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(NASA-TM-X-1370) DATA OBTAINED FROM A FLIGHT TEST OF A LOW DENSITY PHENOLIC NYLON CHARRING ABLATOR AT 8.15 KM/SEC (NASA) 152 p

N74-73765

Unclas
00/99 27427

FACILITY
(PAGES)
TMX-1370
(NASA CR OR TMX OR AD NUMBER)
(THRU)
2D
(CODE)
33
(CATEGORY)

CLASSIFICATION CHANGE

TO - UNCLASSIFIED [redacted]

By authority of E.O. No. 11652

Changed by O. H. Werkheiser Date 12/31/73

~~NOFORN~~

DATA OBTAINED FROM A FLIGHT TEST OF A LOW DENSITY PHENOLIC NYLON CHARRING ABLATOR AT 8.15 km/sec

by Robert J. Keynton and Robert P. Rhinehart

Langley Research Center

Langley Station, Hampton, Va.

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION • WASHINGTON, D. C. • APRIL 1967

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DATA OBTAINED FROM A FLIGHT TEST OF A LOW DENSITY PHENOLIC NYLON CHARRING ABLATOR AT 8.15 km/sec*

By Robert J. Keynton and Robert P. Rhinehart
Langley Research Center

SUMMARY

The Reentry E experiment was a flight test of a low density phenolic nylon charring ablator. A standard NASA Scout vehicle plus a fifth stage was used as the test vehicle. The spacecraft reentered the earth atmosphere at 8.15 km/sec at a flight-path angle of -0.14 rad. The nose cap was exposed to a maximum stagnation heating rate of 9.20 MW/m^2. Although data recorded during VHF blackout were lost, preblackout and postblackout data were obtained by a second transmitter which was transmitting in real time. This report presents data obtained during the flight test which will be used in evaluating the effectiveness of the ablation material. The ablation material itself is not evaluated in this report. A description of the spacecraft, nose-cap sensors, and spacecraft motion instrumentation is also presented.

INTRODUCTION

The Langley Research Center has a history of using the rocket-propelled vehicle technique for obtaining flight test data. The Scout Reentry Heating Program is an extension to the research done with smaller rocket vehicles and is intended to extend the reentry technology to supercircular speeds. Since existing ground test facilities provide only partial simulation of the actual flight environment, the flight tests of the Scout Reentry Heating Program have as their objective the attainment of the required flight test data to realistically extrapolate ground tests to flight conditions.

Experiments in the Scout Reentry Heating Program have been of three general types: (1) total heat-transfer measurement, (2) radiative heat-transfer measurement, and (3) thermal protection material tests. The Reentry E experiment is of the third type and was conducted to obtain data on a low density phenolic nylon charring ablator, which was chosen on the basis of ground tests and was expected to perform efficiently and effectively in the reentry environment to which it was to be subjected.

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*Title, Unclassified.

[redacted]

The test objectives were

(a) To determine the thermal effectiveness of the material in a severe flight environment which can be only partially simulated on the ground

(b) To determine the char integrity in this environment

(c) To validate the analytical and computational procedures for extrapolating data from ground-based facilities to a more severe flight environment

The Reentry E spacecraft was launched by an NASA Scout vehicle (141-C) on February 9, 1966, from the NASA Wallops Station. The spacecraft reentered at about 8.15 km/sec at an altitude of 102 km and a flight-path angle of -0.14 rad and impacted 1723 km downrange. This first report on the flight is not intended to evaluate the ablation material performance. The report contains the basic Reentry E flight experiment data, including nose-cap thermocouple and ablation sensor measurements, rate gyro, and accelerometer data. Also included is a description of the above instrumentation and a discussion of the reentry trajectory and spacecraft motion data. The data presented herein has been examined sufficiently to establish its validity and consistency.

SYMBOLS AND ABBREVIATIONS

C_DS	drag parameter, Axial-force coefficient × Reference area, meters^2
D	diameter, meters
d	sensor depth below original material surface, meters
H	altitude, meters
L	length, meters
M	free-stream Mach number
N_{Re}	Reynolds number based on 1 meter
$\dot{q}_c$	cold wall convective heating rate, watts per meter^2
$\dot{q}_r$	radiative heating rate, watts per meter^2
R	radius, meters

S	reference area, spacecraft base area, 0.6797 meter^2
s	distance around the body contour, meters
T	temperature, ^{o}K
t	time, seconds from launch
X,Y,Z	body axes
x,y,z	distance along X-, Y-, and Z-axis, respectively, meters
γ	earth-relative flight-path angle, radians
θ	angle relative to tower side of the yaw axis, radians
σ	standard deviation
BO	burnout
ETR	Eastern Test Range
FM	frequency modulation
IRIG	Inter Range Instrumentation Group
LP	light pipe sensor
NC	nose cap
PAM	pulse amplitude modulation
SW	spring wire sensor
TC	thermocouple
TM	telemeter
VHF	very high frequency

VSWR voltage standing-wave ratio

Xmtr transmitter

SPACECRAFT

The Reentry E spacecraft consisted of a 0.147-rad blunt-cone configuration 0.94 m long. Figure 1 shows a photo of the spacecraft, dimensions, and component assemblies as well as the section used to adapt the spacecraft to the Scout fourth-stage motor. The cone structure was a magnesium shell divided into three sections by insulating fiberglass rings which allowed the sections to function as telemetry antennas. The conical structure was thermally protected from reentry heating by an outer skin of teflon. Housed within the spacecraft were two VHF transmitters, one of which transmitted data continuously in real time, while the second one was used in conjunction with a continuous loop tape recorder which provided transmission of the data recorded during VHF blackout. Other spacecraft components included battery power supplies, C-band transponder, accelerometers, pitch and yaw rate gyros, and other monitoring instrumentation all of which were housed in a sealed container mounted within the spacecraft. In addition to the instrumentation, the spacecraft also contained a 43.2-cm-diameter spherical rocket motor which was used to provide additional velocity to the spacecraft over that normally provided by the four-stage Scout vehicle. Given in table I are the mass, center of gravity, and moment of inertias for the spacecraft alone and for the spacecraft plus adapter section.

Experimental Nose Cap

The Reentry E experiment, which was the nose cap, was molded from a low density phenolic nylon charring ablation material. The composition was 40 percent (by mass) powdered nylon, 25 percent phenolic resin, and 35 percent phenolic microballoons molded to a density of 0.56 g/cc. In order to obtain a three-dimensional temperature time-history distribution and surface recession information through the nose cap, sensors were installed in six concentric circles and were located at varying depths. The sensor instrumentation consisted of 26 chromel-alumel thermocouples, 2 nose-cap substructure thermistors, and 4 light pipe and 12 spring wire sensors. Details of the nose-cap assembly procedures, instrument construction and assembly procedures, and quality control techniques are given in reference 1. Photographs of the nose cap are shown in figure 2 as well as nose-cap dimensions and instrument location. Instrument location is presented in tabular form in table II.

Nose-cap thermocouples.- All nose-cap thermocouples (fig. 3) were constructed from 0.127-mm-diameter (36 gage) chromel-alumel thermocouple wire with a resistance

lap welded hot junction. The hot junction was centered on the end of a 6.3-mm-diameter plug of nose-cap material and the leads were inserted in quartz tubing which was bonded in grooves on each side of the thermocouple plug. The length of wire across the end of the plug was along an isotherm during nose-cap heating and served to reduce errors due to thermal conduction in the wire.

Light pipe ablation sensors.- The light pipe ablation sensor (fig. 4) was designed to measure nose-cap surface location (ref. 2). When several sensors are located at various depths in the ablator and correlated with time, they provide a measurement of surface recession rate. The assembly consisted of a 0.406-mm-diameter sapphire rod inserted into a through-hole in a 6.3-mm plug of nose-cap material. The sapphire rod was used to channel the light from the surface of the ablating material through an infrared filter to a photosensitive diode. A predetermined diode resistance level was selected experimentally.

Spring wire ablation sensor.- The spring wire ablation sensor (fig. 5) consisted of a 0.508-mm-outside-diameter molybdenum tube attached to a snap-action switch (ref. 2). A 0.076-mm-diameter tungsten wire knotted at one end was threaded through the tubing and was attached to the leaf spring of the switch so as to hold the spring under tension. The tubing was then embedded in the ablator at the desired depth. Closure of the sensor switch could be brought about either by the melting of the molybdenum tube or by the oxidation of the tungsten wire. Because of the large temperature gradient at or just beyond the char surface, this melting or oxidation would be expected to occur near the char surface. A number of these units located in the ablator at varying depths, and correlated with time, provide a measurement of surface recession rate.

Spacecraft Data System

The Reentry E spacecraft utilized a PAM/FM/FM data system. Thirteen IRIG subcarrier data channels were used. Telemetry channel assignments are given in table III. Four of these channels transmitted commutated data, the remaining were continuous data channels. All subcarrier channels modulated two separate radio-frequency (rf) links. A block diagram of the data system is shown in figure 6. One of the rf links (240.2 MHz) transmitted the data as it occurred and the other (225.7 MHz) transmitted the data which had been recorded 85 sec earlier. The recording was accomplished by a continuous-loop magnetic tape recorder. This phase of the data system was necessitated by an expected 70-sec rf attenuation (blackout) period caused by ionized air enveloping the spacecraft during part of the reentry period. The conical shell sections which constituted the spacecraft substructure were used as the telemetry antennas. The forward frustum, with the center frustum as neutral, formed a split body antenna for the 240.2 MHz (real-time data) transmission. The aft frustum, with the center frustum as a neutral, formed a split body antenna for the 225.7 MHz (delayed data) transmission. The spacecraft

contained two rate gyros, four accelerometers, a C-band transponder, and an on-board coded timer. Temperatures of critical components were monitored as well as were power supply voltages, transmitted power, and events (power transfer and separation). Data from these quantities are not included in this report; however, anomalies within the data system are noted in a later section.

Pitch and yaw rate gyros.- The pitch and yaw rate gyros were driven by internally supplied alternating current and had an internal inductive demodulator-type output. The gyros had calibrated soft stops near full scale that served as additional calibration points in case the units were operated beyond the full-scale range.

Accelerometers.- Accelerations were measured along all three axes with four non-pendulous servo accelerometers. Two accelerometers, low and high ranges, were used to measure the longitudinal accelerations. The low range accelerometer was to provide a sensitive measurement to indicate the onset of drag and to act as a calibration of the low portion of the high range accelerometer. The other two accelerometers measured the normal and transverse accelerations.

On-board coded timer and reference oscillator.- Because of the technique used to obtain data during blackout a coded timer was required for time correlation during that period. A reference oscillator was used for tape wow-and-flutter compensation.

C-band transponder.- In order to facilitate radar tracking, a C-band beacon was attached to the top of the telemetry deck inside the reentry body as shown in figure 1(b). The beacon output was fed to a side-looking dipole antenna located as shown in the same figure. This arrangement resulted in a signal-strength pattern with a sharp null on the side opposite the antenna. The antenna was fed with a peak power of 400 W. The beacon was interrogated by the Bermuda FPS-16 radar from acquisition until C-band radio-frequency blackout.

GROUND SUPPORT

The ground support for this flight consisted of telemetry, optical, radar, and atmospheric sounding stations.

Telemetry

Six VHF telemetry receiving stations – two land based, two seagoing, and two airplanes – were used and are shown pictorially in figure 7. Of the six stations, two experienced malfunctions which made difficult the use of their data. The Eastern Test Range Airplanes, Silver I and Silver II, experienced difficulty with their on-board range time generators thus producing an erroneous time code. All other telemetry stations recorded usable data. The duration of usable data from all stations is depicted in figure 8.

Radar

Three radar stations, two land based and one shipboard, were intended to obtain trajectory data before and after blackout. During the flight, however, tracking data (fig. 8) were obtained only from the Wallops and Bermuda Stations. The ETR radar ship (General H. H. Arnold) did not obtain track.

Optical

Two NASA airplanes were equipped with spectrographic and events cameras. Typical data from these cameras are presented in the discussion on flight data.

Atmospheric Data

Rawinsondes and rocket-boosted sondes were utilized in defining the atmospheric conditions during the Reentry E flight period. Soundings were made 24 hr prior to flight, 1 hr after launch, and 24 hr after the flight. Meteorological launchings were made from land bases at Antigua, Bermuda, and Cape Kennedy. Launchings were also made from a meteorological station aboard the ETR tracking ship. Figure 9 is a composite plot of density against altitude taken from these soundings and is compared with the 1962 standard atmosphere (ref. 3). The maximum difference between the data and reference 3 was found to be less than 6 percent. The difference is considered small and since the 1962 standard atmosphere was already programed in the computer, the 1962 standard atmosphere was adopted for data reduction and trajectory computation.

FLIGHT DATA

The space vehicle was launched from the NASA Wallops Station on February 9, 1966, at 41:00:55 GMT (7:55 p.m. EST). All stages of the Scout launch vehicle functioned as planned. The sequence of events of the entire trajectory is given in table IV and figure 10. The following sections present the trajectory and telemetry data obtained during reentry.

Trajectory

Vehicle and spacecraft position and velocity data were obtained from the Wallops radar complex and the Bermuda FPS-16 radar. Wallops provided tracking from lift-off through fourth-stage ignition. Bermuda provided tracking from about third-stage ignition to C-band blackout which was 9 sec after onset of VHF blackout. No tracking data were obtained beyond this point. The portion of the radar trajectory from apogee to blackout is compared with the preflight predictions of flight-path angle and altitude in figure 11. This figure shows the flight trajectory deviation from the predicted nominal trajectory

which subjected the spacecraft to an environment very close to the 2σ undershoot condition.

Because there was no tracking beyond the C-band blackout period, the remaining portion of the trajectory had to be constructed with the preblackout tracking data as a starting reference. This construction was accomplished by a series of computer runs which utilized the Bermuda radar inputs for the initial conditions. These computer runs were then matched to the spacecraft on-board longitudinal accelerometer time history. Slight adjustments were made to the initial conditions in order to provide a better agreement of the flight and computed axial accelerations during reentry. The adjustments required were well within the quoted accuracy of the radar tracking system. This simulation provided good agreement, as shown in figure 12, with the flight data until $t = 480$ sec. Any simulation beyond this point is not considered to be valid at this time since the spacecraft performance instrumentation indicates that the spacecraft was at large angles of attack during this period and the trajectory is probably not well represented by the three-degree-of-freedom simulation used. Figures 13 to 15 show a comparison between the Bermuda radar data and the final computer analysis utilized in the accelerometer matching. Figure 16 shows the drag parameter plotted against Mach number for the R-4 spacecraft (ref. 4), wind-tunnel analysis of a similar shape (ref. 5), and the values used in the present simulation. It was concluded in reference 4 that the abnormal variations shown in figure 16 for R-4, which was identical in shape to Reentry E, was largely due to changes in body geometry or flow conditions brought about by the asymmetrical nose-cap ablation process during reentry. A similar analysis for the Reentry E spacecraft has not been completed; therefore, the drag values used for this analysis represent those values expected for a spacecraft at small angles of attack and with a symmetrical nose configuration.

Figures 17 to 20 show plots of Mach number, Reynolds number, dynamic pressure, and total stagnation-point heating rate plotted against time. The radiative segment of the total heating rate was always less than 2 percent. Thus the heating rate shown is almost totally convective. Figure 21 shows a plot of altitude as a function of velocity. All these plots represent data obtained from the final trajectory simulation runs and is believed to be an accurate description of the reentry.

Telemetry

Upon entering blackout all sensors appeared to be functioning normally. When the VHF signal was acquired after blackout, several thermocouples and light pipe and spring wire sensors had output signals which indicated that they had been activated by the environment. Except where noted, all spacecraft functions were operating within acceptable limits throughout the flight. Since the delay playback transmitter had failed prior to blackout the time histories of those sensors as they approached their full-scale condition

cannot be reported herein. However, the time histories of all sensors presented are for the time periods just prior to and, where possible, after blackout. The thermocouple, light pipe sensor, and motion data are considered to be accurate within 3 percent of the full scale while operating within the calibrated range of the instrument. As part of the development of ablation sensors for the Reentry E flight test, exhaustive arc-jet tests were conducted over a wide range of heating rates and shear levels. The results of these tests indicated that the spring wire and light pipe sensors made surface position measurements to an accuracy on the order of 0.25 mm.

Data system anomalies.- Two malfunctions within the spacecraft data system occurred during the flight. The most critical was the loss of the delay playback transmitter signal at 333.21 sec which was 77 sec prior to blackout. No further data were received through that link. It has been deduced that the most probable cause of data loss was an electron tube failure. This tube preceded the output stage of the transmitter resulting in the loss of transmitted power. Although data which were recorded during blackout were consequently lost, preblackout and postblackout data were transmitted by the real-time transmitter.

The second malfunction was the failure, shortly after lift-off, of the 30 kHz subcarrier oscillator which was to provide continuous data from one thermocouple (number 12). This thermocouple was also connected to switch positions 15 and 30 on the 22 kHz commutated channel so that data from the thermocouple were not lost. The available information is not adequate to determine the cause of this failure.

Thermocouples.- Of the 26 thermocouples mounted in the nose cap, 7 exceeded their full-scale range during blackout. Thermocouples were considered to have exceeded their full-scale range when the faired data exceeded 1650° K. Data from that time on were considered invalid. Figure 22 presents the temperature time histories of those thermocouples just prior to the blackout period.

As noted, the nose cap was instrumented to yield temperature time histories along both the radial and longitudinal axes. Figure 23 compares data from thermocouples located at the same depth but at different radial locations. Temperature time histories for thermocouples at different depths and locations are given in figures 24 to 26. The temperature time histories from these thermocouples appear to follow reasonable trends except for thermocouples 4 and 25 (figs. 26(a) and 24(b), respectively) which indicate unexpected variations. A reexamination of the original data confirmed that the trends indicated by the plots are not due to data reduction errors or scatter caused by intermittent marginal signal strength. In addition, there is no indication from any of the records that these trends are caused by sensor or data system malfunction. From these figures it may be observed that the deepest thermocouple on the face of the nose cap to exceed its full-scale range (1650° K) was TC 22 at a depth of 10.1 mm. The deepest

thermocouple which responded to the heat pulse was TC 24 located on the 0.1778-m-diameter circle at a depth of 30.6 mm.

The two corner thermocouples (TC 46 and 47) survived the blackout period but exceeded their full-scale range soon thereafter. Figure 27 presents the temperature time histories of these two thermocouples.

The purpose of figures 22 to 27 is to show the trends of the temperature distribution through the nose cap. For detailed analysis of material performance, each data point is presented in tables V and VI. These tables were prepared from the computer print-out sheets as tabulated from raw data. As a consequence, the tables contain some erroneous points caused by marginal signal strength. In addition, at certain times data could not be read or the data were outside the quoted range of the sensor. These points are indicated in the tables by a reading of 9999.9. Since the values which are erroneous deviate greatly from the general trend, these points are quite obvious and consequently no attempt has been made to remove bad data or the 9999.9 values.

Light pipe sensors.- Upon reentry the data from the light pipe sensors were expected to show a continuously rising voltage until the nose cap had ablated sufficiently to expose the sapphire rod to the ablating surface. Afterward the voltage time history would no longer be predictable. The sensors were designed so that they would not respond to a body radiating at temperatures less than 1755° K. Detailed discussion of light pipe and spring wire sensor operation is presented in reference 2.

Upon emergence from blackout two of the four sensors (42 and 45) were producing output signals of adequate magnitude (fig. 28) to indicate that the light pipe sensors had experienced temperatures in excess of 1755° K. However, it was not possible from these data alone to determine if the sensors had been exposed to the ablating surface. Correlating the data from spring wire sensors (discussed in the following section) in proximity of the light pipe sensors in question indicates that light pipe sensors 42 and 45 were exposed to the ablating surface during blackout.

Spring wire sensors.- The spring wire sensors produced a permanent switch closure when actuated. Five of the 12 spring wire sensors were activated during the flight and four were activated during blackout. These were sensors 30, 34, 35, and 38. The fifth, sensor 41, was observed to function after blackout at 465.7 sec after launch, indicating that the surface above that sensor had receded to a depth of 7.62 mm at this time. Table VII presents a summary of ablator sensor status after blackout.

Motion data.- A preliminary review of the motion data (rate gyro and accelerometer data) indicated that upon emergence from blackout (t = 464 sec) the spacecraft was in a near roll resonant condition, had a nonrolling trim due to either mass unbalance or aerodynamic conditions, had a total angle of attack of approximately 0.176 rad, and was experiencing some trim amplification. The spacecraft apparently passed through

resonance 5 sec later (t = 469 sec) whereupon the orientation of the trim shifted π rad and amplification of the trim continued. A more detailed evaluation of the spacecraft motions is currently being conducted.

Figures 29 to 32 presents the data from the pitch and yaw gyros and the normal and transverse accelerometers at 0.01-sec intervals from t = 388 to 506.5 sec. Included in these figures are curves representing smoothed values of the data. This curve was machine generated using a nine-point numerical filter. Longitudinal acceleration is given in figure 12. In figures 30(d), 31(c), and 31(d), data for approximately 4.75 sec have been deleted because examination of the raw data showed that the computer program was introducing erroneous data while switching from one data source to another (Bermuda to Range Recoverer magnetic tapes). The data during the deleted segment were beyond the full-scale range of the instrument.

All data, from transmitter to final plots, were processed by automatic machine techniques. At present the automatic techniques cannot remove bad points or excessive scatter caused by radio-frequency interference (RFI). Since these erratic points are obvious no attempt was made to remove them from the final plots.

The exact locations of the motion sensors relative to the spacecraft nominal burnout center of gravity are given in table VIII.

The roll rate of the spacecraft, as determined by signal strength records, was 3.1 Hz prior to blackout. However, upon emergence from blackout the records indicated a marked difference in signal pattern which continued for the remainder of the flight. The roll rate after blackout cannot be determined from signal strength alone and must await a more complete motion analysis.

Optical Coverage

The reentry was covered by two NASA optical airplanes with the primary function of obtaining reentry events and spectral data. The visible portion, as recorded by the airborne optics (t = 435 sec to t = 480 sec), appeared to be normal, with the exception of a small flash which occurred at approximately t = 459.8 sec. This flash is shown in figures 33 and 34 as viewed by the NASA 238 airplane. Figure 33 presents a portion of the visible trace as viewed by the RC-5 ballistic camera with timing, while figure 34 shows a first-order spectrum as recorded by a K-37 ballistic camera utilizing a 150 line/mm grating. This small flash, which occurs shortly after peak heating, appears to be the green system of the aluminum oxide molecule. This identification is based on the fact that in the aluminum oxide system the band heads are degraded to the red and all the more intense bands are found in the spectrum. (See ref. 6.) These include the heads at 4470.5 Å, 4648.2 Å, 4842.1 Å, 5079.3 Å, and 5336.9 Å. Since thermistors located on the substructure of the nose cap and afterbody thermocouples

(table IX) showed little or no rise (fig. 35) during reentry, it is believed that the flash shown in figures 33 and 34 is the combustion of the aluminum umbilical bracket (fig. 1) located at the rear of the spacecraft.

CONCLUDING REMARKS

The low density phenolic nylon charring ablator was successfully flight tested at a computed maximum total stagnation-point heating rate of 920 MW/m^2. The flight-path angle and maximum entry velocity were -0.14 rad and 8.15 km/sec, respectively. The computed maximum reentry dynamic pressure was 245 kN/m^2 which occurred at a velocity of 4.7 km/sec upon emergence from blackout (463.5 sec after launch). Telemetry data were received prior to and after blackout. Data during blackout were lost due to a failure in the delay playback transmitter. Although data were lost during blackout, the data presented herein may be used to perform an analysis of the nose-cap material.

Langley Research Center,
National Aeronautics and Space Administration,
Langley Station, Hampton, Va., November 29, 1966,
711-02-04-01-23.

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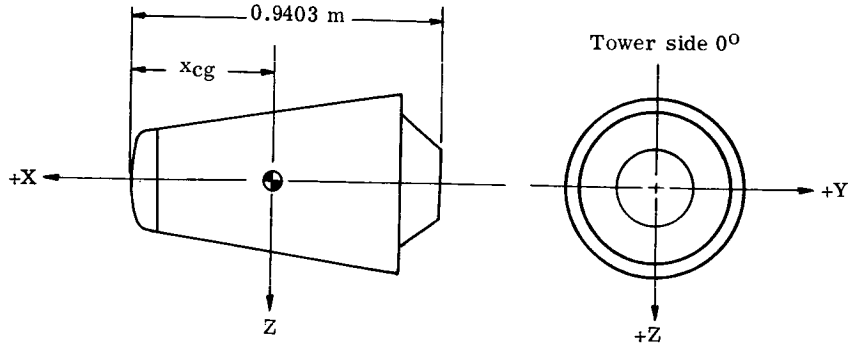
[redacted]

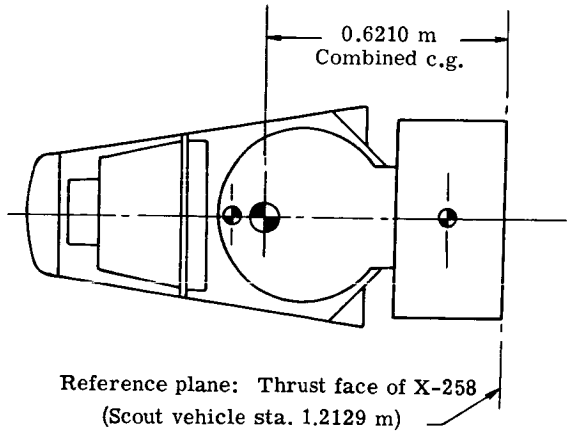
TABLE I.- MASS CHARACTERISTICS

(a) Spacecraft



Event	Mass, kg	Distance from station 0 to center of gravity, x_{cg}, m	Pitch inertia, I_Y, kg-m^2	Roll inertia, I_X, kg-m^2
Fifth-stage ignition	157.428	0.5125	1.372	0.4081
Propellant consumed	61.639	.7005		.1288
Fifth-stage burnout	95.791	.3914	.8989	.2793

(b) Spacecraft plus adapter section

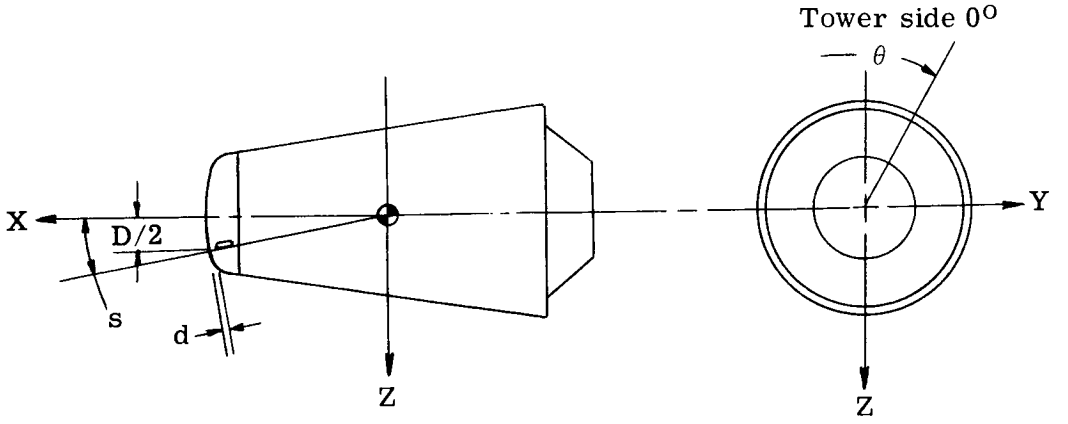


Components	Mass, kg	x, m	Pitch inertia, I_Y, kg-m^2	Roll inertia, I_X, kg-m^2
Payload	157.428	0.6843	1.372	0.4081
Fourth-to-fifth stage adapter	21.863	.1648	.0475	.0692
Totals	179.291			.4772

[redacted]

TABLE II.- NOSE-CAP SENSOR LOCATIONS

(a) Nose-cap thermocouples

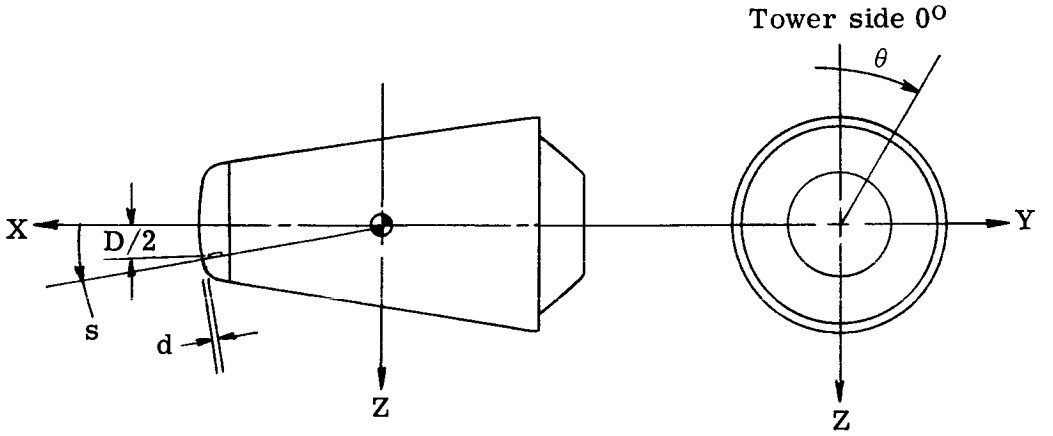


	s, m	D, m	θ, rad	d, m
Thermistor 1	0	0	0	0.0387
Thermistor 2	.0895	.1778	5.759	.0504
TC 3	.0254	.0508	0	.0077
TC 4	.0254	.0508	1.571	.0102
TC 5	.0254	.0508	3.141	.0128
TC 6	.0254	.0508	4.7115	.0153
TC 7	.0573	.1143	0	.0076
TC 8	.0573	.1143	.5235	.0051
TC 9	.0573	.1143	1.047	.0025
TC 10	.0573	.1143	1.571	.0102
[a]TC 11	.0573	.1143	2.094	.0229
TC 12	.0573	.1143	2.6175	.0255
TC 13	.0573	.1143	3.141	.0127
TC 14	.0573	.1143	3.665	.0203
TC 15	.0573	.1143	4.188	.0178
TC 16	.0573	.1143	4.7115	.0153
TC 17	.0573	.1143	5.235	.0280
TC 18	.0573	.1143	5.759	.0306
TC 19	.0895	.1778	0	.0076
[a]TC 20	.0895	.1778	.5235	.0024
TC 21	.0895	.1778	1.047	.0025
TC 22	.0895	.1778	1.571	.0101
TC 23	.0895	.1778	2.094	.0229
TC 24	.0895	.1778	2.6175	.0306
TC 25	.0895	.1778	3.141	.0128
TC 26	.0895	.1778	3.665	.0051
TC 27	.0895	.1778	4.188	.0178
TC 28	.0895	.1778	4.7115	.0153
[a]TC 29	.0895	.1778	5.235	.0203
TC 46	.1293	.2510	5.8196	.0127
TC 47	.1293	.2510	3.272	.0178

[a]Not connected.

