711	4.00	21	32	19.6876	87	7	.38	.57
494	4.66	21	34	18.4816	265	16	1.15	1.45
502	4.96	21	38	1.3654	256	41	1.75	.60
674	3.82	21	41	51.5453	127	27	.09	-.14
1383	4.93	21	44	30.2612	222	28	1.02	.13
3536	5.10	21	47	56.5371	18	51	2.81	.42
3185	4.90	21	49	6.4911	215	27	-1.11	2.02
3020	5.70	21	53	14.8409	321	5	3.82	.02
738	4.64	21	55	35.1569	73	12	.53	.89
3604	5.40	22	0	26.6467	43	17	2.78	-.30
1468	5.48	22	3	57.6526	140	4	.40	-.59
3360	5.70	22	7	32.2885	165	32	.07	-.24
705	3.40	22	10	13.8264	114	22	.18	.01
3575	5.00	22	12	48.5323	83	34	.57	.49
719	5.13	22	14	15.5442	106	40	-.00	.38
3083	4.60	22	17	39.9101	284	37	2.78	.44
3631	6.00	22	21	57.8160	35	10	3.33	-.58
524	5.00	22	24	16.1635	343	54	3.87	-.04
767	4.28	22	28	44.7817	46	58	2.35	.00
500	5.41	22	32	16.1976	307	21	3.54	.15
3457	5.50	22	43	50.0152	148	6	-1.08	.86
3252	4.70	22	46	19.5852	220	21	1.75	-.68
572	3.72	22	47	55.3011	232	21	2.15	-.66
770	5.18	22	55	45.8028	22	34	4.33	-1.20
593	4.22	23	1	8.2107	223	48	1.46	-.27
1379	4.37	23	2	52.3246	339	32	4.73	-.87
576	4.17	23	6	58.5385	239	53	3.64	-1.89
540	5.39	23	8	38.5264	274	17	3.95	-1.03
3128	5.40	23	14	46.7662	326	21	4.08	-.21
3655	5.60	23	26	16.9718	92	31	.90	-.12
690	3.92	23	35	52.6055	170	46	1.09	-1.21

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .75

UNKNOWNS:

DELTA PHI.....:	1.811		
DELTA LAMBDA COS(PHI):	.970	-.0002	-.0014 .0313
DELTA Z.....:	1.824		

MATRIX OF WEIGHTCOEFFICIENTS:

.0709

.0019 .0560

RESULTS RELATED TO THE C.I.O.: ESTIMATE OF ST. DEV.:

LATITUDE = 51 31 44.4507 .231

LONGITUDE= -5 58 23.1746 .205 *SEC PHI

STATION....:KOOTWIJK/P.EAST

INSTRUMENT.:N12 ASTROLABE

CHRONOMETER:OMEGA

OBSERVER...:C.DE VRIES

DATE.....:AUG.6,1974

APPROXIMATE VALUES

LATITUDE.....: 52 10 45.0000

LONGITUDE.....: -5 48 35.0000

ZENITHDISTANCE.....: 30 0 35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
795	5.90	20	51	1.7649	16	25	3.95	-.82
3427	5.70	20	53	57.6490	190	24	6.06	-.47
580	5.41	20	56	43.1251	263	23	5.17	.53
549	5.67	21	1	16.6853	305	11	4.55	.26
3508	4.60	21	3	17.1354	167	25	6.28	-1.17
3229	5.30	21	7	32.4715	342	12	3.77	.06
821	4.26	21	10	25.6256	76	15	2.30	.72
1534	4.09	21	13	1.4217	125	51	3.55	.47
837	4.99	21	15	32.3738	29	1	2.36	.61
1416	4.61	21	19	25.4419	268	30	6.23	-.61
3587	5.70	21	21	15.2240	148	49	4.00	.64
3730	5.30	21	22	39.9000	89	59	2.25	.97
1460	4.48	21	25	38.0421	217	28	5.21	.70
569	3.14	21	28	46.2042	330	23	3.84	.30
811	5.09	21	30	4.7302	96	57	4.11	-.75
847	3.70	21	32	47.3643	57	5	3.67	-.79
3714	5.20	21	34	26.1184	105	31	3.47	.07
853	5.21	21	36	28.5305	46	39	3.17	-.30
3415	5.30	21	38	38.3865	214	59	4.92	.98
601	4.26	21	44	5.0867	274	20	5.87	-.35
851	5.22	21	45	54.6848	26	21	3.68	-.68
1446	5.27	21	49	1.0549	244	50	5.98	-.08
3240	5.90	21	50	42.1029	325	12	4.29	-.01
848	3.85	21	52	6.2170	74	9	3.51	-.51
786	5.24	21	54	46.3491	134	30	4.14	.11
3508	4.60	21	57	23.1672	192	35	5.74	-.11
595	4.96	21	59	32.2752	295	47	5.30	-.25
3585	4.90	22	1	30.6113	168	23	5.97	-.83
3397	5.80	22	7	35.8515	235	56	6.21	-.27
3384	5.90	22	11	20.2436	349	12	2.99	.67
3800	4.50	22	13	18.8657	90	23	2.44	.80
3314	5.90	22	16	45.6418	278	8	5.31	.13

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .38

UNKNOWNS:

DELTA PHI.....:	-.986		
DELTA LAMBDA COS(PHI):	1.184	-.0003	.0010 .0313
DELTA Z.....:	4.409		

MATRIX OF WEIGHTCOEFFICIENTS:

.0688

.0008 .0573

RESULTS RELATED TO THE C.I.O.: ESTIMATE OF ST. DEV.:

LATITUDE = 52 10 44.0184 .162

LONGITUDE= -5 48 32.7859 .148 *SEC PHI

STATION....:KOOTWIJK/P.EAST

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:OMEGA

OBSERVER...:C. DE VRIES

DATE.....:AUGUST 15, 1974

APPROXIMATE VALUES

LATITUDE.....:	52	10	45.0000
LONGITUDE.....:	-5	48	35.0000
ZENITHDISTANCE.....:	30	0	35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	LT1			AZIMUTH		L	E
795	5.90	20	15	41.1785	16	25	.03	-.05
3427	5.70	20	18	32.0065	190	23	1.87	.73
580	5.41	20	21	19.2826	263	23	1.95	.34
549	5.67	20	25	52.4786	305	11	.71	.64
3508	4.60	20	27	55.2967	167	26	2.76	-.51
3229	5.30	20	32	6.7368	342	12	.43	.05
821	4.26	20	35	2.7228	76	14	.29	-.07
1534	4.09	20	37	38.4448	125	51	1.05	.25
837	4.99	20	40	10.2189	29	1	.34	-.44
1416	4.61	20	44	1.5169	268	30	2.16	.02
3587	5.70	20	45	52.1730	148	49	2.28	-.42
3730	5.30	20	47	17.0490	89	59	-.72	1.19
1460	4.48	20	50	14.1271	217	28	1.65	1.08
569	3.14	20	53	21.3031	330	23	.04	.70
811	5.09	20	54	41.9251	96	57	.56	.05
847	3.70	20	57	24.8032	57	5	.49	-.50
3714	5.20	20	59	3.0832	105	31	1.83	-1.03
853	5.21	21	1	6.0412	46	39	.69	-.78
3415	5.30	21	3	14.5653	214	59	1.91	.83
601	4.26	21	8	41.2314	274	20	2.57	-.51
851	5.22	21	10	33.1354	26	21	.14	-.23
1446	5.27	21	13	37.2914	244	50	2.71	-.15
3240	5.90	21	15	17.5155	325	12	1.04	-.19
848	3.85	21	16	43.5455	74	9	.17	.02
786	5.24	21	19	23.4355	134	30	1.53	-.01
3508	4.60	21	21	58.8236	192	34	2.86	-.25
595	4.96	21	24	8.2576	295	47	1.93	-.35
3585	4.90	21	26	8.3777	168	24	3.23	-.96
3397	5.80	21	32	12.1838	235	56	3.47	-.82
3384	5.90	21	35	52.8178	349	12	-.15	.50
3800	4.50	21	37	56.1398	90	23	-1.08	1.56
3314	5.90	21	41	21.8719	278	8	2.67	-.68

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .44

MATRIX OF WEIGHTCOEFFICIENTS:

UNKNOWNS:				
DELTA PHI.....:	-1.145	.0688		
DELTA LAMBDA COS(PHI):	.843	-.0003	.0010	
DELTA Z.....:	1.313	.0008	.0573	.0313

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 52 10 43.8570

ESTIMATE OF ST. DEV.: .174

LONGITUDE= -5 48 33.3425

ESTIMATE OF ST. DEV.: .159 *SEC PHI

STATION....:AARDENBURG

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:OMEGA

OBSERVER...:C.DE VRIES

DATE.....:AUGUST21,1974

APPROXIMATE VALUES

LATITUDE.....:	51	16	26.3000
LONGITUDE.....:	-3	26	53.2000
ZENITHDISTANCE.....:	30	0	35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
641	3.16	20	15	48.7594	215	29	6.23	1.87
3587	5.70	20	22	52.4211	144	14	3.48	1.85
3305	5.50	20	25	52.7990	348	4	-.30	1.03
1412	5.78	20	29	3.9199	280	2	6.73	-1.24
3730	5.30	20	32	11.3728	88	26	.58	.72
690	3.92	20	37	57.9146	193	11	8.41	-.56
3797	5.70	20	41	4.6525	42	28	-2.02	1.52
1559	4.42	20	42	51.4964	109	35	2.58	.17
3384	5.90	20	46	51.4103	351	50	-.54	1.07
3535	4.90	20	52	4.4902	158	54	6.77	-.47
601	4.26	20	54	.3201	275	49	6.45	-.68
3415	5.30	20	56	48.8320	219	7	7.73	.36
786	5.24	20	59	47.5119	131	18	4.16	.22
1446	5.27	21	2	3.7938	247	4	7.85	-.47
587	5.13	21	5	21.1557	312	53	3.49	-.44
595	4.96	21	7	4.7737	296	58	3.98	.27
3778	5.70	21	8	40.3036	89	12	1.89	-.54
621	4.25	21	11	11.9215	270	0	4.92	1.24
3657	5.10	21	13	3.9555	143	0	6.01	-.77
1583	4.64	21	19	19.1893	97	0	3.05	-1.19
3397	5.80	21	21	47.6972	238	32	7.65	.04
1594	5.74	21	23	51.0111	19	24	.16	-.59
3508	4.60	21	26	47.0090	201	39	8.57	-.55
875	5.65	21	32	32.1968	58	31	.42	-.56
3833	5.20	21	33	55.4788	76	19	1.29	-.68
3862	5.60	21	36	58.4307	30	53	-.46	-.08
3373	6.00	21	42	7.1145	261	7	6.56	.13
619	4.98	21	43	52.9144	325	12	3.17	-1.01
3852	5.60	21	50	44.0862	81	23	.57	.32
1593	5.50	21	57	56.6320	12	53	-.06	-.22
1549	5.57	22	4	54.2137	161	41	6.93	-.51
3377	5.80	22	9	13.6316	278	40	5.84	-.25

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .76

MATRIX OF WEIGHTCOEFFICIENTS:

UNKNOWNS:				
DELTA PHI.....:	-3.621	.0716		
DELTA LAMBDA COS(PHI):	2.377	.0006	.0555	
DELTA Z.....:	3.778	.0008	.0000	.0313

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 51 16 22.6724

ESTIMATE OF ST. DEV.: .233

LONGITUDE= -3 26 49.1272

ESTIMATE OF ST. DEV.: .205 *SEC PHI

STATION....:OUDGASTEL

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:OMEGA

OBSERVER...:C.DE VRIES

DATE.....:AUGUST22,1974

APPROXIMATE VALUES

LATITUDE.....:	51	35	16.8000
LONGITUDE.....:	-4	27	37.5000
ZENITHDISTANCE.....:	30	0	35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
844	4.58	20	43	25.0935	69	8	5.84	1.90
601	4.26	20	46	13.5835	275	18	4.19	.59
3585	4.90	20	49	41.9316	161	36	7.28	-.90
606	5.51	20	52	35.3056	339	45	6.05	-.02
587	5.13	20	59	14.5258	312	30	6.12	-.76
3778	5.70	21	0	40.5098	89	45	6.33	1.38
621	4.25	21	3	13.1998	269	27	5.48	-.75
3657	5.10	21	7	49.6779	144	27	7.76	-.95
1594	5.74	21	10	13.3899	19	55	6.59	.46
3508	4.60	21	13	22.5880	199	1	5.74	-.32
3276	5.40	21	18	15.4681	322	55	6.20	-.59
643	3.36	21	21	58.8481	255	18	4.22	.48
3862	5.60	21	25	38.7042	31	17	7.35	-.05
1434	5.14	21	27	39.7422	284	10	6.05	-1.18
3715	5.40	21	30	6.1023	134	11	8.33	-1.27
3776	5.40	21	32	46.2383	111	11	7.63	-.14
858	5.24	21	33	52.0103	92	28	7.01	.69
852	4.91	21	39	30.6584	99	18	8.04	-.40
1593	5.50	21	41	22.1225	13	35	8.09	-1.18
869	3.63	21	49	49.8266	91	15	7.74	-.03
3448	5.00	21	51	18.4826	239	35	3.58	1.20
1488	4.92	21	52	23.6006	222	15	3.76	1.22
3326	5.00	21	54	9.5407	316	26	5.64	-.19
1462	5.82	21	57	44.5307	266	31	4.58	.15
3377	5.80	22	1	33.1268	278	10	4.89	-.09
899	4.40	22	3	45.6428	58	14	8.31	-.63
3585	4.90	22	8	12.3909	198	23	5.25	.18
2005	5.50	22	9	33.0809	44	45	6.75	.77
1565	4.76	22	12	8.4850	153	55	7.16	-.58
1508	4.63	22	15	28.5010	212	35	4.13	1.01
675	5.04	22	21	21.9431	342	7	5.60	.49
891	4.28	22	22	38.8911	89	2	8.19	-.47

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .71

MATRIX OF WEIGHTCOEFFICIENTS:

UNKNOWNS:				
DELTA PHI.....:	.344	.0750		
DELTA LAMBDA COS(PHI):	-1.488	-.0008	.0536	
DELTA Z.....:	6.228	-.0016	.0004	.0313

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 51 35 17.1406

ESTIMATE OF ST. DEV.: .230

LONGITUDE= -4 27 39.6184

ESTIMATE OF ST. DEV.: .195 *SEC PHI

STATION....:MONNICKENDAM

INSTRUMENT.:N12 ASTROLABE

CHRONOMETER:OMEGA

OBSERVER...:C.DE VRIES

DATE.....:AUGUST28,1974

APPROXIMATE VALUES

LATITUDE.....:	52	27	27.9000
LONGITUDE.....:	-5	1	57.2000
ZENITHDISTANCE.....:	30	0	35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
569	3.14	20	8	30.6442	330	3	1.28	.99
3415	5.30	20	12	34.1983	213	36	2.85	1.08
3281	6.00	20	14	44.9743	267	48	-.08	1.61
851	5.22	20	18	52.7924	26	42	5.55	-.02
601	4.26	20	20	47.9344	273	53	1.86	-.44
3305	5.50	20	24	34.2965	345	31	2.73	.30
3472	6.00	20	28	18.7946	200	10	4.96	-.19
3649	5.50	20	29	55.0786	142	37	7.71	.19
626	3.61	20	31	58.4046	259	7	.78	.98
3799	4.60	20	33	48.3066	80	14	7.90	.26
3778	5.70	20	34	50.8687	91	15	7.56	.86
3611	5.10	20	36	37.5947	160	19	7.01	.12
3839	5.50	20	41	31.9808	60	27	6.06	1.35
598	4.11	20	48	23.0009	303	18	2.78	-1.32
3657	5.10	20	50	31.1649	148	53	8.89	-1.23
1593	5.50	20	53	39.0690	15	17	4.49	.32
3384	5.90	20	57	6.1730	348	32	3.36	-.16
614	5.66	21	4	31.9452	296	21	1.94	-.58
3365	5.10	21	6	8.8952	263	48	2.24	-.62
1604	5.83	21	7	12.3012	76	43	7.18	.88
3776	5.40	21	9	11.7452	113	15	9.00	-.46
835	4.38	21	14	8.0773	117	34	8.33	.17
895	5.02	21	19	18.9494	38	32	6.44	-.19
3448	5.00	21	21	57.3474	237	7	2.13	.50
3857	5.80	21	28	12.7936	89	52	8.67	-.28
3518	5.50	21	31	22.6896	216	48	3.83	-.09
3326	5.00	21	34	5.6797	315	25	2.77	-1.02
3377	5.80	21	36	24.6817	276	48	1.87	-.49
2005	5.50	21	38	5.4337	45	46	7.76	-1.09
1508	4.63	21	39	53.4917	207	40	4.07	.23
3870	6.00	21	42	57.4978	93	25	9.15	-.69
3704	5.80	21	46	46.9339	158	33	8.19	-.97

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .63

MATRIX OF WEIGHTCOEFFICIENTS:

UNKNOWNS:				
DELTA PHI.....:	-1.083	.0732		
DELTA LAMBDA COS(PHI):	-3.455	.0003	.0545	
DELTA Z.....:	4.942	-.0003	.0006	.0313

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 52 27 26.8158

ESTIMATE OF ST. DEV.: .214

LONGITUDE= -5 2 2.5856

ESTIMATE OF ST. DEV.: .185 *SEC PHI

STATION....:WORKUM — APPROXIMATE VALUES

INSTRUMENT.:NI2 ASTROLABE — LATITUDE.....: 52 58 48.5000

CHRONOMETER:OMEGA — LONGITUDE.....: -5 26 34.3000

OBSERVER...:C.DE VRIES — ZENITHDISTANCE.....: 30 0 35.0000

DATE.....:AUGUST30,1974

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
565	5.23	20	2	47.8920	320	26	.02	-.49
3281	6.00	20	5	5.1520	266	52	-.65	1.30
3472	6.00	20	7	57.4240	195	1	4.73	.21
1594	5.74	20	11	10.6360	21	57	1.36	.49
1446	5.27	20	13	30.9740	242	46	1.97	-.01
667	3.48	20	17	.2880	221	25	2.58	.73
3844	5.50	20	21	32.0900	40	19	3.06	-.06
3799	4.60	20	22	44.5540	81	3	5.22	.22
3649	5.50	20	25	7.8840	145	5	6.59	.20
3305	5.50	20	27	55.5620	344	35	-.11	.15
3839	5.50	20	30	6.9000	61	6	3.40	.92
3862	5.60	20	35	50.2060	32	57	2.96	-.43
3611	5.10	20	38	22.1060	165	39	7.68	-1.38
3800	4.50	20	40	30.3220	91	47	5.99	-.04
3314	5.90	20	44	32.0380	276	53	.59	-.36
612	5.04	20	47	54.6880	337	27	.05	-.22
3863	5.60	20	55	6.0980	69	58	4.19	.59
3373	6.00	20	56	36.3380	257	42	1.17	-.06
3291	5.60	20	58	29.5300	305	5	-1.00	.55
3776	5.40	21	1	13.5080	114	33	6.61	.06
3715	5.40	21	4	26.0100	139	38	6.66	.19
1488	4.92	21	5	54.3760	216	14	3.01	.63
619	4.98	21	15	52.8460	323	12	-.12	-.32
3857	5.80	21	18	44.2520	90	47	6.18	-.27
1462	5.82	21	21	36.1100	263	57	1.41	-.62
893	3.42	21	27	49.5880	18	55	2.24	-.57
1590	5.51	21	30	6.3900	120	55	6.64	.14
890	4.00	21	35	28.8380	83	55	5.87	-.29
3611	5.10	21	40	20.6160	194	20	5.11	-.14
663	3.79	21	45	31.9820	275	24	.35	-.06
3704	5.80	21	47	14.1260	163	18	6.99	-.62
3381	5.90	21	49	37.2440	291	50	.18	-.42

NUMBER OF STARS: 32 — MATRIX OF WEIGHTCOEFFICIENTS:

ESTIMATE OF VARIANCE: .30 — .0722

UNKNOWNS: — -.0004 .0551

DELTA PHI.....:	-2.524		
DELTA LAMBDA COS(PHI):	-2.680	-.0009	-.0001 .0313
DELTA Z.....:	3.188		

RESULTS RELATED TO THE C.I.O.: — ESTIMATE OF ST. DEV.:

LATITUDE = 52 58 45.6774 — .147

LONGITUDE= -5 26 38.4603 — .128 *SEC PHI

STATION....:WINTERSWIJK — APPROXIMATE VALUES

INSTRUMENT.:NI2 ASTROLABE — LATITUDE.....: 51 58 22.8000

CHRONOMETER:OMEGA — LONGITUDE.....: -6 43 15.2000

OBSERVER...:C.DE VRIES — ZENITHDISTANCE.....: 30 0 35.0000

DATE.....:SEPT.10,1974

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3303	5.00	19	31	59.8415	267	27	1.78	1.09
3585	4.90	19	34	24.2975	165	38	6.04	-.40
1594	5.74	19	39	48.5074	20	31	.12	.19
1456	5.36	19	41	21.9613	242	0	3.93	.15
612	5.04	19	43	5.8613	338	52	-.12	.34
3839	5.50	19	45	30.3653	59	51	.49	1.11
3657	5.10	19	47	41.9132	146	20	5.08	.22
3800	4.50	19	52	3.2732	90	1	3.18	-.15
3314	5.90	19	55	17.8251	278	28	2.04	.29
3276	5.40	19	57	45.5211	322	27	.52	.05
681	3.83	20	4	24.1750	229	20	4.19	.41
1593	5.50	20	7	45.6849	14	22	.76	-.56
858	5.24	20	10	16.1729	93	9	3.28	-.10
1575	5.00	20	12	25.8108	125	60	4.01	.64
619	4.98	20	18	31.4827	324	21	.67	-.15
1432	5.85	20	21	49.9987	308	26	2.00	-.97
895	5.02	20	25	29.4886	37	58	.32	.44
3857	5.80	20	30	24.1305	89	2	3.21	-.22
3585	4.90	20	36	3.6484	194	22	5.77	-.20
3377	5.80	20	38	9.6564	277	34	1.82	.55
672	3.99	20	40	33.2704	255	36	3.42	.03
2005	5.50	20	43	22.0603	45	12	.42	.60
1508	4.63	20	47	43.3862	210	32	5.31	-.08
823	5.05	20	49	11.3322	143	9	6.00	-.78
1549	5.57	20	51	6.6302	170	11	5.39	.28
891	4.28	20	58	54.3761	89	42	3.33	-.31
1610	5.75	21	1	18.7400	102	19	3.84	-.22
675	5.04	21	5	7.4239	341	28	.49	-.31
3611	5.10	21	11	13.6538	203	32	5.22	.19
3433	5.90	21	15	15.9998	275	50	3.51	-1.04
2022	5.70	21	17	45.7817	67	58	2.61	-.65
684	5.42	21	19	32.7737	267	58	3.29	-.45

NUMBER OF STARS: 32 — MATRIX OF WEIGHTCOEFFICIENTS:

ESTIMATE OF VARIANCE: .29 — .0731

UNKNOWNS: — .0003 .0546

DELTA PHI.....:	-2.806		
DELTA LAMBDA COS(PHI):	-.143	-.0003	-.0005 .0313
DELTA Z.....:	2.888		

RESULTS RELATED TO THE C.I.O.: — ESTIMATE OF ST. DEV.:

LATITUDE = 51 58 20.0016 — .145

LONGITUDE= -6 43 15.1526 — .126 *SEC PHI

STATION....:KLIFSBERG — APPROXIMATE VALUES

INSTRUMENT.:NI2 ASTROLABE — LATITUDE.....: 51 9 53.4000

CHRONOMETER:OMEGA — LONGITUDE.....: -6 8 50.0000

OBSERVER...:C.DE VRIES — ZENITHDISTANCE.....: 30 0 35.0000

DATE.....:SEPT.18,1974

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3472	6.00	19	19	28.8960	209	7	6.24	.75
3800	4.50	19	22	56.5160	88	38	6.00	-.25
1594	5.74	19	24	57.7680	19	13	6.79	-.51
3508	4.60	19	27	38.5140	202	29	6.53	.37
3389	5.90	19	31	58.5840	250	28	7.28	.07
3833	5.20	19	33	13.5480	76	9	5.09	.68
3715	5.40	19	34	38.7540	132	40	5.47	.51
3862	5.60	19	37	16.1880	30	44	6.21	-.07
882	5.20	19	38	37.3160	48	3	6.10	-.15
3365	5.10	19	39	51.8780	266	11	5.82	1.57
619	4.98	19	42	.5880	325	20	7.55	-.53
3320	5.40	19	48	8.8600	299	40	7.86	-.59
3634	5.80	19	53	28.2880	172	1	7.11	-.63
3326	5.00	19	58	23.1840	316	56	6.97	.14
3448	5.00	19	59	58.5000	240	44	6.65	.64
1488	4.92	20	2	24.5520	223	54	7.45	-.29
1462	5.82	20	4	59.9040	267	17	7.62	-.23
1590	5.51	20	6	11.2480	116	5	6.30	-.45
3377	5.80	20	8	15.4040	278	50	8.55	-1.18
823	5.05	20	13	31.2300	139	38	6.50	-.44
3870	6.00	20	15	36.9660	91	6	5.81	-.06
675	5.04	20	19	52.0540	342	52	6.83	-.04
3585	4.90	20	22	42.3820	201	58	7.23	-.33
3381	5.90	20	27	6.1520	294	15	7.26	.05
831	3.96	20	32	42.7960	142	18	7.36	-1.28
1616	5.50	20	36	50.9980	95	33	5.24	.51
3739	5.40	20	39	33.6900	155	53	6.00	.26
3433	5.90	20	45	30.9520	277	7	7.34	.04
893	3.42	20	47	51.2880	15	51	6.22	.10
2022	5.70	20	50	44.9040	66	52	5.55	.26
700	5.84	20	52	40.1020	344	16	6.43	.35
2016	5.80	20	54	48.6620	77	46	5.05	.72

NUMBER OF STARS: 32 — MATRIX OF WEIGHTCOEFFICIENTS:

ESTIMATE OF VARIANCE: .36 — .0725

UNKNOWNS: — -.0011 .0550

DELTA PHI.....:	-.022		
DELTA LAMBDA COS(PHI):	.821	.0003	-.0003 .0313
DELTA Z.....:	6.572		

RESULTS RELATED TO THE C.I.O.: — ESTIMATE OF ST. DEV.:

LATITUDE = 51 9 53.3814 — .162

LONGITUDE= -6 8 48.4182 — .141 *SEC PHI

STATION....:ROZENDAAL3 — APPROXIMATE VALUES

INSTRUMENT.:NI2 ASTROLABE — LATITUDE.....: 52 2 27.3000

CHRONOMETER:OMEGA — LONGITUDE.....: -5 59 17.3000

OBSERVER...:C.DE VRIES — ZENITHDISTANCE.....: 30 0 35.0000

DATE.....:SEPT.20,1974

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3472	6.00	19	0	52.5610	203	28	8.32	.56
621	4.25	19	3	2.9950	263	40	8.75	.40
3844	5.50	19	4	10.8630	39	14	4.09	.44
3384	5.90	19	8	48.9450	349	33	5.75	.35
3657	5.10	19	11	57.3210	146	40	6.90	-.23
3800	4.50	19	15	39.4010	90	8	3.07	1.58
3314	5.90	19	18	59.4750	278	21	8.64	.27
643	3.36	19	21	4.1930	254	20	7.97	1.39
3389	5.90	19	22	38.4710	248	26	8.93	.47
3833	5.20	19	24	40.6890	77	27	4.20	.23
3874	5.90	19	26	22.4950	53	26	4.46	-.09
681	3.83	19	27	38.2890	229	6	9.12	.25
1593	5.50	19	29	38.0090	14	30	5.29	-.14
3373	6.00	19	32	6.5090	259	37	9.98	-.68
1575	5.00	19	36	20.7910	126	12	6.00	-.21
835	4.38	19	38	30.2050	116	23	4.83	.60
619	4.98	19	42	45.3470	324	16	7.87	-.66
1432	5.85	19	45	47.8350	308	21	9.43	-1.54
895	5.02	19	48	31.3530	38	3	4.68	-.13
627	4.88	19	52	43.7310	300	7	7.61	.59
3857	5.80	19	52	59.7110	89	9	4.60	.03
3585	4.90	19	57	55.8470	193	33	9.63	-1.05
3377	5.80	20	1	49.9750	277	27	9.23	-.29
3704	5.80	20	6	7.4090	155	25	8.01	-.95
3870	6.00	20	8	24.4830	92	40	4.26	.44
1508	4.63	20	10	35.2750	210	9	8.30	.75
823	5.05	20	13	33.4850	143	28	7.22	-.69
1549	5.57	20	17	23.9410	171	26	8.61	-.86
1622	5.09	20	20	1.9300	82	31	4.54	-.03
893	3.42	20	21	48.8650	17	26	6.41	-1.35
639	3.22	20	25	5.4050	318	7	7.33	.14
675	5.04	20	30	7.0410	341	21	6.02	.42

NUMBER OF STARS: 32 — MATRIX OF WEIGHTCOEFFICIENTS:

ESTIMATE OF VARIANCE: .55 — .0708

UNKNOWNS: — -.0015 .0560

DELTA PHI.....:	-1.213		
DELTA LAMBDA COS(PHI):	2.235	-.0010	-.0003 .0313
DELTA Z.....:	6.883		

RESULTS RELATED TO THE C.I.O.: — ESTIMATE OF ST. DEV.:

LATITUDE = 52 2 26.0504 — .197

LONGITUDE= -5 59 13.3943 — .175 *SEC PHI

STATION....:KOOTWIJK/P.EAST

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:OMEGA

OBSERVER...:C. DE VRIES

DATE.....:OCT. 10, 1974

APPROXIMATE VALUES

LATITUDE.....:	52	10	45.0000
LONGITUDE.....:	-5	48	35.0000
ZENITHDISTANCE.....:	30	0	35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
1593	5.50	18	8	15.8110	14	46	7.81	.50
3291	5.60	18	12	3.7750	306	2	9.03	.40
3365	5.10	18	14	9.8070	264	19	8.47	1.86
858	5.24	18	16	.5650	93	31	7.79	1.19
1575	5.00	18	19	4.1330	126	37	8.70	1.01
3852	5.60	18	23	53.3610	82	48	7.98	.79
619	4.98	18	26	3.7210	324	6	8.88	.15
895	5.02	18	29	26.8150	38	13	7.21	1.06
3448	5.00	18	30	57.0850	237	56	10.03	.69
3585	4.90	18	36	.7570	191	40	11.52	-.72
1462	5.82	18	39	25.4470	265	26	10.29	.02
3518	5.50	18	41	36.1230	218	5	10.28	.58
3377	5.80	18	44	.9190	277	14	9.99	.09
2005	5.50	18	47	42.4170	45	26	8.03	.27
3704	5.80	18	50	10.8790	156	24	10.56	-.22
893	3.42	19	1	3.3690	17	40	8.35	-.06
1619	4.33	19	3	8.7830	87	32	8.74	.12
3381	5.90	19	4	47.2930	292	54	9.91	-.18
1498	5.46	19	6	34.8450	227	59	10.48	.33
3370	5.50	19	10	37.8930	312	16	9.83	-.54
675	5.04	19	14	45.6910	341	8	9.90	-1.19
831	3.96	19	16	45.7690	147	9	9.96	.20
3433	5.90	19	21	4.7950	275	30	11.01	-.90
2022	5.70	19	22	53.5870	68	14	8.41	.13
1589	5.96	19	24	40.2210	140	10	9.97	.04
3923	6.00	19	25	34.6630	91	30	10.15	-1.22
3739	5.40	19	32	31.7490	164	38	11.43	-.95
760	5.45	19	38	46.3170	209	15	11.13	-.26
3506	5.50	19	41	46.8530	254	19	11.12	-.62
3914	5.90	19	43	52.3970	107	28	10.37	-1.09
2046	4.80	19	45	59.4210	73	40	9.50	-.89
700	5.84	19	49	16.7670	342	25	9.26	-.57

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .60

MATRIX OF WEIGHTCOEFFICIENTS:

UNKNOWNS:			
		.0752	
		-.0010	.0535
DELTA PHI.....:	-1.130		
DELTA LAMBDA COS(PHI):	.657	-.0001	-.0002 .0313
DELTA Z.....:	9.564		

RESULTS RELATED TO THE C.I.O.:

ESTIMATE OF ST. DEV.:

LATITUDE = 52 10 43.8835 .213

LONGITUDE= -5 48 33.6305 .179 *SEC PHI

STATION....:KOOTWIJK/P.EAST

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:OMEGA

OBSERVER...:C. DE VRIES

DATE.....:NOV. 1 , 1974

APPROXIMATE VALUES

LATITUDE.....:	52	10	45.0000
LONGITUDE.....:	-5	48	35.0000
ZENITHDISTANCE.....:	30	0	35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
869	3.63	17	5	22.9730	92	18	9.72	.45
3909	5.10	17	7	43.4990	56	36	9.85	.01
1462	5.82	17	12	54.9190	265	26	10.99	.67
3518	5.50	17	15	5.7170	218	5	10.86	1.03
3704	5.80	17	23	39.8790	156	23	11.73	-.50
893	3.42	17	34	32.7650	17	40	10.62	-.65
1619	4.33	17	36	38.2170	87	32	9.82	.28
891	4.28	17	38	3.4630	90	3	9.71	.42
1610	5.75	17	40	45.6370	102	44	10.60	-.29
3370	5.50	17	44	7.1990	312	16	10.63	.31
675	5.04	17	48	14.2430	341	8	9.65	.78
831	3.96	17	50	14.6790	147	9	12.14	-1.07
3433	5.90	17	54	34.2890	275	30	12.16	-.62
760	5.45	18	12	15.9570	209	15	10.76	1.10
3506	5.50	18	15	16.5570	254	19	13.21	-1.43
671	3.90	18	16	59.3150	300	2	11.65	-.49

NUMBER OF STARS: 16

ESTIMATE OF VARIANCE: .65

MATRIX OF WEIGHTCOEFFICIENTS:

UNKNOWNS:			
		.1707	
		-.0062	.0990
DELTA PHI.....:	-.717		
DELTA LAMBDA COS(PHI):	.739	.0028	.0003 .0625
DELTA Z.....:	10.872		

RESULTS RELATED TO THE C.I.O.:

ESTIMATE OF ST. DEV.:

LATITUDE = 52 10 44.3210 .333

LONGITUDE= -5 48 33.4703 .254 *SEC PHI

STATION....:KOOTWIJK/P.EAST

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:OMEGA

OBSERVER...:C. DE VRIES

DATE.....:NOV. 1 , 1974

APPROXIMATE VALUES

LATITUDE.....:	52	10	43.9000
LONGITUDE.....:	-5	48	33.8000
ZENITHDISTANCE.....:	30	0	35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
2075	5.70	19	14	3.6870	92	53	11.58	.47
3541	6.00	19	15	48.8690	278	48	11.51	.28
3572	5.40	19	24	25.4570	269	5	12.69	-.91
2112	5.20	19	34	47.0050	87	23	10.91	1.14
729	4.63	19	36	40.6290	333	15	11.68	.18
42	2.37	19	40	52.5310	109	41	12.87	-.83
1629	4.75	19	43	5.8410	148	22	12.41	-.43
2139	5.40	19	54	55.8790	18	26	12.79	-.83
3668	5.70	19	57	7.5910	244	3	11.94	-.15
823	5.05	20	1	53.3250	215	54	11.84	-.01
2201	5.60	20	11	35.4170	50	44	10.70	1.33
43	4.70	20	14	14.4410	126	59	12.85	-.83
859	4.14	20	24	29.6050	201	8	11.03	.83
758	4.32	20	35	39.6550	299	15	11.62	.18
3666	5.10	20	39	.9670	271	56	11.23	.55
2222	4.90	20	40	43.9950	24	42	12.92	-.94

NUMBER OF STARS: 16

ESTIMATE OF VARIANCE: .65

MATRIX OF WEIGHTCOEFFICIENTS:

UNKNOWNS:			
		.1637	
		.0022	.1012
DELTA PHI.....:	.008		
DELTA LAMBDA COS(PHI):	-.136	-.0007	-.0024 .0626
DELTA Z.....:	11.915		

RESULTS RELATED TO THE C.I.O.:

ESTIMATE OF ST. DEV.:

LATITUDE = 52 10 43.9453 .325

LONGITUDE= -5 48 33.6963 .256 *SEC PHI

STATION....:KOOTWIJK P.EAST

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:OMEGA2

OBSERVER...:C.DE VRIES

DATE.....:MAY 27,1975

APPROXIMATE VALUES

LATITUDE.....:	52	10	45.0000
LONGITUDE.....:	-5	48	35.0000
ZENITHDISTANCE.....:	30	0	35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
557	4.67	20	53	24.3160	138	23	-.04	.05
1282	5.14	20	59	14.6477	263	42	-1.39	1.03
621	4.25	21	0	8.4736	91	36	-.69	-.14
2870	4.80	21	3	56.6935	270	24	-.29	-.18
3185	4.90	21	10	13.1951	147	50	-.42	.56
659	5.21	21	11	51.8611	37	15	-2.11	.48
2828	5.80	21	13	53.2950	324	12	-1.32	-.10
3381	5.90	21	16	1.1349	67	7	-1.70	.44
387	4.92	21	18	36.5147	317	50	-2.52	1.19
398	5.16	21	21	27.0646	300	43	-.91	-.13
2839	6.00	21	24	40.8444	315	13	-1.59	.30
3151	6.00	21	30	41.4621	171	32	.49	-.12
3377	5.80	21	33	40.1380	82	47	-1.96	.96
3072	5.70	21	35	26.3239	205	13	-.14	.53
432	5.88	21	40	25.6636	270	22	.14	-.61
3365	5.10	21	41	46.6476	95	42	-.12	-.64
2963	5.60	21	42	35.4975	252	14	.39	-.54
3330	5.90	21	46	12.0653	113	45	-1.51	1.10
3287	5.70	21	48	34.9612	129	42	.72	-.85
685	5.03	21	52	50.8790	44	47	-.92	-.64
3045	4.90	21	57	5.6548	224	39	-.07	.31
3373	6.00	21	58	29.9027	100	41	.09	-.75
1322	5.43	22	0	24.7246	244	9	-.25	.23
675	5.04	22	4	32.7824	18	53	-1.94	.20
3151	6.00	22	7	8.4403	188	28	.71	-.28
3433	5.90	22	15	32.8679	84	31	-.94	-.03
458	5.92	22	16	45.7538	264	17	.28	-.64
3484	5.60	22	17	31.0638	48	33	-1.28	-.24
3475	4.90	22	19	34.4937	59	40	-1.07	-.31
454	5.12	22	23	33.7455	342	57	-1.01	-.62
447	2.54	22	33	33.7430	293	42	-.60	-.32
522	4.82	22	36	12.9648	212	44	.55	-.21

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .34

MATRIX OF WEIGHTCOEFFICIENTS

UNKNOWNS:			
		.0824	
		.0014	.0504
DELTA PHI.....:	-1.072		
DELTA LAMBDA COS(PHI):	.196	-.0001	.0007 .0313
DELTA Z.....:	-.665		

RESULTS RELATED TO THE C.I.O.:

ESTIMATE OF ST. DEV.:

LATITUDE = 52 10 43.8834 .168

LONGITUDE= -5 48 34.2878 .132 *SEC PHI

STATION....:KOOTWIJK P.EAST

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:OMEGA2

OBSERVER...:C.DE VRIES

DATE.....:MAY 28,1975

APPROXIMATE VALUES

LATITUDE.....: 52 10 45.0000

LONGITUDE.....: -5 48 35.0000

ZENITHDISTANCE.....: 30 0 35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
557	4.67	20	49	28.0904	138	22	1.36	.31
1318	4.78	20	52	43.5122	216	44	1.11	1.33
1282	5.14	20	55	19.0242	263	42	1.03	1.03
621	4.25	20	56	12.3881	91	36	.46	.37
2870	4.80	21	0	1.0020	270	24	1.51	.44
3185	4.90	21	6	16.6058	147	50	2.39	-.56
659	5.21	21	7	55.6697	37	15	-.79	1.12
2828	5.80	21	9	57.8897	324	12	1.29	-.29
3381	5.90	21	12	5.0736	67	7	-.76	1.27
387	4.92	21	14	41.0215	317	50	-.04	1.16
398	5.16	21	17	31.2874	300	43	.01	1.42
2839	6.00	21	20	45.4093	315	13	1.38	-.22
3151	6.00	21	26	43.7491	171	31	2.44	-.26
3377	5.80	21	29	43.9130	82	47	.54	.16
3072	5.70	21	31	30.9150	205	14	1.39	1.05
432	5.88	21	36	30.0648	270	22	2.81	-.86
3365	5.10	21	37	50.5147	95	42	1.53	-.64
2963	5.60	21	38	39.8047	252	14	2.05	.15
3330	5.90	21	42	15.7246	113	45	1.69	-.47
3287	5.70	21	44	38.7445	129	42	2.43	-.92
685	5.03	21	48	54.6664	44	47	.83	-.48
3373	6.00	21	54	33.9382	100	41	.18	.80
1322	5.43	21	56	29.2021	244	10	2.66	-.37
675	5.04	22	0	35.9700	18	53	.62	-.26
3151	6.00	22	3	14.3919	188	29	2.73	-.39
2929	6.00	22	6	22.3498	287	9	3.03	-1.36
3039	5.10	22	8	41.9477	236	19	2.87	-.51
3433	5.90	22	11	36.7276	84	31	.81	-.08
458	5.92	22	12	50.1816	264	17	3.11	-1.07
3484	5.60	22	13	34.7815	48	33	1.07	-.71
3475	4.90	22	15	38.3555	59	40	.49	-.05
454	5.12	22	19	38.9193	342	57	1.82	-1.11

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .67

MATRIX OF WEIGHTCOEFFICIENTS

.0848

.0017 .0495

UNKNOWNS:			
DELTA PHI.....:	-.806		
DELTA LAMBDA COS(PHI):	.577	-.0033	.0004 .0313
DELTA Z.....:	1.385		

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 52 10 44.0663

LONGITUDE= -5 48 33.6692

ESTIMATE OF ST. DEV.:

.239

.183 *SEC PHI

STATION....:JUD GASTEL

INSTRUMENT.:NI2ASTROLABE

CHRONOMETER:TIMERECORDER 3

OBSERVER...:C.DE VRIES

DATE.....:JULY 28,1975

APPROXIMATE VALUES

LATITUDE.....: 51 35 16.8000

LONGITUDE.....: -4 27 37.5000

ZENITHDISTANCE.....: 30 0 35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3161	5.50	21	18	32.1402	295	7	1.33	-.49
1535	5.94	21	20	10.9203	105	56	3.72	.51
3150	6.00	21	22	53.3403	313	44	2.69	-1.30
3179	5.70	21	26	37.7764	285	47	1.59	-.98
813	5.97	21	28	26.8424	58	12	5.10	-.56
573	5.15	21	33	46.9605	265	40	-.37	.67
3633	4.60	21	35	52.8505	118	11	4.38	-.45
3294	4.70	21	38	23.6506	238	8	.06	.25
3701	5.10	21	40	33.7546	87	22	4.00	.52
1523	4.74	21	41	42.4646	133	27	3.20	.26
795	5.90	21	46	14.1287	15	19	3.48	.13
3427	5.70	21	51	.4528	197	38	1.97	-.81
1423	4.94	21	54	3.6968	254	33	.45	-.20
3587	5.70	21	57	2.9989	145	44	2.50	.53
3400	5.70	22	0	34.6149	210	59	.65	.14
3730	5.30	22	4	28.6690	68	58	4.58	-.07
565	5.23	22	6	9.7830	322	2	1.12	.55
3797	5.70	22	10	11.4671	42	51	3.90	.42
811	5.09	22	11	23.8671	95	50	4.34	.08
3774	5.40	22	13	37.1691	72	7	3.96	.64
3794	5.70	22	15	30.8372	31	30	4.24	-.17
3281	6.00	22	20	2.7592	269	20	-1.18	1.52
3271	4.60	22	22	55.5733	277	48	-.27	.73
760	5.45	22	25	19.7853	147	31	3.62	-.65
3240	5.90	22	26	51.5014	325	54	2.09	-.28
3585	4.90	22	28	58.9974	161	36	3.03	-.58
606	5.51	22	31	50.7074	339	44	2.75	-.42
851	5.22	22	35	32.0295	25	33	3.83	.09
3778	5.70	22	39	57.3436	89	44	4.69	-.19
667	3.48	22	41	1.8656	226	44	-.60	1.06
621	4.25	22	42	29.5796	269	27	.37	-.02
3472	6.00	22	46	31.3377	206	32	1.86	-.95

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .43

MATRIX OF WEIGHTCOEFFICIENTS

.0790

-.0009 .0517

UNKNOWNS:			
DELTA PHI.....:	.666		
DELTA LAMBDA COS(PHI):	-2.071	.0000	-.0004 .0313
DELTA Z.....:	2.424		

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 51 35 17.3462

LONGITUDE= -4 27 40.5649

ESTIMATE OF ST. DEV.:

.184

.149 *SEC PHI

STATION....:WORKUM

INSTRUMENT.:NI2ASTROLABE

CHRONOMETER:TIMERECORDER 3

OBSERVER...:C.DE VRIES

DATE.....:JULY 29,1975

APPROXIMATE VALUES

LATITUDE.....: 52 58 48.5000

LONGITUDE.....: -5 26 34.3000

ZENITHDISTANCE.....: 30 0 35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3218	5.90	20	49	45.9177	245	16	.70	-.07
3550	4.90	20	51	.9658	131	2	6.29	.26
3718	5.40	20	53	19.5318	41	3	3.30	-.26
1440	5.20	20	54	52.5299	204	48	2.90	.41
3518	5.50	20	57	44.0300	145	42	7.21	-.89
1551	4.88	21	1	45.9921	81	23	5.12	.36
1379	4.37	21	4	22.0562	337	26	-2.22	1.51
3128	5.40	21	6	5.8943	324	39	-1.01	-.09
795	5.90	21	7	49.9723	17	43	1.87	-.42
3627	5.20	21	12	3.1185	113	17	7.05	-.56
813	5.97	21	15	9.4866	59	56	4.26	.03
3356	5.90	21	16	54.4426	210	17	3.53	-.59
792	3.92	21	19	3.7447	89	46	5.89	-.04
3179	5.70	21	21	10.1388	283	46	-.72	-.34
3150	6.00	21	23	28.3228	312	7	-.84	-.46
1395	5.59	21	25	45.3049	280	28	-.62	-.35
580	5.41	21	29	55.5071	261	51	.26	-.53
3701	5.10	21	32	28.8311	89	44	5.15	.70
3633	4.60	21	33	17.2312	122	1	7.06	-.49
3259	5.50	21	37	15.6753	255	31	-.38	.43
837	4.99	21	40	9.2954	29	59	3.09	-.81
821	4.26	21	43	5.5935	77	25	4.97	.32
1397	5.21	21	44	.7355	294	23	-1.07	-.20
1508	4.63	21	46	6.5296	155	48	6.12	-.11
1460	4.48	21	52	10.2638	213	36	2.30	.41
1416	4.61	21	53	6.3798	267	4	-.33	-.17
1412	5.78	21	54	12.2859	277	22	-1.82	.93
3730	5.30	21	56	37.1220	91	22	5.43	.48
634	3.92	22	2	38.3882	234	4	1.07	.25
3587	5.70	22	4	41.4862	153	35	5.63	.46
851	5.22	22	9	27.0384	27	20	2.02	.07
569	3.14	22	11	42.2385	329	25	-.75	-.23

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .29

MATRIX OF WEIGHTCOEFFICIENTS

.0808

-.0010 .0510

UNKNOWNS:			
DELTA PHI.....:	-2.263		
DELTA LAMBDA COS(PHI):	-3.239	-.0007	-.0008 .0313
DELTA Z.....:	2.619		

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 52 58 46.1205

LONGITUDE= -5 26 39.3979

ESTIMATE OF ST. DEV.:

.154

.122 *SEC PHI

STATION....:BOSBERG

INSTRUMENT.:NI2ASTROLABE

CHRONOMETER:TIMERECORDER3

OBSERVER...:C.DE VRIES

DATE.....:JULY 30,1975

APPROXIMATE VALUES

LATITUDE.....: 52 57 12.0000

LONGITUDE.....: -6 20 25.0000

ZENITHDISTANCE.....: 30 0 35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3218	5.90	20	42	20.4512	245	20	3.67	-1.15
3718	5.40	20	46	.5053	41	1	6.89	.80
1440	5.20	20	47	44.4473	204	59	1.61	.69
3518	5.50	20	49	58.6573	145	35	2.43	1.73
1551	4.88	20	54	16.7734	81	21	6.38	.59
1379	4.37	20	56	28.0374	337	28	6.32	-.05
3128	5.40	20	58	21.2595	324	40	5.10	.61
795	5.90	21	0	50.9955	17	41	6.74	.77
3627	5.20	21	4	27.9576	113	13	5.98	-.29
813	5.97	21	7	44.6696	59	54	6.65	.85
3356	5.90	21	9	41.7677	210	26	2.73	-.47
792	3.92	21	11	33.0097	89	43	6.60	.07
3179	5.70	21	13	37.3717	283	49	4.37	-.57
3150	6.00	21	15	48.8638	312	9	5.42	-.30
1395	5.59	21	18	13.1258	280	31	4.02	-.35
580	5.41	21	22	26.5839	261	54	2.70	.26
3701	5.10	21	24	58.0099	89	41	6.66	.02
3633	4.60	21	25	40.1099	121	57	5.10	.18
3259	5.50	21	29	48.0940	255	34	2.94	-.17
837	4.99	21	32	55.8700	29	57	8.71	-1.06
821	4.26	21	35	36.7241	77	22	8.04	-.95
1397	5.21	21	36	25.6881	294	25	3.15	1.14
1508	4.63	21	38	12.5061	155	36	4.83	-1.10
1534	4.09	21	43	14.0402	128	16	5.89	-.91
1460	4.48	21	44	55.4202	213	45	1.44	.80
1412	5.78	21	46	40.7323	277	25	3.03	.50
3730	5.30	21	49	6.0283	91	20	6.60	.01
634	3.92	21	55	15.5284	234	9	1.91	.42
3587	5.70	21	56	49.7124	153	24	4.15	-.33
851	5.22	22	2	15.4725	27	18	8.36	-.75
569	3.14	22	3	54.9926	329	27	6.39	-.47
3271	4.60	22	8	37.1406	275	38	3.95	-.49

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .55

MATRIX OF WEIGHTCOEFFICIENTS

.0813

-.0016 .0509

UNKNOWNS:			
DELTA PHI.....:	2.128		
DELTA LAMBDA COS(PHI):	-1.707	-.0012	-.0008 .0313
DELTA Z.....:	4.956		

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 52 57 14.0152

LONGITUDE= -6 20 27.5518

ESTIMATE OF ST. DEV.:

.212

.168 *SEC PHI

STATION....:VENRAY

INSTRUMENT.:NI2ASTROLABE

CHRONOMETER:TIMERECORDER3

OBSERVER...:C.DE VRIES

DATE.....:AUG.1,1975

APPROXIMATE VALUES

LATITUDE.....:	51	31	42.6000
LONGITUDE.....:	-5	58	25.0000
ZENITHDISTANCE.....:	30	0	35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3161	5.50	20	56	36.0723	295	12	6.87	-.34
1535	5.94	20	58	18.4863	105	49	4.32	.33
3150	6.00	21	0	46.0603	313	49	7.39	-.28
3179	5.70	21	4	45.9204	285	53	6.81	-.61
813	5.97	21	6	55.2024	58	7	6.01	.46
573	5.15	21	12	3.3565	265	47	5.05	.38
3633	4.60	21	13	54.7066	118	2	4.65	-.44
3294	4.70	21	16	52.4406	238	18	3.49	.89
3701	5.10	21	18	48.8846	87	16	5.18	.18
1523	4.74	21	19	34.8547	133	14	3.74	.02
795	5.90	21	25	50.8828	15	12	8.23	-.68
3427	5.70	21	30	26.2688	198	12	3.63	-.30
1423	4.94	21	32	24.6729	254	40	5.26	-.27
3587	5.70	21	34	43.4649	145	27	3.24	.23
3400	5.70	21	39	27.7410	211	18	4.28	-.70
3730	5.30	21	42	41.2670	88	51	4.91	.39
565	5.23	21	43	55.2731	322	6	6.59	.71
3797	5.70	21	48	50.0211	42	46	7.24	-.28
811	5.09	21	49	35.6792	95	43	4.88	.15
1460	4.48	21	50	50.3432	220	17	3.67	.14
3794	5.70	21	54	22.1552	31	25	6.99	.27
3281	6.00	21	58	17.6793	269	26	4.05	1.52
3271	4.60	22	1	7.1634	277	54	5.75	.15
760	5.45	22	2	58.0874	147	12	3.60	-.16
3240	5.90	22	4	32.6514	325	59	8.04	-.66
3585	4.90	22	6	4.9434	161	3	3.61	-.38
606	5.51	22	9	3.7455	339	50	7.78	-.19
848	3.85	22	13	19.2116	73	12	5.78	.13
851	5.22	22	14	33.5796	25	28	7.82	-.43
3778	5.70	22	18	11.6516	89	38	5.00	.27
621	4.25	22	20	44.4417	269	33	5.37	.20
3472	6.00	22	25	31.7118	206	55	4.21	-.72

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .27

UNKNOWNS:

		MATRIX OF WEIGHTCOEFFICIENTS		
		.0785		
		-.0010	.0519	
DELTA PHI.....:	2.254			
DELTA LAMBDA COS(PHI):	.167	.0001	-.0002	.0313
DELTA Z.....:	5.423			

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 51 31 44.7386

LONGITUDE= -5 58 24.4696

ESTIMATE OF ST. DEV.:

.146

.119 *SEC PHI

STATION....:ZALTBOMMEL

INSTRUMENT.:NI2ASTROLABE

CHRONOMETER:TIMERECORDER3

OBSERVER...:C.DE VRIES

DATE.....:AUG.2,1975

APPROXIMATE VALUES

LATITUDE.....:	51	48	42.0000
LONGITUDE.....:	-5	15	9.0000
ZENITHDISTANCE.....:	30	0	35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3594	5.40	20	55	41.0164	122	37	8.57	-.13
3287	5.70	20	58	6.3765	231	31	4.05	.14
3150	6.00	21	1	26.6266	313	28	5.24	-.19
792	3.92	21	4	15.2427	87	46	7.93	1.22
1572	4.46	21	6	33.1388	51	7	9.02	-.12
573	5.15	21	10	51.3529	265	16	3.81	.12
3508	4.60	21	13	7.7810	163	6	7.51	-.72
795	5.90	21	18	12.8938	15	45	8.06	-.29
1523	4.74	21	20	15.4892	134	15	7.73	.30
3427	5.70	21	23	20.5193	195	19	4.66	.69
590	4.34	21	26	7.6554	343	53	6.95	-.61
554	4.86	21	28	45.5735	318	57	5.13	.13
821	4.26	21	29	56.3956	75	42	9.39	-.20
1423	4.94	21	30	50.6536	254	4	4.02	-.10
1558	4.28	21	33	13.7697	98	47	9.35	-.32
3400	5.70	21	35	19.1237	209	44	4.31	.49
3587	5.70	21	36	22.1258	146	51	7.74	-.23
1412	5.78	21	38	8.1498	279	12	4.55	-.47
3730	5.30	21	41	35.7360	89	20	9.27	-.13
569	3.14	21	43	27.4180	330	51	5.55	.21
3797	5.70	21	45	49.0861	43	6	8.41	.30
811	5.09	21	48	43.3182	96	15	9.26	-.20
3794	5.70	21	50	21.1202	31	47	7.52	.84
1559	4.42	21	53	35.9404	110	48	9.88	-1.10
3293	5.50	21	55	20.9524	262	25	4.48	-.57
3247	5.50	21	57	17.1105	291	16	4.21	.13
844	4.58	21	59	19.8065	69	26	8.33	.83
3415	5.30	22	0	52.5306	216	43	3.38	1.20
601	4.26	22	2	48.9847	274	56	4.09	-.07
760	5.45	22	4	48.2667	148	41	8.25	-.81
3240	5.90	22	6	9.7128	325	38	5.85	-.31
1446	5.27	22	9	2.6929	245	45	4.02	-.05

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .32

UNKNOWNS:

		MATRIX OF WEIGHTCOEFFICIENTS		
		.0795		
		-.0026	.0517	
DELTA PHI.....:	.535			
DELTA LAMBDA COS(PHI):	-2.585	.0003	.0006	.0313
DELTA Z.....:	6.551			

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 51 48 42.4175

LONGITUOE= -5 15 12.9205

ESTIMATE OF ST. DEV.:

.158

.128 *SEC PHI

STATION....:KOOTWIJK P.EAST

INSTRUMENT.:ZEISS N12ASTROLABE

CHRONOMETER:TIMERECORDER 3

OBSERVER...:C. DE VRIES

DATE.....:AUG.3,1975

APPROXIMATE VALUES

LATITUDE.....:	52	10	45.0000
LONGITUDE.....:	-5	48	35.0000
ZENITHDISTANCE.....:	30	0	35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
1498	5.46	20	15	8.7252	132	1	4.39	-.15
511	4.77	20	18	52.7132	316	9	3.32	.51
3599	5.10	20	20	15.7353	105	35	3.59	.31
528	4.87	20	23	4.0673	288	43	4.14	.05
540	5.39	20	25	23.9254	273	12	4.80	-.42
3182	5.60	20	27	1.1094	260	41	3.64	.88
1379	4.37	20	30	15.3914	338	33	3.17	.40
3472	6.00	20	33	16.4955	157	35	4.07	.47
3155	5.90	20	36	18.6815	284	23	4.16	.09
3718	5.40	20	38	20.4156	40	9	3.27	.05
1551	4.88	20	41	29.9436	80	9	4.78	-1.19
3655	5.60	20	42	59.7336	93	40	3.24	.50
1440	5.20	20	43	55.9977	209	51	4.07	.75
3287	5.70	20	50	1.2158	230	19	5.59	-.83
817	4.85	20	57	54.2259	31	6	3.89	-.58
788	4.04	21	0	15.7739	95	2	3.62	.14
795	5.90	21	3	50.0040	16	24	3.41	-.09
3427	5.70	21	6	44.6860	190	24	4.37	.41
580	5.41	21	9	29.3901	263	23	4.55	-.05
549	5.67	21	14	2.4342	305	11	3.29	.66
3508	4.60	21	16	2.2222	167	24	5.33	-.70
3229	5.30	21	20	16.8703	342	12	3.66	-.12
821	4.26	21	23	12.1843	76	14	2.82	.73
1534	4.09	21	25	47.4344	125	50	4.12	.04
837	4.99	21	28	19.7924	29	1	3.43	-.13
1416	4.61	21	32	11.7105	268	30	4.86	-.42
3587	5.70	21	34	.6665	148	48	4.36	.08
3730	5.30	21	35	26.2345	89	58	3.83	-.13
1460	4.48	21	38	25.1486	217	28	4.84	-.03
569	3.14	21	41	31.2606	330	23	4.03	-.37
1441	5.35	21	42	38.4906	259	3	5.63	-.91

NUMBER OF STARS: 31

ESTIMATE OF VARIANCE: .28

UNKNOWNS:

		MATRIX OF WEIGHTCOEFFICIENTS		
		.0764		
		-.0029	.0561	
DELTA PHI.....:	-.666			
DELTA LAMBDA COS(PHI):	.363	.0001	-.0018	.0323
DELTA Z.....:	4.062			

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 52 10 44.2178

LONGITUDE= -5 48 34.1439

ESTIMATE OF ST. DEV.:

.147

.126 *SEC PHI

STATION....:KOOTWIJK P.EAST

INSTRUMENT.:NI2ASTROLABE

CHRONOMETER:TIMEREC.3

OBSERVER...:C.DE VRIES

DATE.....:AUG.4,1975

APPROXIMATE VALUES

LATITUDE.....:	52	10	45.0000
LONGITUDE.....:	-5	48	35.0000
ZENITHDISTANCE.....:	30	0	35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
1498	5.46	20	11	12.9234	132	1	3.78	-.56
511	4.77	20	14	56.6235	316	9	2.82	-.38
3599	5.10	20	16	19.9415	105	35	2.71	.09
528	4.87	20	19	8.0036	288	43	3.44	-.56
540	5.39	20	21	27.8197	273	12	3.61	-.48
3182	5.60	20	23	5.1358	260	41	3.63	-.31
1379	4.37	20	26	18.9339	338	33	1.96	.19
3472	6.00	20	29	20.7020	157	35	3.81	-.25
3155	5.90	20	32	22.5881	284	23	3.16	-.21
3718	5.40	20	34	24.8741	40	9	1.50	.48
1551	4.88	20	37	34.3042	80	9	2.58	-.19
3655	5.60	20	39	4.0083	93	40	1.76	.84
1440	5.20	20	40	.0163	209	51	4.09	-.29
817	4.85	20	53	58.7988	31	6	2.14	-.20
788	4.04	20	56	19.9349	95	2	3.24	-.62
795	5.90	20	59	54.7290	16	24	2.38	-.46
3427	5.70	21	2	47.9371	190	23	3.26	.54
580	5.41	21	5	33.2312	263	23	2.88	.40
549	5.67	21	10	6.3053	305	11	2.39	.22
3508	4.60	21	12	6.8054	167	24	4.57	-.91
3229	5.30	21	16	20.0635	342	12	1.91	.20
821	4.26	21	19	16.3836	76	14	2.28	.06
1534	4.09	21	21	51.7737	125	50	2.54	.59
837	4.99	21	24	24.3558	29	1	1.99	-.06
1416	4.61	21	28	15.5239	268	30	2.98	.22
3587	5.70	21	30	5.0600	148	48	3.17	.29
3730	5.30	21	31	30.4940	89	59	2.68	-.14
1460	4.48	21	34	28.7581	217	27	2.58	1.18
569	3.14	21	37	34.6282	330	23	1.58	.66
1441	5.35	21	38	42.2643	239	2	3.67	-.08
847	3.70	21	41	38.7424	57	4	2.19	-.08
3375	5.80	21	45	23.4945	228	58	3.88	-.19

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .23

UNKNOWNS:

		MATRIX OF WEIGHTCOEFFICIENTS		
		.0745		
		-.0008	.0539	
DELTA PHI.....:	-.891			
DELTA LAMBDA COS(PHI):	.319	-.0012	-.0002	.0313
DELTA Z.....:	2.862			

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 52 10 43.9927

LONGITUDE= -5 48 34.2192

ESTIMATE OF ST. DEV.:

.131

.112 *SEC PHI

STATION....:AMERSFOORT

INSTRUMENT.:N12ASTROLABE

CHRONOMETER:TIMERECORDER3

OBSERVER...:C.DE VRIES

DATE.....:AUG.6,1975

APPROXIMATE VALUES

LATITUDE.....: 52 9 24.0000

LONGITUDE.....: -5 23 4.0000

ZENITHDISTANCE.....: 30 0 35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
795	5.90	20	54	12.6743	16	22	7.64	-.94
3427	5.70	20	57	24.7264	190	45	2.58	-.22
580	5.41	20	59	24.1845	263	25	3.00	.71
549	5.67	21	3	50.3827	305	13	5.26	.01
3508	4.60	21	5	18.6648	167	6	2.75	-.14
3229	5.30	21	9	43.7950	342	14	5.65	.69
821	4.26	21	13	8.0512	76	12	6.18	-.60
1534	4.09	21	15	35.2073	125	46	3.60	.17
837	4.99	21	18	29.1775	28	59	6.64	-.01
1416	4.61	21	22	5.7377	268	32	3.47	.42
3587	5.70	21	23	40.5457	148	41	2.78	.25
3730	5.30	21	25	20.2618	89	56	4.34	.76
1460	4.48	21	28	30.1780	217	34	2.52	-.01
569	3.14	21	31	9.8261	330	25	5.25	.82
811	5.09	21	32	44.1182	96	54	4.53	.31
847	3.70	21	35	33.9703	57	3	5.57	.57
3714	5.20	21	37	3.9724	105	27	4.38	.14
853	5.21	21	39	17.7765	46	37	6.68	-.30
3415	5.30	21	41	32.0146	215	6	3.22	-.74
601	4.26	21	46	44.5309	274	22	4.46	-.35
851	5.22	21	48	54.2430	26	18	7.49	-.84
1446	5.27	21	51	45.6311	244	53	3.24	-.13
3240	5.90	21	53	8.6772	325	13	6.19	-.27
848	3.85	21	54	49.4853	74	6	5.18	.47
786	5.24	21	57	17.5374	134	25	3.80	-.34
3508	4.60	22	0	44.7696	192	54	2.41	-.06
595	4.96	22	2	7.8457	295	48	4.88	.04
3397	5.80	22	10	22.4721	235	60	2.78	.09
3657	5.10	22	13	27.1642	147	16	3.05	.02
3800	4.50	22	15	59.2363	90	20	5.23	-.14
3314	5.90	22	19	24.5525	278	10	4.18	.08
3276	5.40	22	23	14.9347	322	14	6.28	-.46

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .22

UNKNOWNS:

DELTA PHI.....: 2.096

DELTA LAMBDA COS(PHI): -.575

DELTA Z.....: 4.523

MATRIX OF WEIGHTCOEFFICIENTS

.0719

-.0014 .0554

-.0002 .0008 .0313

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 52 9 25.9789

LONGITUDE= -5 23 4.6773

ESTIMATE OF ST. DEV.:

.126

.110 *SEC PHI

STATION....:BERKHEIDE

INSTRUMENT.:N12ASTROLABE

CHRONOMETER:TIMERECORDER3

OBSERVER...:C.DE VRIES

DATE.....:AUG.7,1975

APPROXIMATE VALUES

LATITUDE.....: 52 10 38.6000

LONGITUDE.....: -4 23 21.6000

ZENITHDISTANCE.....: 30 0 35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
795	5.90	20	53	48.3227	16	24	5.18	-.86
3427	5.70	20	56	47.0868	190	26	7.85	.57
580	5.41	20	59	25.5229	263	23	2.91	.63
549	5.67	21	3	57.9590	305	11	2.22	-.11
3508	4.60	21	5	52.9071	167	21	9.81	-.21
3229	5.30	21	10	10.1532	342	12	2.43	.15
821	4.26	21	13	7.9693	76	14	9.06	-.64
1534	4.09	21	15	42.3674	125	49	10.09	.18
837	4.99	21	18	17.2175	29	1	4.85	.32
1416	4.61	21	22	7.8376	268	30	3.74	-.47
3587	5.70	21	23	54.5197	148	47	9.97	.19
3730	5.30	21	25	21.9817	89	58	8.91	.27
1460	4.48	21	28	22.5838	217	28	5.95	.66
569	3.14	21	31	25.5919	330	23	1.89	.37
811	5.09	21	32	46.7820	96	56	9.46	.05
847	3.70	21	35	30.7621	57	4	7.12	.04
3714	5.20	21	37	7.8581	105	29	9.43	.40
853	5.21	21	39	12.3762	46	38	6.64	-.21
3415	5.30	21	41	23.2383	214	60	5.42	1.36
601	4.26	21	46	47.2905	274	20	3.21	-.22
851	5.22	21	48	40.7785	26	20	4.87	.12
1446	5.27	21	51	44.3766	244	50	5.29	-.61
3240	5.90	21	53	21.9547	325	12	2.89	-.73
848	3.85	21	54	49.0627	74	8	8.34	-.04
786	5.24	21	57	26.6408	134	29	10.53	-.22
3508	4.60	22	0	14.5969	192	39	8.62	-.33
595	4.96	22	2	13.7090	295	47	2.26	.00
3585	4.90	22	4	2.8870	168	18	10.73	-1.17
3397	5.80	22	10	19.7292	235	56	5.94	-.65
3384	5.90	22	13	52.0254	349	12	1.68	1.17
3800	4.50	22	16	1.1014	90	22	9.05	.15
3314	5.90	22	19	27.8575	278	8	2.98	-.15

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .32

UNKNOWNS:

DELTA PHI.....: -2.826

DELTA LAMBDA COS(PHI): -2.994

DELTA Z.....: 6.189

MATRIX OF WEIGHTCOEFFICIENTS

.0689

.0008 .0573

-.0003 .0010 .0313

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 52 10 35.6526

LONGITUDE= -4 23 26.2320

ESTIMATE OF ST. DEV.:

.149

.136 *SEC PHI

STATION....:MONNICKENDAM

INSTRUMENT.:N12ASTROLABE

CHRONOMETER:TIMERECORDER3

OBSERVER...:C.DE VRIES

DATE.....:AUG.18,1975

APPROXIMATE VALUES

LATITUDE.....: 52 27 27.9000

LONGITUDE.....: -5 1 57.2000

ZENITHDISTANCE.....: 30 0 35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
1523	4.74	20	22	29.2365	136	41	6.70	.67
3400	5.70	20	25	18.1486	205	45	2.16	.87
1423	4.94	20	27	32.6667	252	39	-1.01	1.56
837	4.99	20	29	12.0647	29	21	3.91	1.55
836	3.62	20	30	39.8688	57	50	6.24	.88
554	4.86	20	31	27.8408	318	12	1.80	-.85
3763	5.70	20	32	33.8949	68	55	6.85	.73
1416	4.61	20	36	15.0230	267	60	.18	-.00
3730	5.30	20	39	33.3051	90	27	7.85	.25
3587	5.70	20	41	12.3011	150	21	6.17	.54
1441	5.35	20	45	38.8433	238	15	1.06	.06
811	5.09	20	47	11.6653	97	28	7.41	.75
569	3.14	20	48	47.7674	330	2	1.44	.09
3714	5.20	20	51	49.7355	106	6	8.64	-.50
3281	6.00	20	55	2.9716	267	48	-.77	.96
3247	5.50	20	56	50.1157	290	23	-.11	.27
851	5.22	20	59	11.9357	26	42	5.46	-.18
601	4.26	21	1	5.7598	273	53	.12	-.01
1468	5.48	21	3	57.7619	215	48	2.70	-.33
3457	5.50	21	8	26.5180	206	31	2.98	.00
1594	5.74	21	9	40.5361	21	13	4.82	.09
626	3.61	21	12	16.6022	259	7	.41	-.06
3799	4.60	21	14	6.3062	80	14	8.21	-.29
3778	5.70	21	15	8.6663	91	15	8.43	-.32
3611	5.10	21	16	53.0943	160	18	7.03	-.90
3716	5.70	21	18	10.7304	120	31	8.92	-1.01
606	5.51	21	21	42.8965	338	26	2.96	-.95
598	4.11	21	28	40.3447	303	18	1.22	-.80
3657	5.10	21	30	47.6868	148	52	8.36	-1.58
674	3.82	21	33	40.7509	229	32	1.71	-.15
882	5.20	21	38	39.0751	49	35	6.99	-.30
3276	5.40	21	39	58.2591	321	53	2.18	-1.06

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .61

UNKNOWNS:

DELTA PHI.....: -.705

DELTA LAMBDA COS(PHI): -3.973

DELTA Z.....: 4.126

MATRIX OF WEIGHTCOEFFICIENTS

.0778

.0008 .0523

-.0001 -.0004 .0313

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 52 27 27.0745

LONGITUDE= -5 2 3.4888

ESTIMATE OF ST. DEV.:

.218

.178 *SEC PHI

STATION....:RODSENDAAL3

INSTRUMENT.:N12ASTROLABE

CHRONOMETER:TIMERECORDER3

OBSERVER...:C.DE VRIES

DATE.....:AUG.26,1975

APPROXIMATE VALUES

LATITUDE.....: 52 2 27.3000

LONGITUDE.....: -5 59 17.3000

ZENITHDISTANCE.....: 30 0 35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3714	5.20	20	15	48.4146	105	12	4.58	-.17
3305	5.50	20	18	43.9747	346	20	4.61	.69
3247	5.50	20	20	33.1427	290	57	6.12	1.12
3415	5.30	20	21	34.0308	215	40	7.14	.71
601	4.26	20	25	38.3109	274	34	6.83	.83
851	5.22	20	29	24.6210	26	9	3.57	.57
3303	5.00	20	34	52.5912	267	20	8.76	-.96
3585	4.90	20	38	59.6373	166	26	7.81	-1.30
612	5.04	20	47	6.9396	338	46	5.04	.54
3839	5.50	20	48	8.1536	59	55	3.11	.66
3397	5.80	20	49	50.8077	236	21	7.64	.39
1583	4.64	20	51	10.3117	98	28	4.40	-.16
3800	4.50	20	54	56.2619	90	7	3.82	.24
3314	5.90	20	58	15.3920	278	21	7.17	.41
3862	5.60	21	0	5.3960	31	50	4.42	-.40
882	5.20	21	5	43.6282	49	6	3.67	.14
681	3.83	21	6	55.9343	229	6	7.77	.23
1593	5.50	21	8	57.4803	14	30	4.88	-.47
3715	5.40	21	12	10.1724	135	51	5.76	-.38
858	5.24	21	13	10.5305	93	16	4.56	-.43
835	4.38	21	17	46.7706	116	28	4.87	-.14
619	4.98	21	22	1.4088	324	16	6.73	-.61
1432	5.85	21	25	4.2589	308	21	7.58	-.89
1488	4.92	21	28	16.1010	220	25	6.78	1.14
627	4.88	21	32	.1791	300	7	8.54	-1.57
3857	5.80	21	33	16.8251	89	9	3.33	.72
1462	5.82	21	36	42.7973	265	42	8.45	-.62
3768	5.60	21	39	39.5074	130	35	4.42	.78
3897	5.30	21	41	.9294	73	33	4.02	-.18
672	3.99	21	43	20.6555	255	20	8.37	-.41
3704	5.80	21	45	22.5455	155	24	7.07	-.96
1508	4.63	21	49	54.0597	210	10	7.29	.46

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .54

UNKNOWNS:

DELTA PHI.....: -1.068

DELTA LAMBDA COS(PHI): 1.844

DELTA Z.....: 5.906

MATRIX OF WEIGHTCOEFFICIENTS

.0814

.0002 .0507

-.0010 -.0005 .0313

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 52 2 26.1150

LONGITUDE= -5 59 14.0840

ESTIMATE OF ST. DEV.:

.209

.165 *SEC PHI

STATION....:WINTERSWIJK APPROXIMATE VALUES

INSTRUMENT.:N12ASTROLABE LATITUDE.....: 51 58 22.8000

CHRONOMETER:TIMERECORDER3 LONGITUDE.....: -6 43 15.2000

OBSERVER...:C.DE VRIES ZENITHDISTANCE.....: 30 0 35.0000

DATE.....:AUG.27,1975

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3714	5.20	20	8	49.7422	105	3	7.10	.52
3305	5.50	20	10	2.4242	346	29	3.08	.53
3247	5.50	20	13	31.3303	291	3	3.58	.68
3415	5.30	20	15	19.0384	215	59	6.05	1.18
601	4.26	20	18	44.6165	274	40	5.07	-.25
851	5.22	20	23	27.1486	26	4	4.56	-.08
3303	5.00	20	28	1.9408	267	27	4.28	.81
3585	4.90	20	30	22.0709	165	35	8.76	-.30
3778	5.70	20	32	58.7890	90	24	6.95	.14
3472	6.00	20	34	19.6110	203	58	7.49	.17
3508	4.60	20	37	41.2591	195	11	8.52	-.60
612	5.04	20	39	6.9332	338	52	3.96	-.39
3839	5.50	20	41	32.0672	59	50	4.66	1.14
3397	5.80	20	43	16.7833	236	32	6.28	.12
1583	4.64	20	44	14.8073	98	20	7.72	-.33
3800	4.50	20	48	4.6495	90	0	6.98	.09
3314	5.90	20	51	19.8036	278	28	4.27	.41
3862	5.60	20	53	56.7537	31	45	4.91	-.23
882	5.20	20	59	15.1798	49	1	4.78	.57
681	3.83	21	0	26.9859	229	20	5.18	1.52
1593	5.50	21	3	49.2860	14	22	4.58	-.46
1575	5.00	21	8	26.4201	125	59	8.03	.16
835	4.38	21	10	42.0122	116	17	8.33	-.37
619	4.98	21	14	32.6143	324	21	3.55	.06
1432	5.85	21	17	51.4705	308	26	4.19	-.36
627	4.88	21	24	52.9287	300	12	4.32	-.32
3857	5.80	21	26	25.5847	89	1	7.23	-.19
1462	5.82	21	29	53.0429	265	49	7.44	-2.28
3768	5.60	21	32	25.1909	130	21	8.98	-.71
3897	5.30	21	34	17.2210	73	27	6.70	-.31
672	3.99	21	36	35.8691	255	36	6.14	-.56
3704	5.80	21	37	33.8031	154	56	8.87	-.37

NUMBER OF STARS: 32 MATRIX OF WEIGHTCOEFFICIENTS

ESTIMATE OF VARIANCE: .52 .0798

UNKNOWNS: -.0008 .0514

DELTA PHI.....:	-2.238			
DELTA LAMBDA COS(PHI):	-1.041	-.0010	.0005	.0313
DELTA Z.....:	6.033			

RESULTS RELATED TO THE C.I.O.: ESTIMATE OF ST. DEV.:

LATITUDE = 51 58 20.4480 .203

LONGITUDE= -6 43 16.6730 .163 *SEC PHI

STATION....:LEMELERBERG APPROXIMATE VALUES

INSTRUMENT.:N12ASTROLABE LATITUDE.....: 52 28 26.4000

CHRONOMETER:TIMERECORDER3 LONGITUDE.....: -6 24 29.1000

OBSERVER...:C.DE VRIES ZENITHDISTANCE.....: 30 0 35.0000

DATE.....:AUG.28,1975

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
1460	4.48	19	55	9.9366	215	6	5.43	.30
3794	5.70	19	56	41.6226	32	34	5.48	.75
1441	5.35	20	0	47.0088	238	13	6.48	-.19
811	5.09	20	2	24.5009	97	30	4.25	.51
847	3.70	20	3	39.0430	57	26	5.76	-.17
3714	5.20	20	7	3.6912	106	8	4.37	.27
3415	5.30	20	7	55.6852	213	32	5.75	-.08
3281	6.00	20	10	14.8233	267	46	6.14	.80
3247	5.50	20	12	4.4594	290	22	6.20	1.07
851	5.22	20	14	11.3675	26	43	6.31	.06
601	4.26	20	16	18.2516	273	51	6.87	.18
3305	5.50	20	20	26.4178	345	29	7.13	.05
3457	5.50	20	23	25.6380	206	25	5.38	.11
760	5.45	20	25	36.4781	152	32	4.40	.15
626	3.61	20	27	27.3562	259	5	5.82	.95
3799	4.60	20	29	17.3483	80	15	4.69	.38
3778	5.70	20	30	20.9653	91	17	4.27	.59
3611	5.10	20	32	22.7904	160	26	5.90	-1.28
3716	5.70	20	33	26.8385	120	34	3.12	1.40
606	5.51	20	37	11.0107	338	25	8.01	-.74
3397	5.80	20	38	22.6807	235	3	6.96	-.75
612	5.04	20	44	43.5990	338	8	7.53	-.27
3657	5.10	20	46	10.6151	148	58	4.44	.08
1593	5.50	20	48	48.8212	15	19	7.01	-.37
643	3.36	20	49	59.9793	253	24	7.07	-.42
882	5.20	20	53	45.0835	49	36	5.38	.42
3276	5.40	20	55	18.4156	321	52	8.32	-.94
614	5.56	21	0	4.7998	296	19	8.13	-.81
3365	5.10	21	1	36.3419	263	46	6.26	.60
1604	5.83	21	2	41.0279	76	44	5.55	-.40
858	5.24	21	3	48.9960	94	3	5.97	-1.15
3715	5.40	21	5	37.6981	137	33	5.59	-1.11

NUMBER OF STARS: 32 MATRIX OF WEIGHTCOEFFICIENTS

ESTIMATE OF VARIANCE: .49 .0768

UNKNOWNS: .0021 .0528

DELTA PHI.....:	1.014			
DELTA LAMBDA COS(PHI):	1.047	-.0002	-.0000	.0313
DELTA Z.....:	5.933			

RESULTS RELATED TO THE C.I.O.: ESTIMATE OF ST. DEV.:

LATITUDE = 52 28 27.2994 .194

LONGITUDE= -6 24 27.1640 .161 *SEC PHI

STATION....:KLIFSBERG APPROXIMATE VALUES

INSTRUMENT.:N12ASTROLABE LATITUDE.....: 51 9 53.4000

CHRONOMETER:TIMERECORDER3 LONGITUDE.....: -6 8 50.0000

OBSERVER...:C.DE VRIES ZENITHDISTANCE.....: 30 0 35.0000

DATE.....:SEPT.21,1975

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
1594	5.74	19	14	12.0764	19	12	7.13	.41
3508	4.60	19	16	52.4585	202	30	6.72	.43
643	3.36	19	18	57.9306	256	12	6.25	1.29
875	5.65	19	21	17.5468	58	22	7.36	-.11
1434	5.14	19	23	14.6049	284	47	5.66	2.01
3862	5.60	19	26	29.2970	30	44	6.83	.64
3776	5.40	19	28	1.9091	110	10	6.78	.17
3365	5.10	19	29	3.2411	266	11	7.25	.35
858	5.24	19	30	3.6192	91	42	6.38	.66
619	4.98	19	31	9.8813	325	20	7.67	.10
835	4.38	19	32	14.3053	114	15	6.22	.72
3320	5.40	19	37	19.3056	299	40	8.17	-.43
869	3.63	19	46	4.9720	90	30	7.45	-.41
3326	5.00	19	47	33.0721	316	56	8.10	-.33
3448	5.00	19	49	10.5662	240	44	7.07	.36
3857	5.80	19	50	33.9302	87	39	6.66	.40
1488	4.92	19	51	37.2263	223	54	7.14	.17
1462	5.82	19	54	11.3204	267	17	8.64	-1.03
3377	5.80	19	57	26.3606	278	50	7.80	-.13
3897	5.30	19	59	52.5567	72	18	6.65	.50
1565	4.76	20	3	9.2569	151	16	7.36	-.45
675	5.04	20	8	58.6871	342	52	7.88	-.15
3585	4.90	20	11	57.7033	201	60	7.71	-.57
1508	4.63	20	15	53.6555	214	44	7.52	-.29
891	4.28	20	19	.7156	88	18	7.48	-.42
831	3.96	20	21	52.0618	142	17	7.80	-.90
3739	5.40	20	26	41.2181	155	51	6.86	.06
1589	5.96	20	31	43.5163	136	5	6.94	-.04
16	4.24	20	35	13.6965	46	45	7.79	-.45
893	3.42	20	37	7.9926	15	50	8.42	-.85
684	5.42	20	39	41.9267	269	24	8.96	-1.34
700	5.84	20	41	46.1088	344	16	8.14	-.41

NUMBER OF STARS: 32 MATRIX OF WEIGHTCOEFFICIENTS

ESTIMATE OF VARIANCE: .49 .0768

UNKNOWNS: -.0003 .0527

DELTA PHI.....:	.322			
DELTA LAMBDA COS(PHI):	.288	-.0009	.0003	.0313
DELTA Z.....:	7.336			

RESULTS RELATED TO THE C.I.O.: ESTIMATE OF ST. DEV.:

LATITUDE = 51 9 53.6387 .194

LONGITUDE= -6 8 49.3727 .161 *SEC PHI

STATION....:NEDERWEERT APPROXIMATE VALUES

INSTRUMENT.:N12ASTROLABE LATITUDE.....: 51 17 13.0000

CHRONOMETER:TIMERECORDER3 LONGITUDE.....: -5 44 54.7000

OBSERVER...:C.DE VRIES ZENITHDISTANCE.....: 30 0 35.0000

DATE.....:SEPT.22,1975

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3778	5.70	18	54	38.4919	89	13	5.26	1.32
621	4.25	18	57	10.3481	269	59	5.57	.92
3657	5.10	18	59	7.2742	143	2	5.35	.67
3289	6.00	19	2	4.0404	334	45	7.29	-.18
3472	6.00	19	4	56.2506	208	25	5.79	.13
3397	5.80	19	7	43.9588	238	30	6.66	-.51
1594	5.74	19	9	38.5709	19	24	6.96	.21
3508	4.60	19	12	36.3431	201	34	6.07	-.18
643	3.36	19	16	25.7694	255	57	5.98	.35
875	5.65	19	18	28.5955	58	31	6.21	.70
3833	5.20	19	19	52.9316	76	19	6.51	.22
1434	5.14	19	21	6.3697	284	36	6.58	.08
3862	5.60	19	22	50.6778	30	53	6.82	.30
3365	5.10	19	26	39.2840	265	58	5.43	1.01
858	5.24	19	27	44.5561	91	55	7.21	-.66
619	4.98	19	29	56.4823	325	11	7.37	-.32
1432	5.85	19	35	56.9847	309	15	7.64	-.72
1593	5.50	19	43	39.8452	12	53	7.62	-.43
3857	5.80	19	48	11.6655	87	51	6.60	.00
3704	5.80	19	50	37.6996	150	39	7.11	-1.14
1462	5.82	19	51	48.2977	267	4	7.17	-.71
1590	5.51	19	53	24.2838	116	22	6.87	-.59
3377	5.80	19	55	12.8559	278	38	6.77	-.18
1600	6.00	19	56	56.1121	103	46	6.70	-.29
3518	5.50	20	0	28.8423	221	50	5.62	.39
1565	4.76	20	2	15.6124	151	60	5.84	.12
2005	5.50	20	5	30.1526	44	22	6.90	.14
3585	4.90	20	7	38.1028	201	2	5.78	.11
675	5.04	20	9	8.0929	342	39	7.41	-.86
3381	5.90	20	14	17.1152	294	5	6.81	-.05
891	4.28	20	16	39.0414	88	31	6.95	-.96
831	3.96	20	20	32.8836	142	50	6.13	-.10

NUMBER OF STARS: 32 MATRIX OF WEIGHTCOEFFICIENTS

ESTIMATE OF VARIANCE: .31 .0773

UNKNOWNS: -.0010 .0525

DELTA PHI.....:	.666			
DELTA LAMBDA COS(PHI):	-.042	-.0000	-.0000	.0313
DELTA Z.....:	6.531			

RESULTS RELATED TO THE C.I.O.: ESTIMATE OF ST. DEV.:

LATITUDE = 51 17 13.5837 .156

LONGITUDE= -5 44 54.6030 .129 *SEC PHI

STATION....:AARDENBURG

INSTRUMENT.:NI2ASTROLABE

CHRONOMETER:TIMERECORDER3

OBSERVER...:C.DE VRIES

DATE.....:SEPT.26,1975

APPROXIMATE VALUES

LATITUDE.....: 51 16 26.3000

LONGITUDE.....: -3 26 53.2000

ZENITHDISTANCE.....: 30 0 35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3778	5.70	18	48	5.6588	89	11	3.65	1.14
621	4.25	18	50	37.3709	270	0	7.73	.28
3472	6.00	18	58	33.2373	208	30	10.30	.15
3397	5.80	19	1	14.3274	238	32	10.78	-1.06
1594	5.74	19	3	21.5115	19	23	1.96	.43
3508	4.60	19	6	17.1117	201	40	10.98	-.51
643	3.36	19	9	54.0618	255	58	8.19	.67
875	5.65	19	11	58.9819	58	30	3.33	-.20
3833	5.20	19	13	21.3780	76	18	3.90	.11
1434	5.14	19	14	31.8341	284	37	6.39	.63
3862	5.60	19	16	26.9662	30	52	2.56	-.14
3365	5.10	19	20	6.5544	265	59	6.52	1.74
858	5.24	19	21	11.5484	91	53	5.12	-.15
619	4.98	19	23	15.4005	325	12	4.15	.12
1432	5.85	19	29	19.3868	309	16	5.68	-.39
1593	5.50	19	37	31.6232	12	51	2.29	.15
3857	5.80	19	41	38.9914	87	50	4.83	-.12
3704	5.80	19	43	55.3155	150	34	9.27	-.38
1462	5.82	19	45	15.5576	267	5	9.05	-.85
1590	5.51	19	46	48.6757	116	20	7.47	-.81
3377	5.80	19	48	38.9098	278	40	6.93	.50
1600	6.00	19	50	21.9739	103	44	5.43	.35
3518	5.50	19	54	1.9760	221	54	10.26	-.00
2005	5.50	19	59	2.9083	44	21	2.93	-.27
3585	4.90	20	1	19.3324	201	9	10.78	-.31
3381	5.90	20	7	41.6987	294	7	7.18	-.83
891	4.28	20	10	6.3529	88	29	4.94	-.19
831	3.96	20	13	52.7210	142	46	9.11	-.68
3739	5.40	20	21	21.8714	156	37	8.93	.29
1589	5.96	20	23	33.6595	136	30	6.81	1.23
670	4.90	20	28	24.9298	332	3	4.11	-.23
700	5.84	20	35	16.9181	344	3	3.96	-.68

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .43

UNKNOWNS:

DELTA PHI.....: -3.722

DELTA LAMBDA COS(PHI): 1.581

DELTA Z.....: 6.428

MATRIX OF WEIGHTCOEFFICIENTS

.0777

-.0009 .0523

-.0001 -.0000 .0313

RESULTS RELATED TO THE C.I.D.: ESTIMATE OF ST. DEV.:

LATITUDE = 51 16 22.4983 .183

LONGITUDE= -3 26 50.5176 .150 *SEC PHI

STATION....:KOOTWIJK,P.EAST

INSTRUMENT.:NI2,ASTROLABE

CHRONOMETER:TIMERECORDER3

OBSERVER...:C.DE VRIES

DATE.....:OCT.9,1975

APPROXIMATE VALUES

LATITUDE.....: 52 10 45.0000

LONGITUDE.....: -5 48 35.0000

ZENITHDISTANCE.....: 30 0 35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3739	5.40	19	37	22.2392	164	35	7.34	.95
664	4.87	19	39	53.4193	324	0	6.57	.58
760	5.45	19	43	44.0776	209	16	7.88	.75
3506	5.50	19	46	42.2658	254	20	7.40	.95
24	5.61	19	50	22.8880	23	31	6.04	.46
3429	5.50	19	52	15.3901	330	34	7.61	-.57
2027	5.20	19	55	27.0204	87	23	5.26	1.69
3493	5.90	19	57	49.7105	265	49	6.44	1.74
25	4.70	19	59	42.0226	78	32	6.06	.76
1030	5.26	20	6	27.0891	64	16	6.00	.65
3577	5.90	20	12	11.9835	241	3	7.51	.98
862	3.67	20	13	29.4656	151	30	9.05	-.96
711	4.00	20	15	56.5517	271	49	8.86	-.77
3657	5.10	20	18	42.5539	212	38	8.52	.11
3848	5.00	20	20	18.8640	146	32	8.14	-.13
3497	6.00	20	23	59.8263	282	47	8.69	-.78
2043	5.40	20	26	40.7264	99	25	7.29	-.14
55	5.54	20	28	1.8425	37	42	7.51	-1.02
1021	4.42	20	28	52.9466	95	20	7.00	.09
51	5.50	20	33	51.1029	27	35	6.55	-.06
3704	5.80	20	36	3.2851	203	38	9.25	-.63
63	3.44	20	40	5.7213	46	27	7.18	-.66
3536	5.10	20	42	58.8395	340	8	7.70	-.81
2075	5.70	20	45	29.8397	92	53	6.79	.25
3541	6.00	20	47	14.5018	278	48	8.31	-.34
18	4.47	20	49	20.4520	115	13	8.83	-1.40
1040	4.96	20	51	11.6901	85	1	6.30	.61
3513	5.70	20	53	1.5222	301	54	6.98	.57
786	5.24	20	54	17.4323	225	32	9.14	-.54
880	4.65	20	56	32.1404	157	29	9.53	-1.34
3584	5.60	20	58	38.6746	263	39	8.91	-.69
3514	5.80	21	0	19.9127	316	55	7.58	-.31

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .74

UNKNOWNS:

DELTA PHI.....: -.915

DELTA LAMBDA COS(PHI): .563

DELTA Z.....: 7.558

MATRIX OF WEIGHTCOEFFICIENTS

.0785

.0014 .0520

.0006 -.0004 .0313

RESULTS RELATED TO THE C.I.D.: ESTIMATE OF ST. DEV.:

LATITUDE = 52 10 44.0360 .240

LONGITUDE= -5 48 33.9352 .195 *SEC PHI

STATION....:KOOTWIJK,P.EAST

INSTRUMENT.:NI2ASTROLABE

CHRONOMETER:TIMERECORDER3

OBSERVER...:C.DE VRIES

DATE.....:OCT.12,1975

APPROXIMATE VALUES

LATITUDE.....: 52 10 45.0000

LONGITUDE.....: -5 48 35.0000

ZENITHDISTANCE.....: 30 0 35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3739	5.40	19	25	33.8842	164	35	8.47	.43
664	4.87	19	28	5.7083	324	0	7.62	-.00
760	5.45	19	31	56.7246	209	16	9.66	-.54
3506	5.50	19	34	54.7128	254	20	9.62	-.86
24	5.61	19	38	35.1450	23	31	6.53	.57
3429	5.50	19	40	27.5472	330	34	8.03	-.51
2027	5.20	19	43	39.0914	87	23	6.78	.88
3493	5.90	19	46	1.8895	265	49	6.36	2.24
25	4.70	19	47	54.0937	78	32	7.67	-.14
1030	5.26	19	54	39.3121	64	16	6.42	.92
3577	5.90	20	0	24.1905	241	3	7.46	1.47
862	3.67	20	1	41.5446	151	29	9.43	-.70
711	4.00	20	4	8.7067	271	49	8.62	-.12
3657	5.10	20	6	54.7429	212	38	8.20	.92
3848	5.00	20	8	30.9490	146	32	8.62	.04
3497	6.00	20	12	11.9013	282	47	7.85	.47
2043	5.40	20	14	52.8975	99	25	7.95	-.09
55	5.54	20	16	14.3035	37	42	6.95	.18
1021	4.42	20	17	5.1636	95	20	7.29	.50
51	5.50	20	22	3.4139	27	35	7.06	.05
3704	5.80	20	24	15.7361	203	38	9.88	-.75
63	3.44	20	28	18.0423	46	27	7.34	-.16
3536	5.10	20	31	10.7545	340	8	7.71	-.33
2075	5.70	20	33	42.0047	92	53	7.70	.04
3541	6.00	20	35	26.7048	278	48	8.60	-.21
18	4.47	20	37	32.5950	115	13	9.66	-1.53
1040	4.96	20	39	23.8491	85	1	7.41	.21
3513	5.70	20	41	13.9392	301	54	9.22	-1.24
786	5.24	20	42	29.5773	225	32	8.55	.51
880	4.65	20	44	44.2874	157	29	9.64	-.83
3584	5.60	20	46	50.8896	263	39	9.14	-.50
3514	5.80	20	48	32.1597	316	55	8.64	-.91

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .66

UNKNOWNS:

DELTA PHI.....: -.925

DELTA LAMBDA COS(PHI): .416

DELTA Z.....: 8.117

MATRIX OF WEIGHTCOEFFICIENTS

.0785

.0014 .0520

.0006 -.0004 .0313

RESULTS RELATED TO THE C.I.D.: ESTIMATE OF ST. DEV.:

LATITUDE = 52 10 44.0342 .227

LONGITUDE= -5 48 34.1789 .185 *SEC PHI

STATION....:BERKHEIDE

INSTRUMENT.:NI2ASTROLABE

CHRONOMETER:TIMERECORDER3

OBSERVER...:C.DE VRIES

DATE.....:OCT.23,1975

APPROXIMATE VALUES

LATITUDE.....: 52 10 38.6000

LONGITUDE.....: -4 23 21.6000

ZENITHDISTANCE.....: 30 0 35.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3739	5.40	18	47	55.5662	164	33	9.91	.30
664	4.87	18	50	28.0804	324	0	2.27	.46
760	5.45	18	54	22.3328	209	16	8.26	-.60
3506	5.50	18	57	18.9930	254	20	4.84	-.28
24	5.61	19	1	2.4933	23	30	5.30	.14
3429	5.50	19	2	49.3935	330	34	2.97	-.11
2027	5.20	19	6	3.7717	87	23	9.03	.62
3493	5.90	19	8	26.1659	265	49	2.85	1.06
25	4.70	19	10	19.0121	78	32	9.01	.17
1030	5.26	19	17	4.4867	64	15	7.79	.50
3577	5.90	19	22	48.9071	241	3	4.69	.72
862	3.67	19	24	4.7633	151	29	10.65	-.03
711	4.00	19	26	32.8135	271	49	4.23	-.61
3657	5.10	19	29	20.3537	212	39	7.11	.31
3848	5.00	19	30	54.4178	146	31	9.97	.75
3497	6.00	19	34	35.7941	282	47	3.14	.04
2043	5.40	19	37	17.4484	99	24	10.05	.15
55	5.54	19	38	40.4265	37	42	7.11	-.68
1021	4.42	19	39	29.7385	95	20	9.76	.27
51	5.50	19	44	30.5050	27	34	5.76	-.04
3704	5.80	19	46	41.8451	203	39	8.74	-.70
63	3.44	19	50	43.8595	46	27	7.46	-.41
3536	5.10	19	53	31.1817	340	8	3.11	.02
2075	5.70	19	56	6.6499	92	52	10.05	-.13
3541	6.00	19	57	50.6681	278	48	3.64	-.31
18	4.47	19	59	56.9542	115	13	11.21	-.54
1040	4.96	20	1	48.6324	85	1	9.68	-.15
3513	5.70	20	3	37.1405	301	54	2.42	.29
786	5.24	20	4	54.6647	225	32	6.00	.50
880	4.65	20	7	6.8268	157	28	11.39	-.94
3584	5.60	20	9	15.1290	263	39	4.36	-.33
3514	5.80	20	10	54.9152	316	55	3.11	-.45

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .25

UNKNOWNS:

DELTA PHI.....: -2.750

DELTA LAMBDA COS(PHI): -3.039

DELTA Z.....: 6.747

MATRIX OF WEIGHTCOEFFICIENTS

.0785

.0014 .0520

.0006 -.0004 .0313

RESULTS RELATED TO THE C.I.D.: ESTIMATE OF ST. DEV.:

LATITUDE = 52 10 35.8341 .141

LONGITUDE= -4 23 26.4227 .114 *SEC PHI

STATION....:KOOTWIJK/P.EAST

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:TR3

OBSERVER...:C.DE VRIES

DATA.....:MAY 6,1976

APPROXIMATE VALUES

LATITUDE.....:	52	10	45.0000
LONGITUDE.....:	-5	48	35.0000
ZENITHDISTANCE.....:	29	59	40.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
540	5.39	20	17	45.8424	86	50	2.41	.65
2755	6.00	20	19	15.8304	245	15	2.72	1.14
2649	5.60	20	21	54.2364	292	34	4.33	-.95
2700	5.20	20	23	16.6323	271	33	3.01	.60
339	4.09	20	25	4.9903	266	55	4.05	-.39
569	3.14	20	27	6.2843	29	38	1.48	1.23
571	3.47	20	28	47.3243	55	32	1.42	1.38
2897	4.90	20	32	29.0062	199	6	3.48	.53
3166	5.80	20	36	53.3981	96	20	2.72	.44
1323	4.78	20	40	30.1941	165	46	4.13	-.26
2662	6.00	20	43	10.1360	321	12	4.05	-.98
341	3.68	20	45	55.5780	279	26	4.30	-.77
3106	5.80	20	48	15.5579	131	25	5.18	-1.62
2889	5.60	20	49	28.4619	210	16	3.07	.94
2762	5.00	20	51	9.1259	261	34	4.20	-.49
1386	5.98	20	53	11.1538	103	8	1.60	1.64
555	3.63	20	55	21.9638	96	32	3.78	-.62
3247	5.50	20	59	16.4257	69	16	2.21	.69
3255	5.90	21	1	21.3257	62	0	3.55	-.70
2812	4.50	21	4	4.9977	249	54	3.00	.82
2751	5.60	21	6	11.5076	275	56	2.75	.82
3072	5.70	21	7	43.0236	154	55	3.76	.03
1412	5.78	21	9	36.2376	81	25	3.18	-.17
3229	5.30	21	11	2.4955	17	48	2.69	.02
338	4.99	21	15	45.6735	321	54	3.11	-.05
619	4.98	21	28	21.7173	35	54	3.32	-.59
568	4.47	21	30	28.5792	104	20	4.42	-1.17
390	4.41	21	31	28.1692	253	59	3.45	.33
1323	4.78	21	41	38.7850	194	14	4.91	-.91
355	3.75	21	44	35.2770	312	47	3.46	-.30
2772	5.40	21	47	57.3169	331	17	3.48	-.51
3204	5.30	22	5	54.6566	129	36	4.29	-.75

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .74

UNKNOWNS:

DELTA PHI.....:	-.595
DELTA LAMBDA COS(PHI):	.270
DELTA Z.....:	3.360

MATRIX OF WEIGHTCOEFFICIENTS

.0880		
-.0003	.0485	
-.0004	-.0001	.0313

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 52 10 44.4886

LONGITUDE= -5 48 33.9985

ESTIMATE OF ST. DEV.:

.255

.189 *SEC PHI

STATION....:KOOTWIJK/P.EAST

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:TR3

OBSERVER...:C.DE VRIES

DATA.....:MAY 7,1976/A

APPROXIMATE VALUES

LATITUDE.....:	52	10	45.0000
LONGITUDE.....:	-5	48	35.0000
ZENITHDISTANCE.....:	29	59	40.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
1323	4.78	20	36	36.7410	165	47	-.84	.01
2662	6.00	20	39	13.1130	321	12	-1.38	-.17
341	3.68	20	41	58.9710	279	26	-1.11	.20
3106	5.80	20	44	20.6050	131	26	-.82	-.52
2889	5.60	20	45	31.3150	210	15	-1.98	1.51
2677	4.80	20	49	54.8550	315	17	-2.00	.54
555	3.63	20	51	26.7630	96	32	-2.02	.15
3182	5.60	20	53	37.0950	99	22	-2.00	.17
2738	5.70	20	54	51.6390	278	41	-1.34	.44
340	5.68	21	0	28.5610	294	50	-.65	-.49
3276	5.40	21	1	54.4630	37	48	-2.39	.11
3072	5.70	21	3	48.4190	154	55	-.72	-.26
1412	5.78	21	5	41.0010	81	25	-2.17	.12
338	4.99	21	11	48.7910	321	54	-1.37	-.19
407	5.37	21	13	16.3150	235	54	-1.50	1.00
374	5.19	21	15	27.6130	265	11	.07	-.80
3260	5.90	21	17	45.3970	74	37	-2.06	-.06
573	5.15	21	18	43.3130	95	28	-2.01	.13
1255	5.20	21	23	29.5470	276	54	-.77	-.11
590	4.34	21	24	56.1410	16	46	-2.54	.34
390	4.41	21	27	31.7370	253	58	-.29	-.33
606	5.51	21	33	.4390	21	10	-2.15	-.08
3326	5.00	21	35	48.7890	44	17	-2.44	.17
1323	4.78	21	37	40.3630	194	13	-.07	-.48
412	3.92	21	40	51.2850	246	58	-.47	-.09
383	3.52	21	41	41.6110	269	41	-.99	.20
3218	5.90	21	42	51.5090	112	49	-1.79	.16
2982	5.10	21	43	36.8950	205	46	.26	-.75
627	4.88	21	48	41.8730	60	5	-2.16	-.06
1383	4.93	21	51	58.8310	140	18	-.99	-.21
3281	6.00	21	53	51.3130	91	45	-1.83	-.10
372	5.96	21	57	17.6510	332	35	-1.17	-.56

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .23

UNKNOWNS:

DELTA PHI.....:	-.700
DELTA LAMBDA COS(PHI):	.580
DELTA Z.....:	-1.368

MATRIX OF WEIGHTCOEFFICIENTS

.0830		
-.0016	.0502	
-.0005	-.0007	.0313

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 52 10 44.3819

LONGITUDE= -5 48 33.4907

ESTIMATE OF ST. DEV.:

.139

.108 *SEC PHI

STATION....:KOOTWIJK,P.EAST

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:TR3

OBSERVER...:C.DE VRIES

DATA.....:MAY 7,1976/B

APPROXIMATE VALUES

LATITUDE.....:	52	10	45.0000
LONGITUDE.....:	-5	48	35.0000
ZENITHDISTANCE.....:	29	59	40.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
557	4.67	22	9	17.5030	138	27	.51	-.16
1318	4.78	22	12	8.2230	216	38	.69	-.12
1282	5.14	22	14	50.3950	263	40	.38	-.39
621	4.25	22	15	56.2570	91	37	-.35	-.00
2870	4.80	22	19	32.3730	270	22	-1.74	1.63
3185	4.90	22	26	9.2910	147	57	.59	-.13
659	5.21	22	27	40.6650	37	15	-2.29	1.24
2828	5.80	22	29	27.8730	324	12	-.50	-.40
3381	5.90	22	31	48.3890	67	8	-1.69	.97
387	4.92	22	34	11.8530	317	50	-1.04	.21
398	5.16	22	37	3.0890	300	42	-.44	-.15
2839	6.00	22	40	16.2550	315	13	-.49	-.30
3151	6.00	22	47	18.4810	171	57	.47	.16
3377	5.80	22	49	27.4190	82	48	-2.01	1.52
3072	5.70	22	50	49.7230	205	5	.30	.34
432	5.88	22	56	1.3230	270	20	.95	-1.07
3365	5.10	22	57	34.2210	95	44	.59	-.88
2963	5.60	22	58	10.0150	252	11	-.34	.50
3330	5.90	23	2	.7270	113	48	-.40	.40
3287	5.70	23	4	25.6690	129	46	1.18	-.94
685	5.03	23	8	38.7910	44	47	-.67	-.31
3373	6.00	23	14	17.5910	100	43	.69	-.90
1322	5.43	23	15	58.5810	244	6	-.23	.50
675	5.04	23	20	26.6930	18	52	-.82	-.32
2929	6.00	23	25	53.5990	287	8	.56	-.95
3039	5.10	23	28	10.3970	236	15	.15	.22
3433	5.90	23	31	19.8510	84	32	-.48	.01
458	5.92	23	32	20.8390	264	15	.05	-.08
3484	5.60	23	33	18.5170	48	33	-.46	-.49
3475	4.90	23	35	21.4870	59	40	-.56	-.26
454	5.12	23	39	.3530	342	57	-1.17	.10
522	4.82	23	51	40.5230	212	37	.54	.05

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .48

UNKNOWNS:

DELTA PHI.....:	-.908
DELTA LAMBDA COS(PHI):	.132
DELTA Z.....:	-.244

MATRIX OF WEIGHTCOEFFICIENTS

.0869		
.0031	.0490	
-.0007	-.0003	.0313

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 52 10 44.1734

LONGITUDE= -5 48 34.2220

ESTIMATE OF ST. DEV.:

.204

.153 *SEC PHI

STATION....:ULTH.MEDEN

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:TR3

OBSERVER...:C.DE VRIES

DATA.....:MAY 14,1976

APPROXIMATE VALUES

LATITUDE.....:	53	24	34.0000
LONGITUDE.....:	-6	42	30.0000
ZENITHDISTANCE.....:	29	59	40.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
412	3.92	21	6	3.0570	243	54	4.83	1.56
3320	5.40	21	7	26.5330	63	13	3.98	1.82
383	3.52	21	10	23.8830	267	31	3.33	2.16
2793	5.30	21	12	35.2770	283	35	3.13	1.80
3218	5.90	21	15	23.8390	115	52	7.89	-.24
608	3.91	21	16	35.6250	84	31	6.78	-.17
2976	5.80	21	18	27.6850	210	29	6.16	1.38
3305	5.50	21	22	9.9630	16	7	3.45	.85
3259	5.50	21	26	16.9930	105	27	7.37	-.04
1318	4.78	21	28	47.5970	210	20	7.67	-.13
363	5.74	21	30	13.5670	323	46	3.56	.44
1383	4.93	21	31	39.3150	145	59	9.51	-1.29
2892	6.00	21	33	18.4830	250	7	6.15	-.00
2802	5.70	21	34	43.1530	298	36	3.91	.57
3303	5.00	21	41	57.1730	95	12	6.28	.71
621	4.25	21	45	11.9850	93	50	6.77	.17
659	5.21	21	46	8.4810	38	38	4.55	.36
1276	5.28	21	48	52.1350	275	24	6.71	-1.50
572	3.72	21	51	56.4970	134	9	8.57	-.51
3381	5.90	21	57	23.6790	68	46	5.83	.17
2878	5.70	22	3	12.1410	273	49	6.45	-1.19
1262	5.74	22	5	26.0210	315	31	5.30	-1.18
395	5.04	22	7	48.5130	336	57	4.43	-.52
3185	4.90	22	10	3.5130	155	25	8.96	-.67
3429	5.50	22	12	45.7230	30	54	4.90	-.23
1332	5.07	22	16	18.5750	219	13	8.30	-1.03
3377	5.80	22	17	26.8610	84	46	5.98	.64
2908	5.10	22	18	18.9010	268	56	6.09	-.66
578	2.31	22	21	.1930	145	7	9.25	-1.04
3085	5.90	22	24	59.2810	201	44	7.05	.72
675	5.04	22	26	44.0090	20	39	5.54	-1.14
403	5.23	22	31	17.4630	323	28	5.82	-1.81

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: 1.15

UNKNOWNS:

DELTA PHI.....:	-2.083
DELTA LAMBDA COS(PHI):	-.706
DELTA Z.....:	6.102

MATRIX OF WEIGHTCOEFFICIENTS

.0791		
-.0012	.0517	
-.0006	-.0004	.0313

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 53 24 31.9873

LONGITUDE= -6 42 30.5846

ESTIMATE OF ST. DEV.:

.302

.244 *SEC PHI

STATION....:EIERLAND

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:TIMEREC.3

OBSERVER...:C.DE VRIES

DATA.....:MAY17,1967

APPROXIMATE VALUES

LATITUDE.....: 53 10 57.0000

LONGITUDE.....: -4 51 20.0000

ZENITHDISTANCE.....: 29 59 40.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
606	5.51	20	41	1.4170	22	33	2.46	.44
3072	5.70	20	45	30.6730	163	12	3.07	-.05
1255	5.20	20	48	41.3750	275	18	2.18	.21
358	3.26	20	50	12.6390	287	58	2.09	.30
2982	5.10	20	51	36.8890	197	48	2.72	.05
568	4.47	20	52	51.1430	106	29	2.89	.36
3271	4.60	20	56	19.8570	84	46	3.00	.23
1416	4.61	20	59	12.7570	93	20	3.07	.18
563	3.54	21	5	17.3150	118	27	3.81	-.58
383	3.52	21	6	2.8630	267	56	1.70	.70
2852	5.80	21	6	59.7030	255	5	2.40	.03
522	4.82	21	9	24.8870	153	11	3.19	-.11
355	3.75	21	11	7.2770	311	38	2.56	-.11
357	4.57	21	15	26.8810	325	12	2.29	.22
2976	5.80	21	16	33.1010	211	44	2.84	-.17
2772	5.40	21	20	15.1470	330	5	3.32	-.78
1434	5.14	21	23	.9150	78	14	3.25	-.04
3370	5.50	21	26	50.2730	48	55	2.99	.09
3314	5.90	21	27	47.6870	83	29	2.87	.36
2802	5.70	21	29	28.6390	298	53	2.52	-.11
3204	5.30	21	32	16.1930	133	4	3.71	-.53
372	5.96	21	34	11.3130	331	22	2.32	.22
3303	5.00	21	37	25.3850	94	47	3.37	-.13
1282	5.14	21	38	29.0890	261	44	2.19	.22
557	4.67	21	41	48.3930	142	47	3.38	-.24
1276	5.28	21	44	18.3550	275	45	2.70	-.31
2997	5.10	21	45	53.9510	218	56	1.74	.88
664	4.87	21	48	50.9450	37	9	3.15	-.14
1300	5.46	21	50	1.3130	244	27	3.64	-1.17
3381	5.90	21	53	35.5750	68	28	2.18	1.01
2999	4.60	21	55	29.5770	223	25	2.41	.17
670	4.90	21	58	1.0090	30	20	4.16	-1.20

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .26

MATRIX OF WEIGHTCOEFFICIENTS

UNKNOWNS:			
DELTA PHI.....:	-.082	.0832	
DELTA LAMBDA COS(PHI):	-.423	-.0007	.0500
DELTA Z.....:	2.818	.0005	-.0001 .0313

RESULTS RELATED TO THE C.I.O.:	ESTIMATE OF ST. DEV.:
LATITUDE = 53 10 56.9650	.146
LONGITUDE= -4 51 20.1034	.113 *SEC PHI

STATION....:ZALTBOMMEL

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:TIMEREC.3

OBSERVER...:C.DE VRIES

DATA.....:MAY22,1976

APPROXIMATE VALUES

LATITUDE.....: 51 48 42.0000

LONGITUDE.....: -5 15 12.0000

ZENITHDISTANCE.....: 29 59 40.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
522	4.82	20	33	1.4574	145	31	.31	.55
3271	4.60	20	36	4.9331	82	35	1.13	-.23
1416	4.61	20	37	38.1849	90	54	1.01	-.08
563	3.54	20	39	32.0268	114	54	1.28	-.34
3326	5.00	20	41	30.4886	43	51	.18	.54
2793	5.30	20	44	10.1443	285	53	.80	-.63
383	3.52	20	44	56.0622	270	20	-.48	.67
612	5.04	20	48	8.4159	20	53	.34	.23
1323	4.78	20	49	9.0378	198	8	1.30	-.74
2844	4.80	20	52	4.5895	264	20	.70	-.49
627	4.88	20	53	18.9914	59	37	.16	.65
372	5.96	20	55	53.5711	333	4	.24	.03
368	3.89	20	57	29.9070	305	8	-.07	.26
1259	5.74	21	2	26.8285	294	33	-.01	.18
1434	5.14	21	3	48.6923	76	12	.69	.19
2976	5.80	21	8	5.2219	218	25	-.90	1.33
557	4.67	21	9	54.2817	136	59	.54	.35
2892	6.00	21	11	4.2656	253	43	.39	-.15
3370	5.50	21	13	38.9313	47	19	1.36	-.63
3293	5.50	21	15	2.7352	97	37	.63	.30
395	5.04	21	16	5.5851	339	10	.21	.10
1423	4.94	21	17	36.6389	105	59	.41	.53
1318	4.78	21	18	29.5189	218	18	.07	.36
2938	5.70	21	20	5.4847	240	26	.32	-.02
2870	4.80	21	22	45.3724	270	60	.38	-.19
3172	5.80	21	26	46.6420	152	19	1.39	-.55
2828	5.80	21	29	22.6918	324	38	1.88	-1.64
2997	5.10	21	34	43.2952	224	31	-.09	.47
3151	6.00	21	38	10.7749	166	9	2.17	-1.41
664	4.87	21	39	48.6007	35	34	.38	.29
626	3.61	21	41	8.8706	99	39	1.51	-.57
420	3.15	21	42	46.4984	274	3	-.46	.64

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .41

MATRIX OF WEIGHTCOEFFICIENTS

UNKNOWNS:			
DELTA PHI.....:	-.123	.0836	
DELTA LAMBDA COS(PHI):	-.365	.0008	.0499
DELTA Z.....:	.554	.0013	-.0002 .0313

RESULTS RELATED TO THE C.I.O.:	ESTIMATE OF ST. DEV.:
LATITUDE = 51 48 41.9251	.185
LONGITUDE= -5 15 12.0110	.143 *SEC PHI

STATION....:BEEK EN DONK

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:TIMEREC.3

OBSERVER...:C.DE VRIES

DATA.....:AUG.7,1976

APPROXIMATE VALUES

LATITUDE.....: 51 31 35.0000

LONGITUDE.....: -5 37 35.0000

ZENITHDISTANCE.....: 29 59 40.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3733	4.80	20	57	7.6903	71	14	4.48	.54
795	5.90	21	1	10.2724	15	10	5.50	-.11
554	4.86	21	2	22.3744	319	17	5.89	-.32
3427	5.70	21	5	2.6465	198	5	4.58	.39
1423	4.94	21	7	9.3445	254	39	5.25	.10
3210	5.50	21	8	43.8085	290	49	4.92	.60
3587	5.70	21	9	41.7145	145	29	4.38	.39
3668	5.70	21	12	11.8026	114	20	4.73	.07
1412	5.78	21	13	37.5366	279	37	5.17	.31
1416	4.61	21	14	13.1326	269	37	5.64	-.21
569	3.14	21	15	48.5966	331	13	5.44	.12
3730	5.30	21	17	37.5987	88	52	4.52	.39
811	5.09	21	24	31.8228	95	44	4.78	.10
1460	4.48	21	25	33.8188	220	14	4.79	.32
1441	5.35	21	27	1.7088	240	47	5.84	-.59
1559	4.42	21	28	54.9248	110	10	6.34	-1.52
847	3.70	21	30	31.2129	56	16	4.83	.29
3247	5.50	21	32	20.9849	291	39	5.39	.13
853	5.21	21	35	29.6550	45	52	5.43	-.24
760	5.45	21	37	56.2590	147	15	5.30	-.53
3240	5.90	21	39	9.4570	325	59	5.95	-.39
3585	4.90	21	41	7.5271	161	8	5.73	-.93
606	5.51	21	43	31.4091	339	51	5.73	-.19
786	5.24	21	45	43.5171	132	11	4.55	.22
3303	5.00	21	48	6.1032	268	13	5.42	.00
851	5.22	21	49	42.2432	25	26	6.08	-.75
3778	5.70	21	53	8.0953	89	38	4.60	.31
621	4.25	21	55	29.0673	269	32	5.39	.04
3457	5.50	21	56	59.7093	211	52	4.58	.47
3472	6.00	22	0	13.3614	206	51	5.18	-.16
1594	5.74	22	4	2.8634	19	47	5.15	.21
3800	4.50	22	8	15.2115	89	15	3.99	.92

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .26

MATRIX OF WEIGHTCOEFFICIENTS

UNKNOWNS:			
DELTA PHI.....:	.301	.0766	
DELTA LAMBDA COS(PHI):	.262	-.0018	.0529
DELTA Z.....:	5.170	-.0008	-.0002 .0313

RESULTS RELATED TO THE C.I.O.:	ESTIMATE OF ST. DEV.:
LATITUDE = 51 31 35.0589	.141
LONGITUDE= -5 37 34.1885	.117 *SEC PHI

STATION....:UBACHSBERG

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:TIMEREC.3

OBSERVER...:C.DE VRIES

DATA.....:AUG.8,1976

APPROXIMATE VALUES

LATITUDE.....: 50 50 50.0000

LONGITUDE.....: -5 56 60.0000

ZENITHDISTANCE.....: 29 59 40.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3587	5.70	20	58	32.6313	142	20	4.71	.56
830	5.39	21	1	11.9733	46	37	6.52	.07
569	3.14	21	3	34.4193	332	7	7.28	1.05
3668	5.70	21	5	5.6894	112	41	4.92	.36
565	5.23	21	7	42.5134	322	56	8.29	.13
1416	4.61	21	8	58.9034	270	47	7.10	1.05
3427	5.70	21	11	10.2215	203	37	5.72	.74
795	5.90	21	12	43.0175	13	43	7.99	-.47
3400	5.70	21	15	36.1895	214	42	7.15	-.38
571	3.47	21	17	41.7176	306	7	8.05	.43
811	5.09	21	18	55.4196	94	28	4.67	.82
837	4.99	21	21	20.4636	27	14	7.49	-.35
3585	4.90	21	24	57.0817	155	48	6.29	-.88
3293	5.50	21	26	38.1437	264	12	8.64	-.60
3611	5.10	21	27	44.1857	149	28	5.90	-.56
3687	5.70	21	29	24.9378	119	25	4.91	.32
3649	5.50	21	31	.8938	136	0	6.34	-1.10
3769	5.30	21	32	50.0518	83	45	5.28	.40
612	5.04	21	34	8.1979	340	41	8.63	-.47
3260	5.90	21	36	10.2059	287	19	9.51	-1.13
3415	5.30	21	39	5.0279	220	50	6.93	.02
587	5.13	21	41	50.1400	313	23	9.09	-.61
3303	5.00	21	42	58.1460	269	25	7.14	.99
626	3.61	21	46	36.0341	262	15	8.58	-.58
3778	5.70	21	47	58.9361	88	28	6.13	-.54
3799	4.60	21	48	55.9761	77	47	5.75	.05
621	4.25	21	50	15.2661	270	43	7.73	.43
851	5.22	21	53	46.0282	24	28	7.63	-.41
1456	5.36	21	55	44.3162	244	51	8.28	-.68
1583	4.64	21	58	15.7762	96	12	5.28	.18
3839	5.50	22	0	47.3343	58	24	5.88	.39
3472	6.00	22	2	50.8982	210	50	5.95	.71