TABLE II.- NOSE-CAP SENSOR LOCATIONS – Concluded

(b) Ablation sensors



	s, m	D, m	θ, rad	d, m
SW 30	0.03815	0.0762	0.7854	0.0050
SW 31	.03815	.0762	2.3561	.00996
SW 32	.03815	.0762	3.9269	.01262
SW 33	.03815	.0762	5.4977	.00729
SW 34	.07656	.1524	.26180	.00488
SW 35	.07656	.1524	1.3090	.00223
SW 36	.07656	.1524	1.8327	.02256
SW 37	.07656	.1524	2.8797	.01887
SW 38	.07656	.1524	3.4033	.00356
SW 39	.07656	.1524	3.9270	.01255
SW 40	.07656	.1524	4.9741	.00986
SW 41	.07656	.1524	6.0213	.00742
LP 42	.07656	.1524	.7854	.00254
LP 43	.07656	.1524	2.3561	.00887
LP 44	.07656	.1524	3.9269	.01148
LP 45	.07656	.1524	5.4977	.00627

TABLE III.- TELEMETRY CHANNEL ASSIGNMENT

(a) Continuous channels

Channel	Frequency, kHz	Measurement	Nominal range
5	1.3	Events monitor	0 to 5 V
6	1.7	Rate of pitch	±4 rad/sec
7	2.3	Rate of yaw	±4 rad/sec
8	3.0	Longitudinal acceleration	+15g to -35g
9	3.9	Longitudinal acceleration	-2g to 1g
10	5.4	Normal acceleration	±8g
11	7.35	Transverse acceleration	±8g
12	10.5	Coded time	1/100 sec
13	14.5	Ablation sensors	0 to 5 V
14	22.0	Temperatures	0 to 50 mV
15	30.0	Temperature	0 to 50 mV
16	40.0	VSWR and temperatures	0 to 40 mV
17	52.5	Tape speed compensation	
18	70.0	Temperatures	0 to 50 mV

[redacted]

TABLE III.- TELEMETRY CHANNEL ASSIGNMENT – Continued

(b) Commutated channel 13, 14.5 kHz

Switch position	Sensor	Range	Sensor type
1	---	0	Zero calibration
2,3	---	5.002 V	Full scale
4	---	2.512 V	Half scale
5	---	5.002 V	Full scale
6	---	2.512 V	Half scale
7,17,27	42	0 to 5 V	Light pipe
8,18,28	43	0 to 5 V	Light pipe
9,19,29	44	0 to 5 V	Light pipe
10,20,30	45	0 to 5 V	Light pipe
11	30	Step function	Spring wire
12	31	Step function	Spring wire
13	32	Step function	Spring wire
14	33	Step function	Spring wire
15	34	Step function	Spring wire
16	35	Step function	Spring wire
21	36	Step function	Spring wire
22	37	Step function	Spring wire
23	38	Step function	Spring wire
24	39	Step function	Spring wire
25	40	Step function	Spring wire
26	41	Step function	Spring wire

[redacted]

TABLE III.- TELEMETRY CHANNEL ASSIGNMENT – Continued

(c) Commutated channel 14, 22 kHz

Switch position	Thermocouple	Range	Thermocouple type
1	---	0	Zero calibration
2,3	---	54 mV	Full scale
4	---	27 mV	Half scale
5	---	54 mV	Full scale
6	---	27 mV	Half scale
7,22	4	0 to 1650° K	Chromel-alumel
8,23	6	0 to 1650° K	Chromel-alumel
9,24	13	0 to 1650° K	Chromel-alumel
10,25	15	0 to 1650° K	Chromel-alumel
11,26	17	0 to 1650° K	Chromel-alumel
12,27	18	0 to 1650° K	Chromel-alumel
13,28	19	0 to 1650° K	Chromel-alumel
14,29	26	0 to 1650° K	Chromel-alumel
15,30	12	0 to 1650° K	Chromel-alumel
16	21	0 to 1650° K	Chromel-alumel
17	22	0 to 1650° K	Chromel-alumel
18	47	0 to 1650° K	Chromel-alumel
19	---	+54.7 mV	Calibration reference
20	---	---	---
21	---	---	---

TABLE III.- TELEMETRY CHANNEL ASSIGNMENT – Continued

(d) Commutated channel 16, 40 kHz

Switch position	Sensor	Range	Function	Sensor type
1	---	0	Zero calibration	
2,3	---	38.7 mV	Full scale	
4	---	19.4 mV	Half scale	
5	---	38.7 mV	Full scale	
6	---	19.4 mV	Half scale	
7	101	0 to 1650° K	Afterbody temperature	Thermocouple
8	102	0 to 1650° K	Afterbody temperature	Thermocouple
9	103	0 to 1650° K	Afterbody temperature	Thermocouple
10	104	0 to 1650° K	Afterbody temperature	Thermocouple
11	1	---	NC substructure temperature	Thermistor
12	2	---	NC substructure temperature	Thermistor
13	---	0 to 40 mV	VSWR direct forward	
14	---	0 to 40 mV	VSWR direct reverse	
15	---	0 to 40 mV	VSWR delayed forward	
16	---	0 to 40 mV	VSWR delayed reverse	
17	1	---	Xmtr delay temperature	Thermistor
18	2	---	Cold junction 1	Thermistor
19	3	---	Xmtr direct temperature	Thermistor
20	4	---	Free-air temperature	Thermistor
21	5	---	Tape recorder temperature	Thermistor
22	6	---	Cold junction 3	Thermistor
23	7	---	Direct VSWR temperature	Thermistor
24	8	---	Delay VSWR temperature	Thermistor
25	9	---	Cold junction 2	Thermistor
26	---	---	300-V monitor	
27	---	---	Stable 28-V monitor	
28	---	---	Unstable 28-V monitor	
29	---	---	---	
30	---	---	---	

TABLE III.- TELEMETRY CHANNEL ASSIGNMENT – Concluded

(e) Commutated channel 18, 70 kHz

Switch position	Thermocouple	Range	Thermocouple type
1	---	0	Zero calibration
2,3	---	54 mV	Full scale
4	---	27 mV	Half scale
5	---	54 mV	Full scale
6	---	27 mV	Half scale
7,22	3	0 to 1650° K	Chromel-alumel
8,23	5	0 to 1650° K	Chromel-alumel
9,24	7	0 to 1650° K	Chromel-alumel
10,25	8	0 to 1650° K	Chromel-alumel
11,26	9	0 to 1650° K	Chromel-alumel
12,27	10	0 to 1650° K	Chromel-alumel
13,28	14	0 to 1650° K	Chromel-alumel
14,29	16	0 to 1650° K	Chromel-alumel
15,30	23	0 to 1650° K	Chromel-alumel
16	46	0 to 1650° K	Chromel-alumel
17	24	0 to 1650° K	Chromel-alumel
18	25	0 to 1650° K	Chromel-alumel
19	27	0 to 1650° K	Chromel-alumel
20	28	0 to 1650° K	Chromel-alumel
21	---	+54.7 mV	Calibration reference

[redacted]

TABLE IV.- SEQUENCE OF TRAJECTORY EVENTS

[Launch date: February 9, 1966; launch time: 41:00:55 GMT]

Event	Time from launch, sec	Altitude, m	Relative velocity, m/sec	Relative flight-path angle, rad	Relative azimuth, rad
First-stage ignition	0	0	0	0	0
First-stage burnout	68.6	31 595	1113	.741	2.220
Second-stage ignition	83.89	41 983	1031	.638	2.222
Second-stage burnout	126.0	84 741	2763	.472	2.238
Third-stage ignition	271.23	180 093	2424	.025	2.284
Third-stage burnout	310.00	174 934	4866	-.072	2.292
Spin-motor ignition	321.25	170 749	4882	-.084	2.297
Fourth-stage ignition	327.34	168 257	4891	-.092	2.300
Fourth-stage burnout	352.28	150 218	6883	-.140	2.238
Fifth-stage ignition	352.28	150 218	6883	-.140	2.238
Fifth-stage burnout	396.0	101 882	8183	-.146	2.354
VHF blackout	[a]410.7	84 641	8205	-.142	2.364
C-band blackout	[a]419.30	74 739	8219	-.139	2.368
VHF recovery	[a]464.0	28 487	4638	-.146	2.389
Impact	[b]596.3				

[a]As recorded by Bermuda station.
[b]Simulated trajectory.

[redacted]

[redacted]

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES

(a) Thermocouples 19, 21, and 26

TC 19; d = 0.0076 m

t, sec	T, °K
400.099	287.1
400.179	287.1
400.264	280.3
400.349	285.2
400.429	276.4
400.509	281.0
400.594	284.8
400.679	287.5
400.759	283.9
400.839	283.4
400.924	280.8
401.009	279.4
401.094	281.6
401.179	284.1
401.259	281.5
401.339	279.4
401.419	283.2
401.499	283.2
401.584	280.8
401.669	283.6
401.754	279.1
401.839	286.4
401.919	286.7
401.999	287.6
402.084	285.1
402.169	288.3
402.249	293.4
402.329	291.1
402.414	285.7
402.499	286.4
402.579	288.5
402.659	292.2
402.744	279.2
402.829	281.7
402.914	286.6
402.999	283.0
403.079	283.7
403.159	283.7
403.244	282.8
403.329	284.8
403.414	279.9
403.499	281.1
403.579	278.3
403.659	280.4
403.744	283.2
403.829	282.7
403.909	280.9
403.989	286.4
404.074	282.8
404.159	285.7
404.244	286.9
404.329	289.2
404.409	287.4
404.489	286.4
404.574	284.4
404.659	286.0
404.744	284.5
404.829	283.8
404.909	284.6
404.989	288.1
405.074	283.2
405.159	286.6
405.239	287.1
405.319	288.1
405.404	284.3
405.489	287.3
405.574	280.4
405.659	283.8
405.739	282.8
405.819	287.6
405.904	286.0
405.989	287.3
406.069	285.3
406.149	285.3
406.234	279.5
406.319	282.5
406.404	280.7
406.489	283.2
406.569	279.7
406.649	280.6
406.734	281.1
406.819	287.6
406.899	285.0
406.979	287.1
407.064	285.3
407.149	285.9
407.234	284.8
407.319	287.1
407.399	289.4
407.479	291.5
407.564	285.5
407.649	287.3
407.729	286.9
407.809	290.1
407.894	294.5
407.979	289.7

t, sec	T, °K
408.059	284.5
408.139	282.2
408.224	283.9
408.309	282.7
408.394	283.6
408.479	282.5
408.559	288.3
408.639	286.9
408.724	284.1
408.809	283.4
408.889	279.6
408.969	287.1
409.054	287.9
409.139	288.5
409.219	292.2
409.299	287.4
409.384	291.5
409.469	290.1
409.549	292.4
409.629	286.0
409.714	292.0
409.799	285.1
409.884	292.4
409.969	289.4
410.049	291.5
410.129	288.8
410.214	292.2
410.299	293.1
410.379	306.0
410.459	294.7

TC 21; d = 0.0025 m

t, sec	T, °K
400.115	280.7
400.281	303.8
400.445	302.2
400.611	308.4
400.775	308.2
400.941	304.7
401.111	308.4
401.275	303.3
401.435	306.6
401.601	305.0
401.771	308.2
401.935	307.5
402.101	308.1
402.265	312.9
402.431	308.9
402.595	310.2
402.761	306.6
402.931	305.9
403.095	310.2
403.261	310.7
403.431	306.6
403.595	308.4
403.761	313.2
403.925	315.1
404.091	314.0
404.261	318.6
404.425	312.7
404.591	315.1

t, sec	T, °K
404.761	313.2
404.925	320.0
405.091	315.2
405.255	319.8
405.421	319.8
405.591	317.0
405.755	324.7
405.921	324.0
406.085	319.6
406.251	320.7
406.421	326.4
406.585	319.4
406.751	324.2
406.915	324.3
407.081	324.3
407.251	324.9
407.415	327.8
407.581	326.2
407.745	325.3
407.911	326.4
408.075	327.8
408.241	326.9
408.411	326.9
408.575	326.0
408.741	329.8
408.905	331.7
409.071	333.7
409.235	333.0
409.401	329.5
409.565	333.7
409.731	335.3
409.901	334.6
410.065	337.9
410.231	335.9
410.395	341.5

TC 26; d = 0.0051 m

t, sec	T, °K
400.105	295.4
400.185	291.3
400.269	292.4
400.354	281.0
400.435	291.4
400.515	291.2
400.599	291.7
400.684	290.5
400.765	292.4
400.845	288.2
400.929	285.0
401.014	288.4
401.099	291.0
401.184	292.2
401.265	284.5
401.345	288.2
401.425	290.6
401.509	292.6
401.589	288.0
401.674	291.0
401.759	289.7
401.844	295.4
401.925	296.1
402.005	297.3
402.089	297.3
402.174	299.8
402.255	297.0
402.335	299.6
402.419	295.9
402.504	296.6
402.585	301.6
402.665	301.2
402.749	293.8
402.834	293.5
402.919	296.8
403.004	296.1
403.085	292.3
403.165	296.1
403.249	295.0
403.334	296.6
403.419	291.7
403.504	293.8
403.585	290.3
403.665	291.9
403.749	295.2
403.834	296.6
403.915	295.0
403.995	298.9
404.079	291.5
404.164	294.7
404.245	296.8
404.334	298.4
404.415	293.8
404.495	298.4
404.579	296.3
404.664	296.1
404.749	289.6
404.834	300.2
404.915	303.2
404.995	303.5
405.079	295.6
405.164	297.9
405.245	300.5
405.325	303.7
405.409	297.5
405.494	298.2
405.579	298.6
405.664	297.9
405.745	303.0
405.825	301.4
405.909	298.5
405.994	303.0
406.075	299.6
406.155	303.7
406.239	297.9
406.324	297.9
406.409	297.5
406.494	300.5
406.575	296.5
406.655	296.3
406.739	298.2
406.824	297.0
406.905	298.9
406.985	298.6
407.069	300.2
407.154	297.5
407.239	300.5
407.324	300.7
407.405	302.1
407.485	305.8
407.569	303.2
407.654	306.2
407.735	304.4
407.815	305.3
407.899	302.3
407.984	304.6
408.065	302.8

t, sec	T, °K
408.145	302.3
408.229	307.6
408.314	306.0
408.399	300.5
408.484	303.0
408.565	303.5
408.645	303.9
408.729	301.2
408.814	304.9
408.895	304.4
408.975	306.7
409.059	306.7
409.144	311.0
409.225	306.2
409.305	307.6
409.389	309.4
409.474	307.1
409.555	305.5
409.635	306.0
409.719	306.0
409.804	308.5
409.885	307.4
409.974	309.4
410.055	310.4
410.135	313.0
410.219	310.6
410.304	316.1
410.385	314.6
410.465	317.3

[redacted]

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(b) Thermocouples 3, 7, and 8

TC 3; d = 0.0077 m

t, sec	T, °K
400.207	307.4
400.287	291.5
400.370	307.2
400.455	298.9
400.537	304.6
400.617	290.5
400.697	303.0
400.777	291.7
400.860	301.6
400.945	290.3
401.027	302.3
401.107	292.1
401.190	308.3
401.275	295.2
401.357	309.5
401.437	294.7
401.517	306.9
401.597	290.3
401.680	301.9
401.765	291.7
401.847	304.2
401.927	295.1
402.007	304.2
402.087	295.2
402.170	301.6
402.255	289.1
402.337	302.8
402.417	292.4
402.500	301.9
402.585	291.0
402.667	304.9
402.747	293.1
402.827	304.2
402.907	288.7
402.990	303.0
403.075	289.1
403.181	302.6
403.311	291.7
403.396	304.4
403.431	293.8
403.487	305.1
403.567	296.3
403.650	305.8
403.735	295.4
403.817	304.4
403.897	292.1
403.977	307.2
404.057	294.2
404.140	307.4
404.225	292.6
404.307	304.6
404.387	292.6
404.467	306.9
404.547	292.4
404.630	304.6
404.715	289.6
404.797	300.5
404.877	288.2
404.960	305.6
405.045	294.5
405.127	311.1
405.207	294.5
405.290	304.2
405.375	292.4
405.457	308.3
405.537	294.0
405.620	305.3
405.705	292.2
405.787	307.9
405.867	290.1
405.947	309.0
406.027	289.8
406.110	306.0
406.195	293.6
406.277	299.8
406.357	287.8
406.440	301.6
406.525	287.0
406.607	302.1
406.687	291.2
406.770	306.5
406.855	292.1
406.937	303.9
407.017	294.2
407.097	299.8
407.177	292.4
407.260	306.9
407.345	289.9
407.427	306.0
407.507	291.5
407.590	305.6
407.675	293.3
407.757	309.9
407.837	292.9
407.920	303.5
408.005	291.5
408.087	299.1
408.167	291.9
408.250	302.8
408.335	294.7
408.417	303.5
408.497	291.2
408.580	300.7
408.665	291.7
408.747	297.4
408.827	285.6
408.910	303.0
408.995	288.2
409.077	309.5
409.157	294.9
409.237	302.8
409.317	291.9
409.400	307.6
409.485	291.5
409.567	312.8
409.647	292.4
409.730	301.2
409.815	288.9
409.897	305.3
409.977	295.4
410.060	313.3
410.145	300.9
410.227	310.4
410.307	295.4
410.390	304.6
410.475	291.0
410.560	303.0
410.645	9999.9
410.727	306.4
410.807	297.7

TC 7; d = 0.0076 m

t, sec	T, °K
400.218	303.5
400.298	291.9
400.381	298.2
400.466	291.0
400.548	291.4
400.628	289.6
400.708	296.3
400.788	287.2
400.871	297.2
400.956	286.6
401.038	295.4
401.118	288.4
401.201	306.7
401.286	295.6
401.368	305.8
401.448	300.5
401.528	304.4
401.608	297.2
401.691	297.9
401.776	291.2
401.858	294.4
401.938	287.0
402.018	295.2
402.098	290.5
402.181	294.0
402.266	286.8
402.348	296.1
402.428	291.2
402.511	299.8
402.596	288.7
402.678	307.2
402.758	298.6
402.838	304.6
402.918	298.2
403.001	303.5
403.086	293.5
403.198	297.5
403.328	288.4
403.401	297.2
403.436	288.2
403.498	297.2
403.578	287.8
403.661	297.5
403.746	291.7
403.828	300.9
403.908	290.0
403.988	307.2
404.068	297.2
404.151	307.6
404.236	301.4
404.318	306.0
404.398	297.7
404.478	303.7
404.558	294.2
404.641	299.3
404.726	291.9
404.808	293.3
404.888	284.7
404.971	297.0
405.056	290.5
405.138	300.0
405.218	289.4
405.301	299.5
405.386	289.1
405.468	302.1
405.548	294.0
405.631	304.4
405.716	298.9
405.798	308.1
405.878	303.5
405.958	306.0
406.038	296.5
406.121	306.0
406.206	297.5
406.288	298.2
406.368	292.1
406.451	295.6
406.536	288.2
406.618	294.0
406.698	282.4
406.781	296.5
406.866	285.2
406.948	296.3
407.028	286.1
407.108	294.9
407.188	290.0
407.271	301.4
407.356	296.3
407.438	306.0
407.518	295.9
407.601	309.9
407.686	300.7
407.768	305.1
407.848	300.2
407.931	303.5
408.016	297.9
408.098	300.2
408.178	291.9
408.261	296.5
408.346	288.6
408.428	296.1
408.508	288.4
408.591	292.1
408.676	286.3
408.758	296.0
408.838	281.6
408.921	298.8
409.006	287.3
409.088	305.8
409.168	294.3
409.248	301.2
409.328	297.9
409.411	307.6
409.496	299.3
409.578	310.8
409.658	303.5
409.741	305.3
409.826	300.5
409.908	302.8
409.988	296.1
410.071	305.6
410.156	297.9
410.238	301.2
410.318	293.3
410.401	297.0
410.486	290.0
410.571	295.4
410.656	9999.9
410.738	304.6
410.818	296.7

TC 8; d = 0.0051 m

t, sec	T, °K
400.223	310.0
400.303	302.8
400.387	307.9
400.472	301.2
400.553	300.9
400.633	296.3
400.713	296.3
400.793	293.3
400.877	300.5
400.962	293.5
401.043	306.3
401.123	301.6
401.207	312.2
401.292	305.8
401.373	316.4
401.453	310.2
401.533	316.4
401.613	308.8
401.697	310.2
401.782	301.4
401.863	309.3
401.943	304.4
402.023	308.3
402.103	302.8
402.187	301.2
402.272	296.5
402.353	306.7
402.433	299.1
402.517	311.1
402.602	301.9
402.683	314.2
402.763	308.8
402.843	317.8
402.923	309.7
403.007	315.6
403.092	306.0
403.207	310.2
403.337	302.3
403.403	310.2
403.438	304.9
403.503	309.0
403.583	301.9
403.667	307.6
403.752	303.5
403.833	306.3
403.913	302.3
403.993	320.6
404.073	310.2
404.157	322.2
404.242	313.7
404.323	319.3
404.403	314.6
404.483	318.6
404.563	311.8
404.647	312.2
404.732	306.0
404.813	308.1
404.893	301.9
404.977	312.4
405.062	308.3
405.143	312.0
405.223	305.8
405.307	309.7
405.392	305.1
405.473	315.1
405.553	309.3
405.637	319.7
405.722	314.2
405.803	324.0
405.883	318.6
405.963	323.1
406.043	317.1
406.127	327.8
406.212	315.1
406.293	315.6
406.373	310.2
406.457	311.3
406.542	308.1
406.623	313.8
406.703	305.1
406.787	311.8
406.872	306.0
406.953	311.3
407.033	305.1
407.113	313.1
407.193	305.8
407.277	318.6
407.362	316.6
407.443	322.9
407.523	314.0
407.607	330.4
407.692	324.4
407.775	327.8
407.853	322.9
407.937	327.1
408.022	317.3
408.103	321.1
408.183	314.9
408.267	317.4
408.352	315.4
408.433	315.6
408.513	313.8
408.597	311.6
408.682	307.7
408.763	310.0
408.843	305.4
408.927	314.0
409.012	309.7
409.093	325.0
409.173	316.2
409.253	324.5
409.333	315.6
409.417	331.5
409.502	321.3
409.583	334.6
409.663	328.1
409.747	329.5
409.832	322.9
409.913	325.6
409.993	322.5
410.077	332.4
410.162	323.3
410.243	326.7
410.323	323.3
410.407	317.6
410.492	314.3
410.577	319.6
410.662	9999.9
410.743	318.9
410.823	320.9

[redacted]

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(c) Thermocouple 9: d = 0.0025 m

t, sec	T, °K	t, sec	T, °K
400.225	320.7	408.027	342.2
400.309	315.1	408.109	341.8
400.392	320.5	408.189	338.0
400.477	313.8	408.272	341.0
400.559	314.7	408.357	337.0
400.639	309.7	408.439	339.2
400.719	312.0	408.519	335.6
400.799	306.3	408.602	336.6
400.882	308.4	408.687	333.9
400.967	304.6	408.769	335.6
401.049	313.8	408.849	330.5
401.129	311.1	408.932	338.6
401.212	320.2	409.017	335.0
401.297	317.1	409.099	343.5
401.379	327.3	409.179	340.1
401.459	324.2	409.259	344.6
401.539	325.6	409.339	339.9
401.619	323.3	409.422	348.4
401.702	322.3	409.507	346.8
401.787	315.6	409.589	356.5
401.869	322.1	409.669	355.0
401.949	317.6	409.752	352.4
402.029	321.8	409.837	350.2
402.109	317.5	409.919	350.3
402.192	316.9	409.999	348.1
402.277	312.5	410.082	354.2
402.359	316.3	410.167	349.9
402.439	310.7	410.249	350.9
402.522	316.0	410.329	351.3
402.607	314.5	410.412	347.3
402.689	324.0	410.497	339.3
402.769	321.8	410.582	350.5
402.849	330.0	410.667	9999.9
402.929	325.8	410.749	354.0
403.012	327.4	410.829	353.4
403.097	323.8		
403.215	324.3		
403.345	319.6		
403.406	325.1		
403.441	319.8		
403.509	324.0		
403.589	318.7		
403.672	324.2		
403.757	318.9		
403.839	319.6		
403.919	317.1		
403.999	326.4		
404.079	322.2		
404.162	333.0		
404.247	330.2		
404.329	332.9		
404.409	328.0		
404.489	332.9		
404.569	328.2		
404.652	330.5		
404.737	324.7		
404.819	324.1		
404.899	321.6		
404.982	329.6		
405.067	327.6		
405.149	333.5		
405.229	328.2		
405.312	324.7		
405.397	321.8		
405.479	326.2		
405.559	325.1		
405.642	331.1		
405.727	329.1		
405.809	338.0		
405.889	335.1		
405.969	338.9		
406.049	337.4		
406.132	341.1		
406.217	337.5		
406.299	335.2		
406.379	334.3		
406.462	331.7		
406.547	328.8		
406.629	334.1		
406.709	327.6		
406.792	331.8		
406.877	333.4		
406.959	334.5		
407.039	329.2		
407.119	328.1		
407.199	323.9		
407.282	334.0		
407.367	333.1		
407.449	337.8		
407.529	338.7		
407.612	349.1		
407.697	344.8		
407.779	344.4		
407.859	342.0		
407.942	347.8		

[redacted]

[redacted]

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(d) Thermocouple 4: s = 0.0254 m; d = 0.0102 m