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .43

MATRIX OF WEIGHTCOEFFICIENTS

UNKNOWNS:			
DELTA PHI.....:	.995	.0786	
DELTA LAMBDA COS(PHI):	1.292	-.0023	.0520
DELTA Z.....:	6.851	-.0004	-.0004 .0313

RESULTS RELATED TO THE C.I.O.:	ESTIMATE OF ST. DEV.:
LATITUDE = 50 50 50.7506	.184
LONGITUDE= -5 56 57.5722	.149 *SEC PHI

STATION....:GOEDEREEDE

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:TIMEREC.3

OBSERVER...:C.DE VRIES

DATA.....:AUG.16,1976

APPROXIMATE VALUES

LATITUDE.....:	51	49	10.0000
LONGITUDE.....:	-3	58	35.0000
ZENITHDISTANCE.....:	29	59	40.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3508	4.60	20	20	39.9021	163	18	11.45	-.25
580	5.41	20	22	54.0681	264	2	10.98	-.56
795	5.90	20	25	32.3582	15	43	7.85	.11
3733	4.80	20	27	41.0622	71	38	7.68	1.02
3427	5.70	20	29	57.1342	195	5	10.53	.96
3259	5.50	20	31	5.4843	257	54	10.44	.15
590	4.34	20	32	59.2863	343	53	8.28	-.03
1568	4.22	20	35	2.7983	83	59	8.79	.25
3188	5.90	20	36	37.0784	307	27	9.03	.08
1534	4.09	20	37	28.8204	124	46	10.49	-.23
3210	5.50	20	40	38.3704	290	25	9.88	-.25
3400	5.70	20	42	9.9525	209	37	10.62	.83
3339	5.90	20	43	10.2325	233	43	10.66	.48
3668	5.70	20	44	14.7665	115	3	10.13	-.16
1416	4.61	20	45	23.9465	269	6	10.77	-.50
3730	5.30	20	48	46.9986	89	22	9.44	-.25
565	5.23	20	52	9.9806	321	45	8.67	.05
811	5.09	20	55	54.8687	96	16	9.50	-.10
3794	5.70	20	57	34.6587	31	46	7.91	.11
847	3.70	21	0	27.5908	56	37	8.30	.07
3722	5.00	21	1	14.5988	101	2	9.27	.27
3247	5.50	21	4	17.3088	291	15	9.35	.25
3271	4.60	21	7	18.5469	277	25	9.90	.12
760	5.45	21	12	7.6810	148	47	10.89	.01
3611	5.10	21	16	1.2250	155	26	11.97	-.92
606	5.51	21	19	47.5311	339	23	8.53	-.20
3778	5.70	21	24	19.0652	90	8	9.60	-.39
621	4.25	21	26	39.7512	269	2	10.45	-.18
1594	5.74	21	30	3.8933	20	15	8.22	-.26
3508	4.60	21	32	7.1793	196	42	11.98	-.48
3839	5.50	21	33	28.5673	59	38	8.46	-.03
3397	5.80	21	35	4.8693	236	57	11.06	.02

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .19

UNKNOWNS:

DELTA PHI.....:	-1.689
DELTA LAMBDA COS(PHI):	.520
DELTA Z.....:	9.728

MATRIX OF WEIGHTCOEFFICIENTS

.0794		
-.0001	.0515	
-.0002	.0002	.0313

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 51 49 8.0487

LONGITUDE= -3 58 33.7851

ESTIMATE OF ST. DEV.:

.121

.098 *SEC PHI

STATION....:GOEDEREEDE

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:TIMEREC.NO3

OBSERVER...:C.DE VRIES

DATA.....:AUG.17,1976

APPROXIMATE VALUES

LATITUDE.....:	51	49	10.0000
LONGITUDE.....:	-3	58	35.0000
ZENITHDISTANCE.....:	29	59	40.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3508	4.60	20	16	44.2952	163	18	10.22	.10
580	5.41	20	18	57.8773	264	2	8.37	.78
795	5.90	20	21	36.6653	15	43	7.31	-.32
3733	4.80	20	23	45.2273	71	38	6.79	1.15
3427	5.70	20	26	.7834	195	5	9.18	1.28
590	4.34	20	29	2.6654	343	53	6.59	.54
1568	4.22	20	31	6.9635	83	59	7.85	.45
3188	5.90	20	32	40.8675	307	27	6.97	.89
1534	4.09	20	33	33.0375	124	46	9.19	.33
3210	5.50	20	36	42.3195	290	25	8.79	-.44
3400	5.70	20	38	14.2196	209	37	11.24	-.88
3339	5.90	20	39	14.2536	233	43	10.03	-.08
3668	5.70	20	40	18.9296	115	3	9.18	.06
1416	4.61	20	41	27.8776	269	6	9.32	-.33
3730	5.30	20	44	51.1237	89	22	8.86	-.39
565	5.23	20	48	14.0337	321	45	8.61	-1.10
811	5.09	20	51	58.9118	96	16	9.66	-.98
3794	5.70	20	53	38.9118	31	46	7.13	-.01
847	3.70	20	56	31.8079	56	37	7.22	.35
3722	5.00	20	57	18.6919	101	2	8.96	-.14
3247	5.50	21	0	21.2619	291	15	8.25	.07
3271	4.60	21	3	22.4800	277	25	8.48	.26
760	5.45	21	8	11.7801	148	47	10.46	-.37
3611	5.10	21	12	5.6081	155	26	10.45	-.25
606	5.51	21	15	51.1762	339	24	7.24	-.06
626	3.61	21	18	8.3082	260	22	9.44	-.18
3778	5.70	21	20	23.2163	90	8	8.82	-.33
621	4.25	21	22	43.6923	269	2	9.08	-.08
1594	5.74	21	26	8.2744	20	15	7.40	-.39
3508	4.60	21	28	10.8144	196	42	10.45	.01
3839	5.50	21	29	32.7784	59	38	7.44	.19
3397	5.80	21	31	8.8405	236	57	9.98	-.10

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .32

UNKNOWNS:

DELTA PHI.....:	-1.738
DELTA LAMBDA COS(PHI):	.243
DELTA Z.....:	8.724

MATRIX OF WEIGHTCOEFFICIENTS

.0795		
-.0003	.0515	
-.0003	.0002	.0313

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 51 49 7.9998

LONGITUDE= -3 58 34.2362

ESTIMATE OF ST. DEV.:

.159

.128 *SEC PHI

STATION....:JITHUIZERMEDEN

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:TIMEREC.NO3

OBSERVER...:C.DE VRIES

DATA.....:AUG.23,1976

APPROXIMATE VALUES

LATITUDE.....:	53	24	34.0000
LONGITUDE.....:	-6	42	30.0000
ZENITHDISTANCE.....:	29	59	40.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
634	3.92	20	14	6.3364	232	40	4.70	.49
853	5.21	20	16	45.5065	48	2	3.82	-.16
851	5.22	20	17	56.3245	27	49	3.15	-.08
3457	5.50	20	23	59.2807	199	11	6.23	-.10
3722	5.00	20	25	10.5168	104	19	5.39	.18
1559	4.42	20	26	46.4208	114	42	6.46	-.59
3769	5.30	20	29	46.3689	87	58	4.78	.27
601	4.26	20	32	2.3990	272	16	4.31	-.50
667	3.48	20	34	2.3951	219	33	5.39	.22
848	3.85	20	37	38.5812	75	54	5.05	-.43
3260	5.90	20	38	45.4892	283	37	3.04	.41
3303	5.00	20	40	7.1473	264	48	4.26	-.20
626	3.61	20	41	33.6073	257	8	4.15	.18
1593	5.50	20	43	16.6094	16	50	3.30	-.48
1456	5.36	20	44	39.7274	237	60	4.40	.61
3778	5.70	20	46	11.0375	92	57	5.59	-.37
608	3.91	20	47	50.7575	275	30	3.24	.46
3839	5.50	20	49	11.2776	61	38	3.36	.75
595	4.96	20	50	46.7176	294	10	3.70	-.56
3862	5.60	20	52	12.1637	33	24	2.35	.87
760	5.45	20	55	11.5438	159	22	6.19	.34
3305	5.50	20	58	5.2119	343	54	2.23	.23
3800	4.50	21	1	13.0720	92	33	4.80	.40
598	4.11	21	3	17.3340	302	8	2.55	.40
606	5.51	21	7	31.9182	337	10	2.72	-.25
3365	5.10	21	16	16.4205	261	57	4.31	-.14
3276	5.40	21	18	21.8785	320	49	3.57	-.96
1488	4.92	21	22	14.8807	214	5	5.79	-.03
3776	5.40	21	23	9.7867	115	39	6.17	-.28
3852	5.60	21	26	18.1448	84	46	4.51	.42
3715	5.40	21	28	31.5009	141	32	7.09	-.69
1508	4.63	21	36	46.7372	200	48	6.51	-.42

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .22

UNKNOWNS:

DELTA PHI.....:	-1.939
DELTA LAMBDA COS(PHI):	-.615
DELTA Z.....:	4.499

MATRIX OF WEIGHTCOEFFICIENTS

.0859		
.0050	.0497	
-.0006	-.0014	.0313

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 53 24 31.8123

LONGITUDE= -6 42 30.6390

ESTIMATE OF ST. DEV.:

.138

.105 *SEC PHI

STATION....:LEMELERBERG

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:TIMEREC.NO3

OBSERVER...:C.DE VRIES

DATA.....:AUG.24,1976

APPROXIMATE VALUES

LATITUDE.....:	52	28	26.4000
LONGITUDE.....:	-6	24	29.1000
ZENITHDISTANCE.....:	29	59	40.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3400	5.70	19	52	50.4102	205	33	4.34	-.39
780	2.64	19	54	34.6902	115	6	1.90	1.02
837	4.99	19	57	12.0303	29	21	5.76	.08
1534	4.09	19	59	24.2643	126	46	3.14	-.39
3763	5.70	20	0	36.6283	68	57	3.67	.62
1416	4.61	20	4	7.3084	267	57	5.95	.36
590	4.34	20	5	59.9884	342	45	7.36	-.26
3730	5.30	20	7	37.9924	90	29	3.15	.38
3587	5.70	20	9	33.5345	150	32	2.95	-.26
1441	5.35	20	13	26.6465	238	10	5.26	-.04
811	5.09	20	15	17.1146	97	31	2.69	.64
847	3.70	20	16	33.1446	57	26	5.13	-.39
3714	5.20	20	19	56.3686	106	9	3.11	-.01
3215	5.80	20	23	15.6147	312	58	7.27	-.04
3247	5.50	20	24	44.3527	290	21	6.69	.22
3271	4.60	20	26	39.5588	276	23	6.91	-.35
601	4.26	20	28	58.6788	273	50	6.69	-.20
1468	5.48	20	31	38.0688	215	39	4.53	-.21
3260	5.90	20	34	27.0569	284	59	7.14	-.34
3457	5.50	20	36	.1109	206	19	3.79	.19
1594	5.74	20	37	41.7089	21	13	5.44	.69
626	3.61	20	40	7.9790	259	3	6.08	-.07
3799	4.60	20	42	10.1830	80	15	4.13	-.26
3778	5.70	20	43	13.5550	91	17	3.73	-.22
3611	5.10	20	45	25.4271	160	33	4.01	-1.22
606	5.51	20	49	38.9371	338	26	7.91	-.75
612	5.04	20	57	11.6273	338	9	7.51	-.35
3657	5.10	20	59	7.4673	149	1	3.32	-.64
1593	5.50	21	2	2.0214	15	17	6.46	-.13
3389	5.90	21	3	54.7634	247	22	4.39	1.18
882	5.20	21	6	41.2974	49	36	5.05	.00
681	5.83	21	7	31.7034	227	33	3.67	1.12

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .31

UNKNOWNS:

DELTA PHI.....:	1.803
DELTA LAMBDA COS(PHI):	1.415
DELTA Z.....:	4.963

MATRIX OF WEIGHTCOEFFICIENTS

.0773		
.0022	.0525	
-.0005	.0000	.0313

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 52 28 27.9539

LONGITUDE= -6 24 26.4044

ESTIMATE OF ST. DEV.:

.155

.127 *SEC PHI

STATION....:UBACHSBERG

INSTRUMENT.:NI2ASTROLABE

CHRONOMETER:TIMEREC.3

OBSERVER...:C.DE VRIES

DATA.....:SEPT.6,1976

APPROXIMATE VALUES

LATITUDE.....:	50	50	50.0000
LONGITUDE.....:	-5	56	60.0000
ZENITHDISTANCE.....:	29	59	40.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
1416	4.61	19	14	56.9547	270	47	40.02	.63
3427	5.70	19	17	9.3288	203	37	38.17	.85
3540	4.60	19	19	15.7429	166	49	37.42	.74
3400	5.70	19	21	34.7510	214	42	38.65	.68
811	5.09	19	24	53.4951	94	28	37.68	.32
837	4.99	19	27	20.1711	27	14	38.47	1.12
3797	5.70	19	29	21.4352	41	56	37.42	1.77
606	5.51	19	32	5.5613	340	59	40.22	.43
3611	5.10	19	33	41.5094	149	28	38.34	-.44
3687	5.70	19	35	22.8854	119	25	37.00	.78
3649	5.50	19	36	58.7155	136	0	37.73	.06
612	5.04	19	40	4.1956	340	41	40.61	.05
3415	5.30	19	45	3.7717	220	50	39.69	-.20
587	5.13	19	47	47.6098	313	23	41.80	-.88
3303	5.00	19	48	56.2299	269	25	39.82	.81
595	4.96	19	50	41.9379	297	30	41.57	-.65
863	3.68	19	52	26.6960	39	48	39.93	-.68
3778	5.70	19	53	57.2920	88	28	38.12	-.02
3657	5.10	19	54	50.2281	141	9	38.94	-1.11
621	4.25	19	56	13.3461	270	43	40.37	.28
851	5.22	19	59	45.9122	24	28	40.16	-.49
1456	5.36	20	1	42.6003	244	51	40.07	.05
3276	5.40	20	4	48.3584	323	49	41.27	-.40
3839	5.50	20	6	45.9665	58	24	39.46	-.71
3800	4.50	20	9	6.1585	88	5	38.14	-.04
3314	5.90	20	10	51.2666	280	11	40.84	-.06
643	3.36	20	16	10.4508	256	50	40.97	-.57
3508	4.60	20	18	5.6688	204	41	39.79	-.75
3833	5.20	20	19	50.6129	75	40	38.57	-.22
3805	5.80	20	22	29.5090	96	3	38.55	-.57
3776	5.40	20	24	13.5790	109	28	38.14	-.30
3365	5.10	20	25	54.1911	266	44	41.08	-.50

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .48

UNKNOWNS:

DELTA PHI.....:	.929
DELTA LAMBDA COS(PHI):	1.281
DELTA Z.....:	39.357

MATRIX OF WEIGHTCOEFFICIENTS

.0795		
.0005	.0515	
.0007	.0002	.0313

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 50 50 50.6783

LONGITUDE= -5 56 57.6693

ESTIMATE OF ST. DEV.:

.194

.156 *SEC PHI

STATION....:BEEK EN DONK

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:TIMEREC.NO.3

OBSERVER...:C.DE VRIES

DATA.....:SEPT.19,1976

APPROXIMATE VALUES

LATITUDE.....:	51	31	35.0000
LONGITUDE.....:	-5	37	35.0000
ZENITHDISTANCE.....:	29	59	40.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
606	5.51	18	54	24.9245	339	51	9.26	-1.22
786	5.24	18	56	37.6806	132	10	7.36	.48
3303	5.00	18	59	1.4287	268	14	8.60	-.32
851	5.22	19	0	39.1267	25	26	7.67	.16
3778	5.70	19	4	3.0388	89	38	8.02	-.30
621	4.25	19	6	24.3969	269	32	8.62	-.33
3457	5.50	19	7	56.6950	211	53	8.30	-.09
3472	6.00	19	11	10.8111	206	52	9.10	-.91
1594	5.74	19	15	.0832	19	46	8.39	-.54
3508	4.60	19	17	37.6173	199	28	8.52	-.36
3276	5.40	19	20	47.7274	322	59	9.10	-.98
643	3.36	19	25	16.7695	255	25	7.89	.40
3833	5.20	19	28	57.0197	76	40	7.53	.19
3862	5.60	19	29	50.8617	31	10	7.96	-.16
1434	5.14	19	30	43.8877	284	14	8.21	.05
869	3.63	19	53	12.3785	91	8	7.93	-.21
3448	5.00	19	54	44.9225	239	43	7.47	.81
895	5.02	19	56	25.7126	37	25	7.72	.07
3857	5.80	19	57	34.4786	88	16	7.34	.39
3909	5.10	19	58	32.8127	55	48	6.86	.88
1462	5.82	20	0	57.6907	266	36	8.33	-.05
3704	5.80	20	2	55.6488	152	7	9.10	-1.17
3377	5.80	20	4	40.6569	278	15	7.80	.47
1549	5.57	20	5	38.4149	164	16	8.01	-.02
3518	5.50	20	7	57.5690	220	49	7.88	.35
3870	6.00	20	11	56.9671	91	44	8.43	-.70
1565	4.76	20	14	44.1132	153	33	7.44	.50
675	5.04	20	22	54.7875	342	14	7.42	.61
639	3.22	20	24	33.5795	318	43	7.32	.82
1610	5.75	20	27	48.5856	101	24	7.65	.10
857	3.10	20	30	13.8157	124	32	7.12	.69
655	4.98	20	38	1.5780	297	25	7.81	.41

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .35

UNKNOWNS:

DELTA PHI.....:	-.063
DELTA LAMBDA COS(PHI):	.278
DELTA Z.....:	8.004

MATRIX OF WEIGHTCOEFFICIENTS

.0750		
.0005	.0536	
-.0002	-.0002	.0313

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 51 31 34.6822

LONGITUDE= -5 37 34.2779

ESTIMATE OF ST. DEV.:

.163

.138 *SEC PHI

STATION....:EIERLAND

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:TIMEREC3

OBSERVER...:C.DE VRIES

DATA.....:SEPT.21,1976

APPROXIMATE VALUES

LATITUDE.....:	53	10	57.0000
LONGITUDE.....:	-4	51	20.0000
ZENITHDISTANCE.....:	29	59	40.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
848	3.85	18	51	23.5595	75	34	3.31	.36
3303	5.00	18	53	36.3276	265	14	3.50	.82
626	3.61	18	55	15.3896	257	36	4.25	-.02
3799	4.60	18	57	30.4177	81	21	3.55	.05
3778	5.70	18	59	28.4977	92	32	3.31	.16
608	3.91	19	1	3.0658	275	52	4.05	.39
786	5.24	19	2	46.5959	138	26	3.74	-.58
760	5.45	19	4	42.7759	157	31	3.62	-.45
587	5.13	19	6	47.5660	310	38	5.12	-.43
3862	5.60	19	7	52.8400	33	9	4.07	.17
1583	4.64	19	11	52.2962	100	44	3.45	-.06
674	3.82	19	13	21.6722	226	57	3.63	.18
598	4.11	19	15	41.0743	302	24	3.94	.71
606	5.51	19	17	14.8183	337	28	5.03	-.33
3314	5.90	19	18	27.3144	276	32	5.22	-.77
3874	5.90	19	19	44.0484	54	47	3.74	.21
3657	5.10	19	23	41.2146	153	15	3.58	-.42
3863	5.60	19	28	35.0207	69	13	3.11	.65
3365	5.10	19	29	50.2768	262	23	3.70	.59
3289	6.00	19	31	6.6648	332	18	4.72	-.00
858	5.24	19	33	10.6629	95	22	3.02	.43
3776	5.40	19	35	48.5430	115	4	3.24	.03
895	5.02	19	37	59.6850	39	20	4.50	-.33
3852	5.60	19	39	48.7591	84	24	2.90	.66
1575	5.00	19	40	55.9531	129	54	3.96	-.78
3448	5.00	19	43	.7432	234	56	2.85	1.07
3320	5.40	19	46	28.7753	297	5	5.24	-.61
3518	5.50	19	48	48.8754	213	12	4.10	-.47
619	4.98	19	51	18.6795	322	58	5.24	-.52
1508	4.63	19	53	56.7516	202	37	3.23	.27
893	3.42	19	58	16.1357	19	10	4.97	-.56
672	3.99	20	0	27.1698	252	57	4.59	-.43

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .27

UNKNOWNS:

DELTA PHI.....:	.650
DELTA LAMBDA COS(PHI):	.438
DELTA Z.....:	3.938

MATRIX OF WEIGHTCOEFFICIENTS

.0886		
-.0010	.0483	
-.0021	.0061	.0313

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 53 10 57.3918

LONGITUDE= -4 51 18.9862

ESTIMATE OF ST. DEV.:

.155

.115 *SEC PHI

STATION....:KOOTWIJK/P.EAST

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:TIMEREC.3

OBSERVER...:C.DE VRIES

DATA.....:SEPT.22,1976

APPROXIMATE VALUES

LATITUDE.....:	52	10	45.0000
LONGITUDE.....:	-5	48	35.0000
ZENITHDISTANCE.....:	29	59	40.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
1593	5.50	19	17	38.1125	14	43	2.88	.68
1434	5.14	19	19	13.7226	283	17	5.31	-.12
3291	5.60	19	20	42.8486	306	2	4.33	.43
3365	5.10	19	22	52.3127	264	18	4.83	.63
3715	5.40	19	24	49.1828	136	25	4.38	.11
1575	5.00	19	27	59.3229	126	38	3.26	1.03
852	4.91	19	31	2.0110	100	27	3.47	.35
3852	5.60	19	32	48.8790	82	47	3.62	-.05
619	4.98	19	34	38.1851	324	6	4.08	.32
895	5.02	19	38	28.8252	38	11	4.08	-.70
869	3.63	19	40	48.8573	92	18	3.36	.34
3585	4.90	19	44	28.9174	191	30	5.79	-.34
1462	5.82	19	48	8.0635	265	25	5.95	-.50
3518	5.50	19	50	17.6316	218	1	4.77	.90
3377	5.80	19	52	43.0617	277	13	5.87	-.59
2005	5.50	19	56	42.9618	45	25	3.44	-.07
1508	4.63	19	59	46.2639	209	18	5.35	.27
823	5.05	20	5	35.8221	144	8	4.49	.16
893	3.42	20	10	22.1483	17	38	4.18	-.65
1565	4.76	20	11	37.1203	158	10	5.94	-1.01
891	4.28	20	13	29.5724	90	3	3.90	-.24
1498	5.46	20	15	17.7964	227	57	5.56	.13
639	3.22	20	16	45.4645	317	57	4.11	.42
3370	5.50	20	19	15.7446	312	15	5.05	-.40
675	5.04	20	23	6.0207	341	9	3.85	.22
705	3.40	20	28	53.8289	243	60	6.12	-.48
3433	5.90	20	29	47.2489	275	29	5.98	-.67
3463	5.00	20	32	7.9470	260	60	5.06	.44
1589	5.96	20	33	36.0391	140	11	4.95	-.39
3923	6.00	20	34	30.3351	91	30	5.20	-1.52
2016	5.80	20	37	16.1272	79	18	2.02	1.51
21	2.47	20	39	53.9113	60	56	3.58	-.19

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .42

UNKNOWNS:

DELTA PHI.....:	-.776
DELTA LAMBDA COS(PHI):	.864
DELTA Z.....:	4.525

MATRIX OF WEIGHTCOEFFICIENTS

.0817		
-.0027	.0508	
-.0006	-.0003	.0313

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 52 10 43.9698

LONGITUDE= -5 48 33.3162

ESTIMATE OF ST. DEV.:

.185

.146 *SEC PHI

STATION....:KOOTWIJK P.EAST

INSTRUMENT.:NI2 ASTROLABE

CHRONOMETER:TIMEREC.NO3

OBSERVER...:C. DE VRIES

DATA.....:SEPT.29,1976

APPROXIMATE VALUES

LATITUDE.....:	52	10	44.8000
LONGITUDE.....:	-5	48	35.0000
ZENITHDISTANCE.....:	29	59	40.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3799	4.60	18	23	20.7243	79	48	.80	.70
608	3.91	18	25	.7064	277	27	2.35	.25
621	4.25	18	26	15.8284	268	24	2.44	.25
3585	4.90	18	27	30.1785	168	30	2.90	-.32
3839	5.50	18	31	49.3246	60	5	1.00	.38
612	5.04	18	33	6.7847	338	34	2.03	-.23
1583	4.64	18	35	28.7667	98	44	1.51	.17
3657	5.10	18	36	50.0068	147	26	3.12	-.81
3800	4.50	18	39	6.9889	90	22	.90	.69
3862	5.60	18	42	58.1150	31	59	.85	.52
674	3.82	18	43	53.7270	230	25	2.13	.78
3276	5.40	18	46	13.6631	322	12	2.45	-.43
3833	5.20	18	47	56.9232	77	39	2.05	-.58
1593	5.50	18	50	8.0452	14	43	1.05	.39
1434	5.14	18	51	41.8513	283	16	3.01	-.48
3365	5.10	18	55	20.5174	264	18	2.79	-.06
1575	5.00	19	0	27.8556	126	38	2.66	-.63
835	4.38	19	2	24.2876	116	50	2.23	-.33
619	4.98	19	7	5.9498	324	6	1.79	.20
895	5.02	19	10	57.8939	38	11	2.31	-.96
3448	5.00	19	12	7.9160	237	54	2.50	.39
869	3.63	19	13	17.5880	92	18	1.62	-.01
3585	4.90	19	16	56.3581	191	30	3.18	-.39
3326	5.00	19	21	8.4363	315	44	3.21	-1.10
3518	5.50	19	22	45.8903	218	1	3.00	-.09
3377	5.80	19	25	11.0844	277	13	2.41	.19
672	3.99	19	27	4.2785	255	8	2.36	.44
2005	5.50	19	29	12.1545	45	25	.49	.86
1508	4.63	19	32	14.3346	209	18	2.85	.04
890	4.00	19	34	49.8307	82	38	2.05	-.53
823	5.05	19	38	4.7868	144	9	1.47	.80
663	3.79	19	43	29.0290	276	40	2.69	-.09

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .30

UNKNOWNS:

DELTA PHI.....:	-.564
DELTA LAMBDA COS(PHI):	.545
DELTA Z.....:	2.130

MATRIX OF WEIGHTCOEFFICIENTS

.0842		
.0019	.0498	
-.0003	-.0002	.0313

RESULTS RELATED TO THE C.I.O.:	ESTIMATE OF ST. DEV.:
LATITUDE = 52 10 43.9815	.159
LONGITUDE= -5 48 33.8693	.122 *SEC PHI

STATION....:KOOTWIJK,P.EAST

INSTRUMENT.:NI2ASTROLABE

CHRONOMETER:TIMEREC.NO3

OBSERVER...:C.DE VRIES

DATA.....:MAY18,1977

APPROXIMATE VALUES

LATITUDE.....:	52	10	45.0000
LONGITUDE.....:	-5	48	35.0000
ZENITHDISTANCE.....:	29	59	40.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
557	4.67	21	27	2.1589	138	27	7.87	.20
1318	4.78	21	29	51.9551	216	37	7.49	1.25
1282	5.14	21	32	35.4753	263	39	8.59	-.40
621	4.25	21	33	39.6834	91	37	7.52	-.40
2870	4.80	21	37	17.7556	270	21	7.76	.30
3185	4.90	21	43	54.0521	147	57	8.32	-.08
659	5.21	21	45	21.6902	37	15	5.34	1.09
2828	5.80	21	47	15.5083	324	11	7.41	-.42
3381	5.90	21	49	31.0964	67	8	6.09	.62
387	4.92	21	51	58.8506	317	49	6.77	.33
398	5.16	21	54	49.1308	300	42	7.53	-.08
2839	6.00	21	58	2.9690	315	12	7.19	-.04
3151	6.00	22	5	4.7335	171	58	8.68	-.09
3377	5.80	22	7	10.4256	82	48	6.71	.26
3072	5.70	22	8	33.4157	205	4	8.31	.46
432	5.88	22	13	46.3361	270	20	8.64	-.58
2963	5.60	22	15	54.7522	252	10	8.09	.28
3330	5.90	22	19	44.2465	113	47	8.39	-.81
3287	5.70	22	22	9.5786	129	45	8.88	-.98
685	5.03	22	26	20.7069	44	46	6.19	.28
3373	6.00	22	32	1.0733	100	43	7.41	-.10
1322	5.43	22	33	43.1654	244	6	8.01	.48
1462	5.82	22	37	4.2996	94	36	7.12	.06
3151	6.00	22	39	38.9218	188	2	8.55	.17
2929	6.00	22	43	38.8200	287	7	8.08	-.36
3039	5.10	22	45	54.9502	236	15	8.85	-.27
3433	5.90	22	49	2.8944	84	32	7.22	-.23
458	5.92	22	50	5.7365	264	14	8.71	-.53
3484	5.60	22	51	.6025	48	33	6.70	-.21
3475	4.90	22	53	4.0147	59	40	6.49	.12
454	5.12	22	56	50.5289	342	56	7.29	-.61
3384	5.90	22	59	12.6551	10	48	6.15	.27

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .26

UNKNOWNS:

DELTA PHI.....:	-1.084
DELTA LAMBDA COS(PHI):	.486
DELTA Z.....:	7.581

MATRIX OF WEIGHTCOEFFICIENTS

.0842		
.0013	.0497	
-.0004	.0002	.0313

RESULTS RELATED TO THE C.I.O.:	ESTIMATE OF ST. DEV.:
LATITUDE = 52 10 44.1068	.148
LONGITUDE= -5 48 33.5750	.114 *SEC PHI

STATION....:KOOTWIJK,P.EAST

INSTRUMENT.:NI2ASTROLABE

CHRONOMETER:TIMEREC.NO3

OBSERVER...:C.DE VRIES

DATA.....:MAY24,1977

APPROXIMATE VALUES

LATITUDE.....:	52	10	45.0000
LONGITUDE.....:	-5	48	35.0000
ZENITHDISTANCE.....:	29	59	40.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
557	4.67	21	3	26.6322	138	27	7.57	.09
1318	4.78	21	6	16.4964	216	37	7.53	1.10
1282	5.14	21	8	59.8865	263	39	8.44	-.32
621	4.25	21	10	4.3366	91	37	6.40	.21
2870	4.80	21	13	42.0989	270	21	7.07	.93
3185	4.90	21	20	18.4673	147	57	8.18	-.30
659	5.21	21	21	46.2894	37	15	6.15	-.19
2828	5.80	21	23	39.7415	324	11	7.56	-.77
3381	5.90	21	25	55.7717	67	8	5.46	.73
387	4.92	21	28	23.0238	317	49	6.27	.66
398	5.16	21	31	13.3300	300	42	6.40	.93
2839	6.00	21	34	27.2182	315	12	7.04	-.06
3151	6.00	21	41	27.8967	171	57	9.72	-1.40
3377	5.80	21	43	35.1868	82	48	4.99	1.45
3072	5.70	21	44	57.9529	205	4	7.92	.70
432	5.88	21	50	13.8013	270	20	8.96	-.96
2963	5.60	21	52	19.2114	252	10	7.98	.34
3330	5.90	21	56	8.8457	113	47	7.69	-.60
3287	5.70	21	58	34.1938	129	45	7.91	-.44
685	5.03	22	2	45.5081	44	46	5.88	.11
3373	6.00	22	8	25.7025	100	43	6.76	.04
1322	5.43	22	10	7.7026	244	6	8.33	.09
1462	5.82	22	13	28.8448	94	36	7.42	-.75
3151	6.00	22	16	3.5190	188	2	8.02	.49
2929	6.00	22	20	3.2773	287	7	8.68	-1.05
3039	5.10	22	22	19.4114	236	15	8.38	.13
3433	5.90	22	25	27.6376	84	32	6.05	.42
458	5.92	22	26	30.2097	264	14	8.87	-.75
3484	5.60	22	27	25.3958	48	33	6.51	-.50
3475	4.90	22	29	28.7239	59	40	6.47	-.37
454	5.12	22	33	13.9842	342	56	6.50	-.09
3384	5.90	22	35	38.5823	10	48	5.89	.15

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .48

UNKNOWNS:

DELTA PHI.....:	-1.133
DELTA LAMBDA COS(PHI):	.713
DELTA Z.....:	7.289

MATRIX OF WEIGHTCOEFFICIENTS

.0842		
.0013	.0497	
-.0004	.0002	.0313

RESULTS RELATED TO THE C.I.O.:	ESTIMATE OF ST. DEV.:
LATITUDE = 52 10 44.0319	.202
LONGITUDE= -5 48 33.1985	.155 *SEC PHI

STATION....:URK

INSTRUMENT.:NI2ASTROLABE

CHRONOMETER:TIMEREC.NO3

OBSERVER...:C.DE VRIES

DATA.....:MAY25,1977

APPROXIMATE VALUES

LATITUDE.....:	52	39	45.0000
LONGITUDE.....:	-5	35	35.0000
ZENITHDISTANCE.....:	29	59	40.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
557	4.67	21	4	4.5499	140	29	6.74	.30
1282	5.14	21	5	33.2400	262	44	9.21	-.54
621	4.25	21	7	7.1161	92	29	6.19	.79
2870	4.80	21	10	37.9522	269	31	8.39	.32
659	5.21	21	14	35.1084	37	48	7.43	.18
2997	5.10	21	16	34.1265	221	9	7.18	.98
395	5.04	21	18	7.7466	337	56	7.17	1.33
1262	5.74	21	22	31.5908	316	21	8.26	.44
2828	5.80	21	24	56.1510	323	38	9.51	-.86
3172	5.90	21	26	41.1850	158	14	6.99	.23
1396	5.03	21	29	32.8392	151	30	7.22	-.08
420	3.15	21	30	57.0033	272	38	7.95	.78
3072	5.70	21	34	32.8474	201	30	7.10	.75
3264	4.90	21	37	48.0936	128	44	7.09	-.12
3377	5.90	21	40	8.3637	83	34	5.95	1.10
3429	5.50	21	43	19.6539	30	2	7.87	-.14
403	5.23	21	46	42.9520	324	18	9.10	-.46
2963	5.60	21	48	12.2501	251	5	8.97	-.41
3365	5.10	21	48	58.6542	96	38	8.02	-1.06
2865	5.70	21	50	5.8502	304	41	8.95	-.19
424	5.97	21	53	35.8724	283	56	9.77	-.99
3416	5.20	21	55	27.9665	73	28	7.04	.09
3085	5.90	21	58	3.2686	207	2	7.88	.06
663	3.79	21	59	59.7787	84	8	7.28	-.24
675	5.04	22	2	22.5908	19	36	7.44	.45
1322	5.43	22	5	29.0490	242	51	9.20	-.74
3447	5.90	22	8	16.0351	66	0	7.66	-.44
643	3.36	22	11	42.1493	107	4	7.52	-.59
1446	5.27	22	14	50.8434	116	27	7.32	-.38
3384	5.90	22	16	49.3015	11	55	8.47	-.45
2965	5.10	22	18	13.9236	269	11	8.01	.70
1358	5.91	22	21	8.7538	213	28	8.89	-.85

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .44

UNKNOWNS:

DELTA PHI.....:	.346
DELTA LAMBDA COS(PHI):	.860
DELTA Z.....:	7.860

MATRIX OF WEIGHTCOEFFICIENTS

.0786		
-.0011	.0519	
-.0004	-.0004	.0313

RESULTS RELATED TO THE C.I.O.:	ESTIMATE OF ST. DEV.:
LATITUDE = 52 39 45.5046	.186
LONGITUDE= -5 35 32.9301	.151 *SEC PHI

STATION....:STEENWIJK

INSTRUMENT.:NI2ASTROLABE

CHRONOMETER:TIMEREC.NO3

OBSERVER...:C.DE VRIES

DATA.....:MAY26,1977

APPROXIMATE VALUES

LATITUDE.....: 52 47 25.0000

LONGITUDE.....: -6 6 55.0000

ZENITHDISTANCE.....: 29 59 40.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
557	4.67	20	59	4.9151	141	2	8.04	-.20
621	4.25	21	1	8.1812	92	43	8.19	-.51
1276	5.28	21	4	37.4674	276	23	11.21	-.32
659	5.21	21	7	29.0056	37	57	8.24	-.34
1293	4.78	21	9	29.1598	256	40	10.46	.56
1300	5.46	21	11	48.9499	245	26	10.87	.13
395	5.04	21	14	11.7081	337	45	9.58	-.10
3381	5.00	21	15	11.4442	67	57	5.37	2.22
2999	4.60	21	18	44.3884	224	55	10.19	.62
2828	5.80	21	20	4.0765	323	29	11.28	-1.39
3172	5.80	21	22	48.7967	159	16	10.51	-1.34
420	3.15	21	24	58.7368	272	25	10.92	.01
3072	5.70	21	26	21.3129	200	27	9.82	.50
3264	4.90	21	32	27.6093	129	9	8.93	-.60
3377	5.80	21	34	1.6334	83	46	7.11	.50
3429	5.50	21	35	51.5795	30	11	7.66	.39
2869	5.40	21	37	43.5217	294	44	10.91	-.32
403	5.23	21	41	52.4379	324	9	10.15	-.27
2865	5.70	21	44	40.1141	304	32	10.67	-.28
424	5.97	21	47	47.5643	283	45	10.81	-.02
3416	5.20	21	49	11.9444	73	39	8.20	-.62
3252	4.70	21	53	11.1207	145	28	9.43	-.67
3373	6.00	22	0	8.6151	101	57	8.27	-.48
1462	5.82	22	4	45.4415	95	44	8.25	-.54
3384	5.90	22	6	51.7376	12	12	8.31	.17
1446	5.27	22	9	15.0778	116	47	7.76	.28
3039	5.10	22	10	28.6538	234	24	10.18	.74
2965	5.10	22	12	12.6260	268	58	11.02	-.07
1358	5.91	22	13	50.8961	212	48	9.87	.72
3484	5.60	22	14	50.8501	49	16	6.94	.80
3433	5.90	22	16	1.6062	85	32	7.18	.44
458	5.92	22	16	58.8703	263	5	10.99	.00

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .50

UNKNOWNS:

DELTA PHI.....: -.494

OELTA LAMBDA COS(PHI): 1.648

OELTA Z.....: 9.298

MATRIX OF WEIGHTCOEFFICIENTS

.0893

-.0006 .0481

-.0006 -.0006 .0313

RESULTS RELATED TO THE C.I.O.:

LATITUOE = 52 47 24.6735

LONGITUOE= -6 6 51.6197

ESTIMATE OF ST. OEV.:

.212

.155 *SEC PHI

STATION....:OOSTERHOUT

INSTRUMENT.:NI2ASTROLABE

CHRONOMETER:TIMEREC.NO3

OBSERVER...:C.DE VRIES

DATA.....:MAY31,1977

APPROXIMATE VALUES

LATITUDE.....: 51 38 49.0000

LONGITUDE.....: -4 51 40.0000

ZENITHDISTANCE.....: 29 59 40.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
432	5.38	21	26	23.7466	271	14	9.88	.52
3365	5.10	21	27	38.4827	94	44	10.98	-.60
3252	4.70	21	28	41.8068	140	14	10.43	-.11
593	4.22	21	29	44.3429	136	44	10.67	-.34
3330	5.70	21	30	55.8709	112	30	9.17	1.18
3287	5.70	21	32	2.7050	128	1	10.26	.08
3429	5.50	21	34	21.7952	28	46	10.06	.40
417	1.95	21	39	27.3555	310	49	9.02	1.43
685	5.03	21	42	30.9177	44	9	10.60	-.16
3045	4.90	21	46	24.4080	226	31	10.61	-.27
1322	5.43	21	48	.9961	245	26	9.98	.39
1462	5.82	21	49	29.2742	93	37	9.91	.47
3447	5.90	21	50	37.3442	64	40	10.02	.40
492	4.32	21	52	58.7024	227	29	9.91	.43
2929	6.00	21	55	14.0626	287	53	10.99	-.57
2965	5.10	21	57	33.5027	270	57	10.36	.04
451	5.96	21	59	40.5848	342	10	10.67	-.20
675	5.04	22	1	4.7569	17	59	10.51	-.05
3433	5.90	22	2	4.2330	83	40	8.98	1.41
458	5.92	22	3	5.1131	265	14	10.16	.23
433	4.06	22	4	42.1192	326	1	10.80	-.34
3151	6.00	22	3	42.4175	195	45	10.16	.15
3458	5.10	22	13	24.7298	75	39	10.64	-.23
2941	5.40	22	14	49.7399	298	24	10.77	-.34
1456	5.36	22	15	54.4999	117	12	11.07	-.72
440	5.48	22	18	48.7581	320	49	10.86	-.41
3268	4.80	22	20	41.5303	159	24	11.00	-.69
470	4.32	22	23	15.8624	266	55	11.07	-.68
522	4.82	22	27	12.6767	215	17	10.43	-.11
684	5.42	22	28	42.7388	91	29	10.93	-.55
714	4.91	22	30	59.0649	30	18	11.34	-.89
1337	5.11	22	32	31.9710	252	40	10.22	.15

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .37

UNKNOWNS:

DELTA PHI.....: .081

DELTA LAMBDA COS(PHI): .007

DELTA Z.....: 10.389

MATRIX OF WEIGHTCOEFFICIENTS

.0857

-.0013 .0492

-.0005 -.0002 .0313

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 51 38 49.2030

LONGITUDE= -4 51 39.3514

ESTIMATE OF ST. OEV.:

.177

.134 *SEC PHI

STATION....:SCHOORL

INSTRUMENT.:NI2,ASTROLABE

CHRONOMETER:TIMEREC.NO3

OBSERVER...:C.DE VRIES

DATA.....:JUNE13,1977

APPROXIMATE VALUES

LATITUDE.....: 52 41 56.0000

LONGITUDE.....: -4 41 18.0000

ZENITHDISTANCE.....: 29 59 50.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3484	5.60	21	10	18.0354	49	9	-4.83	-.41
461	5.22	21	14	50.7916	259	3	-2.54	.19
3339	5.90	21	16	29.0477	129	7	-3.49	.11
2915	5.90	21	20	12.6299	309	38	-3.27	-.50
3458	5.10	21	21	21.0720	77	12	-5.27	.45
3389	5.90	21	22	57.0280	113	12	-4.37	.51
433	4.06	21	24	9.5401	324	47	-4.71	.50
522	4.82	21	26	2.8002	209	46	-2.21	.38
2941	5.40	21	27	58.8503	297	3	-3.49	.11
714	4.91	21	29	11.1944	31	35	-5.20	-.11
470	4.32	21	32	20.5825	264	60	-2.37	-.11
700	5.84	21	36	.2987	18	24	-4.94	-.32
684	5.42	21	38	35.3728	93	21	-4.58	.15
672	3.99	21	39	49.0149	105	60	-4.20	.13
3106	5.80	21	43	15.6091	226	44	-1.50	-.37
1316	5.56	21	44	14.8391	282	48	-3.16	.19
3172	5.80	21	48	25.2653	201	29	-2.23	.38
3064	6.00	21	49	43.5074	248	22	-1.61	-.53
3547	4.60	21	51	13.7675	42	48	-5.49	.21
2986	5.40	21	55	9.9097	336	43	-4.42	-.11
3268	4.80	21	57	18.0158	172	11	-2.01	-.23
726	3.98	22	5	38.3942	68	4	-4.64	-.35
1440	5.20	22	6	41.2302	153	26	-2.40	-.28
711	4.00	22	11	41.1885	89	6	-4.46	-.08
3030	6.00	22	13	58.5406	278	48	-2.23	-.61
502	4.96	22	15	27.4927	254	8	-2.73	.48
1338	5.72	22	18	38.1768	274	22	-2.45	-.28
1396	5.03	22	19	44.1789	208	17	-2.11	.28
733	3.94	22	22	16.1470	71	35	-4.89	-.04
3541	6.00	22	22	58.6211	82	2	-4.54	-.17
472	3.88	22	25	56.4892	325	42	-5.09	.85
641	3.16	22	27	33.2113	152	18	-2.28	-.43

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .14

UNKNOWNS:

DELTA PHI.....: -1.462

DELTA LAMBDA COS(PHI): .951

DELTA Z.....: -3.564

MATRIX OF WEIGHTCOEFFICIENTS

.0827

.0023 .0503

.0001 -.0004 .0313

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 52 41 54.5858

LONGITUDE= -4 41 15.7670

ESTIMATE OF ST. DEV.:

.109

.085 *SEC PHI

STATION....:GRONINGEN

INSTRUMENT.:NI2ASTROLABE

CHRONOMETER:TIMEREC.NO3

OBSERVER...:C.DE VRIES

DATA.....:JULY 2,1977

APPROXIMATE VALUES

LATITUDE.....: 53 13 17.0000

LONGITUDE.....: -6 34 8.0000

ZENITHDISTANCE.....: 29 59 50.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3094	5.60	21	10	48.4011	256	41	-2.45	-.64
641	3.16	21	12	25.7853	155	47	-1.73	-.94
478	5.92	21	14	37.2576	310	56	-1.40	-1.62
3586	5.20	21	16	28.0239	69	37	-2.42	-.08
734	6.00	21	18	28.4881	14	32	-2.40	-.31
3075	5.90	21	23	3.0887	343	36	-1.47	-1.40
1370	4.83	21	26	55.8613	248	11	-2.12	-.96
3575	5.00	21	29	13.1216	86	18	-2.51	.03
1479	5.71	21	32	28.4060	130	59	-2.46	-.11
724	4.46	21	34	31.5383	104	50	-2.31	-.18
1468	5.48	21	36	43.2206	148	9	-1.37	-1.26
3572	5.40	21	37	44.5047	92	48	-3.70	1.22
759	4.43	21	43	8.3534	18	55	-2.22	-.46
713	3.30	21	46	5.3478	120	56	-2.98	.45
3252	4.70	21	48	26.2781	212	19	-2.91	-.05
3654	5.90	21	50	13.4384	53	59	-3.34	.80
509	1.91	21	51	28.5165	282	44	-4.35	1.27
1368	5.44	21	53	31.9588	270	7	-3.45	.36
535	3.00	21	54	41.6330	256	1	-3.65	.56
572	3.72	21	55	38.0851	226	32	-3.65	.63
3584	5.60	21	57	49.9654	98	22	-2.20	-.29
3087	4.70	21	59	9.7596	294	22	-3.83	.76
593	4.22	22	5	12.5304	216	34	-2.83	-.15
3641	4.90	22	7	8.5006	78	30	-2.47	-.01
527	4.26	22	9	55.2690	275	23	-3.55	.45
505	5.67	22	10	59.6391	328	1	-3.47	.52
3693	6.00	22	12	44.6874	32	2	-2.71	.09
524	5.00	22	16	18.1658	341	7	-3.15	.26
3457	5.50	22	23	38.3788	159	12	-3.11	.42
540	5.39	22	26	23.9992	271	25	-3.05	-.04
3662	5.60	22	28	21.0554	81	3	-2.86	.38
1440	5.20	22	30	41.6418	202	55	-3.21	.30

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .52

UNKNOWNS:

DELTA PHI.....: .006

DELTA LAMBDA COS(PHI): -.337

DELTA Z.....: -2.790

MATRIX OF WEIGHTCOEFFICIENTS

.0805

.0002 .0511

.0003 -.0003 .0313

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 53 13 16.9944

LONGITUDE= -6 34 7.8448

ESTIMATE OF ST. DEV.:

.205

.163 *SEC PHI

STATION....: HARIKERBERG

APPROXIMATE VALUES

INSTRUMENT.:NI2ASTROLABE — LATITUDE.....: 52 14 16.0000

CHRONOMETER:TIMEREC.NO3 — LONGITUDE.....: -6 32 20.0000

OBSERVER...:C.DE VRIES — ZENITHDISTANCE.....: 29 59 50.0000

DATA.....:JULY 3,1977

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
478	5.92	21	5	4.7225	312	3	-.54	-.78
3094	5.60	21	8	24.3367	258	43	-2.34	-.56
3604	5.40	21	9	14.5887	44	6	-.22	.29
3608	4.70	21	11	6.9268	37	60	-.00	.11
681	3.83	21	12	28.5249	131	38	-2.46	.40
557	4.67	21	17	14.9351	221	19	-3.95	.46
3268	4.80	21	20	6.7973	194	53	-3.59	.13
1468	5.48	21	23	24.9314	143	14	-2.15	-.27
3575	5.00	21	25	54.8095	84	42	-.24	-.40
724	4.46	21	29	7.2437	102	45	-.74	-.41
3083	4.60	21	32	13.0319	283	32	-2.16	-.06
3572	5.40	21	33	42.4759	91	3	-.59	-.22
3383	5.70	21	35	4.9160	163	50	-2.85	-.11
713	3.30	21	38	35.6722	118	15	-1.25	-.39
3610	6.00	21	41	16.2823	78	37	-1.29	.80
509	1.91	21	46	6.9246	284	11	-2.26	.07
3640	5.90	21	47	22.4726	61	52	.51	-.66
1368	5.44	21	49	36.7227	271	48	-2.75	.19
524	5.00	21	52	43.2069	342	38	-1.06	.60
3252	4.70	21	53	57.8009	217	10	-3.65	.14
757	3.95	21	54	49.1130	81	57	-.42	-.15
505	5.67	21	56	34.6211	329	10	-1.90	1.09
759	4.43	21	59	3.2992	17	24	.56	-.48
3593	5.40	22	0	41.1553	97	4	-2.03	1.05
3457	5.50	22	5	29.2895	152	12	-3.11	.44
1386	5.98	22	7	12.2996	256	45	-2.38	-.57
593	4.22	22	9	28.2457	220	54	-2.75	-.74
563	3.54	22	11	31.7698	244	2	-4.01	.80
3166	5.80	22	12	51.1139	263	33	-2.52	-.26
511	4.77	22	16	10.1941	316	4	-1.70	.50
3693	6.00	22	19	30.7162	30	53	.91	-.79
540	5.39	22	22	20.0964	273	4	-2.29	-.24

NUMBER OF STARS: 32

MATRIX OF WEIGHTCOEFFICIENTS

ESTIMATE OF VARIANCE: .30 — .0843

UNKNOWNS: — .0020 .0498

DELTA PHI.....:	1.578		
DELTA LAMBDA COS(PHI):	-.914	.0010	-.0004 .0313
DELTA Z.....:	-1.698		

RESULTS RELATED TO THE C.I.O.: — ESTIMATE OF ST. DEV.:

LATITUDE = 52 14 17.5625 — .159

LONGITUDE= -6 32 20.8482 — .123 *SEC PHI

STATION....:KOOTWYK,P.EAST

APPROXIMATE VALUES

INSTRUMENT.:NI2ASTROLABE — LATITUDE.....: 52 10 45.0000

CHRONOMETER:TIMEREC.NO3 — LONGITUDE.....: -5 48 35.0000

OBSERVER...:C.DE VRIES — ZENITHDISTANCE.....: 29 59 50.0000

DATA.....:JULY 4,1977

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3268	4.80	21	20	29.2938	195	33	-4.41	.91
1370	4.83	21	24	38.0680	250	38	-4.04	.35
3631	6.00	21	28	42.3842	35	56	-6.86	1.02
3588	5.50	21	31	23.9823	81	12	-6.15	.70
3383	5.70	21	32	46.4704	163	13	-3.95	.07
767	4.28	21	37	28.0706	47	43	-6.16	.35
734	6.00	21	42	11.5569	12	30	-6.21	.44
3204	5.30	21	44	2.1490	230	24	-4.11	.61
1368	5.44	21	48	34.3472	271	54	-4.86	.84
524	5.00	21	50	26.4913	342	44	-5.91	.51
3584	5.60	21	52	7.0134	96	22	-5.43	.25
3252	4.70	21	53	26.4554	217	26	-3.72	.27
505	5.67	21	54	56.0155	329	14	-5.41	.24
770	5.18	21	58	35.4797	23	27	-4.90	-.93
782	4.63	21	59	43.5197	58	42	-5.62	-.10
3457	5.50	22	3	44.9859	151	50	-3.89	-.18
1488	4.92	22	6	52.2901	140	14	-3.80	-.49
593	4.22	22	8	52.9782	221	9	-3.87	.41
563	3.54	22	10	41.6163	244	11	-2.88	-.74
3166	5.80	22	11	52.2583	263	40	-2.61	-1.27
511	4.77	22	14	44.5465	316	8	-4.37	-.54
528	4.87	22	18	57.3227	288	42	-4.49	.15
540	5.39	22	21	17.3188	273	10	-3.43	-.61
3577	5.90	22	22	39.5149	118	59	-4.20	-.53
3662	5.60	22	24	42.0310	79	27	-5.37	-.10
3518	5.50	22	25	34.8230	141	59	-4.18	-.08
1525	4.82	22	26	46.0671	106	10	-4.67	-.32
555	3.63	22	29	45.4572	263	29	-3.95	.08
3155	5.90	22	32	12.0154	284	21	-3.87	-.39
3128	5.40	22	33	16.5134	325	33	-4.91	-.19
1551	4.88	22	37	34.6816	80	9	-4.57	-.90
3655	5.60	22	39	4.4317	93	41	-5.41	.17

NUMBER OF STARS: 32

MATRIX OF WEIGHTCOEFFICIENTS

ESTIMATE OF VARIANCE: .34 — .0809

UNKNOWNS: — .0012 .0510

DELTA PHI.....:	-1.003		
DELTA LAMBDA COS(PHI):	.658	.0001	-.0008 .0313
DELTA Z.....:	-4.644		

RESULTS RELATED TO THE C.I.O.: — ESTIMATE OF ST. DEV.:

LATITUDE = 52 10 43.9722 — .167

LONGITUDE= -5 48 33.2837 — .132 *SEC PHI

STATION....:KOOTWYK,P.EAST

APPROXIMATE VALUES

INSTRUMENT.:NI2ASTROLABE — LATITUDE.....: 52 10 45.0000

CHRONOMETER:TIMEREC.NO3 — LONGITUDE.....: -5 48 35.0000

OBSERVER...:C.DE VRIES — ZENITHDISTANCE.....: 29 59 50.0000

DATA.....:JULY 5,1977

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3268	4.80	21	16	33.8651	195	33	-3.17	.28
1370	4.83	21	20	42.2133	250	38	-3.30	.19
3631	6.00	21	24	46.1655	35	56	-4.85	.13
3588	5.50	21	27	27.9416	81	12	-4.80	.43
3383	5.70	21	28	50.3457	163	13	-3.38	.23
767	4.28	21	33	31.9959	47	43	-4.73	.05
734	6.00	21	38	15.2422	12	30	-4.97	.28
3204	5.30	21	40	6.3583	230	25	-3.11	.17
1368	5.44	21	44	38.6025	271	54	-3.02	-.36
524	5.00	21	46	30.9346	342	44	-4.48	.04
3584	5.60	21	48	11.0067	96	22	-4.44	.29
3252	4.70	21	49	30.6027	217	26	-3.31	.43
505	5.67	21	50	58.2228	329	14	-4.40	.13
770	5.18	21	54	39.5010	23	27	-4.25	-.48
782	4.63	21	55	47.4810	58	42	-4.34	-.27
3457	5.50	21	59	49.0172	151	50	-3.66	.37
1488	4.92	22	2	56.2894	140	13	-3.26	-.19
593	4.22	22	4	57.2795	221	9	-2.50	-.40
563	3.54	22	6	45.6156	244	11	-3.45	.41
3166	5.80	22	7	56.2516	263	40	-3.24	-.03
511	4.77	22	10	48.6078	316	8	-4.12	.04
528	4.87	22	15	1.4400	288	42	-3.90	.26
540	5.39	22	17	21.4681	273	10	-2.59	-.81
3577	5.90	22	19	43.4842	118	59	-3.16	-.63
3662	5.60	22	20	46.1003	79	27	-4.96	.57
3518	5.50	22	21	38.7303	141	59	-3.13	-.30
1525	4.82	22	22	50.1084	106	10	-4.12	.12
555	3.63	22	25	49.6405	263	29	-2.84	-.42
3155	5.90	22	28	16.1187	284	21	-3.40	-.17
3128	5.40	22	29	20.5387	325	33	-4.78	.56
1551	4.88	22	33	38.7049	80	9	-3.69	-.69
3655	5.60	22	35	8.3890	93	41	-3.97	-.22

NUMBER OF STARS: 32

MATRIX OF WEIGHTCOEFFICIENTS

ESTIMATE OF VARIANCE: .15 — .0809

UNKNOWNS: — .0012 .0510

DELTA PHI.....:	-.816		
DELTA LAMBDA COS(PHI):	.445	.0001	-.0008 .0313
DELTA Z.....:	-3.800		

RESULTS RELATED TO THE C.I.O.: — ESTIMATE OF ST. DEV.:

LATITUDE = 52 10 44.0571 — .109

LONGITUDE= -5 48 33.6181 — .087 *SEC PHI

STATION....:URK

APPROXIMATE VALUES

INSTRUMENT.:NI2 ASTROLABE — LATITUDE.....: 52 39 45.0000

CHRONOMETER:TIMEREC. NR. 3 — LONGITUDE.....: -5 35 35.0000

OBSERVER...:C. DE VRIES — ZENITHDISTANCE.....: 29 59 50.0000

DATA.....:JULY 15, 1977

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
500	5.41	21	7	42.6700	305	57	-4.54	-.21
770	5.18	21	9	2.4421	24	6	-5.49	-.08
3584	5.60	21	10	6.4322	97	17	-5.96	-.05
757	3.95	21	11	2.5503	82	37	-6.66	.67
524	5.00	21	17	58.5052	341	57	-5.17	.09
1510	4.85	21	19	41.6394	114	1	-6.15	.19
3641	4.90	21	20	42.4915	77	40	-6.44	.46
527	4.26	21	22	19.0537	276	17	-4.07	-.58
3191	5.70	21	24	31.4359	248	36	-4.99	.28
3088	5.70	21	25	42.1241	315	47	-5.51	.68
563	3.54	21	26	44.0802	242	56	-3.93	-.81
3457	5.50	21	27	40.1723	154	57	-5.59	-.06
3166	5.80	21	29	6.2425	262	45	-4.65	-.00
511	4.77	21	35	36.2352	315	34	-5.56	.74
528	4.87	21	37	36.8794	288	1	-5.03	.36
540	5.39	21	39	3.0716	272	21	-4.84	.19
3703	5.20	21	40	26.8998	44	33	-5.30	-.47
3662	5.60	21	41	44.8739	80	11	-6.53	.54
3383	5.70	21	49	25.4028	190	41	-5.39	.15
1379	4.37	21	51	30.9811	337	51	-4.74	-.29
3570	4.90	21	53	19.1113	128	3	-5.65	-.23
3472	6.10	21	55	41.9756	161	48	-5.52	-.06
3627	5.20	22	3	45.0325	112	31	-6.17	.21
795	5.90	22	7	17.2749	17	11	-4.72	-.77
3356	5.90	22	12	40.4555	211	57	-4.34	-.66
788	4.04	22	14	15.5457	95	56	-6.18	.18
580	5.41	22	22	35.7707	262	25	-4.55	-.11
3749	6.00	22	26	29.1252	61	21	-5.58	-.32
3400	5.70	22	31	40.7578	204	14	-5.21	.13
1523	4.74	22	33	33.5420	137	33	-5.22	-.59
837	4.99	22	36	30.0903	29	35	-5.24	-.38
3339	5.90	22	39	16.5106	231	1	-5.61	.79

NUMBER OF STARS: 32

MATRIX OF WEIGHTCOEFFICIENTS

ESTIMATE OF VARIANCE: .21 — .0779

UNKNOWNS: — .0007 .0522

DELTA PHI.....:	.039		
DELTA LAMBDA COS(PHI):	.678	-.0003	.0003 .0313
DELTA Z.....:	-5.324		

RESULTS RELATED TO THE C.I.O.: — ESTIMATE OF ST. DEV.:

LATITUDE = 52 39 44.9786 — .127

LONGITUDE= -5 35 33.2441 — .104 *SEC PHI

STATION....:DOSTERHOUT

INSTRUMENT.:NI2ASTROLABE

CHRONOMETER:TIMEREC.ND3

OBSERVER...:C.DE VRIES

DATA.....:JULY21,1977

APPROXIMATE VALUES

LATITUDE.....: 51 38 49.0000

LONGITUDE.....: -4 51 40.0000

ZENITHDISTANCE.....: 29 59 50.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3457	5.50	20	54	39.0553	148	47	-6.79	.59
3593	5.40	20	56	10.3515	95	57	-6.35	.66
782	4.63	20	58	47.3718	58	2	-5.97	.51
527	4.26	21	0	49.2041	277	54	-6.01	-.30
770	5.18	21	3	37.3945	22	42	-4.75	-.71
3101	6.00	21	4	56.1047	310	17	-5.82	-.18
3191	5.70	21	6	16.9368	250	57	-6.41	-.09
759	4.43	21	7	37.6470	16	21	-4.95	-.53
593	4.22	21	9	37.0873	223	16	-6.82	.23
3360	5.70	21	15	18.7940	192	48	-7.17	.65
540	5.39	21	18	.4464	274	3	-5.95	-.39
3472	6.00	21	18	48.1925	153	55	-6.18	-.07
3182	5.60	21	20	22.7267	261	41	-6.42	-.02
765	2.32	21	21	32.7289	96	15	-6.65	.96
3662	5.60	21	22	18.5670	78	38	-6.14	.58
3670	5.80	21	23	21.0531	72	21	-5.82	.29
3128	5.40	21	25	7.3554	326	12	-6.29	.44
555	3.63	21	27	3.5376	264	29	-5.82	-.60
3155	5.90	21	28	13.8118	285	8	-5.69	-.55
732	3.24	21	34	10.8706	132	50	-5.14	-.91
3666	5.10	21	35	56.0248	87	11	-5.80	.18
568	4.47	21	37	23.6130	256	48	-6.58	.11
809	3.33	21	41	42.3636	31	56	-4.27	-1.16
3161	5.50	21	42	33.4857	295	1	-6.25	.10
1535	5.94	21	44	20.2859	106	5	-5.34	-.44
3287	5.70	21	45	35.3141	231	59	-7.04	.46
550	2.24	21	47	48.2644	335	57	-7.26	1.51
3383	5.70	21	51	35.7369	201	33	-6.39	-.17
1572	4.46	21	54	19.0512	50	55	-4.59	-.85
3508	4.60	21	56	52.8176	161	38	-5.92	-.40
3633	4.60	22	0	8.3380	118	22	-5.20	-.70
3229	5.30	22	1	50.0582	343	7	-6.48	.79

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .41

MATRIX OF WEIGHTCOEFFICIENTS

.0796

UNKNOWNS:

DELTA PHI.....:	.449	-.0005	.0515
DELTA LAMBDA COS(PHI):	-.368	-.0007 -.0004	.0313
DELTA Z.....:	-6.009		

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 51 38 49.3594

LONGITUDE= -4 51 39.9942

ESTIMATE OF ST. DEV.:

.180

.144 *SEC PHI

STATION....:GRONINGEN

INSTRUMENT.:NI2ASTROLABE

CHRONOMETER:TIMEREC.ND3

OBSERVER...:C.DE VRIES

DATA.....:AUG.29,1977

APPROXIMATE VALUES

LATITUDE.....: 53 13 17.0000

LONGITUDE.....: -6 34 8.0000

ZENITHDISTANCE.....: 29 59 50.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3457	5.50	20	5	25.6257	200	50	-1.07	.13
3769	5.30	20	7	45.3380	87	38	-.69	.48
601	4.26	20	9	56.2602	272	35	-.12	-.60
1446	5.27	20	11	2.8343	242	6	-.55	-.34
848	3.85	20	15	53.9689	75	37	-.34	.21
3303	5.00	20	18	10.8992	265	9	-.82	.05
626	3.61	20	19	47.8514	257	32	-.65	-.17
3778	5.70	20	24	3.4039	92	36	.37	-.61
1593	5.50	20	25	25.3400	16	32	.09	-.13
786	5.24	20	27	37.6363	138	34	-.67	.07
797	3.40	20	28	27.3084	129	46	-.53	-.01
760	5.45	20	29	52.5525	157	48	-.63	-.12
587	5.13	20	31	36.4547	310	35	-.00	-.42
1583	4.64	20	36	29.3573	100	48	.55	-.86
3800	4.50	20	39	5.9896	92	12	-.08	-.16
875	5.65	20	40	22.6398	60	55	-.74	.67
3314	5.90	20	43	4.8561	276	28	.33	-1.03
3611	5.10	20	44	10.3342	169	4	-.49	-.33
612	5.04	20	49	50.5889	337	8	-.12	-.10
1434	5.14	20	53	4.8952	281	44	-1.06	.40
3365	5.10	20	54	24.0994	262	19	-1.48	.69
3289	6.00	20	56	11.7776	332	16	.10	-.36
895	5.02	21	2	15.5583	39	22	-.25	.23
3852	5.60	21	4	21.5726	84	27	-.29	.10
835	4.38	21	5	54.7207	119	36	-.08	-.37
3448	5.00	21	7	26.3909	234	49	-1.67	.75
3909	5.10	21	11	6.3693	57	52	-.64	.59
3518	5.50	21	13	2.4696	213	1	-1.56	.61
619	4.98	21	16	14.3279	322	55	-1.62	1.29
1508	4.63	21	17	58.1462	202	21	-1.22	.27
627	4.88	21	20	9.0964	298	37	.07	-.59
893	3.42	21	22	6.5766	19	14	.32	-.35

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .28

MATRIX OF WEIGHTCOEFFICIENTS

.0826

UNKNOWNS:

DELTA PHI.....:	.391	.0002	.0503
DELTA LAMBDA COS(PHI):	-.258	.0002 -.0004	.0313
DELTA Z.....:	-.483		

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 53 13 17.1710

LONGITUDE= -6 34 7.9250

ESTIMATE OF ST. DEV.:

.153

.119 *SEC PHI

STATION....:SCHOORL

INSTRUMENT.:NI2ASTROLABE

CHRONOMETER:TIMEREC.ND3

OBSERVER...:C.DE VRIES

DATA.....:SEPT.1,1977

APPROXIMATE VALUES

LATITUDE.....: 52 41 56.0000

LONGITUDE.....: -4 41 18.0000

ZENITHDISTANCE.....: 29 59 50.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3794	5.70	19	43	45.6225	32	48	-2.98	.93
590	4.34	19	47	3.2369	342	22	-1.56	.08
3587	5.70	19	48	34.4671	151	50	-.13	.21
3774	5.40	19	51	.1833	73	41	-2.48	.75
3296	5.50	19	51	57.3674	254	33	.91	-.36
3330	5.90	19	53	28.7956	244	56	.81	-.12
3415	5.30	19	54	40.4458	212	17	.67	.21
569	3.14	19	55	39.0199	329	45	-.97	-.22
3714	5.20	19	56	44.3480	106	37	-.81	-.23
1559	4.42	19	58	19.7422	112	55	-.60	-.29
3281	6.00	19	59	14.9343	267	21	-.37	.68
851	5.22	20	0	41.5945	26	58	-1.69	-.34
3247	5.50	20	1	39.9906	290	2	.03	-.23
3769	5.30	20	3	37.9248	86	46	-1.30	-.19
1468	5.48	20	5	57.5331	214	34	.68	.20
3472	6.00	20	8	13.3293	197	53	.37	.44
1594	5.74	20	10	19.8036	21	31	-2.20	.19
848	3.85	20	12	31.2138	74	52	-2.11	.40
3303	5.00	20	14	9.1680	266	7	.40	-.07
3649	5.50	20	16	46.7843	143	45	.84	-.96
3799	4.60	20	18	17.8365	80	35	-1.32	-.29
786	5.24	20	19	33.0987	136	28	.18	-.47
608	3.91	20	21	.2168	276	38	.52	-.41
595	4.96	20	22	16.1670	295	5	.60	-.93
587	5.13	20	24	18.9132	311	11	.09	-.83
3611	5.10	20	26	8.9914	162	37	.74	-.43
606	5.51	20	29	41.8939	338	6	-1.11	-.27
1583	4.64	20	31	34.2181	99	45	-.56	-.65
3800	4.50	20	34	42.3204	91	16	-2.15	.75
674	3.82	20	36	34.7567	228	40	-.38	1.22
3314	5.90	20	38	21.9309	277	18	-.78	.88
882	5.20	20	41	49.9053	49	51	-2.36	.36

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .33

MATRIX OF WEIGHTCOEFFICIENTS

.0810

UNKNOWNS:

DELTA PHI.....:	-1.197	-.0005	.0509
DELTA LAMBDA COS(PHI):	.841	-.0004	.0003 .0313
DELTA Z.....:	-.585		

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 52 41 54.5664

LONGITUDE= -4 41 16.1415

ESTIMATE OF ST. DEV.:

.163

.129 *SEC PHI

STATION....: HARIKERBERG

INSTRUMENT.:NI2ASTROLABE

CHRONOMETER:TIMEREC.ND3

OBSERVER...:C.DE VRIES

DATA.....:SEPT.13,1977

APPROXIMATE VALUES

LATITUDE.....: 52 14 16.0000

LONGITUDE.....: -6 32 20.0000

ZENITHDISTANCE.....: 29 59 50.0000

OBSERVATIONS AND ADJUSTMENT

STAR	MAGN	UT1			AZIMUTH		L	E
3769	5.30	19	9	15.6237	85	60	-4.97	.79
851	5.22	19	12	8.8640	26	23	-3.86	.09
1468	5.48	19	15	34.6024	216	46	-7.95	1.04
760	5.45	19	17	27.5705	151	8	-4.84	-1.02
3303	5.00	19	19	45.4328	266	57	-6.07	-.37
3508	4.60	19	22	3.0610	191	37	-7.22	.52
1594	5.74	19	23	33.9292	20	52	-4.58	.77
3778	5.70	19	25	.4333	90	51	-4.79	.51
608	3.91	19	26	3.2494	277	22	-5.84	-.37
606	5.51	19	27	28.0375	338	46	-4.97	.39
3585	4.90	19	30	21.3558	169	22	-5.49	-.81
3839	5.50	19	32	34.9261	60	9	-4.16	.36
612	5.04	19	35	4.0343	338	29	-4.86	.27
1583	4.64	19	36	30.8125	98	51	-4.66	.21
3657	5.10	19	38	23.6126	147	43	-5.74	-.03
3314	5.90	19	43	23.0531	278	1	-5.21	-.98
643	3.36	19	44	56.9273	253	53	-6.78	.11
3389	5.90	19	46	22.2834	247	56	-7.64	.89
3276	5.40	19	47	42.3636	322	8	-4.70	-.32
1593	5.50	19	49	39.8598	14	49	-3.02	-.86
1434	5.14	19	52	46.7461	283	11	-5.58	-.49
614	5.66	19	53	46.0142	296	37	-6.75	1.03
3365	5.10	19	56	17.8604	264	11	-6.90	.41
1604	5.83	19	57	45.5266	76	23	-4.19	.19
1575	5.00	20	1	42.9010	126	48	-4.12	-1.06
835	4.38	20	3	34.2092	116	58	-5.17	.25
852	4.91	20	4	33.4413	100	34	-4.35	-.14
3852	5.60	20	6	13.5374	82	52	-4.63	.51
619	4.98	20	8	36.9017	324	2	-4.01	-.95
895	5.02	20	11	27.9719	38	15	-2.74	-.97
3448	5.00	20	12	53.7221	237	44	-7.27	.42
3585	4.90	20	16	4.6944	190	38	-6.29	-.41

NUMBER OF STARS: 32

ESTIMATE OF VARIANCE: .45

MATRIX OF WEIGHTCOEFFICIENTS

.0770

UNKNOWNS:

DELTA PHI.....:	1.204	-.0017	.0527
DELTA LAMBDA COS(PHI):	-1.059	-.0017	-.0002 .0313
DELTA Z.....:	-5.314		

RESULTS RELATED TO THE C.I.O.:

LATITUDE = 52 14 16.9486

LONGITUDE= -6 32 21.3145

ESTIMATE OF ST. DEV.:

.186

.154 *SEC PHI