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
400.067	307.2	407.860	310.6	465.610	1511.1	477.570	1327.7	485.560	1171.2
400.147	302.1	407.945	293.8	469.695	1523.1	477.655	1331.0	485.645	1156.5
400.230	300.2	408.027	303.9	469.780	1531.4	477.740	1333.5	485.730	9999.9
400.315	296.3	408.107	286.4	469.865	1515.7	477.825	1327.1	485.815	1160.5
400.397	299.5	408.190	306.2	469.950	1508.5	477.910	1326.5	485.900	1158.4
400.477	296.8	408.275	290.1	470.035	1507.8	477.995	1302.0	485.985	1149.6
400.560	300.5	408.360	305.1	470.120	1490.3	478.080	1329.9	486.070	1157.2
400.645	300.7	408.445	287.2	470.205	1492.5	478.165	1298.9	486.155	9999.9
400.727	301.9	408.527	308.1	470.290	1516.2	478.250	1333.2	486.240	1145.5
400.807	296.6	408.607	287.3	470.375	1502.5	478.335	1307.4	486.325	9999.9
400.890	298.9	408.690	303.7	470.460	1504.0	478.420	9999.9	486.410	1140.0
400.975	293.3	408.775	290.1	470.545	1501.7	478.505	1314.5	486.495	9999.9
401.060	303.7	408.857	305.8	470.627	1511.3	478.590	1410.2	486.580	1136.1
401.145	294.7	408.937	287.8	470.707	1492.4	478.675	1320.8	486.665	1130.2
401.227	299.5	409.020	308.3	470.790	1523.6	478.760	1397.5	486.750	1130.9
401.307	291.9	409.105	291.1	470.875	1523.1	478.845	1394.8	486.835	1112.6
401.387	302.6	409.187	307.1	470.960	1521.9	478.930	1398.2	486.920	1124.0
401.467	291.9	409.267	292.2	471.045	1512.2	479.015	1376.6	487.005	1161.1
401.550	302.3	409.350	304.8	471.130	1527.1	479.100	1387.5	487.090	1114.6
401.635	291.0	409.435	290.1	471.215	1518.6	479.185	1375.0	487.175	1106.4
401.720	302.1	409.517	306.7	471.300	1507.9	479.270	9999.9	487.257	1109.7
401.805	268.7	409.597	291.3	471.385	1495.7	479.355	1391.0	487.337	1099.8
401.887	306.0	409.680	305.8	471.470	1500.2	479.440	1380.3	487.422	1109.3
401.967	291.7	409.765	287.4	471.555	1480.7	479.525	1383.2	487.512	1086.2
402.050	311.3	409.850	304.6	471.640	1498.0	479.610	1376.2	487.600	1100.6
402.135	290.8	409.935	289.2	471.725	1483.8	479.695	1367.4	487.685	9999.9
402.217	314.3	410.017	303.9	471.810	1485.2	479.780	1373.7	487.770	1084.9
402.297	295.7	410.097	292.2	471.895	1476.7	479.865	1360.4	487.855	1077.7
402.380	307.6	410.180	306.0	471.980	1486.8	479.950	1369.3	487.940	1076.2
402.465	291.0	410.265	298.0	472.065	1480.8	480.035	1375.0	488.025	1071.7
402.547	308.1	410.347	309.4	472.150	1480.8	480.120	1360.5	488.110	1064.8
402.627	295.4	410.427	298.8	472.235	1483.6	480.205	1365.6	488.195	1061.6
402.710	300.5	464.350	1034.0	472.320	1475.0	480.290	1355.2	488.280	1068.3
402.795	287.1	464.475	1046.1	472.405	1468.9	480.375	1345.3	488.365	1048.9
402.880	308.3	464.557	1090.6	472.490	1475.9	480.460	1351.2	488.450	1062.6
402.965	291.9	464.637	1085.8	472.575	1465.9	480.545	1340.1	488.535	1045.9
403.047	300.5	464.720	1114.4	472.660	1466.5	480.630	1346.1	488.620	1049.1
403.127	288.7	464.805	1095.1	472.745	1457.0	480.715	1349.5	488.705	1038.3
403.210	304.2	464.887	1120.3	472.830	1464.4	480.800	1350.6	488.790	1043.9
403.295	288.4	464.967	1126.8	472.915	1460.7	480.885	1333.5	488.875	1025.7
403.380	302.6	465.050	1148.6	473.000	1470.0	480.970	1347.5	488.960	1034.4
403.465	286.6	465.135	1154.0	473.085	1457.3	481.055	1325.0	489.045	1025.6
403.547	302.1	465.220	1172.8	473.170	1450.6	481.140	1338.8	489.130	1031.2
403.627	285.5	465.305	1172.8	473.255	1448.2	481.225	1319.0	489.215	1024.6
403.710	304.6	465.390	1194.3	473.340	1451.7	481.310	1330.2	489.300	1024.3
403.795	289.0	465.475	1206.0	473.425	1446.5	481.395	1340.0	489.385	1013.5
403.877	308.8	465.557	1216.7	473.510	1459.3	481.480	1321.1	489.470	1016.1
403.957	291.5	465.637	9999.9	473.595	1459.1	481.565	1324.3	489.555	1006.1
404.040	303.0	465.720	1228.2	473.677	1456.9	481.650	1325.6	489.640	1015.9
404.125	288.2	465.805	1238.8	473.757	1484.2	481.735	1308.9	489.725	1009.8
404.210	307.4	465.890	1256.9	473.842	1440.3	481.820	1306.6	489.810	1000.9
404.295	291.8	465.975	1267.4	473.932	1432.3	481.905	1311.8	489.895	998.5
404.377	304.6	466.057	1275.8	474.017	1441.4	481.990	1295.2	489.980	996.7
404.457	285.7	466.137	1284.2	474.097	1425.0	482.075	1302.5	490.065	989.2
404.540	305.1	466.220	1298.3	474.180	1430.9	482.160	1293.8	490.150	985.7
404.625	289.9	466.305	1298.5	474.265	1429.4	482.245	1301.2	490.235	975.8
404.710	300.5	466.390	1301.3	474.350	1426.3	482.330	1307.5	490.320	970.5
404.795	290.8	466.475	1299.7	474.435	1423.1	482.415	1298.0	490.405	976.2
404.877	307.8	466.560	1318.3	474.520	1435.3	482.500	1286.0	490.490	968.7
404.957	298.6	466.645	1314.3	474.605	1416.4	482.585	1265.8	490.575	974.9
405.040	303.5	466.730	1324.1	474.690	1414.5	482.670	1277.6	490.660	973.3
405.125	290.3	466.815	1331.2	474.775	1407.1	482.755	1276.9	490.745	953.7
405.207	306.5	466.900	1334.7	474.860	1419.4	482.840	1275.6	490.830	961.1
405.287	296.1	466.985	1327.4	474.945	1395.8	482.925	1275.4	490.915	952.3
405.370	306.0	467.067	1345.7	475.030	1401.3	483.010	1271.7	491.000	937.7
405.455	295.2	467.147	1345.5	475.115	1389.4	483.095	1253.6	491.085	959.9
405.540	301.6	467.230	1345.2	475.200	1401.8	483.180	1263.2	491.170	939.8
405.625	292.6	467.315	1348.8	475.285	1395.5	483.265	1230.7	491.255	942.6
405.707	307.2	467.400	1357.6	475.370	1394.7	483.350	1247.0	491.340	938.1
405.787	295.6	467.485	1356.2	475.455	1392.5	483.435	1236.9	491.425	939.4
405.870	307.4	467.570	1364.9	475.540	1402.9	483.517	1251.8	491.510	932.7
405.955	291.5	467.655	1363.9	475.625	1393.2	483.597	9999.9	491.595	923.6
406.037	305.8	467.740	1368.2	475.710	1405.2	483.680	1240.2	491.680	933.5
406.117	291.7	467.825	1368.2	475.795	1370.4	483.765	1242.3	491.765	926.4
406.200	302.3	467.912	1384.8	475.880	1355.1	483.850	1236.0	491.850	926.6
406.285	286.4	468.002	1387.7	475.965	1354.2	483.935	9999.9	491.935	916.6
406.370	302.8	468.087	1397.7	476.050	1371.6	484.020	1236.9	492.020	905.0
406.455	292.0	468.167	1405.4	476.135	9999.9	484.105	1223.5	492.105	897.6
406.537	303.2	468.250	1395.7	476.220	1365.2	484.190	1224.3	492.190	918.0
406.617	288.9	468.335	1395.2	476.305	1361.1	484.275	1200.1	492.275	903.3
406.700	302.8	468.420	1436.1	476.390	1375.6	484.360	1219.6	492.360	908.9
406.785	285.4	468.505	1439.0	476.475	1367.0	484.445	1203.6	492.445	897.6
406.867	305.1	468.590	1438.5	476.560	1381.3	484.530	1205.3	492.530	903.6
406.947	291.9	468.675	1451.5	476.645	1355.2	484.615	1206.0	492.615	896.5
407.030	301.9	468.760	1446.7	476.730	1389.9	484.700	1200.3	492.700	901.5
407.115	290.1	468.845	1472.8	476.815	1365.2	484.785	1185.1	492.785	890.0
407.200	305.3	468.930	1487.1	476.900	1360.8	484.870	1192.2	492.870	890.4
407.285	292.0	469.015	1484.1	476.985	1302.9	484.955	1180.7	492.955	885.4
407.367	303.7	469.100	1454.7	477.070	9999.9	485.040	1202.1	493.040	885.9
407.447	291.3	469.185	1455.2	477.155	1317.2	485.125	1199.0	493.125	876.1
407.530	306.7	469.270	1505.6	477.240	1342.6	485.210	1184.3	493.210	879.3
407.615	290.8	469.355	1495.0	477.325	1321.8	485.295	1175.9	493.295	875.0
407.697	306.0	469.440	1519.9	477.407	1338.1	485.382	1167.1	493.380	868.9
407.777	291.0	469.525	1508.4	477.487	1306.4	485.472	1163.9	493.465	863.2

[redacted]

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(d) Thermocouple 4 - Concluded

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
493.550	869.9	501.550	674.6	512.110	544.0	582.342	377.5
493.635	859.9	501.635	675.1	512.195	540.1	582.432	369.3
493.720	862.9	501.720	679.0	512.280	535.2	582.520	351.0
493.805	848.9	501.805	668.2	512.365	526.0	582.605	335.4
493.890	851.1	501.890	684.6	512.450	523.1	582.690	371.3
493.975	9999.9	501.975	657.1	512.535	516.5	582.775	327.4
494.060	839.9	502.060	668.2	512.620	522.6	584.052	365.0
494.145	840.3	502.145	660.1	512.705	520.8	584.142	365.5
494.230	845.6	502.230	9999.9	512.790	551.1	584.230	384.2
494.315	846.7	502.315	650.4	512.875	540.5	584.315	9999.9
494.400	837.5	502.400	661.1	513.810	536.8	584.400	362.8
494.485	827.9	502.485	663.3	513.895	513.0	584.485	355.9
494.570	840.6	502.572	653.8	513.980	523.7	584.570	373.3
494.655	827.7	502.662	657.5	514.065	520.3	584.655	9999.9
494.740	827.9	502.750	655.8	514.150	515.5	584.740	355.1
494.825	832.9	502.835	649.4	514.235	545.8	584.825	383.6
494.910	824.7	502.920	658.5	514.320	527.3	584.910	370.4
494.995	813.3	503.005	643.1	514.405	9999.9	584.995	381.0
495.080	815.7	503.260	630.5	514.490	524.8		
495.165	817.5	503.345	645.1	514.575	9999.9		
495.250	822.4	503.430	652.1	567.480	337.1		
495.335	813.5	503.515	641.6	567.565	337.3		
495.420	812.2	503.600	659.5	567.650	343.8		
495.505	804.4	503.685	639.8	567.735	341.1		
495.590	804.8	503.770	646.1	567.820	331.6		
495.675	805.6	503.855	630.5	567.905	331.6		
495.760	804.1	503.940	635.2	567.990	319.0		
495.845	793.7	504.025	627.1	568.075	331.7		
495.930	800.2	504.110	633.3	568.847	328.3		
496.015	788.8	504.195	628.7	568.927	339.3		
496.100	795.5	504.280	652.9	570.380	337.0		
496.185	789.6	504.365	631.3	570.465	327.8		
496.270	785.2	504.450	631.8	570.550	353.5		
496.355	787.8	504.535	606.9	570.635	336.0		
496.440	788.7	504.620	629.4	570.720	342.5		
496.525	733.1	504.705	624.8	570.805	340.5		
496.610	780.8	504.790	9999.9	570.890	351.8		
496.695	767.8	504.875	615.3	570.975	332.8		
496.780	774.3	504.960	630.5	571.060	347.3		
496.865	766.1	505.045	618.8	571.145	9999.9		
496.950	771.2	505.130	616.2	572.430	334.7		
497.035	764.3	505.215	611.5	572.515	331.8		
497.120	768.6	505.300	617.3	572.600	351.5		
497.205	761.2	505.385	612.9	572.685	346.6		
497.290	764.5	505.470	613.2	572.770	359.3		
497.375	746.9	505.555	603.9	572.855	342.9		
497.460	759.1	505.640	612.4	572.940	354.7		
497.545	747.4	505.725	607.5	573.025	335.6		
497.630	750.3	505.810	614.2	573.110	348.7		
497.715	750.1	505.895	617.5	573.195	348.3		
497.800	757.5	505.980	611.0	573.280	360.6		
497.885	751.5	506.065	593.7	573.365	336.6		
497.970	744.9	506.150	611.8	574.820	9999.9		
498.055	722.6	506.235	585.0	574.905	341.7		
498.140	747.4	506.320	606.2	574.990	344.4		
498.225	736.4	506.405	9999.9	575.075	341.5		
498.310	731.3	506.840	609.1	575.160	346.8		
498.395	733.7	506.925	574.9	575.245	340.5		
498.480	736.3	507.010	592.7	575.330	344.1		
498.565	716.3	507.095	598.0	575.415	9999.9		
498.650	728.6	507.180	603.1	575.500	344.2		
498.735	721.7	507.265	598.3	575.585	361.2		
498.820	716.6	507.350	607.6	575.670	349.1		
498.905	719.2	507.435	598.4	575.755	349.1		
498.990	725.9	507.520	590.6	577.210	359.8		
499.075	730.7	507.605	573.5	577.295	362.7		
499.160	726.0	507.690	583.2	577.380	355.4		
499.245	718.0	507.775	599.0	577.465	335.2		
499.330	720.2	508.370	594.3	577.550	357.1		
499.415	707.2	508.455	587.6	577.635	365.9		
499.500	713.9	508.540	585.2	577.720	356.0		
499.585	705.0	508.625	577.1	577.805	353.3		
499.670	703.2	508.710	596.6	577.890	350.9		
499.755	691.3	508.795	571.4	577.975	334.1		
499.840	704.1	508.880	583.7	578.060	4448.0		
499.925	697.3	508.965	568.2	578.145	9999.9		
500.010	705.0	509.050	566.0	579.430	369.3		
500.095	692.4	509.135	575.0	579.515	364.9		
500.180	702.3	509.220	575.0	579.602	375.4		
500.265	700.8	509.305	540.1	579.692	364.5		
500.350	696.0	509.390	563.3	579.777	376.1		
500.435	689.4	509.475	563.0	579.857	379.4		
500.520	694.4	510.240	559.5	579.940	354.4		
500.605	665.3	510.325	555.3	580.025	345.4		
500.692	687.8	510.410	562.4	580.112	366.1		
500.782	676.6	510.495	558.5	580.202	352.7		
500.870	683.3	510.580	557.4	580.290	366.2		
500.955	684.2	510.665	550.9	580.375	362.1		
501.040	683.2	510.750	555.1	580.460	359.0		
501.125	668.6	510.835	544.5	580.545	341.1		
501.210	684.7	510.920	555.6	582.000	340.2		
501.295	663.3	511.005	545.3	582.085	373.4		
501.380	672.0	511.090	558.1	582.170	363.6		
501.465	681.8	511.175	540.7	582.255	350.7		

[redacted]

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(e) Thermocouple 5: s = 0.0254 m; d = 0.0128 m

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
400.213	302.1	408.010	291.5	470.005	416.0	477.845	435.3	485.770	602.1
400.293	287.3	408.093	300.0	470.090	405.1	477.930	436.8	485.855	595.9
400.375	301.4	408.173	288.2	470.175	410.2	478.015	451.3	485.940	593.0
400.460	291.0	408.255	296.5	470.260	398.8	478.100	436.3	486.023	597.7
400.543	300.2	408.340	288.6	470.343	420.9	478.183	447.3	486.103	582.6
400.623	289.6	408.423	296.1	470.423	403.1	478.263	439.5	486.185	613.4
400.703	301.2	408.503	288.4	470.503	402.4	478.345	454.2	486.270	608.0
400.783	287.2	408.585	295.6	470.583	396.0	478.430	450.5	486.355	606.2
400.865	300.7	408.670	286.3	470.665	409.8	478.513	460.7	486.440	598.1
400.950	290.3	408.753	296.0	470.750	399.3	478.593	456.6	486.523	605.2
401.033	302.3	408.833	283.0	470.835	408.6	478.675	463.3	486.603	602.8
401.113	294.9	408.915	298.8	470.920	399.3	478.760	449.1	486.685	608.9
401.195	306.7	409.000	287.3	471.003	403.8	478.845	472.2	486.770	607.1
401.280	294.0	409.083	306.9	471.083	397.0	478.930	465.8	486.853	606.4
401.363	309.5	409.163	294.9	471.165	402.0	479.013	470.5	486.933	607.2
401.443	302.8	409.243	302.8	471.250	391.4	479.093	474.8	487.015	614.6
401.523	307.2	409.323	292.1	471.335	396.8	479.175	473.1	487.100	603.7
401.603	295.4	409.405	307.6	471.420	395.7	479.260	9999.9	487.185	609.3
401.685	297.9	409.490	295.2	471.503	400.2	479.345	481.0	487.270	9999.9
401.770	288.2	409.573	310.8	471.583	395.7	479.430	478.3	487.353	606.1
401.853	299.8	409.653	300.5	471.665	397.0	479.515	485.8	487.433	596.7
401.933	292.1	409.735	305.3	471.750	393.4	479.600	484.4	487.515	607.2
402.013	301.6	409.820	291.0	471.835	396.8	479.683	496.0	487.600	600.4
402.093	295.2	409.903	299.3	471.920	396.8	479.763	491.1	487.683	598.6
402.175	301.6	409.983	291.2	472.003	397.5	479.845	499.5	487.763	593.8
402.260	290.7	410.065	305.6	472.083	388.6	479.930	492.0	487.845	606.5
402.343	301.9	410.150	293.1	472.165	403.9	480.013	505.3	487.930	598.9
402.423	291.2	410.233	301.2	472.250	387.7	480.093	497.2	488.183	602.5
402.505	304.6	410.313	293.3	472.335	398.0	480.175	505.8	488.263	592.9
402.590	295.6	410.395	297.0	472.420	396.4	480.260	501.7	488.345	600.7
402.673	307.0	410.480	291.0	472.505	405.4	480.345	514.1	488.430	588.7
402.753	296.8	410.565	295.4	472.590	396.9	480.430	506.5	488.515	595.5
402.833	307.4	410.650	9999.9	472.673	400.1	480.515	517.9	488.600	587.2
402.913	298.2	410.733	304.6	472.753	392.7	480.600	508.5	488.685	602.7
402.995	304.6	410.813	297.7	472.835	407.3	480.683	529.2	488.770	587.0
403.080	289.1	465.045	412.8	472.920	397.5	480.763	517.6	488.853	598.7
403.189	296.3	465.130	405.7	473.005	406.0	480.845	527.0	488.933	589.8
403.319	284.5	465.213	407.6	473.090	398.3	480.930	518.7	489.015	592.6
403.399	299.8	465.293	403.7	473.175	406.4	481.015	530.8	489.100	582.6
403.434	290.1	465.373	411.1	473.260	396.8	481.100	510.5	489.185	593.3
403.493	305.1	465.453	404.2	473.343	410.3	481.183	534.7	489.270	583.3
403.573	292.6	465.533	409.6	473.423	407.1	481.263	523.3	489.353	589.5
403.655	305.8	465.613	408.7	473.505	403.2	481.345	537.3	489.433	580.7
403.740	293.1	465.695	399.9	473.590	391.9	481.430	529.5	489.515	589.8
403.823	304.2	465.780	394.3	473.675	414.0	481.515	539.1	489.600	580.5
403.903	290.0	465.863	409.6	473.760	392.5	481.600	535.8	489.853	581.6
403.983	307.2	465.943	398.4	473.843	405.7	481.683	544.3	489.933	583.4
404.063	300.2	466.023	409.0	473.923	391.4	481.763	539.0	490.015	582.4
404.145	307.6	466.103	394.3	474.005	405.3	481.845	545.1	490.100	579.3
404.230	295.6	466.185	401.8	474.090	404.2	481.930	539.7	490.183	586.0
404.313	306.0	466.270	396.7	474.175	397.3	482.015	552.3	490.263	576.0
404.393	292.6	466.353	407.1	474.260	394.9	482.100	551.6	490.345	582.6
404.473	303.7	466.433	399.1	474.345	389.2	482.183	558.1	490.430	573.9
404.553	290.5	466.515	411.9	474.430	388.4	482.263	554.3	490.515	589.3
404.635	300.0	466.600	400.5	474.513	398.4	482.345	565.4	490.600	582.7
404.720	289.6	466.685	412.6	474.593	388.3	482.430	552.7	490.685	592.1
404.803	293.3	466.770	401.4	474.675	397.9	482.515	563.6	490.770	583.6
404.883	284.7	466.855	414.4	474.760	390.1	482.600	550.1	490.853	586.8
404.965	299.6	466.940	401.6	474.843	400.1	482.683	571.6	490.933	579.3
405.050	289.4	467.023	409.5	474.923	398.5	482.763	568.9	491.015	578.7
405.133	307.2	467.103	399.4	475.005	393.8	482.845	572.2	491.100	575.4
405.213	295.2	467.185	408.9	475.090	391.5	482.930	562.7	491.185	586.6
405.295	303.9	467.270	403.6	475.175	397.4	483.015	576.8	491.270	572.6
405.380	292.8	467.353	405.4	475.260	396.9	483.100	566.0	491.353	579.6
405.463	305.1	467.433	393.2	475.345	397.2	483.185	582.4	491.433	574.0
405.543	295.2	467.515	406.2	475.430	403.2	483.270	561.5	491.515	575.4
405.625	307.9	467.600	401.9	475.513	415.0	483.353	581.7	491.600	570.9
405.710	297.5	467.685	407.4	475.593	394.6	483.433	581.7	491.685	571.8
405.793	309.2	467.770	399.2	475.675	403.3	483.515	580.3	491.770	559.0
405.873	300.2	467.853	409.1	475.760	397.2	483.600	9999.9	491.853	573.9
405.953	305.3	467.933	395.6	475.845	404.0	483.683	581.8	491.933	565.4
406.033	292.1	468.015	409.1	475.930	402.7	483.763	571.2	492.015	572.7
406.115	306.0	468.100	398.7	476.015	405.6	483.845	586.0	492.100	559.2
406.200	294.2	468.183	405.1	476.100	399.9	483.930	9999.9	492.185	562.5
406.283	299.8	468.263	402.4	476.183	405.4	484.015	592.1	492.270	557.1
406.363	290.5	468.345	407.4	476.263	397.7	484.100	580.3	492.353	564.5
406.445	295.6	468.430	400.5	476.345	412.0	484.185	597.3	492.433	550.3
406.530	284.7	468.515	406.4	476.430	398.3	484.270	585.1	492.515	561.9
406.613	294.0	468.600	401.9	476.513	410.9	484.353	593.3	492.600	551.3
406.693	285.6	468.683	412.5	476.593	403.4	484.433	581.3	492.685	561.3
406.775	302.6	468.763	404.5	476.675	390.7	484.515	597.4	492.770	549.7
406.860	292.1	468.845	413.8	476.760	380.9	484.600	585.4	492.853	557.7
406.943	301.2	468.930	406.2	476.760	415.9	484.685	593.3	492.933	543.3
407.023	289.4	469.013	409.0	476.845	426.6	484.770	584.0	493.015	557.6
407.103	299.8	469.093	400.8	476.930	423.9	484.853	595.3	493.100	541.0
407.183	290.0	469.175	409.6	477.013	426.4	484.933	581.5	493.185	555.4
407.265	306.0	469.260	403.0	477.093	425.5	485.015	594.5	493.270	543.1
407.350	294.5	469.343	420.8	477.175	431.3	485.100	587.3	493.353	547.3
407.433	305.8	469.423	403.5	477.260	430.6	485.185	592.8	493.433	539.0
407.513	295.9	469.505	420.9	477.345	444.3	485.270	585.8	493.515	551.8
407.595	309.9	469.590	406.3	477.430	432.7	485.353	587.4	493.600	535.3
407.680	295.6	469.673	411.4	477.513	443.3	485.433	581.7	493.685	548.7
407.763	306.0	469.753	399.4	477.593	429.6	485.515	600.7	493.770	536.8
407.843	297.5	469.835	408.8	477.675	440.8	485.600	590.9	493.853	543.5
407.925	303.5	469.920	407.4	477.760	435.6	485.685	601.7	493.933	531.4

[redacted]

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TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(e) Thermocouple 5 - Concluded

t, sec	T, °K
494.015	548.2
494.100	538.2
494.183	544.7
494.263	535.1
494.345	546.7
494.430	543.6
494.515	547.8
494.600	542.6
494.683	535.2
494.763	534.9
495.015	544.3
495.100	542.1
495.183	540.9
495.263	534.4
495.345	543.8
495.430	534.7
495.515	543.1
495.600	537.7
495.683	541.5
495.763	535.5
495.845	540.1
495.930	526.7
496.015	534.0
496.100	528.6
496.183	533.6
496.263	521.8
496.345	536.5
496.430	519.7
496.513	532.4
496.593	515.5
496.675	532.5
496.760	524.7
496.845	531.2
496.930	519.1
497.013	520.3
497.093	506.8
497.175	519.2
497.260	511.5
497.345	523.3
497.430	510.1
497.513	522.3
497.593	508.4
497.675	516.3
497.760	510.1
497.845	516.8
497.930	504.5
498.013	518.4
498.093	500.2
498.175	517.9
498.260	504.0
498.345	518.8
498.430	505.9
498.513	507.7
498.593	498.1
498.675	518.9
498.760	503.3
498.843	511.8
498.923	501.3
499.005	507.4
499.090	495.3
499.173	500.7
499.253	496.2
499.335	507.5
499.420	494.2
499.505	504.5
499.590	494.6
499.673	505.2
499.753	496.4
499.835	505.0
499.920	491.7
500.005	503.1
500.090	493.2
500.173	503.0
500.253	489.9
500.335	495.0
500.420	484.6
500.503	498.7
500.583	491.0
500.665	494.4
500.750	495.5
500.835	498.9
500.920	492.7
501.005	496.9
501.090	492.2
501.173	495.6
501.253	489.5
501.335	493.9
501.420	491.4
501.503	492.3
501.583	488.7
501.665	508.0
501.750	494.4
501.835	499.2
501.920	497.2

t, sec	T, °K
502.003	505.9
502.083	494.2
502.165	504.7
502.250	496.0
502.333	493.9
502.413	492.1
502.495	494.9
502.580	492.6
502.665	495.8
502.750	491.1
502.833	489.5
502.913	491.7
502.995	491.9
503.080	485.2
503.163	488.5
503.243	483.4
503.325	489.4
503.410	483.6
503.495	487.6
503.580	483.1
503.663	491.0
503.743	489.9
503.825	495.0
503.910	488.3
503.993	490.2
504.073	489.6
504.155	495.9
504.240	475.2
504.323	492.3
504.403	481.8
504.485	485.8
504.570	480.9
504.655	482.2
504.740	482.6
504.823	482.6
504.903	476.9
504.985	487.8
505.070	472.6
505.153	484.1
505.233	473.3
505.315	473.3
505.400	473.7
505.485	487.4
505.570	477.9
505.653	480.4
505.733	472.6
505.815	476.9
505.900	475.0
505.983	477.8
506.063	466.1
506.145	482.6
506.230	474.4
506.313	476.4
506.393	467.2
506.475	469.6
506.560	9999.9
506.813	480.0
506.893	471.4
506.975	474.7
507.060	472.9
507.143	476.7
507.223	471.4
507.305	474.9
507.390	470.0
507.473	474.1
507.553	467.9
507.635	476.8
507.720	464.9
507.805	473.4
507.890	472.3
508.303	467.8
508.383	459.8
508.465	475.7
508.550	460.6
508.635	473.8
508.720	462.3
508.803	473.3
508.883	466.5
508.965	472.2
509.050	459.8
509.133	473.3
509.213	472.6
509.295	478.7
509.380	467.1
509.465	476.0
509.550	465.1
510.125	477.0
510.210	465.2
510.293	471.5
510.373	456.7
510.455	479.5
510.540	472.0
510.623	470.8
510.703	459.8

t, sec	T, °K
510.785	469.7
510.870	458.2
510.955	475.1
511.040	463.1
511.123	5015.2
511.203	5063.2
511.285	479.7
511.370	454.1
511.953	484.1
512.033	470.1
512.115	483.1
512.200	465.4
512.283	471.1
512.363	461.4
512.445	475.0
512.530	466.3
512.613	477.9
512.693	473.8
512.775	480.7
512.860	473.5
512.943	467.3
513.023	457.7
513.105	478.3
513.190	466.9
513.605	467.7
513.690	477.3
513.773	465.5
513.853	468.5
513.935	470.3
514.020	462.8
514.105	470.3
514.190	462.8
514.273	476.0
514.353	470.6
514.433	478.9
514.513	470.0
514.595	476.0
514.680	469.8
514.765	475.5
514.850	463.8
515.593	459.4
515.673	454.6
515.755	469.0
515.840	453.7
515.925	464.7
516.010	456.2
516.093	460.5
516.173	460.8
517.415	455.7
517.500	448.4
517.583	460.7
517.663	452.3
518.743	446.9
518.823	450.3
518.905	459.3
518.990	447.4
519.073	454.6
519.153	444.6
519.235	454.2
519.320	443.4
519.405	469.9
519.490	459.7
519.573	462.0
519.653	440.7
519.733	470.2
519.813	456.4
520.403	432.4
520.483	450.3
520.565	464.2
520.650	455.4
520.733	451.2
520.813	447.8
520.895	463.8
520.980	455.4
521.063	454.1
521.143	456.8
522.223	452.5
522.303	448.4
522.385	452.8
522.470	450.5
522.555	455.5
522.640	428.7
538.335	446.9
538.420	427.3
538.503	412.0
538.583	424.5
538.665	427.7
538.750	419.1
541.165	413.7
541.250	422.2
541.333	416.2
541.413	9999.9
565.335	9999.9
565.420	397.8

t, sec	T, °K
565.505	404.2
565.590	389.0
565.673	407.3
565.753	384.5
565.835	403.7
565.920	396.7
566.005	387.7
566.090	382.8
566.173	357.6
566.253	384.5
566.335	391.0
566.420	390.1
566.505	391.1
566.590	377.3
566.673	380.8
566.753	9999.9
566.835	9999.9
566.920	389.6
567.005	398.1
567.090	393.0
567.335	9999.9
567.420	385.3
567.505	397.4
567.590	381.0
567.673	396.6
567.753	391.0
567.835	390.3
567.920	387.6
568.005	401.5
568.090	393.0
568.173	396.9
568.253	392.2
568.335	400.0
568.420	402.0
568.673	394.8
568.753	388.4
568.835	405.7
568.920	394.3
569.005	389.7
569.090	388.8
569.173	396.6
569.253	409.4
569.335	413.9
569.420	403.0
570.005	392.1
570.090	385.2
570.175	381.7
570.260	378.2
570.343	384.9
570.423	380.5
570.505	382.2
570.590	372.4
570.675	386.7
570.760	374.7
570.843	383.9
570.923	377.1
571.005	387.5
571.090	378.6
571.175	389.4
571.260	378.6
571.343	390.9
571.423	388.2
572.343	397.5
572.423	382.9
572.505	394.9
572.590	383.8
572.675	399.9
572.760	384.6
572.845	396.3
572.930	386.2
573.013	400.5
573.093	382.3
573.175	393.5
573.260	378.9
573.345	391.8
573.430	375.6
573.513	377.4
573.593	375.1
573.675	384.4
573.760	374.4
573.845	389.9
573.930	9999.9
574.175	396.2
574.260	377.7
574.675	389.8
574.760	380.4
574.845	393.2
574.930	382.4
575.013	398.9
575.093	389.6
575.175	400.1
575.260	391.9
575.345	398.1
575.430	383.2

t, sec	T, °K
575.513	396.5
575.593	387.9
575.675	399.2
575.760	395.9
575.845	397.5
575.930	388.8
577.015	392.8
577.100	376.4
577.183	385.1
577.263	369.8
577.345	390.3
577.430	375.3
577.515	386.2
577.600	375.3
577.683	383.5
577.763	380.0
577.845	378.5
577.930	376.8
578.015	383.2
578.100	374.8
578.183	392.5
578.263	386.1
578.345	383.2
578.430	384.8
579.345	395.8
579.430	389.2
579.515	385.3
579.600	382.0
579.683	388.7
579.763	376.5
579.845	387.8
579.930	367.5
580.015	385.6
580.100	375.0
580.183	377.3
580.263	372.8
580.345	385.9
580.430	373.7
580.515	385.1
580.600	357.5
581.853	393.7
581.933	383.4
582.015	389.3
582.100	387.3
582.185	391.7
582.270	387.3
582.353	395.2
582.433	384.8
582.515	395.9
582.600	386.2
582.683	397.8
582.763	383.6
582.845	394.0
582.930	9999.9
584.015	377.0
584.100	372.1
584.185	386.6
584.270	372.6
584.353	382.6
584.433	367.9
584.515	374.7
584.600	356.2
584.685	372.8
584.770	371.0
584.853	382.5
584.933	369.4
585.015	381.9
585.100	377.5
585.185	389.5
585.270	386.6
589.695	373.5
589.780	374.8
589.865	384.5
589.950	364.2

[redacted]

[redacted]

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(f) Thermocouple 6: s = 0.0254 m; d = 0.0153 m

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
400.073	301.2	407.950	293.8	469.785	420.2	477.830	415.5	485.905	398.3
400.153	302.1	408.033	305.1	469.870	412.5	477.915	392.9	485.990	391.8
400.235	293.3	408.113	287.5	469.955	428.0	478.000	415.2	486.075	407.1
400.320	298.6	408.195	306.2	470.040	416.6	478.085	398.0	486.160	9999.9
400.403	297.2	408.280	291.5	470.125	420.4	478.170	392.9	486.245	406.7
400.483	297.0	408.365	305.1	470.210	416.8	478.255	415.0	486.330	390.8
400.565	303.2	408.450	288.0	470.295	415.4	478.340	395.6	486.415	395.7
400.650	300.9	408.533	305.1	470.380	415.8	478.425	416.3	486.500	9999.9
400.733	301.9	408.613	292.2	470.465	415.0	478.510	397.3	486.585	399.9
400.813	293.5	408.695	307.4	470.550	413.2	478.595	397.9	486.670	671.9
400.895	298.9	408.780	291.3	470.633	419.5	478.680	9999.9	486.755	404.4
400.980	293.3	408.863	307.4	470.713	412.9	478.765	399.5	486.840	397.8
401.065	298.6	408.943	294.7	470.795	423.3	478.850	403.0	486.925	394.4
401.150	294.7	409.025	308.3	470.880	410.8	478.935	403.4	487.010	401.6
401.233	302.3	409.110	292.7	470.965	415.7	479.020	396.3	487.095	393.5
401.313	291.9	409.193	309.7	471.050	414.3	479.105	403.9	487.180	387.3
401.393	302.6	409.273	292.2	471.135	416.0	479.190	397.1	487.263	9999.9
401.473	292.6	409.355	307.1	471.220	418.5	479.275	9999.9	487.343	386.7
401.555	302.3	409.440	290.1	471.305	417.6	479.360	398.9	487.428	412.7
401.640	291.0	409.523	306.7	471.390	406.1	479.445	395.9	487.518	402.2
401.725	302.1	409.603	291.3	471.475	413.9	479.530	396.3	487.605	395.1
401.810	290.8	409.685	305.8	471.560	407.5	479.615	410.7	487.690	9999.9
401.893	305.5	409.770	289.4	471.645	419.6	479.700	396.3	487.775	398.7
401.973	291.7	409.855	304.6	471.730	412.6	479.785	9999.9	487.860	396.5
402.055	303.0	409.940	290.1	471.815	414.2	479.870	9999.9	487.945	392.8
402.140	290.8	410.023	303.5	471.900	409.7	479.955	373.5	488.030	380.4
402.223	306.2	410.103	290.6	471.985	420.1	480.040	411.9	488.115	386.1
402.303	295.7	410.185	306.0	472.070	413.0	480.125	394.1	488.200	372.7
402.385	304.2	410.270	293.1	472.155	414.1	480.210	416.9	488.285	405.1
402.470	291.0	410.353	307.6	472.240	410.0	480.295	404.9	488.370	382.6
402.553	308.5	410.433	296.8	472.325	415.5	480.380	391.0	488.455	9999.9
402.633	295.4	464.395	416.8	472.410	398.0	480.465	396.1	488.540	382.0
402.715	300.7	464.480	403.1	472.495	415.9	480.550	393.2	488.625	396.5
402.800	288.7	464.563	439.4	472.580	410.3	480.635	398.4	488.710	368.7
402.885	310.9	464.643	423.4	472.665	420.8	480.720	406.0	488.795	396.6
402.970	291.9	464.725	416.2	472.750	414.9	480.805	401.1	488.880	370.6
403.053	303.5	464.810	407.1	472.835	409.2	480.890	401.7	488.965	395.5
403.133	291.5	464.893	414.2	472.920	412.2	480.975	414.8	489.050	376.0
403.215	307.2	464.973	405.5	473.005	415.9	481.060	405.5	489.135	401.0
403.300	293.3	465.055	419.8	473.090	409.4	481.145	413.0	489.220	396.4
403.385	301.4	465.140	413.4	473.175	416.5	481.230	387.9	489.305	398.1
403.470	286.8	465.225	413.8	473.260	403.1	481.315	9999.9	489.390	385.9
403.553	301.2	465.310	415.9	473.345	419.6	481.400	414.3	489.475	399.6
403.633	285.9	465.395	419.1	473.430	413.8	481.485	9999.9	489.560	391.3
403.715	303.9	465.480	415.9	473.515	415.2	481.570	403.4	489.645	398.1
403.800	291.5	465.563	418.0	473.600	416.0	481.655	9999.9	489.730	381.3
403.883	305.1	465.643	9999.9	473.683	416.8	481.740	402.2	489.815	386.5
403.963	291.7	465.725	396.7	473.763	409.0	481.825	432.0	489.900	387.8
404.045	304.9	465.810	398.0	473.848	413.1	481.910	420.8	489.985	390.3
404.130	291.5	465.895	419.2	473.938	404.2	481.995	392.6	490.070	384.9
404.215	307.4	465.980	423.9	474.023	419.9	482.080	387.4	490.155	396.1
404.300	294.3	466.063	418.7	474.103	409.1	482.165	388.2	490.240	377.3
404.383	304.9	466.143	418.0	474.185	417.8	482.250	400.1	490.325	394.2
404.463	292.4	466.225	421.2	474.270	402.8	482.335	406.2	490.410	397.6
404.545	302.1	466.310	406.7	474.355	422.0	482.420	418.8	490.495	393.3
404.630	289.9	466.395	415.4	474.440	418.6	482.505	410.2	490.580	384.1
404.715	300.7	466.480	394.7	474.525	405.1	482.590	9999.9	490.665	401.5
404.800	290.8	466.565	425.6	474.610	403.5	482.675	428.6	490.750	348.6
404.883	306.7	466.650	412.7	474.695	414.1	482.760	409.5	490.835	360.0
404.963	293.8	466.735	419.3	474.780	404.6	482.845	405.6	490.920	381.8
405.045	300.9	466.820	413.8	474.865	405.5	482.930	9999.9	491.005	399.2
405.130	292.4	466.905	418.6	474.950	397.8	483.015	405.6	491.090	386.7
405.213	304.2	466.990	410.0	475.035	408.4	483.100	407.8	491.175	390.9
405.293	294.0	467.073	418.6	475.120	397.3	483.185	399.1	491.260	396.2
405.375	306.5	467.153	415.0	475.205	397.3	483.270	421.2	491.345	389.1
405.460	295.2	467.235	411.1	475.290	397.8	483.355	401.7	491.430	388.2
405.545	301.6	467.320	412.9	475.375	393.3	483.440	392.7	491.515	385.4
405.630	292.6	467.405	420.9	475.460	398.9	483.523	405.2	491.600	373.2
405.713	308.1	467.490	411.8	475.545	407.6	483.603	9999.9	491.685	384.8
405.793	295.6	467.575	423.4	475.630	393.4	483.665	413.8	491.770	383.2
405.875	306.0	467.660	408.5	475.715	412.8	483.770	406.9	491.855	391.7
405.960	294.5	467.745	411.6	475.800	399.2	483.855	397.1	491.940	385.6
406.043	303.9	467.830	408.4	475.885	424.9	483.940	9999.9	492.025	376.9
406.123	292.2	467.918	413.3	475.970	409.1	484.025	404.2	492.110	367.4
406.205	301.6	468.008	412.0	476.055	414.1	484.110	399.7	492.195	406.5
406.290	290.3	468.093	416.8	476.140	9999.9	484.195	388.6	492.280	393.0
406.375	303.0	468.173	412.2	476.225	414.4	484.280	9999.9	492.365	396.8
406.460	292.9	468.255	424.4	476.310	395.7	484.365	403.2	492.450	383.6
406.543	300.0	468.340	410.1	476.395	374.9	484.450	392.3	492.535	352.7
406.623	288.9	468.425	424.1	476.480	400.6	484.535	400.5	492.620	384.4
406.705	302.8	468.510	411.0	476.565	416.9	484.620	390.8	492.705	392.7
406.790	289.4	468.595	423.0	476.650	400.1	484.705	397.2	492.790	388.5
406.873	301.9	468.680	410.9	476.735	413.1	484.790	391.7	492.875	390.0
406.953	292.6	468.765	414.3	476.820	413.6	484.875	403.1	492.960	362.8
407.035	301.2	468.850	417.0	476.905	404.8	484.960	380.5	493.045	398.7
407.120	291.5	468.935	419.4	476.990	478.3	485.045	410.9	493.130	383.4
407.205	302.3	469.020	413.7	477.075	431.2	485.130	396.9	493.215	394.0
407.290	292.2	469.105	418.9	477.160	427.2	485.215	393.0	493.300	390.2
407.373	304.4	469.190	409.8	477.245	392.1	485.300	386.9	493.385	384.2
407.453	293.6	469.275	419.5	477.330	393.0	485.388	9999.9	493.470	386.5
407.535	302.3	469.360	411.1	477.413	411.7	485.478	398.7	493.555	406.1
407.620	290.8	469.445	422.4	477.493	405.8	485.565	400.5	493.640	385.8
407.703	301.9	469.530	415.3	477.575	9999.9	485.650	379.4	493.725	401.6
407.783	291.0	469.615	417.8	477.660	415.0	485.735	9999.9	493.810	384.8
407.865	307.1	469.700	416.7	477.745	417.8	485.820	380.3	493.895	388.8

[redacted]

[redacted]

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(f) Thermocouple 6 - Concluded

t, sec	T, °K
493.580	9999.9
494.065	374.8
494.150	358.4
494.235	389.0
494.320	398.7
494.405	387.9
494.490	386.5
494.575	405.5
494.660	394.9
494.745	390.9
494.830	392.2
494.915	389.1
495.000	9999.9
495.085	388.2
495.170	375.3
495.255	9999.9
495.340	392.6
495.425	363.3
495.510	380.6
495.595	397.0
495.680	383.5
495.765	392.0
495.850	379.5
495.935	391.3
496.020	380.2
496.105	388.3
496.190	384.8
496.275	384.6
496.360	368.0
496.445	402.4
496.530	398.5
496.615	405.0
496.700	393.9
496.785	396.0
496.870	385.8
496.955	388.6
497.040	391.8
497.125	396.5
497.210	380.6
497.295	395.7
497.380	377.2
497.465	397.7
497.550	383.4
497.635	383.0
497.720	383.7
497.805	400.2
497.890	385.8
497.975	386.9
498.060	363.2
498.145	9999.9
498.230	364.0
498.315	459.7
498.400	386.4
498.485	393.7
498.570	373.2
498.655	397.0
498.740	387.2
498.825	9999.9
498.910	385.6
498.995	392.6
499.080	410.6
499.165	393.0
499.250	376.2
499.335	406.0
499.420	387.9
499.505	397.1
499.590	369.5
499.675	387.3
499.760	385.7
499.845	387.9
499.930	366.1
500.015	396.8
500.100	383.2
500.185	396.7
500.270	399.0
500.355	388.7
500.440	385.6
500.525	395.2
500.610	9999.9
500.695	399.4
500.780	385.7
500.865	388.4
500.950	385.3
501.045	392.7
501.130	377.4
501.215	398.8
501.300	380.6
501.385	396.2
501.470	392.2
501.555	399.3
501.640	9999.9
501.725	399.8
501.810	384.1
501.895	400.5
501.980	383.7
502.065	394.0
502.150	399.0
502.235	9999.9
502.320	388.7
502.405	399.6
502.490	391.6
502.576	391.1
502.668	385.0
502.755	394.4
502.840	390.3
502.925	395.9
503.010	377.8
503.265	407.3
503.350	382.6
503.435	390.3
503.520	389.4
503.605	411.3
503.690	400.7
503.775	401.6
503.860	393.7
503.945	393.2
504.030	393.6
504.115	383.5
504.200	386.8
504.285	412.1
504.370	390.9
504.455	387.4
504.540	410.2
504.625	9999.9
504.710	379.2
504.795	9999.9
504.880	368.4
504.965	404.2
505.050	394.6
505.135	416.6
505.220	401.6
505.305	406.8
505.390	410.5
505.475	373.1
505.560	379.8
505.645	397.4
505.730	395.8
505.815	403.8
505.900	405.0
505.985	397.3
506.070	385.2
506.155	397.0
506.240	372.3
506.325	391.9
506.410	9999.9
506.845	412.3
506.930	379.4
507.015	395.4
507.100	395.4
507.185	406.0
507.270	405.3
507.355	418.3
507.440	402.0
507.525	397.4
507.610	9999.9
507.695	391.2
507.780	9999.9
508.375	390.6
508.460	394.1
508.545	403.5
508.630	396.1
508.715	421.1
508.800	403.8
508.885	407.5
508.970	397.6
509.055	399.3
509.140	389.9
509.225	403.8
509.310	395.8
509.395	413.0
509.480	396.7
510.245	407.2
510.330	400.4
510.415	410.7
510.500	394.0
510.585	406.0
510.670	404.2
510.755	414.0
510.840	402.3
510.925	416.3
511.010	395.2
511.055	416.8
511.100	396.2
512.115	411.2
512.200	414.6
512.285	409.5
512.370	396.0
512.455	389.5
512.540	364.3
512.625	395.9
512.710	390.0
512.795	413.7
512.880	392.7
513.815	382.4
513.900	390.5
513.985	429.2
514.070	416.7
514.155	400.6
514.240	419.9
514.325	400.2
514.410	9999.9
514.495	412.6
514.580	9999.9
567.485	405.3
567.570	403.9
567.655	431.7
567.740	418.3
567.825	9999.9
567.910	391.3
567.995	432.6
568.080	9999.9
568.863	393.4
568.933	386.4
570.385	434.0
570.470	343.1
570.555	430.0
570.640	412.7
570.725	415.8
570.810	9999.9
570.895	424.0
570.980	9999.9
571.065	435.8
571.150	401.8
572.435	411.8
572.520	406.5
572.605	418.8
572.690	419.3
572.775	429.0
572.860	425.4
572.945	417.9
573.030	404.3
573.115	415.0
573.200	403.5
573.285	416.6
573.370	415.0
574.825	405.3
574.910	407.0
574.995	414.9
575.080	380.1
575.165	421.8
575.250	395.0
575.335	417.3
575.420	9999.9
575.505	423.8
575.590	411.6
575.675	412.7
575.760	414.5
577.215	413.4
577.300	403.9
577.385	419.1
577.470	406.6
577.555	417.3
577.640	407.0
577.725	421.5
577.810	411.6
577.895	420.0
577.980	9999.9
578.065	4532.0
578.150	9999.9
579.435	423.6
579.520	416.5
579.608	411.3
579.698	433.0
579.783	421.4
579.863	423.7
579.945	403.6
580.030	408.4
580.118	421.7
580.208	404.0
580.295	413.1
580.380	406.5
580.465	400.2
580.550	397.9
582.005	430.1
582.090	414.4
582.175	415.1
582.260	407.7
582.348	418.2
582.438	409.6
582.525	399.6
582.610	398.3
582.695	421.1
582.780	386.6
584.050	415.0
584.143	9999.9
584.235	423.3
584.320	378.7
584.405	411.4
584.490	9999.9
584.575	423.9
584.660	387.5
584.745	390.2
584.830	369.7
584.915	419.4
585.000	372.1

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[redacted]

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(g) Thermocouple 10: s = 0.0573 m; d = 0.0102 m

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
400.234	293.5	408.114	291.9	470.198	1535.7	478.204	1438.0	486.208	1174.0
400.314	294.7	408.194	289.8	470.283	1552.4	478.284	1440.5	486.293	1170.4
400.398	292.1	408.278	288.9	470.364	1549.9	478.368	1441.8	486.378	1168.7
400.483	291.4	408.363	288.9	470.444	1556.9	478.453	1446.5	486.463	1168.5
400.564	287.9	408.444	289.8	470.524	1555.2	478.534	1454.6	486.544	1148.9
400.644	291.2	408.524	286.3	470.604	1544.0	478.614	1451.1	486.624	1158.5
400.724	285.6	408.608	284.9	470.688	1549.8	478.698	9999.9	486.708	1158.4
400.804	287.5	408.693	284.7	470.773	1546.6	478.783	1443.7	486.793	1154.4
400.888	287.3	408.774	279.3	470.858	1542.9	478.868	1440.9	486.874	1147.0
400.973	282.2	408.854	276.7	470.943	1543.7	478.953	1439.9	486.954	1147.6
401.054	286.6	408.938	284.9	471.024	1540.2	479.034	1428.1	487.038	1145.7
401.134	282.9	409.023	279.8	471.104	1537.5	479.114	1424.7	487.123	1139.9
401.218	291.2	409.104	287.3	471.188	1542.9	479.198	1423.3	487.208	1138.1
401.303	289.8	409.184	284.1	471.273	1542.1	479.283	1418.7	487.293	9999.9
401.384	301.4	409.264	286.8	471.358	1539.9	479.368	1416.3	487.374	1131.4
401.464	297.9	409.344	287.5	471.443	1541.6	479.453	1415.5	487.454	1123.3
401.544	295.9	409.428	292.2	471.524	1541.9	479.538	1417.3	487.538	1126.0
401.624	294.2	409.513	291.2	471.604	1538.4	479.623	1420.0	487.623	1118.9
401.708	290.3	409.594	298.4	471.688	1541.1	479.704	1409.9	487.704	1110.5
401.793	293.0	409.674	298.9	471.773	1549.7	479.784	1406.2	487.784	1110.9
401.874	289.3	409.758	294.7	471.858	1541.6	479.868	1406.2	487.868	1109.4
401.954	291.0	409.843	293.8	471.943	1541.1	479.953	1402.7	487.953	1104.3
402.034	290.5	409.924	294.5	472.024	1543.3	480.034	1400.6	488.204	1101.3
402.114	289.6	410.004	294.2	472.104	1542.8	480.114	1393.8	488.284	1096.4
402.198	286.8	410.088	294.2	472.188	1529.6	480.198	1396.6	488.368	1090.8
402.283	284.7	410.173	295.9	472.273	1535.8	480.283	1390.1	488.453	1078.9
402.364	289.1	410.254	293.1	472.358	1528.1	480.368	1395.0	488.538	1083.6
402.444	284.7	410.334	293.3	472.443	1528.1	480.453	1394.0	488.623	1080.5
402.528	286.4	410.418	279.8	472.528	1527.5	480.538	1394.3	488.708	1086.1
402.613	283.3	410.503	287.9	472.613	1534.5	480.623	1376.3	488.793	1077.8
402.694	288.2	410.588	287.2	472.694	1529.7	480.704	1380.8	488.874	1073.3
402.774	293.1	410.673	9999.9	472.774	1527.0	480.784	1381.2	488.954	1069.2
402.854	293.3	410.754	293.3	472.858	1530.6	480.868	1380.7	489.038	1067.9
402.934	294.7	410.834	286.3	472.943	1540.9	480.953	1372.2	489.123	1063.0
403.018	294.9	465.068	1339.1	473.028	1531.8	481.038	1370.9	489.208	1060.5
403.103	293.5	465.153	1346.1	473.113	1530.0	481.123	1360.9	489.293	1054.4
403.224	288.4	465.234	1347.6	473.198	1534.9	481.204	1367.0	489.374	1048.6
403.354	291.9	465.314	1350.9	473.283	1530.9	481.284	1359.1	489.454	1046.6
403.408	290.1	465.394	1354.6	473.364	1519.2	481.368	1356.7	489.538	1042.6
403.443	288.5	465.474	1373.4	473.444	1523.1	481.453	1357.6	489.623	1040.1
403.514	290.8	465.554	1375.5	473.528	1523.1	481.538	1357.9	489.874	1024.3
403.594	288.9	465.634	1386.9	473.613	1515.4	481.623	1350.7	489.954	1026.7
403.678	288.9	465.718	1381.6	473.698	1517.9	481.704	1345.0	490.038	1015.9
403.763	289.1	465.803	1388.9	473.783	1514.6	481.784	1352.2	490.123	1016.2
403.844	285.4	465.884	1397.5	473.864	1508.4	481.868	1341.9	490.204	1010.9
403.924	283.3	465.964	1397.2	473.944	1520.9	481.953	1337.8	490.284	1011.7
404.004	292.4	466.044	1401.7	474.028	1514.5	482.038	1335.6	490.368	1004.9
404.084	286.9	466.124	1403.9	474.113	1510.3	482.123	1333.7	490.453	1004.2
404.168	292.6	466.208	1416.7	474.198	1519.3	482.204	1330.8	490.538	1002.5
404.253	292.6	466.293	1421.4	474.283	1515.1	482.284	1326.0	490.623	997.1
404.334	293.5	466.374	1419.9	474.368	1511.5	482.368	1319.6	490.708	1004.3
404.414	293.3	466.454	1423.8	474.453	1508.2	482.453	1324.8	490.793	995.2
404.494	290.8	466.538	1421.9	474.534	1514.1	482.538	1315.6	490.874	989.8
404.574	290.5	466.623	1432.7	474.614	1517.1	482.623	1309.4	490.954	983.9
404.658	291.9	466.708	1445.4	474.698	1512.2	482.704	1315.4	491.038	980.3
404.743	291.7	466.793	1451.6	474.783	1511.5	482.784	1311.4	491.123	977.5
404.824	286.8	466.878	1449.0	474.864	1507.1	482.868	1300.1	491.208	974.2
404.904	288.6	466.963	1458.2	474.944	1518.1	482.953	1306.8	491.293	970.3
404.988	291.0	467.044	1464.2	475.028	1501.1	483.038	1294.8	491.374	971.6
405.073	288.0	467.124	1461.7	475.113	1504.6	483.123	1300.5	491.454	961.5
405.154	291.0	467.208	1468.7	475.198	1496.3	483.208	1289.7	491.538	968.5
405.234	289.6	467.293	1468.0	475.283	1493.8	483.293	1298.9	491.623	955.6
405.318	291.0	467.374	1474.1	475.368	1496.3	483.374	1281.8	491.708	955.2
405.403	286.1	467.454	1473.6	475.453	1506.6	483.454	1278.5	491.793	948.2
405.484	290.3	467.538	1482.2	475.534	1494.6	483.538	1284.7	491.874	946.6
405.564	288.0	467.623	1482.9	475.614	1496.1	483.623	9999.9	491.954	939.4
405.648	292.2	467.708	1483.8	475.698	1490.7	483.704	1269.0	492.038	945.1
405.733	287.8	467.793	1484.3	475.783	1487.2	483.784	1267.3	492.123	941.4
405.814	294.5	467.874	1493.7	475.868	1487.5	483.868	1268.7	492.208	935.2
405.894	289.9	467.954	1491.2	475.953	1476.8	483.953	9999.9	492.293	928.6
405.974	293.8	468.038	1490.9	476.038	1478.9	484.038	1260.1	492.374	927.8
406.054	293.5	468.123	1487.6	476.123	1521.5	484.123	1248.7	492.454	917.3
406.138	296.6	468.204	1487.8	476.204	1480.6	484.208	1254.9	492.538	918.9
406.223	294.9	468.284	1491.5	476.284	1470.6	484.293	9999.9	492.623	915.4
406.304	289.8	468.368	1498.8	476.368	1465.3	484.374	1248.6	492.708	915.4
406.384	290.5	468.453	1496.5	476.453	1477.6	484.454	1243.9	492.793	915.8
406.468	286.3	468.538	1503.3	476.534	1468.6	484.538	1245.1	492.874	907.1
406.553	289.8	468.623	1510.3	476.614	1464.6	484.623	1238.5	492.954	901.9
406.634	290.3	468.704	1515.4	476.698	1454.3	484.708	1235.2	493.038	904.2
406.714	284.5	468.784	1524.9	476.783	1451.8	484.793	1231.4	493.123	902.7
406.798	292.6	468.868	1528.8	476.868	1474.8	484.874	1230.0	493.208	894.5
406.883	288.0	468.953	1530.8	476.953	1475.1	484.954	1222.5	493.293	901.1
406.964	286.6	469.034	1534.5	477.034	1475.4	485.038	1219.8	493.374	888.7
407.044	284.5	469.114	1529.5	477.114	1470.1	485.123	1221.5	493.454	886.3
407.124	283.5	469.198	1527.9	477.198	1475.4	485.208	1220.9	493.538	882.2
407.204	281.2	469.283	1527.4	477.283	1466.2	485.293	1212.4	493.623	881.1
407.288	290.6	469.364	1532.3	477.368	1466.2	485.374	1208.8	493.708	885.1
407.373	286.2	469.444	1531.8	477.453	1452.5	485.454	1204.2	493.793	884.5
407.454	291.5	469.528	1537.2	477.534	1466.7	485.538	1196.8	493.874	869.2
407.534	288.5	469.613	1537.7	477.614	9999.9	485.623	1196.8	493.954	865.3
407.618	293.8	469.694	1535.8	477.698	1457.9	485.708	1187.9	494.038	868.6
407.703	296.1	469.774	1529.3	477.783	1450.4	485.793	1193.0	494.123	861.3
407.784	295.4	469.858	1531.7	477.868	1467.7	485.878	1186.9	494.204	860.4
407.864	292.6	469.943	1533.2	477.953	1448.3	485.963	1189.0	494.284	858.2
407.948	293.6	470.028	1533.5	478.038	1453.1	486.044	1177.3	494.368	857.2
408.033	295.2	470.113	1541.3	478.123	1458.9	486.124	9999.9		

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TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(g) Thermocouple 10 - Concluded

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
494.453	859.0	502.518	646.0	511.393	523.2	566.194	322.0	577.284	324.1
494.538	853.8	502.603	645.3	511.974	528.5	566.274	310.7	577.368	331.4
494.623	854.5	502.688	640.6	512.054	527.9	566.358	319.8	577.453	333.8
494.704	842.5	502.773	644.5	512.138	530.3	566.443	321.5	577.538	327.2
494.784	841.2	502.854	636.9	512.223	520.2	566.528	309.0	577.623	333.4
495.038	839.9	502.934	634.9	512.304	517.9	566.613	308.3	577.704	331.2
495.123	835.1	503.018	638.2	512.384	515.2	566.694	318.5	577.784	332.5
495.204	833.4	503.103	644.1	512.468	514.9	566.774	9999.9	577.868	323.9
495.284	829.1	503.184	627.5	512.553	511.5	566.858	322.2	577.953	329.2
495.368	825.8	503.264	630.6	512.634	523.4	566.943	320.2	578.038	323.6
495.453	821.7	503.348	626.7	512.714	516.5	567.028	320.0	578.123	326.3
495.538	821.7	503.433	624.9	512.798	528.5	567.113	329.2	578.204	331.8
495.623	819.8	503.518	623.7	512.883	526.5	567.358	306.8	578.284	9999.9
495.704	817.3	503.603	622.4	512.964	513.9	567.443	319.8	578.368	9999.9
495.784	811.7	503.684	626.2	513.044	515.7	567.528	317.1	578.453	324.8
495.868	810.6	503.764	626.7	513.128	497.4	567.613	320.9	578.368	345.4
495.953	801.9	503.848	626.7	513.213	503.5	567.694	316.7	578.453	342.3
496.038	801.2	503.933	627.1	513.628	507.4	567.774	321.5	579.538	338.2
496.123	795.2	504.014	626.4	513.713	512.7	567.858	316.7	579.623	330.7
496.204	804.2	504.094	633.8	513.794	508.2	567.943	315.3	579.704	334.9
496.284	790.7	504.178	615.1	513.874	505.1	568.028	319.1	579.784	321.2
496.368	794.3	504.263	620.5	513.958	510.3	568.113	324.6	579.868	332.8
496.453	789.2	504.344	612.0	514.043	502.5	568.194	330.6	579.953	328.1
496.534	789.9	504.424	616.0	514.128	511.8	568.274	325.3	580.038	336.5
496.614	777.2	504.508	622.8	514.213	496.5	568.358	329.3	580.123	325.9
496.698	784.9	504.593	619.8	514.294	501.3	568.443	9999.9	580.204	326.1
496.783	777.6	504.678	608.7	514.374	498.3	568.694	327.3	580.284	333.2
496.868	781.6	504.763	611.5	514.454	511.5	568.774	321.8	580.368	331.2
496.953	775.4	504.844	605.0	514.534	509.2	568.858	327.9	580.453	328.8
497.034	767.3	504.924	605.0	514.618	499.9	568.943	330.6	580.538	335.7
497.114	767.1	505.008	603.0	514.703	499.9	569.028	327.5	580.623	329.4
497.198	771.3	505.093	610.0	514.788	489.5	569.113	339.9	581.874	344.4
497.283	761.0	505.174	600.3	514.873	482.5	569.194	347.1	581.954	338.6
497.368	765.4	505.254	608.4	515.614	479.3	569.274	334.7	582.038	346.8
497.453	751.4	505.338	600.7	515.694	479.0	569.358	336.3	582.123	347.9
497.534	757.1	505.423	602.7	515.778	480.9	569.443	333.5	582.208	342.7
497.614	753.7	505.508	607.1	515.863	482.0	570.028	322.9	582.293	349.1
497.698	754.5	505.593	606.6	515.948	484.3	570.113	325.1	582.374	344.0
497.783	744.4	505.674	596.7	516.033	485.0	570.198	310.5	582.454	351.0
497.868	748.8	505.754	594.7	516.114	488.0	570.283	312.1	582.538	342.0
497.953	738.9	505.838	597.1	516.194	484.6	570.364	315.3	582.623	348.4
498.034	742.6	505.923	597.5	517.438	467.0	570.444	318.4	582.704	351.3
498.114	736.1	506.004	592.1	517.523	466.1	570.528	313.1	582.784	353.7
498.198	740.8	506.084	585.7	517.604	476.0	570.613	311.3	582.868	346.1
498.283	736.5	506.168	590.9	517.684	472.1	570.698	315.8	582.953	9999.9
498.368	737.2	506.253	590.3	518.764	448.7	570.783	314.7	584.038	342.1
498.453	739.5	506.334	584.2	518.844	451.2	570.864	310.4	584.123	338.5
498.534	729.2	506.414	588.6	518.928	458.1	570.944	317.6	584.208	342.0
498.614	724.0	506.498	583.7	519.013	455.0	571.028	317.3	584.293	344.3
498.698	735.3	506.583	9999.9	519.094	452.8	571.113	320.7	584.374	342.0
498.783	725.5	506.834	582.8	519.174	448.4	571.198	322.7	584.454	344.9
498.864	728.2	506.914	579.6	519.258	453.9	571.283	325.3	584.538	334.8
498.944	722.4	506.998	576.0	519.343	451.4	571.364	301.5	584.623	327.9
499.028	718.1	507.083	580.3	519.428	456.1	571.444	331.5	584.708	336.8
499.113	715.5	507.164	586.0	519.513	460.1	572.364	323.3	584.793	338.8
499.194	712.7	507.244	583.2	519.594	452.2	572.444	316.7	584.874	345.0
499.274	712.5	507.328	571.9	519.674	455.8	572.528	322.9	584.954	341.4
499.358	710.4	507.413	575.5	519.754	453.7	572.613	322.4	585.038	343.8
499.443	706.7	507.494	568.5	519.834	455.1	572.698	326.0	585.123	338.9
499.528	706.3	507.574	574.5	520.424	431.9	572.783	322.0	585.208	356.2
499.613	708.3	507.658	566.4	520.504	439.1	572.868	327.5	585.293	350.0
499.694	704.8	507.743	570.0	520.588	451.8	572.953	319.6	589.718	347.3
499.774	700.5	507.828	569.3	520.673	460.6	573.034	328.0	589.803	350.7
499.858	700.8	507.913	561.9	520.754	452.6	573.114	332.9	589.888	344.6
499.943	694.8	508.324	555.7	520.834	441.5	573.198	321.6	589.973	341.5
500.028	690.2	508.404	552.6	520.918	445.3	573.283	317.7		
500.113	694.9	508.488	557.9	521.003	450.7	573.368	322.5		
500.194	692.7	508.573	555.0	521.084	443.5	573.453	322.1		
500.274	690.8	508.658	551.5	521.164	431.0	573.534	317.9		
500.358	685.1	508.743	557.1	522.244	414.2	573.614	321.9		
500.443	686.4	508.824	553.1	522.324	411.1	573.698	318.8		
500.524	684.2	508.904	550.7	522.408	459.6	573.783	316.8		
500.604	684.2	508.988	553.8	522.493	421.4	573.868	326.1		
500.688	680.0	509.073	554.3	522.578	447.1	573.953	9999.9		
500.773	680.0	509.154	552.8	522.663	428.0	574.198	343.9		
500.858	679.7	509.234	554.4	538.358	342.8	574.283	332.2		
500.943	675.7	509.318	563.6	538.443	338.7	574.698	323.4		
501.028	672.9	509.403	555.5	538.524	346.7	574.783	327.9		
501.113	672.9	509.488	550.5	538.604	357.9	574.868	317.2		
501.194	675.5	509.573	549.2	538.688	337.8	574.953	332.9		
501.274	668.0	510.148	552.7	538.773	9999.9	575.034	338.8		
501.358	663.0	510.233	534.4	541.188	304.5	575.114	345.8		
501.443	665.0	510.314	535.3	541.273	315.1	575.198	332.4		
501.524	658.8	510.394	531.5	541.354	348.9	575.283	334.0		
501.604	658.4	510.478	544.8	541.434	9999.9	575.368	332.5		
501.688	660.0	510.563	544.8	565.358	316.3	575.453	335.1		
501.773	664.6	510.644	533.3	565.443	319.6	575.534	341.7		
501.858	659.2	510.724	529.7	565.528	300.2	575.614	330.0		
501.943	659.9	510.808	531.3	565.613	313.8	575.698	340.6		
502.024	658.2	510.893	527.5	565.694	328.4	575.783	330.5		
502.104	657.8	510.978	530.6	565.774	320.0	575.868	334.0		
502.188	653.1	511.063	535.1	565.858	332.1	575.953	332.0		
502.273	653.1	511.144	4634.8	565.943	326.0	577.038	330.0		
502.354	650.0	511.224	4630.9	566.028	339.4	577.123	331.2		
502.434	647.2	511.308	536.7	566.113	323.5	577.204	330.1		

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TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(h) Thermocouple 12: s = 0.0573 m; d = 0.0255 m

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
400.110	295.4	408.070	285.2	469.955	284.9	473.125	9999.9	486.285	314.4
400.190	292.9	408.150	288.5	470.080	285.8	478.210	291.0	486.370	311.9
400.275	288.0	408.235	284.8	470.165	281.1	478.295	282.1	486.455	279.9
400.360	286.1	408.320	288.3	470.250	285.2	478.380	292.2	486.540	305.2
400.440	283.6	408.405	286.4	470.335	291.6	478.465	296.3	486.625	281.2
400.520	289.8	408.490	286.6	470.420	290.7	478.550	279.0	486.710	314.0
400.605	287.1	408.570	284.8	470.505	289.0	478.635	285.4	486.795	459.9
400.690	290.5	408.650	291.0	470.590	280.4	478.720	292.6	486.880	322.6
400.770	283.9	408.735	283.9	470.670	294.7	478.805	290.2	486.965	309.9
400.850	285.2	408.820	289.4	470.750	289.2	478.890	9999.9	487.050	313.3
400.935	283.4	408.900	287.4	470.835	282.1	478.975	9999.9	487.135	301.7
401.020	283.4	408.980	289.0	470.920	283.5	479.060	273.6	487.220	313.5
401.105	288.9	409.065	287.9	471.005	284.9	479.145	271.5	487.300	312.2
401.190	286.9	409.150	291.1	471.090	281.6	479.230	281.3	487.380	316.8
401.270	284.5	409.230	289.2	471.175	288.5	479.315	289.5	487.470	319.5
401.350	283.3	409.310	291.5	471.260	285.5	479.400	288.8	487.560	321.7
401.430	285.0	409.395	286.7	471.345	287.1	479.485	9999.9	487.645	9999.9
401.510	283.9	409.480	291.1	471.430	285.7	479.570	9999.9	487.730	311.0
401.595	280.4	409.560	284.8	471.515	285.6	479.655	266.0	487.815	9999.9
401.680	285.7	409.640	291.3	471.600	288.9	479.740	259.6	487.900	321.1
401.765	280.0	409.725	285.5	471.685	286.7	479.825	274.0	487.985	262.4
401.850	284.1	409.810	289.7	471.770	290.4	479.910	287.8	488.070	9999.9
401.930	285.3	409.895	285.8	471.855	291.7	479.995	177.2	488.155	315.3
402.010	286.2	409.980	287.6	471.940	276.8	480.080	269.4	488.240	306.6
402.095	283.5	410.060	285.5	472.025	295.1	480.165	227.3	488.325	262.7
402.180	291.5	410.140	290.4	472.110	289.8	480.250	279.5	488.410	317.1
402.260	289.9	410.225	289.9	472.195	290.7	480.335	280.5	488.495	9999.9
402.340	295.4	410.310	295.0	472.280	289.1	480.420	255.5	488.580	311.3
402.425	286.7	410.390	293.1	472.365	278.4	480.505	275.6	488.665	290.0
402.510	292.2	410.470	297.7	472.450	281.7	480.590	279.1	488.750	315.9
402.590	287.6	464.435	342.0	472.535	282.5	480.675	264.0	488.835	280.3
402.670	294.7	464.520	254.5	472.620	285.0	480.760	292.6	488.920	319.3
402.755	280.8	464.600	312.7	472.705	291.6	480.845	263.5	489.005	279.8
402.840	284.5	464.680	302.6	472.790	295.9	480.930	292.7	489.090	299.6
402.925	286.9	464.765	291.5	472.875	287.0	481.015	9999.9	489.175	320.8
403.010	290.1	464.850	270.1	472.960	287.0	481.100	289.4	489.260	318.4
403.090	288.0	464.930	285.1	473.045	295.4	481.185	294.7	489.345	290.3
403.170	289.2	465.010	273.6	473.130	294.2	481.270	257.9	489.430	319.6
403.255	281.1	465.095	279.8	473.215	291.3	481.355	309.1	489.515	309.2
403.340	287.4	465.180	253.3	473.300	288.8	481.440	302.9	489.600	314.2
403.425	278.5	465.265	287.1	473.385	298.2	481.525	291.7	489.685	327.1
403.510	285.5	465.350	261.6	473.470	289.1	481.610	283.8	489.770	328.4
403.590	279.2	465.435	294.0	473.555	307.8	481.695	276.3	489.855	250.6
403.670	281.5	465.520	274.9	473.640	278.3	481.780	261.0	489.940	312.8
403.755	285.7	465.600	9999.9	473.720	285.4	481.865	297.0	490.025	343.8
403.840	287.6	465.680	9999.9	473.800	284.6	481.950	312.6	490.110	320.6
403.920	286.7	465.765	277.6	473.890	283.2	482.035	269.9	490.195	314.2
404.000	289.9	465.850	244.6	473.980	284.4	482.120	282.7	490.280	315.5
404.085	282.8	465.935	9999.9	474.060	294.8	482.205	289.3	490.365	316.8
404.170	286.0	466.020	279.0	474.140	284.6	482.290	275.1	490.450	328.4
404.255	285.1	466.100	290.8	474.225	288.1	482.375	301.1	490.535	319.1
404.340	289.0	466.180	284.2	474.310	280.2	482.460	312.0	490.620	317.5
404.420	285.7	466.265	279.6	474.395	308.0	482.545	294.3	490.705	320.4
404.500	286.7	466.350	288.3	474.480	301.0	482.630	9999.9	490.790	331.3
404.585	282.5	466.435	285.1	474.565	283.2	482.715	9999.9	490.875	306.4
404.670	285.5	466.520	283.9	474.650	291.0	482.800	305.2	490.960	318.9
404.755	281.5	466.605	292.0	474.735	290.7	482.885	277.0	491.045	280.0
404.840	284.1	466.690	289.3	474.820	293.4	482.970	9999.9	491.130	324.2
404.920	287.8	466.775	295.3	474.905	282.8	483.055	269.4	491.215	327.5
405.000	290.6	466.860	291.6	474.990	287.4	483.140	300.3	491.300	317.7
405.085	283.6	466.945	295.0	475.075	279.9	483.225	280.0	491.385	315.7
405.170	286.5	467.030	286.3	475.160	286.7	483.310	297.2	491.470	322.5
405.250	287.6	467.110	289.9	475.245	293.3	483.395	283.7	491.555	308.5
405.330	292.0	467.190	277.1	475.330	282.0	483.480	293.9	491.640	313.0
405.415	284.3	467.275	286.0	475.415	289.9	483.560	253.9	491.725	313.5
405.500	288.9	467.360	280.5	475.500	276.3	483.640	9999.9	491.810	318.0
405.585	284.5	467.445	292.2	475.585	296.3	483.725	297.4	491.895	316.9
405.670	286.4	467.530	266.6	475.670	292.4	483.810	324.8	491.980	330.5
405.750	289.2	467.615	287.7	475.755	303.7	483.895	285.6	492.065	299.0
405.830	289.2	467.700	283.3	475.840	301.4	483.980	9999.9	492.150	9999.9
405.915	287.1	467.785	283.7	475.925	295.5	484.065	295.2	492.235	328.5
406.000	289.6	467.870	283.3	476.010	285.5	484.150	320.3	492.320	331.9
406.080	283.4	467.960	280.9	476.095	9999.9	484.235	262.7	492.405	305.7
406.160	287.6	468.050	278.4	476.180	9999.9	484.320	9999.9	492.490	306.4
406.245	278.1	468.130	284.8	476.265	221.1	484.405	274.1	492.575	299.6
406.330	284.8	468.210	259.2	476.350	294.3	484.490	9999.9	492.660	318.0
406.415	283.2	468.295	285.9	476.435	286.9	484.575	281.6	492.745	316.2
406.500	286.7	468.380	289.1	476.520	235.6	484.660	9999.9	492.830	325.5
406.580	283.4	468.465	286.3	476.605	233.9	484.745	303.3	492.915	320.6
406.660	282.9	468.550	282.7	476.690	287.3	484.830	9999.9	493.000	9999.9
406.745	280.2	468.635	298.6	476.775	243.0	484.915	284.6	493.085	308.0
406.830	286.4	468.720	291.5	476.860	263.0	485.000	9999.9	493.170	323.6
406.910	285.9	468.805	311.7	476.945	282.4	485.085	9999.9	493.255	310.6
406.990	286.2	468.890	267.3	477.030	9999.9	485.170	301.8	493.340	324.4
407.075	282.5	468.975	289.7	477.115	315.1	485.255	289.3	493.425	303.4
407.160	287.3	469.060	251.5	477.200	336.2	485.340	293.7	493.510	320.0
407.245	285.0	469.145	286.9	477.285	272.5	485.430	293.1	493.595	325.5
407.330	286.7	469.230	287.8	477.370	273.0	485.520	316.8	493.680	333.5
407.410	283.7	469.315	286.5	477.450	291.8	485.605	289.2	493.765	314.6
407.490	289.4	469.400	288.6	477.530	284.9	485.690	297.8	493.850	326.6
407.575	282.3	469.485	288.8	477.615	9999.9	485.775	9999.9	493.935	304.1
407.660	287.8	469.570	288.6	477.700	301.3	485.860	300.1	494.020	314.8
407.740	286.9	469.655	291.1	477.785	327.7	485.945	277.7	494.105	314.4
407.820	293.3	469.740	285.6	477.870	9999.9	486.030	308.5	494.190	310.1
407.905	289.7	469.825	292.6	477.955	319.0	486.115	9999.9	494.275	326.5
407.990	291.5	469.910	291.7	478.040	305.6	486.200	315.5	494.360	320.0

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TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(h) Thermocouple 12 - Concluded

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
494.445	309.6	502.530	332.6	514.025	323.7
494.530	324.4	502.620	319.1	514.110	340.3
494.615	319.0	502.710	327.4	514.195	321.5
494.700	330.3	502.795	332.0	514.280	335.6
494.785	321.3	502.880	329.7	514.365	312.2
494.870	322.0	502.965	315.8	514.450	337.3
494.955	323.2	503.050	327.2	514.535	328.3
495.040	312.4	503.305	9999.9	514.620	351.1
495.125	312.6	503.390	337.0	570.425	333.8
495.210	324.2	503.475	335.4	570.510	331.8
495.295	321.1	503.560	336.5	570.595	338.4
495.380	326.4	503.645	342.0	570.680	343.3
495.465	311.7	503.730	342.7	570.765	338.5
495.550	317.1	503.815	332.0	570.850	339.0
495.635	312.4	503.900	326.2	570.935	341.3
495.720	324.9	503.985	341.7	571.020	344.0
495.805	324.0	504.070	328.0	571.105	333.8
495.890	325.4	504.155	317.3	571.190	333.4
495.975	321.8	504.240	325.6	572.475	324.5
496.060	322.2	504.325	340.1	572.560	332.5
496.145	333.4	504.410	352.9	572.645	345.8
496.230	329.2	504.495	329.9	572.730	347.8
496.315	290.1	504.580	321.5	572.815	339.1
496.400	325.3	504.665	310.2	572.900	349.0
496.485	320.0	504.750	340.8	572.985	9999.9
496.570	310.2	504.835	324.3	573.070	340.1
496.655	9999.9	504.920	338.7	573.155	9999.9
496.740	312.9	505.005	330.6	573.240	336.5
496.825	318.4	505.090	334.6	573.325	339.3
496.910	323.8	505.175	338.3	573.410	347.8
496.995	320.9	505.260	347.0	574.865	325.5
497.080	322.9	505.345	352.3	574.950	335.4
497.165	222.2	505.430	346.5	575.035	333.1
497.250	323.6	505.515	309.9	575.120	334.3
497.335	315.5	505.600	338.8	575.205	321.6
497.420	299.3	505.685	325.8	575.290	332.2
497.505	321.3	505.770	332.6	575.375	336.7
497.590	312.4	505.855	340.7	575.460	333.3
497.675	321.2	505.940	349.4	577.255	343.7
497.760	322.7	506.025	325.5	577.340	342.5
497.845	325.8	506.110	340.5	577.425	340.9
497.930	330.7	506.195	319.4	577.510	336.4
498.015	324.9	506.280	305.9	577.595	341.5
498.100	326.2	506.365	318.9	577.680	345.0
498.185	320.9	506.450	9999.9	577.765	345.7
498.270	329.1	506.885	318.4	577.850	345.5
498.355	312.9	506.970	333.1	577.935	334.1
498.440	316.9	507.055	324.5	578.020	345.0
498.525	328.7	507.140	335.5	578.105	350.1
498.610	320.2	507.225	347.4	578.190	353.7
498.695	319.1	507.310	347.2	579.475	359.5
498.780	335.8	507.395	321.6	579.560	353.3
498.865	321.4	507.480	350.8	579.645	351.4
498.950	324.9	507.565	310.2	579.740	346.7
499.035	324.0	507.650	333.0	579.870	9999.9
499.120	328.9	507.735	324.5	579.900	356.1
499.205	297.1	507.820	330.1	579.985	9999.9
499.290	322.0	507.415	337.1	580.070	327.0
499.375	328.0	508.500	329.4	580.160	334.5
499.460	326.7	508.585	325.4	580.250	340.4
499.545	325.6	508.670	338.8	580.335	345.0
499.630	331.8	508.755	334.6	580.420	338.3
499.715	327.9	508.840	343.4	580.505	9999.9
499.800	326.1	508.925	331.2	580.590	317.3
499.885	327.2	509.010	337.6	582.045	350.3
499.970	9999.9	509.095	329.4	582.130	331.5
500.055	316.7	509.180	335.0	582.215	351.1
500.140	9999.9	509.265	9999.9	582.300	348.0
500.225	293.0	509.350	336.1	582.390	341.5
500.310	333.6	509.435	9999.9	582.480	343.5
500.395	326.8	509.520	336.7	582.565	330.9
500.480	336.5	510.285	311.1	582.650	336.8
500.565	338.4	510.370	316.0	582.735	340.1
500.650	9999.9	510.455	343.7	582.820	9999.9
500.740	318.9	510.540	340.4	584.100	349.5
500.830	319.6	510.625	330.3	584.190	344.5
500.915	331.4	510.710	345.0	584.275	360.6
501.000	332.5	510.795	346.4	584.360	353.4
501.085	322.7	510.880	349.3	584.445	328.8
501.170	335.7	510.965	341.1	584.530	9999.9
501.255	312.6	511.050	343.1	584.615	9999.9
501.340	330.3	511.135	319.1	584.700	339.1
501.425	324.6	511.220	333.7	584.785	329.3
501.510	344.9	512.155	330.7	584.870	333.2
501.595	335.0	512.240	346.7	584.955	345.0
501.680	332.6	512.325	335.8	585.040	342.8
501.765	325.8	512.410	347.4		
501.850	331.0	512.495	293.8		
501.935	327.2	512.580	315.2		
502.020	331.6	512.665	324.5		
502.105	322.7	512.750	303.8		
502.190	310.2	512.835	329.4		
502.275	9999.9	512.920	347.7		
502.360	347.7	513.655	316.7		
502.445	322.6	513.540	346.4		

[redacted]

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(i) Thermocouple 13: s = 0.0573 m; d = 0.0127 m

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
400.078	295.6	407.788	291.0	469.451	417.8	477.336	489.8	485.221	669.6
400.158	297.2	407.871	303.7	469.536	412.8	477.416	512.4	485.306	662.3
400.241	290.0	407.956	290.8	469.621	418.1	477.496	503.6	485.334	9999.9
400.326	295.4	408.038	298.2	469.706	418.5	477.581	9999.9	485.484	664.2
400.408	294.9	408.118	285.5	469.791	422.3	477.666	518.1	485.571	667.8
400.488	294.0	408.201	298.4	469.876	412.5	477.751	539.1	485.656	662.8
400.571	298.6	408.286	287.1	469.961	423.4	477.836	529.3	485.741	9999.9
400.655	296.8	408.371	302.3	470.046	416.6	477.921	524.1	485.826	664.8
400.738	294.5	408.456	288.0	470.131	419.1	478.006	522.5	485.911	668.3
400.818	292.4	408.538	303.9	470.216	410.0	478.091	528.2	485.996	663.5
400.901	293.3	408.618	291.0	470.301	419.4	478.176	513.6	486.081	672.8
400.986	293.3	408.701	302.6	470.386	415.8	478.261	541.0	486.166	9999.9
401.071	297.9	408.786	288.5	470.471	415.0	478.346	531.1	486.251	678.0
401.156	294.7	408.868	305.8	470.556	413.4	478.431	530.4	486.336	660.0
401.238	293.8	408.948	293.6	470.638	421.1	478.516	549.1	486.421	667.8
401.318	291.9	409.031	308.3	470.718	409.0	478.601	545.4	486.506	9999.9
401.398	296.1	409.116	292.7	470.801	418.3	478.686	9999.9	486.591	677.2
401.478	292.6	409.198	309.0	470.886	410.8	478.771	550.9	486.676	390.9
401.561	295.6	409.278	293.4	470.971	415.7	478.856	559.5	486.761	677.0
401.646	287.3	409.361	303.2	471.056	407.3	478.941	563.3	486.846	667.6
401.731	296.1	409.446	287.6	471.141	411.2	479.026	557.2	486.931	685.0
401.816	290.6	409.528	304.6	471.226	413.2	479.111	560.5	487.016	663.9
401.898	300.0	409.608	293.8	471.311	417.6	479.196	559.3	487.101	671.2
401.978	291.7	409.691	300.7	471.396	410.0	479.281	564.4	487.186	694.8
402.061	303.2	409.776	289.4	471.481	416.4	479.366	579.6	487.268	9999.9
402.146	290.8	409.861	303.9	471.566	407.5	479.451	569.1	487.348	664.4
402.228	306.2	409.946	290.1	471.651	410.8	479.536	9999.9	487.434	676.5
402.308	293.1	410.028	303.5	471.736	414.2	479.621	588.0	487.524	665.8
402.391	302.1	410.108	291.3	471.821	414.2	479.706	585.8	487.611	667.1
402.476	287.6	410.191	304.8	471.906	409.7	479.791	589.6	487.696	9999.9
402.558	303.2	410.276	293.4	471.991	420.1	479.876	581.5	487.781	665.0
402.638	289.6	410.358	307.1	472.076	417.1	479.961	594.6	487.866	667.0
402.721	294.2	410.438	297.2	472.161	415.9	480.046	594.8	487.951	663.1
402.806	287.8	464.401	416.8	472.246	410.0	480.131	591.7	488.036	658.9
402.891	305.5	464.486	397.9	472.331	410.4	480.216	608.6	488.121	662.4
402.976	291.9	464.568	439.6	472.416	398.0	480.301	606.0	488.206	656.7
403.058	303.5	464.648	427.7	472.501	419.9	480.386	593.6	488.291	669.1
403.138	291.5	464.731	414.1	472.586	410.3	480.471	597.9	488.376	653.3
403.221	301.6	464.816	395.5	472.671	418.8	480.556	599.0	488.461	9999.9
403.306	288.7	464.898	414.2	472.756	405.6	480.641	611.2	488.546	656.0
403.391	296.5	464.978	405.1	472.841	409.7	480.726	593.3	488.631	659.1
403.476	288.9	465.061	401.6	472.926	417.2	480.811	626.8	488.716	649.0
403.558	297.5	465.146	407.5	473.011	417.7	480.896	617.8	488.801	657.5
403.638	285.9	465.231	408.6	473.096	409.9	480.981	630.5	488.886	634.6
403.721	302.6	465.316	405.2	473.181	416.5	481.066	611.9	488.971	655.7
403.806	293.3	465.401	403.6	473.266	400.9	481.151	623.3	489.056	648.1
403.888	302.3	465.486	412.5	473.351	419.9	481.236	620.6	489.141	661.0
403.968	291.7	465.568	408.2	473.436	412.0	481.321	9999.9	489.226	655.9
404.051	299.3	465.648	9999.9	473.521	409.6	481.406	633.5	489.311	651.2
404.136	291.3	465.731	394.4	473.606	406.7	481.491	633.2	489.396	649.7
404.221	305.8	465.816	393.1	473.688	412.5	481.576	635.0	489.481	655.7
404.306	291.3	465.901	419.2	473.768	409.0	481.661	625.9	489.566	643.0
404.388	300.5	465.986	419.4	473.854	413.1	481.746	636.3	489.651	655.4
404.468	289.9	466.068	408.9	473.944	404.2	481.831	654.0	489.736	636.3
404.551	299.8	466.148	418.0	474.028	419.9	481.916	650.2	489.821	623.5
404.636	289.9	466.231	417.8	474.108	409.1	482.001	9999.9	489.906	645.5
404.721	294.5	466.316	409.8	474.191	417.8	482.086	629.1	489.991	641.9
404.806	290.8	466.401	415.4	474.276	402.8	482.171	639.7	490.076	647.1
404.888	303.0	466.486	404.0	474.361	422.0	482.256	648.8	490.161	640.5
404.968	292.9	466.571	423.3	474.446	423.8	482.341	650.1	490.246	637.9
405.051	297.2	466.656	412.2	474.531	415.2	482.426	9999.9	490.331	653.1
405.136	296.4	466.741	419.3	474.616	412.9	482.511	653.3	490.416	644.2
405.218	299.6	466.826	413.8	474.701	423.6	482.596	9999.9	490.501	639.7
405.298	294.7	466.911	414.8	474.786	415.7	482.681	664.5	490.586	636.2
405.381	296.8	466.996	410.0	474.871	419.0	482.766	541.0	490.671	630.9
405.466	289.6	467.078	416.6	474.956	414.9	482.851	653.3	490.756	9999.9
405.551	297.7	467.158	415.0	475.041	424.3	482.936	9999.9	490.841	644.1
405.636	289.4	467.241	418.6	475.126	415.6	483.021	652.0	490.926	629.9
405.718	301.4	467.326	412.9	475.211	423.4	483.106	659.2	491.011	644.8
405.798	293.3	467.411	418.4	475.296	426.1	483.191	655.4	491.096	632.2
405.881	302.1	467.496	411.8	475.381	425.4	483.276	9999.9	491.181	637.0
405.966	294.5	467.581	420.7	475.466	426.1	483.361	654.0	491.266	633.1
406.048	300.9	467.666	408.5	475.551	424.0	483.446	643.9	491.351	635.9
406.128	289.9	467.751	414.8	475.636	425.6	483.526	660.6	491.436	626.2
406.211	297.5	467.836	408.4	475.721	438.4	483.608	9999.9	491.521	626.8
406.296	288.0	467.924	408.5	475.806	439.7	483.691	666.1	491.606	613.5
406.381	297.9	468.014	412.0	475.891	439.0	483.776	670.4	491.691	626.6
406.466	292.4	468.098	412.9	475.976	445.7	483.861	657.8	491.776	607.7
406.548	296.3	468.178	409.5	476.061	447.9	483.946	9999.9	491.861	623.3
406.628	288.9	468.261	420.1	476.146	9999.9	484.031	663.8	491.946	621.3
406.711	300.0	468.346	406.7	476.231	460.7	484.116	653.9	492.031	598.5
406.796	289.4	468.431	418.5	476.316	455.9	484.201	653.9	492.116	607.6
406.878	295.4	468.516	411.0	476.401	463.2	484.286	9999.9	492.201	633.5
406.958	292.6	468.601	413.6	476.486	438.6	484.371	663.1	492.286	623.7
407.041	294.9	468.686	412.7	476.571	481.5	484.456	662.2	492.371	623.0
407.126	291.5	468.771	414.3	476.656	482.6	484.541	669.5	492.456	612.0
407.211	300.2	468.856	417.0	476.741	484.3	484.626	669.1	492.541	608.6
407.296	293.3	468.941	419.4	476.826	473.5	484.711	655.2	492.626	614.0
407.378	301.6	469.026	413.7	476.911	474.9	484.796	651.4	492.711	626.0
407.458	293.8	469.111	418.9	476.996	9999.9	484.881	663.3	492.796	615.0
407.541	302.3	469.196	409.8	477.081	506.9	484.966	654.3	492.881	620.0
407.626	290.8	469.281	417.0	477.166	520.4	485.051	657.2	492.965	610.2
407.708	298.4	469.366	411.1	477.251	484.0	485.136	669.0	493.051	615.6

[redacted]

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(i) Thermocouple 13 - Concluded

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
493.136	601.7	501.136	524.2	510.846	492.8	580.556	361.2
493.221	612.4	501.221	532.1	510.931	9999.9	582.011	365.7
493.306	606.2	501.306	519.2	511.016	487.7	582.096	379.4
493.391	606.3	501.391	539.2	511.101	495.6	582.181	371.4
493.476	592.7	501.476	9999.9	511.186	487.3	582.266	369.2
493.561	616.1	501.561	533.2	512.121	489.8	582.354	382.7
493.646	606.5	501.646	528.0	512.206	478.5	582.444	371.7
493.731	609.3	501.731	542.1	512.291	497.0	582.531	362.8
493.816	600.5	501.816	510.5	512.376	480.7	582.616	360.5
493.901	605.2	501.901	538.3	512.461	472.1	582.701	9999.9
493.986	9999.9	501.986	532.9	512.546	467.9	582.786	373.2
494.071	588.7	502.071	9999.9	512.631	465.1	584.054	9999.9
494.156	578.6	502.156	534.2	512.716	497.1	584.154	9999.9
494.241	599.4	502.241	9999.9	512.801	487.7	584.241	389.2
494.326	585.3	502.326	527.5	512.886	488.6	584.326	378.7
494.411	606.4	502.411	536.4	513.821	470.5	584.411	382.8
494.496	577.8	502.496	524.5	513.906	476.5	584.496	9999.9
494.581	603.8	502.581	519.8	513.991	482.3	584.581	390.9
494.666	595.5	502.674	509.8	514.076	9999.9	584.666	377.8
494.751	590.8	502.761	528.6	514.161	473.6	584.751	370.7
494.836	590.3	502.846	519.8	514.246	476.2	584.836	346.3
494.921	600.0	502.931	535.6	514.331	481.9	584.921	369.2
495.006	591.8	503.016	498.1	514.416	9999.9	585.006	359.7
495.091	594.3	503.271	525.4	514.501	495.9		
495.176	582.4	503.356	521.9	514.586	9999.9		
495.261	596.7	503.441	518.1	567.491	382.2		
495.346	587.1	503.526	516.8	567.576	384.7		
495.431	589.6	503.611	538.7	567.661	383.0		
495.516	575.0	503.696	530.2	567.746	9999.9		
495.601	584.5	503.781	529.9	567.831	380.9		
495.686	565.8	503.866	514.7	567.916	9999.9		
495.771	584.4	503.951	514.4	568.001	365.3		
495.856	579.2	504.036	512.8	568.086	9999.9		
495.941	585.1	504.121	502.1	568.868	356.1		
496.026	575.3	504.206	513.1	568.958	353.1		
496.111	579.8	504.291	562.4	570.391	391.9		
496.196	576.2	504.376	525.9	570.476	406.2		
496.281	572.2	504.461	531.3	570.561	369.9		
496.366	574.2	504.546	516.6	570.646	9999.9		
496.451	592.2	504.631	514.5	570.731	376.8		
496.536	581.2	504.716	515.0	570.816	9999.9		
496.621	565.0	504.801	521.7	570.901	377.1		
496.706	562.4	504.886	508.3	570.986	365.7		
496.791	578.7	504.971	511.2	571.071	394.7		
496.876	566.1	505.056	517.5	571.156	377.5		
496.961	570.5	505.141	515.0	572.441	377.0		
497.046	568.0	505.226	475.2	572.526	370.2		
497.131	581.4	505.311	520.8	572.611	389.5		
497.216	553.6	505.396	505.1	572.696	379.3		
497.301	572.6	505.481	525.0	572.781	367.8		
497.386	550.7	505.566	489.5	572.866	362.8		
497.471	570.4	505.651	495.3	572.951	377.6		
497.556	563.0	505.736	501.3	573.036	360.9		
497.641	560.7	505.821	510.4	573.121	376.5		
497.726	561.1	505.906	511.3	573.206	365.0		
497.811	579.6	505.991	503.5	573.291	360.5		
497.896	572.6	506.076	501.6	573.376	373.1		
497.981	548.1	506.161	509.3	574.831	9999.9		
498.066	542.9	506.246	492.4	574.916	9999.9		
498.151	562.3	506.331	513.6	575.001	361.3		
498.236	545.0	506.416	9999.9	575.086	365.6		
498.321	553.3	506.851	525.9	575.171	376.1		
498.406	553.1	506.936	493.1	575.256	9999.9		
498.491	564.5	507.021	501.5	575.341	374.7		
498.576	542.4	507.106	499.4	575.426	374.0		
498.661	571.0	507.191	507.1	575.511	376.6		
498.746	547.2	507.276	493.8	575.596	371.2		
498.831	551.8	507.361	521.5	575.681	376.3		
498.916	543.4	507.446	505.3	575.766	362.3		
499.001	553.4	507.531	501.3	577.221	371.9		
499.086	551.2	507.616	9999.9	577.306	370.8		
499.171	546.6	507.701	496.2	577.391	392.3		
499.256	549.5	507.786	9999.9	577.476	363.4		
499.341	560.1	508.361	504.6	577.561	387.7		
499.426	549.5	508.466	484.8	577.646	368.7		
499.511	547.3	508.551	510.5	577.731	376.4		
499.596	541.0	508.636	499.9	577.816	9999.9		
499.681	545.0	508.721	516.8	577.901	373.4		
499.766	537.3	508.806	498.3	577.986	363.5		
499.851	543.5	508.891	493.7	578.071	4591.7		
499.936	532.4	508.976	490.4	578.156	9999.9		
500.021	548.9	509.061	497.6	579.441	384.9		
500.106	532.4	509.146	490.8	579.526	369.3		
500.191	546.2	509.231	502.7	579.614	383.8		
500.276	540.3	509.316	491.9	579.704	376.2		
500.361	539.0	509.401	512.7	579.793	365.5		
500.446	532.6	509.486	492.0	579.869	393.8		
500.531	546.0	510.251	500.1	579.951	362.5		
500.616	9999.9	510.336	477.4	580.036	360.3		
500.704	537.0	510.421	490.6	580.124	383.5		
500.794	529.6	510.506	480.4	580.214	368.6		
500.881	531.9	510.591	493.6	580.301	376.0		
500.966	537.3	510.676	487.9	580.386	367.0		
501.051	539.4	510.761	504.3	580.471	392.3		

[redacted]

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(j) Thermocouple 14: s = 0.0573 m; d = 0.0203 m

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
400.239	293.5	408.039	295.2	470.034	301.4	477.959	369.9	485.884	372.4
400.319	293.3	408.119	290.5	470.119	302.3	478.044	369.3	485.969	372.9
400.404	293.5	408.199	291.0	470.204	295.0	478.129	9999.9	486.049	367.5
400.489	292.4	408.284	288.9	470.289	300.2	478.209	369.5	486.129	379.0
400.569	287.9	408.369	290.7	470.369	303.2	478.289	377.1	486.214	388.7
400.649	291.2	408.449	289.8	470.449	303.9	478.374	378.0	486.299	390.1
400.729	284.2	408.529	291.4	470.529	294.7	478.459	384.2	486.384	377.9
400.809	287.5	408.614	284.9	470.609	300.9	478.539	384.4	486.469	383.9
400.894	287.3	408.699	286.3	470.694	305.3	478.619	392.4	486.549	375.3
400.979	287.0	408.779	280.7	470.779	301.4	478.704	385.3	486.629	384.8
401.059	286.6	408.859	283.0	470.864	298.6	478.789	385.1	486.714	379.7
401.139	285.4	408.944	285.4	470.949	304.4	478.874	386.7	486.799	381.0
401.224	291.5	409.029	284.0	471.029	296.1	478.959	389.6	486.879	384.0
401.309	288.7	409.109	291.5	471.109	297.5	479.039	387.5	486.959	385.5
401.389	292.4	409.189	289.4	471.194	299.7	479.119	384.8	487.044	384.2
401.469	295.2	409.269	286.8	471.279	299.3	479.204	379.7	487.129	381.8
401.549	298.2	409.349	284.5	471.364	297.4	479.289	381.1	487.214	388.6
401.629	296.8	409.434	291.5	471.449	295.3	479.374	377.4	487.299	390.2
401.714	291.7	409.519	289.2	471.529	296.5	479.459	383.2	487.379	379.6
401.799	292.1	409.599	302.1	471.609	303.4	479.544	391.1	487.459	379.6
401.879	289.3	409.679	296.3	471.694	295.7	479.629	386.0	487.544	384.7
401.959	291.9	409.764	295.2	471.779	293.0	479.709	385.9	487.629	379.9
402.039	291.2	409.849	293.8	471.864	296.1	479.789	385.6	487.709	383.3
402.119	294.0	409.929	294.7	471.949	301.4	479.874	386.1	487.789	382.7
402.204	286.6	410.009	292.4	472.029	299.7	479.959	385.9	487.874	385.1
402.289	288.9	410.094	294.2	472.109	297.6	480.039	386.7	487.959	377.1
402.369	286.6	410.179	297.0	472.194	296.3	480.119	386.9	488.209	383.4
402.449	287.5	410.259	293.5	472.279	305.1	480.204	384.9	488.289	381.4
402.534	287.5	410.339	293.3	472.364	298.8	480.289	381.6	488.374	377.6
402.619	288.0	410.424	284.7	472.449	300.0	480.374	389.6	488.459	9999.9
402.699	289.4	410.509	287.9	472.534	305.1	480.459	385.4	488.544	372.0
402.779	286.8	410.594	287.2	472.619	312.2	480.544	391.0	488.629	382.0
402.859	293.1	410.679	9999.9	472.699	305.3	480.629	387.5	488.714	380.4
402.939	292.4	410.759	292.1	472.779	313.9	480.709	382.0	488.799	379.1
403.024	292.4	410.839	295.3	472.864	314.2	480.789	383.5	488.879	378.8
403.109	294.2	465.074	296.7	472.949	321.3	480.874	385.0	488.959	377.5
403.233	290.3	465.159	296.0	473.034	309.2	480.959	386.1	489.044	371.9
403.363	290.5	465.239	295.2	473.119	313.9	481.044	380.7	489.129	374.6
403.410	292.6	465.319	284.3	473.204	325.4	481.129	381.0	489.214	378.8
403.445	293.3	465.399	298.1	473.289	315.3	481.209	379.1	489.299	381.9
403.519	290.8	465.479	298.8	473.369	327.4	481.289	380.4	489.379	373.7
403.599	293.1	465.559	295.9	473.449	322.9	481.374	381.0	489.459	380.4
403.684	288.9	465.639	9999.9	473.534	315.3	481.459	384.5	489.544	370.9
403.769	291.5	465.724	293.6	473.619	318.8	481.544	382.9	489.629	375.4
403.849	286.6	465.809	298.6	473.704	322.3	481.629	381.3	489.879	376.2
403.929	284.7	465.889	299.5	473.789	330.2	481.709	377.7	489.959	377.1
404.009	292.4	465.969	297.2	473.869	321.5	481.789	378.5	490.044	374.6
404.089	290.3	466.049	290.5	473.949	318.2	481.874	369.8	490.129	371.3
404.174	294.9	466.129	298.4	474.034	334.6	481.959	375.2	490.209	377.1
404.259	292.6	466.214	296.3	474.119	328.4	482.044	391.1	490.289	376.6
404.339	293.5	466.299	296.8	474.204	329.5	482.129	386.9	490.374	372.1
404.419	291.7	466.379	288.5	474.289	325.0	482.209	383.0	490.459	377.0
404.499	291.0	466.459	290.1	474.374	325.1	482.289	380.3	490.544	379.0
404.579	294.5	466.544	290.4	474.459	323.8	482.374	384.5	490.629	384.6
404.664	291.9	466.629	290.6	474.539	328.0	482.459	385.2	490.714	383.6
404.749	291.7	466.714	294.7	474.619	328.2	482.544	379.4	490.799	381.0
404.829	287.0	466.799	292.2	474.704	332.1	482.629	372.8	490.879	383.9
404.909	289.3	466.884	290.3	474.789	332.5	482.709	386.9	490.959	382.6
404.994	291.0	466.969	293.6	474.869	322.9	482.789	387.1	491.044	381.8
405.079	291.9	467.049	292.0	474.949	333.8	482.874	383.0	491.129	382.2
405.159	290.8	467.129	292.6	475.034	326.4	482.959	382.8	491.214	375.3
405.239	293.8	467.214	286.4	475.119	333.1	483.044	379.8	491.299	380.9
405.324	288.0	467.299	290.6	475.204	331.0	483.129	379.6	491.379	383.9
405.409	286.1	467.379	291.5	475.289	329.7	483.214	380.3	491.459	377.0
405.489	290.3	467.459	292.9	475.374	334.2	483.299	385.6	491.544	385.9
405.569	288.4	467.544	293.6	475.459	333.7	483.379	389.6	491.629	380.6
405.654	292.2	467.629	299.8	475.539	340.6	483.459	384.8	491.714	378.8
405.739	291.0	467.714	297.0	475.619	342.9	483.544	386.6	491.799	373.0
405.819	293.3	467.799	296.1	475.704	335.9	483.629	388.8	491.879	381.8
405.899	294.0	467.879	286.1	475.789	328.1	483.709	379.8	491.959	376.5
405.979	292.4	467.959	293.0	475.874	332.2	483.789	376.0	492.044	386.4
406.059	291.5	468.044	295.2	475.959	337.7	483.874	381.0	492.129	379.8
406.144	293.6	468.129	299.5	476.044	329.7	483.959	9999.9	492.044	386.4
406.229	292.2	468.209	293.3	476.129	326.2	484.044	388.1	492.129	379.8
406.309	290.8	468.289	293.5	476.209	328.2	484.129	382.2	492.214	376.5
406.389	292.6	468.374	291.7	476.289	329.3	484.214	383.5	492.299	374.0
406.474	289.1	468.459	295.8	476.374	334.4	484.299	9999.9	492.379	373.4
406.559	289.8	468.544	292.4	476.459	333.3	484.379	378.4	492.459	376.3
406.639	288.0	468.629	295.4	476.539	331.8	484.459	383.7	492.544	370.7
406.719	286.7	468.709	294.0	476.619	332.3	484.544	380.1	492.629	372.5
406.804	289.8	468.789	295.8	476.704	324.8	484.629	384.9	492.714	372.1
406.889	291.7	468.874	290.3	476.789	319.1	484.714	387.2	492.799	372.8
406.969	286.6	468.959	294.2	476.874	343.2	484.799	380.2	492.879	368.1
407.049	287.0	469.039	292.6	476.959	345.4	484.879	375.4	492.959	368.7
407.129	283.5	469.119	296.5	477.039	346.0	484.959	375.4	493.044	375.0
407.209	284.5	469.204	291.4	477.119	352.0	485.044	382.0	493.129	373.9
407.294	288.2	469.289	290.3	477.204	358.6	485.129	377.8	493.214	375.3
407.379	285.0	469.369	295.4	477.289	357.2	485.214	374.5	493.299	374.8
407.459	290.3	469.449	301.4	477.374	368.0	485.299	377.0	493.379	368.7
407.539	288.5	469.534	302.8	477.459	363.5	485.379	375.5	493.459	367.2
407.624	295.2	469.619	304.6	477.539	363.1	485.459	366.6	493.544	362.4
407.709	295.4	469.699	294.5	477.619	9999.9	485.544	376.4	493.629	369.8
407.789	295.4	469.779	297.2	477.704	365.1	485.629	382.2	493.714	367.7
407.869	294.9	469.864	292.6	477.789	363.5	485.714	370.1	493.799	368.8
407.954	293.8	469.949	297.5	477.874	9999.9	485.799	373.0	493.879	371.7

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(j) Thermocouple 14 - Concluded

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
493.959	376.2	502.029	366.1	510.899	355.0	565.699	374.6	575.619	372.0
494.044	374.9	502.109	367.7	510.984	354.8	565.779	375.1	575.704	383.1
494.129	377.5	502.194	366.8	511.069	362.1	565.864	376.6	575.789	368.5
494.209	370.4	502.279	361.2	511.149	4493.9	565.949	371.5	575.874	373.8
494.289	365.7	502.359	362.9	511.229	4500.2	566.034	384.3	575.959	372.0
494.374	366.6	502.439	364.5	511.314	363.0	566.119	379.4	577.044	364.5
494.459	366.2	502.524	362.3	511.399	358.3	566.199	367.9	577.129	366.1
494.544	367.0	502.609	366.6	511.979	368.1	566.279	360.1	577.209	353.4
494.629	371.9	502.694	361.0	512.059	366.7	566.364	362.6	577.289	358.0
494.709	368.9	502.779	366.1	512.144	362.2	566.449	362.0	577.374	364.0
494.789	367.6	502.859	360.6	512.229	361.5	566.534	361.3	577.459	368.6
495.044	378.6	502.939	363.1	512.309	360.2	566.619	365.7	577.544	362.9
495.129	377.7	503.024	357.7	512.389	360.2	566.704	375.9	577.629	366.7
495.209	372.3	503.109	365.3	512.474	362.7	566.789	9999.9	577.709	362.0
495.289	374.3	503.189	346.1	512.559	357.3	566.869	358.1	577.789	365.8
495.374	377.7	503.269	359.7	512.639	366.6	566.949	371.6	577.874	362.1
495.459	372.6	503.354	362.9	512.719	364.4	567.034	356.5	577.959	367.9
495.544	374.0	503.439	359.8	512.804	370.0	567.119	362.5	578.044	356.3
495.629	370.5	503.524	355.3	512.889	369.6	567.369	358.4	578.129	362.1
495.709	377.5	503.609	355.7	512.969	359.3	567.449	361.3	578.209	369.7
495.789	375.7	503.689	358.8	513.049	347.6	567.534	364.6	578.289	9999.9
495.874	380.4	503.769	359.7	513.134	363.9	567.619	366.6	578.374	9999.9
495.959	372.0	503.854	363.0	513.219	359.0	567.699	364.3	578.459	369.7
496.044	373.8	503.939	365.7	513.634	363.3	567.779	363.8	579.374	366.8
496.129	372.1	504.019	370.4	513.719	360.5	567.864	369.3	579.459	372.3
496.209	371.8	504.099	377.0	513.799	356.4	567.949	367.6	579.544	363.9
496.289	366.3	504.184	362.7	513.879	358.4	568.034	360.8	579.629	367.2
496.374	379.8	504.269	362.5	513.964	358.6	568.119	363.7	579.709	362.8
496.459	373.6	504.349	359.6	514.049	359.7	568.199	364.9	579.789	363.9
496.539	370.3	504.429	361.1	514.134	359.0	568.279	360.7	579.874	360.4
496.619	369.2	504.514	357.3	514.219	358.8	568.364	371.0	579.959	359.7
496.704	378.4	504.599	362.4	514.299	362.1	568.449	9999.9	580.044	365.5
496.789	376.6	504.684	360.2	514.379	364.8	568.699	361.9	580.129	365.3
496.874	376.0	504.769	355.8	514.459	367.5	568.779	369.6	580.209	359.5
496.959	372.9	504.849	358.5	514.539	369.1	568.864	375.6	580.289	363.5
497.039	368.7	504.929	361.6	514.624	369.5	568.949	377.1	580.374	362.5
497.119	366.5	505.014	361.0	514.709	363.6	569.034	350.8	580.459	362.1
497.204	367.3	505.099	363.7	514.794	356.0	569.119	371.8	580.544	360.4
497.289	366.2	505.179	360.9	514.879	362.0	569.204	370.4	580.629	368.2
497.374	367.9	505.259	356.2	515.619	343.9	569.289	373.0	581.879	375.0
497.459	368.8	505.344	353.9	515.699	351.5	569.369	379.5	581.959	370.4
497.539	367.2	505.429	359.0	515.784	351.9	569.449	375.1	582.044	380.2
497.619	366.1	505.514	364.8	515.869	356.6	569.534	367.0	582.129	375.2
497.704	370.2	505.599	366.7	515.954	357.9	569.619	9999.9	582.214	373.2
497.789	365.8	505.679	360.4	516.039	355.7	570.034	366.8	582.299	374.0
497.874	359.7	505.759	359.8	516.119	343.8	570.119	359.5	582.379	372.9
497.959	371.9	505.844	361.2	516.199	355.3	570.204	359.3	582.459	377.5
498.039	360.2	505.929	361.0	517.444	341.2	570.289	363.5	582.544	372.5
498.119	362.2	506.009	356.1	517.529	345.5	570.369	354.8	582.629	375.6
498.204	367.0	506.089	352.8	517.609	349.2	570.449	358.1	582.709	377.2
498.289	364.3	506.174	359.8	517.689	347.9	570.534	361.5	582.789	371.9
498.374	367.4	506.259	362.5	518.769	350.1	570.619	363.5	582.874	376.5
498.459	370.5	506.339	355.1	518.849	356.1	570.704	361.7	582.959	9999.9
498.539	359.9	506.419	359.1	518.934	353.0	570.789	361.1	584.044	365.0
498.619	361.0	506.504	353.5	519.019	353.9	570.869	366.0	584.129	363.7
498.704	369.0	506.589	9999.9	519.099	344.4	570.949	363.1	584.214	367.8
498.789	371.2	506.839	364.3	519.179	351.7	571.034	362.4	584.299	367.8
498.869	365.0	506.919	362.1	519.264	343.5	571.119	363.3	584.379	363.7
498.949	366.5	507.004	354.9	519.349	354.8	571.204	367.7	584.459	367.3
499.034	365.1	507.089	360.5	519.434	360.2	571.289	368.9	584.544	357.8
499.119	367.3	507.169	360.9	519.519	355.8	571.369	356.3	584.629	360.0
499.199	354.9	507.249	358.9	519.599	348.1	571.449	371.8	584.714	362.3
499.279	356.5	507.334	349.7	519.679	350.5	572.369	371.4	584.799	363.2
499.364	366.1	507.419	356.1	519.759	355.6	572.449	367.9	584.879	365.6
499.449	365.2	507.499	353.6	519.839	348.9	572.534	370.8	584.959	366.9
499.534	360.0	507.579	356.9	520.429	330.7	572.619	364.4	585.044	362.0
499.619	360.4	507.664	354.1	520.509	354.2	572.704	370.5	585.129	369.8
499.699	364.6	507.749	357.9	520.594	360.7	572.789	363.4	585.214	381.5
499.779	364.1	507.834	356.2	520.679	362.6	572.874	361.9	585.299	381.5
499.864	358.8	507.919	367.5	520.759	356.9	572.959	364.5	589.724	374.4
499.949	357.1	508.329	349.8	520.839	357.5	573.039	368.4	589.809	377.9
500.034	360.9	508.409	355.1	520.924	364.6	573.119	366.4	589.894	361.3
500.119	360.7	508.494	355.6	521.009	365.3	573.204	362.5	589.979	366.9
500.199	361.1	508.579	351.6	521.089	357.8	573.289	360.2		
500.279	358.7	508.664	351.1	521.169	360.0	573.374	363.9		
500.364	357.9	508.749	360.7	522.249	347.0	573.459	366.8		
500.449	358.8	508.829	357.6	522.329	411.1	573.539	362.5		
500.529	363.4	508.909	358.9	522.414	361.1	573.619	362.0		
500.609	362.5	508.994	349.4	522.499	362.3	573.704	361.8		
500.694	366.8	509.079	353.2	522.584	353.5	573.789	360.5		
500.779	363.3	509.159	364.8	522.669	353.3	573.874	371.3		
500.864	364.3	509.239	369.0	538.364	379.7	573.959	9999.9		
500.949	368.0	509.324	357.5	538.449	385.0	574.204	375.7		
501.034	361.5	509.409	360.8	538.529	377.1	574.289	369.1		
501.119	366.8	509.494	363.4	538.609	385.7	574.704	360.8		
501.199	363.1	509.579	362.8	538.694	363.7	574.789	361.3		
501.279	362.2	510.154	363.6	538.779	9999.9	574.874	366.9		
501.364	357.4	510.239	359.9	541.194	357.7	574.959	371.4		
501.449	358.9	510.319	354.4	541.279	353.2	575.039	381.5		
501.529	356.5	510.399	361.1	541.359	373.7	575.119	379.5		
501.609	361.9	510.484	362.4	541.439	9999.9	575.204	374.9		
501.694	363.7	510.569	366.6	565.364	381.0	575.289	377.8		
501.779	367.0	510.649	353.2	565.449	371.8	575.374	373.1		
501.864	366.1	510.729	354.8	565.534	366.1	575.459	371.8		
501.949	373.8	510.814	353.7	565.619	373.4	575.539	378.4		

[redacted]

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(k) Thermocouple 15: s = 0.0573 m; d = 0.0178 m

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
400.083	295.6	407.962	290.8	469.797	389.5	477.842	412.6	485.917	388.7
400.163	274.9	408.043	294.5	469.882	381.5	477.927	398.5	486.002	394.7
400.247	293.3	408.123	288.0	469.967	391.6	478.012	402.2	486.087	401.6
400.332	291.4	408.207	296.2	470.052	398.7	478.097	393.5	486.172	9999.9
400.413	290.8	408.292	288.3	470.137	389.8	478.182	377.2	486.257	395.7
400.493	288.4	408.377	297.9	470.222	388.3	478.267	405.9	486.342	381.0
400.577	295.2	408.462	286.6	470.307	393.0	478.352	395.9	486.427	416.5
400.662	296.8	408.543	295.6	470.392	394.1	478.437	396.4	486.512	398.1
400.743	294.5	408.623	290.8	470.477	396.6	478.522	392.4	486.597	390.5
400.823	293.5	408.707	299.1	470.562	396.3	478.607	388.7	486.682	311.7
400.907	293.3	408.792	288.5	470.643	397.4	478.692	9999.9	486.767	395.7
400.992	291.2	408.873	303.0	470.723	395.2	478.777	401.6	486.852	382.4
401.077	295.6	408.953	291.5	470.807	401.2	478.862	386.4	486.937	398.2
401.162	294.7	409.037	304.8	470.892	394.4	478.947	401.8	487.022	392.0
401.243	293.8	409.122	294.1	470.977	395.9	479.032	384.5	487.107	382.1
401.323	290.5	409.203	304.8	471.062	394.8	479.117	407.8	487.192	385.9
401.403	296.1	409.283	294.5	471.147	397.4	479.202	415.0	487.273	9999.9
401.483	292.6	409.367	303.2	471.232	404.3	479.287	9999.9	487.353	380.2
401.567	295.6	409.452	299.7	471.317	406.1	479.372	404.0	487.440	398.1
401.652	297.3	409.533	304.6	471.402	398.9	479.457	390.5	487.530	387.7
401.737	296.1	409.613	292.7	471.487	406.2	479.542	389.4	487.617	385.9
401.822	290.6	409.697	300.7	471.572	398.2	479.627	402.4	487.702	9999.9
401.903	297.5	409.782	291.0	471.657	411.2	479.712	401.3	487.787	382.2
401.983	291.7	409.867	301.9	471.742	396.5	479.797	395.4	487.872	386.7
402.067	297.5	409.952	290.1	471.827	400.5	479.882	389.9	487.957	386.1
402.152	290.8	410.033	298.2	471.912	394.0	479.967	396.9	488.042	373.5
402.233	301.9	410.113	291.7	471.997	403.4	480.052	401.3	488.127	384.6
402.313	293.1	410.197	304.8	472.082	408.4	480.137	418.5	488.212	376.5
402.397	295.9	410.282	293.4	472.167	404.9	480.222	401.8	488.297	389.9
402.482	298.0	410.363	305.5	472.252	395.8	480.307	399.4	488.382	380.8
402.563	297.5	410.443	297.9	472.337	397.8	480.392	382.5	488.467	9999.9
402.643	290.8	464.407	317.2	472.422	383.1	480.477	385.3	488.552	382.7
402.727	291.0	464.492	281.4	472.507	401.4	480.562	386.6	488.637	395.0
402.812	285.9	464.573	340.7	472.592	393.3	480.647	9999.9	488.722	379.8
402.897	297.3	464.653	333.8	472.677	397.2	480.732	424.6	488.807	387.6
402.982	288.7	464.737	311.0	472.762	398.3	480.817	392.9	488.892	370.8
403.063	296.1	464.822	306.4	472.847	394.4	480.902	397.6	488.977	383.0
403.143	291.5	464.903	320.1	472.932	403.5	480.987	9999.9	489.062	376.5
403.227	292.9	464.983	317.7	473.017	407.1	481.072	393.8	489.147	388.4
403.312	289.0	465.067	312.1	473.102	394.0	481.157	395.7	489.232	394.4
403.397	289.8	465.152	315.2	473.187	405.4	481.242	389.9	489.317	399.0
403.482	297.8	465.237	323.2	473.272	393.9	481.327	420.4	489.402	383.5
403.563	292.9	465.322	325.7	473.357	410.8	481.412	396.0	489.487	395.1
403.643	288.7	465.407	326.6	473.442	399.1	481.497	395.0	489.572	386.2
403.727	298.4	465.492	331.6	473.527	385.9	481.582	398.6	489.657	390.5
403.812	292.9	465.573	325.7	473.612	400.4	481.667	9999.9	489.742	383.8
403.893	297.7	465.653	9999.9	473.693	406.5	481.752	392.0	489.827	377.7
403.973	293.8	465.737	316.5	473.773	402.0	481.837	422.1	489.912	379.1
404.057	299.3	465.822	316.2	473.860	405.8	481.922	9999.9	489.997	386.7
404.142	290.6	465.907	332.6	473.950	392.5	482.007	377.3	490.082	388.5
404.227	300.5	465.992	347.7	474.033	419.7	482.092	371.9	490.167	353.9
404.312	291.3	466.073	343.3	474.113	404.8	482.177	394.7	490.252	356.8
404.393	298.2	466.153	338.0	474.197	404.4	482.262	396.5	490.337	388.0
404.473	291.5	466.237	340.0	474.282	392.0	482.347	408.2	490.422	380.9
404.557	294.0	466.322	340.2	474.367	416.1	482.432	418.6	490.507	379.6
404.642	289.7	466.407	341.8	474.452	413.0	482.517	402.0	490.592	368.0
404.727	294.5	466.492	333.8	474.537	413.1	482.602	9999.9	490.677	392.2
404.812	290.8	466.577	346.7	474.622	401.0	482.687	401.8	490.762	388.4
404.893	300.7	466.662	338.4	474.707	408.6	482.772	402.4	490.847	384.7
404.973	294.7	466.747	345.9	474.792	399.1	482.857	396.8	490.932	375.5
405.057	293.8	466.832	341.8	474.877	394.9	482.942	9999.9	491.017	388.0
405.142	288.0	466.917	342.3	474.962	394.0	483.027	396.2	491.102	383.1
405.223	296.8	467.002	336.6	475.047	402.0	483.112	405.1	491.187	367.3
405.303	293.1	467.083	341.1	475.132	396.1	483.197	395.7	491.272	384.8
405.387	293.3	467.163	346.4	475.217	398.9	483.282	9999.9	491.357	388.9
405.472	290.3	467.247	348.1	475.302	389.3	483.367	381.6	491.442	370.1
405.557	289.6	467.332	343.5	475.387	396.2	483.452	386.0	491.527	363.3
405.642	286.6	467.417	352.5	475.472	396.7	483.533	390.2	491.612	374.1
405.723	293.8	467.502	343.4	475.557	395.3	483.613	9999.9	491.697	372.3
405.803	291.7	467.587	354.6	475.642	391.4	483.697	408.7	491.782	377.4
405.887	294.5	467.672	342.5	475.727	401.7	483.782	402.8	491.867	381.8
405.972	293.6	467.757	344.0	475.812	398.1	483.867	393.5	491.952	371.1
406.053	292.9	467.842	341.5	475.897	409.1	483.952	9999.9	492.037	355.6
406.133	289.9	467.930	344.0	475.982	396.0	484.037	398.5	492.122	366.2
406.217	291.2	468.020	348.4	476.067	409.1	484.122	395.4	492.207	398.8
406.302	288.0	468.103	351.3	476.152	9999.9	484.207	364.8	492.292	392.1
406.387	294.0	468.183	352.4	476.237	407.6	484.292	9999.9	492.377	385.8
406.472	291.5	468.267	357.5	476.322	394.8	484.377	393.2	492.462	368.2
406.553	291.5	468.352	348.9	476.407	403.6	484.462	363.4	492.547	374.1
406.633	288.9	468.437	364.3	476.492	397.4	484.547	393.5	492.632	376.1
406.717	294.0	468.522	358.6	476.577	420.3	484.632	9999.9	492.717	393.4
406.802	291.3	468.607	364.5	476.662	402.2	484.717	390.5	492.802	381.6
406.883	296.3	468.692	365.4	476.747	398.7	484.802	383.4	492.887	367.7
406.963	292.6	468.777	369.0	476.832	406.1	484.887	384.0	492.972	372.1
407.047	294.9	468.862	367.0	476.917	407.8	484.972	387.6	493.057	388.2
407.132	291.0	468.947	378.8	477.002	9999.9	485.057	386.2	493.142	383.4
407.217	299.8	469.032	369.8	477.087	425.6	485.142	388.7	493.227	384.4
407.302	292.0	469.117	378.7	477.172	9999.9	485.227	387.4	493.312	384.6
407.383	298.4	469.202	365.0	477.257	386.4	485.312	383.6	493.397	380.2
407.463	292.0	469.287	373.0	477.342	384.8	485.400	405.6	493.482	386.0
407.547	297.5	469.372	365.9	477.423	407.1	485.490	9999.9	493.567	395.6
407.632	290.8	469.457	379.9	477.503	396.0	485.577	383.8	493.652	376.0
407.713	294.5	469.542	371.3	477.587	9999.9	485.662	9999.9	493.737	383.1
407.793	291.0	469.627	385.0	477.672	403.4	485.747	9999.9	493.822	9999.9
407.877	300.7	469.712	389.0	477.757	405.7	485.832	384.1	493.907	380.5

[redacted]

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(k) Thermocouple 15 - Concluded

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
493.992	9999.9	502.077	371.7	512.722	352.1	584.587	361.1
494.077	362.4	502.162	371.2	512.807	379.8	584.672	377.8
494.162	358.4	502.247	9999.9	512.892	370.6	584.757	358.1
494.247	379.6	502.332	370.4	513.827	359.6	584.842	373.9
494.332	384.5	502.417	383.1	513.912	360.7	584.927	336.6
494.417	390.6	502.502	370.3	513.997	361.1	585.012	361.4
494.502	9999.9	502.590	364.6	514.082	344.8		
494.587	407.6	502.680	362.4	514.167	364.0		
494.672	392.9	502.767	370.4	514.252	351.2		
494.757	386.6	502.852	361.8	514.337	364.7		
494.842	380.1	502.937	366.8	514.422	9999.9		
494.927	380.1	503.022	369.1	514.507	375.2		
495.012	374.7	503.277	367.6	514.592	370.3		
495.097	382.6	503.362	373.3	567.497	360.5		
495.182	377.7	503.447	377.4	567.582	9999.9		
495.267	394.8	503.532	357.5	567.667	371.8		
495.352	380.2	503.617	392.9	567.752	377.0		
495.437	379.2	503.702	383.7	567.837	369.0		
495.522	374.1	503.787	377.9	567.922	368.1		
495.607	368.6	503.872	375.6	568.007	361.5		
495.692	380.0	503.957	382.0	568.092	9999.9		
495.777	383.1	504.042	378.0	568.863	342.3		
495.862	373.7	504.127	367.4	568.943	359.7		
495.947	383.7	504.212	370.1	570.397	377.8		
496.032	373.7	504.297	382.5	570.482	366.1		
496.117	375.8	504.382	385.2	570.567	374.5		
496.202	369.8	504.467	373.1	570.652	9999.9		
496.287	374.6	504.552	352.5	570.737	375.0		
496.372	380.4	504.637	384.8	570.822	377.6		
96.457	392.3	504.722	361.6	570.907	387.5		
96.542	388.3	504.807	360.2	570.992	9999.9		
96.627	385.5	504.892	9999.9	571.077	385.0		
96.712	376.6	504.977	378.7	571.162	361.8		
96.797	380.9	505.062	365.9	572.447	368.9		
496.882	375.9	505.147	348.4	572.532	356.5		
496.967	382.4	505.232	372.7	572.617	380.7		
497.052	374.6	505.317	364.9	572.702	367.6		
497.137	382.1	505.402	364.3	572.787	391.1		
497.222	376.3	505.487	367.7	572.872	371.4		
497.307	384.8	505.572	356.1	572.957	357.6		
497.392	370.9	505.657	355.1	573.042	363.9		
497.477	368.7	505.742	369.7	573.127	372.5		
497.562	374.9	505.827	366.4	573.212	372.8		
497.647	9999.9	505.912	372.2	573.297	380.4		
497.732	380.3	505.997	373.1	573.382	370.4		
497.817	9999.9	506.082	352.8	574.837	370.1		
497.902	339.4	506.167	362.4	574.922	9999.9		
497.987	369.5	506.252	355.4	575.007	331.6		
498.072	374.9	506.337	366.1	575.092	360.9		
498.157	386.9	506.422	9999.9	575.177	299.1		
498.242	376.2	506.857	377.8	575.262	359.9		
498.327	368.0	506.942	376.5	575.347	314.2		
498.412	377.0	507.027	401.1	575.432	366.6		
498.497	368.2	507.112	367.2	577.227	374.3		
498.582	324.5	507.197	376.4	577.312	363.1		
498.667	385.0	507.282	9999.9	577.397	374.8		
498.752	366.0	507.367	377.1	577.482	9999.9		
498.837	375.3	507.452	365.1	577.567	381.2		
498.922	368.1	507.537	360.4	577.652	321.2		
499.007	375.4	507.622	360.8	577.737	375.1		
499.092	382.1	507.707	359.3	577.822	374.9		
499.177	384.5	507.792	9999.9	577.907	360.7		
499.262	393.7	508.387	360.1	577.992	9999.9		
499.347	381.6	508.472	349.1	578.077	394.1		
499.432	369.6	508.557	372.6	578.162	351.0		
499.517	371.7	508.642	362.1	579.447	389.2		
499.602	372.1	508.727	378.8	579.532	381.8		
499.687	370.5	508.812	377.9	579.620	385.0		
499.772	368.0	508.897	370.2	579.710	376.2		
499.857	367.2	508.982	362.6	579.793	9999.9		
499.942	340.9	509.067	366.4	579.873	383.8		
500.027	379.2	509.152	369.7	579.957	376.4		
500.112	373.4	509.237	372.2	580.042	375.8		
500.197	370.4	509.322	364.4	580.130	375.5		
500.282	377.1	509.407	364.5	580.220	375.9		
500.367	375.0	509.492	346.9	580.307	383.1		
500.452	366.9	510.257	369.5	580.392	380.2		
500.537	370.3	510.342	365.9	580.477	376.0		
500.622	9999.9	510.427	380.2	580.562	372.2		
500.710	373.0	510.512	350.9	582.017	381.7		
500.800	368.0	510.597	9999.9	582.102	389.7		
500.887	367.8	510.682	367.0	582.187	371.4		
500.972	364.3	510.767	373.2	582.272	375.2		
501.057	375.2	510.852	363.3	582.360	382.9		
501.142	360.4	510.937	372.4	582.450	371.7		
501.227	371.4	511.022	362.1	582.537	362.8		
501.312	356.8	511.107	370.0	582.622	360.5		
501.397	361.7	511.192	363.3	582.707	360.6		
501.482	374.3	512.127	382.3	582.792	391.3		
501.567	372.6	512.212	354.9	584.070	400.5		
501.652	9999.9	512.297	364.6	584.160	9999.9		
501.737	382.3	512.382	359.0	584.247	386.0		
501.822	368.7	512.467	340.6	584.332	9999.9		
501.907	380.5	512.552	339.3	584.417	376.8		
501.992	371.6	512.637	347.4	584.502	9999.9		

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(i) Thermocouple 16: s = 0.0573 m; d = 0.0153 m

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
400.245	288.9	408.205	288.9	470.375	398.4	478.464	395.1	486.555	395.9
400.325	294.2	408.289	288.9	470.455	399.3	478.545	398.2	486.635	391.0
400.409	291.0	408.374	289.6	470.535	396.0	478.625	403.6	486.719	391.7
400.494	292.1	408.455	289.8	470.615	394.3	478.709	391.8	486.804	395.9
400.575	286.3	408.535	290.3	470.699	398.0	478.794	392.9	486.885	392.6
400.655	291.2	408.619	282.6	470.784	403.2	478.879	395.2	486.965	393.7
400.735	285.6	408.704	286.3	470.869	395.2	478.964	389.6	487.049	395.7
400.815	287.5	408.785	280.7	470.954	397.7	479.045	391.7	487.134	394.1
400.899	283.3	408.865	283.0	471.035	393.2	479.125	394.1	487.219	393.0
400.984	287.7	408.949	280.8	471.115	398.1	479.209	394.0	487.304	389.9
401.065	281.7	409.034	284.0	471.199	393.0	479.294	394.4	487.385	379.6
401.145	285.4	409.115	285.5	471.284	397.9	479.379	396.2	487.465	384.9
401.229	288.5	409.195	289.4	471.369	390.8	479.464	392.7	487.549	384.7
401.314	287.3	409.275	283.1	471.454	393.9	479.549	388.0	487.634	396.9
401.395	285.5	409.355	284.5	471.535	394.3	479.634	390.0	487.715	391.5
401.475	289.9	409.439	287.3	471.615	397.5	479.715	395.9	487.795	391.1
401.555	289.4	409.524	287.8	471.699	389.4	479.795	394.1	487.879	382.9
401.635	292.8	409.605	292.2	471.784	391.2	479.879	386.3	487.964	390.7
401.719	288.6	409.685	289.4	471.869	390.8	479.964	391.9	488.215	383.4
401.804	290.3	409.769	289.4	471.954	393.3	480.045	390.7	488.295	381.4
401.885	289.3	409.854	291.0	472.035	389.7	480.125	387.1	488.379	382.4
401.965	291.9	409.935	290.8	472.115	390.6	480.209	386.2	488.464	9999.9
402.045	291.2	410.015	291.5	472.199	386.1	480.294	388.5	488.549	379.8
402.125	291.7	410.099	294.0	472.284	389.9	480.379	388.3	488.634	378.9
402.209	284.0	410.184	294.7	472.369	390.7	480.464	391.8	488.719	388.8
402.294	288.9	410.265	290.3	472.454	395.3	480.549	391.0	488.804	388.4
402.375	284.7	410.345	293.3	472.539	393.3	480.634	396.1	488.885	377.5
402.455	287.3	410.429	284.7	472.624	398.0	480.715	391.1	488.965	386.1
402.539	282.9	410.514	287.9	472.705	392.1	480.795	388.6	489.049	379.4
402.624	283.8	410.599	285.2	472.785	396.9	480.879	385.8	489.134	386.3
402.705	287.3	410.684	9999.9	472.869	394.8	480.964	385.8	489.219	384.1
402.785	287.3	410.765	292.1	472.954	401.8	481.049	381.0	489.304	385.6
402.865	290.1	410.845	292.8	473.039	381.6	481.134	388.3	489.385	378.8
402.945	289.2	465.079	397.2	473.124	397.4	481.215	381.5	489.465	385.3
403.029	285.7	465.164	397.9	473.209	394.8	481.295	385.9	489.549	380.7
403.114	287.3	465.245	401.5	473.294	394.1	481.379	387.0	489.634	380.7
403.241	285.2	465.325	396.5	473.375	394.9	481.464	392.3	489.885	381.1
403.371	288.9	465.405	394.0	473.455	397.6	481.549	392.0	489.965	389.7
403.413	291.7	465.485	399.4	473.539	389.5	481.634	387.1	490.049	381.1
403.448	293.3	465.565	394.8	473.624	388.3	481.715	389.0	490.134	383.5
403.525	290.3	465.645	9999.9	473.709	389.7	481.795	390.1	490.215	389.3
403.605	292.6	465.729	401.9	473.794	389.4	481.879	377.4	490.295	389.9
403.689	288.2	465.814	397.4	473.875	383.7	481.964	381.0	490.379	384.1
403.774	291.5	465.895	398.4	473.955	384.8	482.049	386.9	490.464	386.3
403.855	282.2	465.975	399.8	474.039	394.7	482.134	398.4	490.549	393.2
403.935	285.9	466.055	396.0	474.124	398.1	482.215	391.4	490.634	391.7
404.015	285.0	466.135	396.5	474.209	388.4	482.295	386.8	490.719	393.6
404.095	285.2	466.219	399.5	474.294	392.0	482.379	396.5	490.804	392.3
404.179	288.5	466.304	400.2	474.379	379.9	482.464	395.2	490.885	392.1
404.264	292.4	466.385	394.6	474.464	386.4	482.549	387.9	490.965	390.1
404.345	288.7	466.465	396.9	474.545	389.6	482.634	372.8	491.049	389.7
404.425	288.7	466.549	390.9	474.625	392.3	482.715	398.0	491.134	388.0
404.505	287.8	466.634	393.3	474.709	393.2	482.795	399.6	491.219	386.2
404.585	289.9	466.719	395.1	474.794	397.9	482.879	394.4	491.304	389.5
404.669	286.3	466.804	397.3	474.875	393.3	482.964	393.5	491.385	389.9
404.754	289.8	466.889	397.0	474.955	393.5	483.049	388.9	491.465	386.8
404.835	284.2	466.974	393.5	475.039	387.1	483.134	392.9	491.549	385.0
404.915	288.4	467.055	394.3	475.124	394.4	483.219	392.7	491.634	385.3
404.999	288.2	467.135	395.6	475.209	399.4	483.304	392.9	491.719	383.2
405.084	291.9	467.219	389.0	475.294	393.1	483.385	388.3	491.804	386.3
405.165	290.8	467.304	393.7	475.379	403.2	483.465	395.4	491.885	381.8
405.245	292.2	467.385	389.2	475.464	392.4	483.549	386.6	491.965	385.3
405.329	286.1	467.465	392.3	475.545	398.1	483.634	388.6	492.049	381.1
405.414	287.0	467.549	397.6	475.625	407.4	483.715	379.8	492.134	384.9
405.495	286.4	467.634	395.8	475.709	392.9	483.795	389.8	492.219	380.5
405.575	287.5	467.719	395.6	475.794	394.7	483.879	384.7	492.304	383.6
405.659	284.3	467.804	397.8	475.879	380.7	483.964	9999.9	492.385	378.5
405.744	288.9	467.885	392.7	475.964	393.3	484.049	384.0	492.465	380.3
405.825	287.6	467.965	394.2	476.049	388.2	484.134	391.5	492.549	378.9
405.905	290.8	468.049	397.3	476.134	393.1	484.219	389.4	492.634	384.0
405.985	288.4	468.134	399.6	476.215	386.1	484.304	9999.9	492.719	380.3
406.065	289.4	468.215	392.9	476.295	389.2	484.385	385.2	492.804	384.3
406.149	289.9	468.295	390.9	476.379	392.2	484.465	391.9	492.885	377.9
406.234	290.3	468.379	392.2	476.464	382.4	484.549	386.5	492.965	379.6
406.315	285.0	468.464	395.3	476.545	386.2	484.634	384.9	493.049	382.1
406.395	287.8	468.549	392.0	476.625	384.7	484.719	395.1	493.134	385.0
406.479	282.6	468.634	394.4	476.709	371.1	484.804	393.4	493.219	387.2
406.564	288.0	468.715	393.8	476.794	366.2	484.885	385.3	493.304	387.7
406.645	288.0	468.795	397.4	476.879	395.7	484.965	390.0	493.385	379.2
406.725	288.7	468.879	390.3	476.964	393.9	485.049	387.6	493.465	379.9
406.809	287.3	468.964	395.5	477.045	387.4	485.134	386.9	493.549	382.0
406.894	291.7	469.045	393.6	477.125	393.8	485.219	384.1	493.634	378.7
406.975	285.4	469.125	396.9	477.209	393.8	485.304	384.3	493.719	381.9
407.055	287.0	469.209	390.4	477.294	394.0	485.385	375.7	493.804	380.1
407.135	281.0	469.294	396.4	477.379	394.9	485.465	383.8	493.885	379.1
407.215	281.9	469.375	398.0	477.464	396.3	485.549	388.4	493.965	384.0
407.299	282.0	469.455	399.1	477.545	389.3	485.634	391.7	494.049	390.1
407.384	285.0	469.539	396.8	477.625	9999.9	485.719	385.3	494.134	391.0
407.465	281.1	469.624	403.8	477.709	387.9	485.804	387.7	494.215	384.6
407.545	288.5	469.705	392.4	477.794	388.3	485.889	382.2	494.295	386.6
407.629	285.5	469.785	397.3	477.879	392.4	485.974	387.1	494.379	386.1
407.714	290.1	469.869	389.4	477.964	390.9	486.055	389.1	494.464	390.8
407.795	284.5	469.954	395.2	478.049	389.0	486.135	381.7	494.549	390.9
407.875	289.2	470.039	396.9	478.134	9999.9	486.219	400.5	494.634	390.0
407.959	287.3	470.124	398.3	478.215	388.4	486.304	401.0	494.715	383.2
408.044	287.8	470.209	391.3	478.295	387.2	486.389	389.7	494.795	382.5
408.125	288.2	470.294	399.3	478.379	390.0	486.474	392.1	495.049	396.3

[redacted]

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(l) Thermocouple 16 - Concluded

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
495.134	390.8	503.195	395.1	512.725	411.3	567.375	407.6	578.295	9999.9
495.215	390.2	503.275	388.2	512.809	413.6	567.455	399.8	578.379	9999.9
495.295	390.9	503.359	398.5	512.894	414.9	567.539	405.5	578.464	9999.9
495.379	389.9	503.444	392.2	512.975	402.8	567.624	407.8	579.379	402.6
495.464	389.4	503.529	384.7	513.055	409.2	567.705	404.1	579.464	398.5
495.549	384.7	503.614	384.3	513.139	394.5	567.785	400.7	579.549	389.9
495.634	386.9	503.695	393.6	513.224	414.4	567.869	404.0	579.634	397.0
495.715	386.2	503.775	396.5	513.639	421.3	567.954	405.6	579.715	394.5
495.795	389.7	503.859	399.3	513.724	411.7	568.039	400.2	579.795	393.6
495.879	390.5	503.944	398.2	513.805	409.1	568.124	406.6	579.879	388.5
495.964	386.3	504.025	403.5	513.885	400.2	568.205	400.1	579.964	392.7
496.049	383.1	504.105	403.7	513.969	406.9	568.285	403.3	580.049	390.1
496.134	383.8	504.189	394.6	514.054	408.2	568.369	403.9	580.134	394.9
496.215	387.7	504.274	397.7	514.139	405.6	568.454	9999.9	580.215	390.8
496.295	389.2	504.355	396.9	514.224	411.3	568.705	406.9	580.295	392.6
496.379	388.8	504.435	401.5	514.305	411.5	568.785	411.3	580.379	388.8
496.464	389.0	504.519	401.8	514.385	412.9	568.869	407.4	580.464	397.2
496.545	382.5	504.604	403.0	514.465	416.3	568.954	414.9	580.549	391.1
496.625	383.4	504.689	395.8	514.545	418.6	569.039	411.6	580.634	391.7
496.709	387.7	504.774	397.6	514.629	423.4	569.124	406.1	581.885	404.1
496.794	395.4	504.855	391.2	514.714	412.9	569.209	410.8	581.965	400.0
496.879	386.3	504.935	392.7	514.799	402.9	569.294	400.4	582.049	402.2
496.964	389.2	505.019	394.1	514.884	422.1	569.375	422.6	582.134	402.2
497.045	379.6	505.104	395.4	515.625	415.4	569.455	414.7	582.219	397.5
497.125	382.5	505.185	395.6	515.705	417.2	569.539	407.7	582.304	400.2
497.209	378.0	505.265	395.6	515.789	404.7	569.624	9999.9	582.385	399.5
497.294	380.4	505.349	392.0	515.874	413.4	570.039	397.4	582.465	399.3
497.379	381.2	505.434	385.8	515.959	415.9	570.124	395.8	582.549	397.0
497.464	389.2	505.519	397.4	516.044	417.2	570.209	395.4	582.634	401.1
497.545	381.3	505.604	396.0	516.125	413.7	570.294	404.9	582.715	400.3
497.625	387.1	505.685	393.1	516.205	412.8	570.375	392.9	582.795	398.2
497.709	383.1	505.765	396.5	517.449	403.6	570.455	394.4	582.879	397.6
497.794	386.4	505.849	397.5	517.534	406.4	570.539	399.7	582.964	9999.9
497.879	380.4	505.934	400.3	517.615	412.0	570.624	402.0	584.049	389.2
497.964	391.5	506.015	390.2	517.695	416.5	570.709	397.7	584.134	387.9
498.045	381.5	506.095	389.1	518.775	412.9	570.794	397.0	584.219	391.3
498.125	385.8	506.179	398.4	518.855	413.6	570.875	397.2	584.304	393.0
498.209	386.5	506.264	397.4	518.939	404.4	570.955	400.2	584.385	393.2
498.294	385.6	506.345	394.2	519.024	416.2	571.039	400.7	584.465	393.4
498.379	384.9	506.425	397.3	519.105	402.8	571.124	398.8	584.549	383.9
498.464	392.4	506.509	389.8	519.185	406.9	571.209	397.3	584.634	385.0
498.545	384.2	506.594	9999.9	519.269	404.1	571.294	401.6	584.719	391.2
498.625	386.4	506.845	398.2	519.354	408.3	571.375	404.7	584.804	387.6
498.709	391.5	506.925	401.8	519.439	418.1	571.455	403.8	584.885	391.8
498.794	392.4	507.009	396.7	519.524	415.8	572.375	396.6	584.965	392.0
498.875	386.2	507.094	394.0	519.605	401.6	572.455	397.3	585.049	389.9
498.955	389.4	507.175	395.2	519.685	412.6	572.539	396.8	585.134	393.5
499.039	381.0	507.255	401.8	519.765	408.4	572.624	394.2	585.219	410.5
499.124	386.2	507.339	395.1	519.845	9999.9	572.709	397.6	585.304	401.9
499.205	381.6	507.424	395.6	520.435	397.9	572.794	401.0	589.729	388.3
499.285	387.2	507.505	396.7	520.515	422.3	572.879	399.5	589.814	393.4
499.369	384.1	507.585	394.1	520.599	419.8	572.964	397.9	589.899	392.3
499.454	389.6	507.669	392.1	520.684	418.5	573.045	399.8	589.984	9999.9
499.539	387.1	507.754	391.8	520.765	426.4	573.125	404.8		
499.624	386.2	507.839	399.4	520.845	422.1	573.209	395.5		
499.705	386.8	507.924	405.5	520.929	416.6	573.294	395.3		
499.785	386.3	508.335	386.7	521.014	432.0	573.379	401.7		
499.869	383.3	508.415	394.9	521.095	407.4	573.464	401.9		
499.954	390.2	508.499	395.8	521.175	415.6	573.545	394.2		
500.039	386.9	508.584	395.0	522.255	419.9	573.625	391.6		
500.124	388.9	508.669	394.9	522.335	341.3	573.709	395.3		
500.205	384.9	508.754	401.9	522.419	422.0	573.794	398.7		
500.285	386.0	508.835	397.0	522.504	432.3	573.879	399.0		
500.369	383.0	508.915	402.2	522.589	424.9	573.964	9999.9		
500.454	382.4	508.999	395.0	522.674	426.2	574.209	409.3		
500.535	387.0	509.084	401.4	538.369	423.9	574.294	412.9		
500.615	390.6	509.165	407.4	538.454	429.6	574.709	396.7		
500.699	392.3	509.245	401.2	538.535	427.2	574.794	399.6		
500.784	393.4	509.329	403.4	538.615	434.7	574.879	402.9		
500.869	389.5	509.414	402.7	538.699	419.8	574.964	407.9		
500.954	390.9	509.499	399.9	538.784	9999.9	575.045	408.6		
501.039	390.8	509.584	405.3	541.199	417.2	575.125	411.1		
501.124	389.3	510.159	407.1	541.284	409.4	575.209	405.1		
501.205	389.8	510.244	406.0	541.365	429.0	575.294	408.0		
501.285	394.3	510.325	394.2	541.445	9999.9	575.379	398.5		
501.369	388.1	510.405	401.4	565.369	9999.9	575.464	401.0		
501.454	393.7	510.489	403.6	565.454	410.5	575.545	401.3		
501.535	386.6	510.574	414.3	565.539	412.5	575.625	399.5		
501.615	385.9	510.655	400.3	565.624	409.5	575.709	401.7		
501.699	392.7	510.735	401.9	565.705	413.4	575.794	396.7		
501.784	395.1	510.819	399.0	565.785	410.9	575.879	398.4		
501.869	397.5	510.904	393.6	565.869	407.1	575.964	365.8		
501.954	393.9	510.989	405.9	565.954	409.8	577.049	400.9		
502.035	393.9	511.074	403.4	566.039	413.8	577.134	397.4		
502.115	395.2	511.155	4664.0	566.124	414.9	577.215	388.2		
502.199	392.0	511.235	4662.4	566.205	400.4	577.295	393.5		
502.284	397.4	511.319	396.2	566.285	410.4	577.379	397.2		
502.365	389.0	511.404	408.5	566.369	397.3	577.464	401.1		
502.445	394.3	511.985	407.2	566.454	399.2	577.549	396.2		
502.529	397.2	512.065	411.8	566.539	405.0	577.634	401.6		
502.614	395.2	512.149	407.4	566.624	402.7	577.715	391.5		
502.699	394.5	512.234	407.1	566.709	430.8	577.795	398.2		
502.784	394.3	512.315	400.8	566.794	9999.9	577.879	393.2		
502.865	390.8	512.395	401.1	566.875	391.1	577.964	399.3		
502.945	391.9	512.479	405.3	566.955	399.8	578.049	395.4		
503.029	398.9	512.564	409.0	567.039	407.3	578.134	401.3		
503.114	392.8	512.645	415.4	567.124	402.7	578.215	400.8		

[redacted]

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(m) Thermocouple 17: s = 0.0573 m; d = 0.0280 m

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
400.089	292.4	407.967	295.1	469.802	308.1	477.947	9999.9	485.922	304.1
400.169	294.9	408.049	293.1	469.887	301.2	477.932	302.8	486.007	9999.9
400.252	293.3	408.129	288.0	469.972	310.8	478.017	303.1	486.092	302.0
400.337	291.4	408.212	295.2	470.057	295.7	478.102	302.1	486.177	305.2
400.419	290.8	408.297	289.9	470.142	302.1	478.187	292.6	486.262	305.0
400.499	291.7	408.382	293.3	470.227	301.4	478.272	300.1	486.347	307.1
400.582	293.8	408.467	287.8	470.312	306.0	478.357	244.7	486.432	297.8
400.667	294.9	408.549	294.9	470.397	308.7	478.442	9999.9	486.517	303.6
400.749	288.5	408.629	288.5	470.482	303.0	478.527	296.5	486.602	312.6
400.829	292.6	408.712	295.6	470.567	305.1	478.612	294.9	486.687	311.7
400.912	292.8	408.797	289.9	470.649	306.4	478.697	9999.9	486.772	307.1
400.997	288.2	408.879	300.7	470.729	298.2	478.782	290.5	486.857	308.5
401.082	291.7	408.959	291.7	470.812	300.5	478.867	309.8	486.942	312.4
401.167	291.7	409.042	304.8	470.897	293.1	478.952	9999.9	487.027	307.4
401.249	289.6	409.127	294.1	470.982	298.9	479.037	269.9	487.112	299.6
401.329	290.5	409.209	303.0	471.067	295.9	479.122	297.7	487.197	298.7
401.409	293.6	409.289	294.5	471.152	296.5	479.207	298.7	487.279	9999.9
401.489	292.6	409.372	295.9	471.237	299.5	479.292	296.5	487.359	296.7
401.572	295.6	409.457	292.4	471.322	298.4	479.377	295.5	487.446	317.5
401.657	290.8	409.539	297.5	471.407	293.8	479.462	292.3	487.536	306.0
401.742	297.5	409.619	295.0	471.492	302.8	479.547	307.5	487.622	302.7
401.827	290.6	409.702	298.6	471.577	295.6	479.632	310.7	487.707	377.8
401.909	297.7	409.787	293.3	471.662	305.1	479.717	302.6	487.792	301.5
401.989	291.7	409.872	301.9	471.747	297.0	479.802	300.1	487.877	295.8
402.072	297.5	409.957	290.1	471.832	295.9	479.887	296.2	487.962	307.8
402.157	294.0	410.039	298.2	471.917	292.2	479.972	301.5	488.047	291.5
402.239	298.6	410.119	293.4	472.002	302.3	480.057	313.2	488.132	289.9
402.319	295.4	410.202	298.6	472.087	303.2	480.142	337.2	488.217	294.1
402.402	295.9	410.287	293.4	472.172	300.7	480.227	309.1	488.302	306.6
402.487	291.5	410.369	305.5	472.257	295.4	480.312	281.9	488.387	300.4
402.569	297.7	410.449	294.7	472.342	291.2	480.397	290.3	488.472	9999.9
402.649	294.7	464.412	297.5	472.427	286.3	480.482	9999.9	488.557	293.4
402.732	292.4	464.497	278.4	472.512	297.7	480.567	298.9	488.642	306.4
402.817	285.9	464.579	321.5	472.597	292.4	480.652	9999.9	488.727	305.0
402.902	294.9	464.659	320.6	472.682	302.8	480.737	9999.9	488.812	301.0
402.987	289.0	464.742	297.9	472.767	299.8	480.822	306.8	488.897	298.5
403.069	296.1	464.827	297.9	472.852	300.9	480.907	302.1	488.982	296.6
403.149	291.5	464.909	302.1	472.937	300.2	480.992	312.3	489.067	300.3
403.232	292.0	464.989	302.1	473.022	310.4	481.077	301.5	489.152	9999.9
403.317	286.4	465.072	293.1	473.107	297.2	481.162	300.8	489.237	317.5
403.402	288.9	465.157	303.0	473.192	303.5	481.247	294.7	489.322	295.4
403.487	288.0	465.242	300.5	473.277	306.7	481.332	310.2	489.407	297.3
403.569	289.4	465.327	305.3	473.362	306.0	481.417	317.4	489.492	9999.9
403.649	288.2	465.412	305.1	473.447	302.1	481.502	310.5	489.577	303.7
403.732	296.6	465.497	307.8	473.532	312.8	481.587	309.4	489.662	301.1
403.817	291.5	465.579	298.2	473.617	306.0	481.672	301.2	489.747	306.2
403.899	297.7	465.659	9999.9	473.699	303.5	481.757	292.1	489.832	302.4
403.979	293.6	465.742	297.1	473.779	306.9	481.842	330.1	489.917	293.6
404.062	295.2	465.827	288.1	473.866	302.5	481.927	326.6	490.002	306.7
404.147	290.8	465.912	321.3	473.956	298.9	482.012	283.6	490.087	299.4
404.232	298.9	465.997	315.9	474.039	306.7	482.097	296.8	490.172	314.2
404.317	291.8	466.079	312.6	474.119	300.5	482.182	299.8	490.257	299.0
404.399	298.2	466.159	313.7	474.202	299.6	482.267	313.6	490.342	317.0
404.479	292.4	466.242	302.8	474.287	296.6	482.352	317.5	490.427	315.0
404.562	294.0	466.327	300.9	474.372	316.5	482.437	325.6	490.512	308.0
404.647	290.8	466.412	300.7	474.457	315.4	482.522	303.8	490.597	307.8
404.732	296.1	466.497	297.9	474.542	300.9	482.607	9999.9	490.682	315.3
404.817	290.8	466.582	304.8	474.627	299.3	482.692	310.0	490.767	304.3
404.899	296.1	466.667	302.8	474.712	307.6	482.777	316.2	490.852	303.1
404.979	294.5	466.752	308.0	474.797	302.1	482.862	303.3	490.937	303.6
405.062	292.4	466.837	301.9	474.882	290.8	482.947	9999.9	491.022	313.5
405.147	288.0	466.922	304.8	474.967	298.2	483.032	311.6	491.107	312.2
405.229	294.3	467.007	303.7	475.052	302.3	483.117	306.5	491.192	311.3
405.309	292.0	467.089	307.4	475.137	295.9	483.202	303.3	491.277	311.7
405.392	293.8	467.169	306.7	475.222	299.5	483.287	9999.9	491.362	306.1
405.477	290.3	467.252	308.7	475.307	293.5	483.372	302.6	491.447	302.9
405.562	289.6	467.337	297.7	475.392	296.1	483.457	292.0	491.532	294.9
405.647	286.6	467.422	309.7	475.477	292.4	483.539	306.5	491.617	304.3
405.729	297.9	467.507	299.3	475.562	306.4	483.619	9999.9	491.702	309.0
405.809	291.7	467.592	307.1	475.647	301.9	483.702	338.6	491.787	296.9
405.892	294.5	467.677	301.4	475.732	303.7	483.787	345.4	491.872	298.7
405.977	290.3	467.762	303.9	475.817	306.9	483.872	308.6	491.957	300.3
406.059	292.9	467.847	299.8	475.902	300.3	483.957	9999.9	492.042	273.6
406.139	288.0	467.936	300.0	475.987	308.5	484.042	308.6	492.127	283.1
406.222	291.2	468.026	302.1	476.072	309.4	484.127	301.7	492.212	316.8
406.307	288.0	468.109	302.1	476.157	9999.9	484.212	293.5	492.297	319.0
406.392	291.0	468.189	301.6	476.242	302.1	484.297	9999.9	492.382	306.6
406.477	291.3	468.272	308.1	476.327	299.4	484.382	307.0	492.467	301.3
406.559	291.7	468.357	302.3	476.412	298.1	484.467	296.6	492.552	300.8
406.639	288.9	468.442	305.1	476.497	296.9	484.552	309.8	492.637	301.0
406.722	291.0	468.527	301.0	476.582	307.5	484.637	9999.9	492.722	305.2
406.807	288.0	468.612	308.1	476.667	9999.9	484.722	303.3	492.807	303.6
406.889	294.5	468.697	310.1	476.752	292.6	484.807	304.7	492.892	311.7
406.969	293.6	468.782	308.1	476.837	307.2	484.892	296.6	492.977	308.3
407.052	294.7	468.867	306.9	476.922	307.5	484.977	291.0	493.062	306.4
407.137	291.0	468.952	309.0	477.007	9999.9	485.062	301.6	493.147	307.5
407.222	298.2	469.037	304.2	477.092	328.6	485.147	9999.9	493.232	299.9
407.307	293.6	469.122	303.0	477.177	327.6	485.232	297.9	493.317	9999.9
407.389	298.9	469.207	305.5	477.262	292.2	485.317	331.4	493.402	306.2
407.469	294.0	469.292	303.2	477.347	286.3	485.406	305.5	493.487	9999.9
407.552	297.5	469.377	300.0	477.429	286.3	485.496	9999.9	493.572	320.4
407.637	292.6	469.462	306.4	477.509	306.1	485.582	292.6	493.657	311.0
407.719	288.3	469.547	302.8	477.592	316.7	485.667	9999.9	493.742	314.8
407.799	291.0	469.632	309.2	477.677	309.3	485.752	9999.9	493.827	308.0
407.882	297.7	469.717	311.5	477.762	307.9	485.837	299.4	493.912	305.9

[redacted]

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(m) Thermocouple 17 - Concluded

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
493.997	9999.9	502.082	318.0	512.727	295.5	584.592	316.7
494.082	289.7	502.167	312.8	512.812	315.4	584.677	302.4
494.167	9999.9	502.252	9999.9	512.897	323.6	584.762	307.2
494.252	308.5	502.337	316.7	513.832	288.8	584.847	307.2
494.337	303.6	502.422	324.8	513.917	303.0	584.932	323.4
494.422	325.1	502.507	311.3	514.002	314.9	585.017	329.4
494.507	313.9	502.596	299.2	514.087	9999.9		
494.592	313.3	502.686	303.9	514.172	296.8		
494.677	312.7	502.772	307.1	514.257	295.9		
494.762	309.2	502.857	307.1	514.342	9999.9		
494.847	307.3	502.942	309.2	514.427	320.3		
494.932	303.4	503.027	311.8	514.512	330.3		
495.017	299.2	503.282	319.3	514.597	302.9		
495.102	304.6	503.367	310.9	567.502	314.2		
495.187	311.7	503.452	316.7	567.587	314.9		
495.272	318.8	503.537	310.9	567.672	327.0		
495.357	314.6	503.622	312.2	567.757	325.9		
495.442	305.7	503.707	328.7	567.842	321.2		
495.527	308.3	503.792	310.0	567.927	310.3		
495.612	304.6	503.877	316.2	568.012	330.8		
495.697	307.6	503.962	9999.9	568.097	9999.9		
495.782	310.1	504.047	301.8	568.869	298.0		
495.867	307.4	504.132	9999.9	568.949	303.7		
495.952	307.4	504.217	311.3	570.402	325.1		
496.037	303.4	504.302	327.2	570.487	309.7		
496.122	309.5	504.387	324.2	570.572	325.8		
496.207	304.6	504.472	333.2	570.657	338.2		
496.292	311.5	504.557	304.5	570.742	326.9		
496.377	312.4	504.642	309.9	570.827	9999.9		
496.462	320.8	504.727	9999.9	570.912	326.0		
496.547	318.8	504.812	309.5	570.997	320.0		
496.632	312.4	504.897	309.7	571.082	361.1		
496.717	309.0	504.982	316.7	571.167	324.0		
496.802	314.4	505.067	307.1	572.452	321.1		
496.887	310.9	505.152	307.9	572.537	315.3		
496.972	307.6	505.237	306.9	572.622	324.7		
497.057	309.9	505.322	325.5	572.707	328.4		
497.142	306.0	505.407	320.9	572.792	335.5		
497.227	312.2	505.492	299.0	572.877	325.5		
497.312	311.5	505.577	299.2	572.962	310.8		
497.397	317.8	505.662	325.8	573.047	313.3		
497.482	9999.9	505.747	315.8	573.132	317.6		
497.567	303.4	505.832	313.5	573.217	317.6		
497.652	9999.9	505.917	316.2	573.302	323.7		
497.737	295.4	506.002	302.5	573.387	320.7		
497.822	313.8	506.087	303.9	574.842	320.3		
497.907	318.2	506.172	320.8	574.927	323.7		
497.992	319.3	506.257	301.3	575.012	309.9		
498.077	305.5	506.342	300.9	575.097	307.5		
498.162	310.4	506.427	9999.9	575.182	306.6		
498.247	308.3	506.862	313.5	575.267	311.3		
498.332	303.1	506.947	9999.9	575.352	312.9		
498.417	9999.9	507.032	340.2	575.437	317.6		
498.502	312.0	507.117	9999.9	577.232	321.0		
498.587	293.7	507.202	326.5	577.317	9999.9		
498.672	315.8	507.287	337.8	577.402	327.0		
498.757	310.4	507.372	314.4	577.487	9999.9		
498.842	307.8	507.457	320.7	577.572	328.7		
498.927	301.8	507.542	304.4	577.657	307.9		
499.012	315.3	507.627	9999.9	577.742	329.4		
499.097	316.4	507.712	309.7	577.827	326.1		
499.182	310.8	507.797	312.9	577.912	326.5		
499.267	342.4	508.392	307.8	577.997	9999.9		
499.352	312.4	508.477	293.7	578.082	9999.9		
499.437	312.9	508.562	310.4	578.167	330.3		
499.522	315.5	508.647	313.3	579.452	330.8		
499.607	313.1	508.732	323.9	579.537	339.7		
499.692	305.0	508.817	320.8	579.622	332.1		
499.777	303.6	508.902	310.6	579.716	333.0		
499.862	306.9	508.987	312.0	579.799	339.0		
499.947	309.9	509.072	309.7	579.879	337.2		
500.032	304.6	509.157	309.9	579.962	322.3		
500.117	312.0	509.242	313.8	580.047	329.5		
500.202	317.8	509.327	321.6	580.136	323.0		
500.287	317.1	509.412	309.3	580.226	331.7		
500.372	305.7	509.497	296.6	580.312	321.6		
500.457	307.6	510.262	9999.9	580.397	324.5		
500.542	317.3	510.347	292.1	580.482	327.2		
500.627	9999.9	510.432	9999.9	580.567	324.8		
500.716	310.6	510.517	318.9	582.022	336.6		
500.806	318.4	510.602	9999.9	582.107	339.1		
500.892	306.4	510.687	314.0	582.192	322.3		
500.977	316.7	510.772	317.1	582.277	322.5		
501.062	305.5	510.857	321.8	582.366	327.5		
501.147	298.3	510.942	9999.9	582.456	327.3		
501.232	300.4	511.027	315.6	582.542	312.8		
501.317	289.7	511.112	304.6	582.627	317.8		
501.402	312.4	511.197	314.2	582.712	350.6		
501.487	301.9	512.132	322.9	582.797	9999.9		
501.572	315.8	512.217	306.0	584.076	335.3		
501.657	301.6	512.302	321.4	584.166	326.3		
501.742	321.4	512.387	315.3	584.252	336.0		
501.827	306.7	512.472	291.7	584.337	321.9		
501.912	319.8	512.557	286.0	584.422	9999.9		
501.997	309.2	512.642	296.5	584.507	9999.9		

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TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(n) Thermocouple 18: s = 0.0573 m; d = 0.0306 m

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
400.094	292.9	407.804	291.0	469.468	306.4	477.353	286.3	485.238	290.4
400.174	292.2	407.888	297.7	469.553	300.5	477.434	309.1	485.323	293.5
400.258	293.1	407.973	293.1	469.638	302.5	477.514	306.1	485.412	320.3
400.343	291.0	408.054	292.9	469.723	302.1	477.598	352.8	485.502	312.6
400.424	290.8	408.134	288.0	469.808	303.2	477.683	309.3	485.588	293.6
400.504	289.8	408.218	294.5	469.893	304.8	477.768	307.9	485.673	295.4
400.588	291.5	408.303	289.6	469.978	301.2	477.853	9999.9	485.758	9999.9
400.673	294.5	408.388	293.3	470.063	298.9	477.938	300.7	485.843	295.4
400.754	288.5	408.473	285.9	470.148	302.1	478.023	295.6	485.928	299.7
400.834	287.3	408.554	297.3	470.233	291.6	478.108	295.8	486.013	297.4
400.918	288.2	408.634	288.7	470.318	297.5	478.193	288.2	486.098	297.8
401.003	284.3	408.718	295.6	470.403	299.4	478.278	304.7	486.183	305.2
401.088	287.3	408.803	286.4	470.488	296.5	478.363	304.2	486.268	305.0
401.173	284.1	408.884	295.2	470.573	294.7	478.448	294.9	486.353	307.3
401.254	281.5	408.964	291.7	470.654	301.2	478.533	9999.9	486.438	297.8
401.334	290.5	409.048	295.2	470.734	298.2	478.618	246.2	486.523	297.8
401.414	293.6	409.133	292.9	470.818	300.5	478.703	9999.9	486.608	310.1
401.494	290.1	409.214	300.0	470.903	296.1	478.788	294.7	486.693	439.1
401.578	295.6	409.294	294.5	470.988	298.9	478.873	290.2	486.778	307.1
401.663	289.6	409.378	300.9	471.073	297.3	478.958	306.5	486.863	305.5
401.748	292.2	409.463	293.4	471.158	297.4	479.043	290.5	486.948	310.1
401.833	293.3	409.544	299.6	471.243	296.5	479.128	295.2	487.033	307.4
401.914	295.2	409.624	293.3	471.328	298.4	479.213	298.7	487.118	294.7
401.994	294.5	409.708	296.3	471.413	293.8	479.298	296.8	487.203	297.8
402.078	297.5	409.793	293.3	471.498	302.8	479.383	292.3	487.264	9999.9
402.163	293.8	409.878	297.5	471.583	295.6	479.468	291.6	487.364	296.7
402.244	298.6	409.963	293.1	471.668	304.8	479.553	256.3	487.452	313.5
402.324	295.4	410.044	298.2	471.753	298.0	479.638	297.6	487.542	305.5
402.408	295.9	410.124	293.4	471.838	295.9	479.723	305.6	487.628	302.4
402.493	291.5	410.208	297.5	471.923	293.8	479.808	298.2	487.713	291.5
402.574	297.7	410.293	293.8	472.008	302.3	479.893	296.2	487.798	303.2
402.654	289.6	410.374	301.4	472.093	303.2	479.978	301.9	487.883	300.4
402.738	292.4	410.454	294.7	472.178	300.7	480.063	296.1	487.968	307.8
402.823	288.2	464.418	291.5	472.263	295.4	480.148	311.8	488.053	292.2
402.908	294.7	464.503	269.9	472.348	289.5	480.233	309.1	488.138	290.1
402.993	289.2	464.584	321.5	472.433	287.9	480.318	9999.9	488.223	294.1
403.074	296.1	464.664	316.8	472.518	297.7	480.403	288.6	488.308	302.7
403.154	291.5	464.748	297.9	472.603	295.4	480.488	9999.9	488.393	306.9
403.238	292.0	464.833	297.9	472.688	298.0	480.573	291.9	488.478	9999.9
403.323	286.9	464.914	302.1	472.773	293.4	480.658	297.2	488.563	293.4
403.408	288.9	464.994	298.9	472.858	295.4	480.743	9999.9	488.648	306.4
403.493	286.2	465.078	293.1	472.943	300.2	480.828	301.7	488.733	305.0
403.574	287.8	465.163	303.5	473.028	302.3	480.913	295.0	488.818	301.0
403.654	284.3	465.248	300.5	473.113	297.2	480.998	312.3	488.903	281.5
403.738	297.5	465.333	288.0	473.198	303.5	481.083	301.5	488.988	287.8
403.823	288.0	465.418	300.2	473.283	294.1	481.168	300.3	489.073	300.3
403.904	297.7	465.503	307.8	473.368	306.0	481.253	294.7	489.158	9999.9
403.984	293.6	465.584	291.5	473.453	302.1	481.338	310.2	489.243	305.7
404.068	295.2	465.664	9999.9	473.538	276.9	481.423	298.7	489.328	309.6
404.153	291.3	465.748	283.2	473.623	300.7	481.508	299.6	489.413	294.7
404.238	298.2	465.833	279.5	473.704	303.5	481.593	305.4	489.498	306.4
404.323	291.8	465.918	295.7	473.784	309.2	481.678	293.0	489.583	312.2
404.404	294.0	466.003	293.9	473.872	297.3	481.763	289.8	489.668	293.2
404.484	290.1	466.084	307.1	473.962	295.6	481.848	330.1	489.753	293.4
404.568	292.2	466.164	303.0	474.044	306.7	481.933	325.1	489.838	304.8
404.653	290.1	466.248	302.8	474.124	300.5	482.018	290.4	489.923	293.6
404.738	294.2	466.333	300.9	474.208	299.6	482.103	279.4	490.008	308.7
404.823	290.8	466.418	301.4	474.293	299.1	482.188	300.0	490.093	306.6
404.904	300.5	466.503	297.9	474.378	311.2	482.273	295.1	490.178	312.4
404.984	294.5	466.588	304.8	474.463	313.6	482.358	312.9	490.263	305.9
405.068	292.6	466.673	302.8	474.548	294.5	482.443	316.2	490.348	309.2
405.153	288.0	466.758	304.9	474.633	295.6	482.528	298.9	490.433	307.1
405.234	294.3	466.843	301.9	474.718	301.0	482.613	9999.9	490.518	308.9
405.314	292.0	466.928	304.8	474.803	292.5	482.698	310.0	490.603	307.8
405.398	293.8	467.013	303.9	474.888	295.2	482.783	307.2	490.688	320.2
405.483	289.6	467.094	303.2	474.973	287.4	482.868	300.8	490.773	315.3
405.568	289.6	467.174	306.7	475.058	284.7	482.953	9999.9	490.858	312.4
405.653	288.2	467.258	303.2	475.143	290.0	483.038	303.3	490.943	306.4
405.734	292.9	467.343	303.9	475.228	299.5	483.123	311.4	491.028	317.3
405.814	291.5	467.428	305.3	475.313	293.5	483.208	298.6	491.113	318.6
405.898	291.7	467.513	304.8	475.398	288.7	483.293	9999.9	491.198	311.0
405.983	290.3	467.598	309.4	475.483	292.4	483.378	264.8	491.283	315.5
406.064	291.5	467.683	301.4	475.568	306.4	483.463	270.8	491.368	310.6
406.144	288.0	467.768	303.9	475.653	304.1	483.544	248.6	491.453	311.9
406.228	290.1	467.853	298.6	475.738	303.7	483.624	9999.9	491.538	300.1
406.313	285.2	467.942	300.5	475.823	284.5	483.708	306.6	491.623	313.0
406.398	289.9	468.032	296.3	475.908	289.8	483.793	304.7	491.708	311.0
406.483	286.4	468.114	302.1	475.993	297.8	483.878	296.8	491.793	309.4
406.564	287.1	468.194	298.6	476.078	293.8	483.963	9999.9	491.878	309.2
406.644	285.2	468.278	303.5	476.163	9999.9	484.048	296.8	491.963	310.1
406.728	291.0	468.363	301.4	476.248	291.1	484.133	300.1	492.048	273.6
406.813	291.0	468.448	305.1	476.333	299.4	484.218	284.6	492.133	292.0
406.894	293.6	468.533	301.0	476.418	298.1	484.303	9999.9	492.218	326.1
406.974	292.2	468.618	303.7	476.503	285.7	484.388	292.9	492.303	325.4
407.058	294.7	468.703	303.5	476.588	321.6	484.473	287.8	492.388	311.3
407.143	289.2	468.788	308.1	476.673	314.5	484.558	300.3	492.473	311.9
407.228	296.6	468.873	306.2	476.758	298.9	484.643	9999.9	492.558	314.6
407.313	290.1	468.958	304.2	476.843	296.1	484.728	298.0	492.643	308.9
407.394	295.6	469.043	297.0	476.928	303.8	484.813	300.3	492.728	319.3
407.474	294.0	469.128	304.4	477.013	9999.9	484.898	297.3	492.813	317.3
407.558	297.5	469.213	303.2	477.098	323.8	484.983	9999.9	492.898	322.1
407.643	292.6	469.298	303.2	477.183	320.3	485.068	285.7	492.983	9999.9
407.724	299.1	469.383	300.0	477.268	282.6	485.153	9999.9	493.068	316.4

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TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(n) Thermocouple 18 - Concluded

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
493.153	9999.9	501.153	317.6	510.863	311.1	582.462	327.3
493.238	315.1	501.238	315.3	510.948	314.0	582.548	295.3
493.323	302.0	501.323	300.4	511.033	308.6	582.633	303.3
493.408	308.9	501.408	328.8	511.118	311.8	582.718	317.9
493.493	295.7	501.493	316.2	511.203	314.2	582.803	9999.9
493.578	312.8	501.578	315.8	512.138	307.0	584.082	336.8
493.663	328.2	501.663	320.0	512.223	310.0	584.172	307.7
493.748	317.7	501.748	321.4	512.308	306.7	584.258	9999.9
493.833	9999.9	501.833	316.9	512.393	307.7	584.343	322.8
493.918	270.8	501.918	315.1	512.478	285.3	584.428	9999.9
494.003	9999.9	502.003	319.4	512.563	285.1	584.513	320.1
494.088	9999.9	502.088	318.0	512.648	290.6	584.598	310.8
494.173	9999.9	502.173	313.8	512.733	289.9	584.683	293.7
494.258	306.8	502.258	9999.9	512.818	311.1	584.768	301.1
494.343	316.2	502.343	321.6	512.903	314.7	584.853	307.2
494.428	316.4	502.428	321.5	513.838	304.6	584.938	308.9
494.513	312.8	502.513	318.4	513.923	303.0	585.023	316.1
494.598	325.0	502.602	310.6	514.008	321.4		
494.683	326.6	502.692	305.7	514.093	316.9		
494.768	318.2	502.778	318.9	514.178	9999.9		
494.853	316.6	502.863	318.3	514.263	310.4		
494.938	312.6	502.948	309.2	514.348	300.4		
495.023	310.1	503.033	305.1	514.433	302.7		
495.108	313.8	503.288	310.9	514.518	311.3		
495.193	311.5	503.373	317.5	514.603	302.9		
495.278	321.7	503.458	299.7	568.018	307.7		
495.363	319.7	503.543	308.3	568.103	9999.9		
495.448	314.4	503.628	332.0	568.874	289.3		
495.533	310.8	503.713	328.7	568.954	290.5		
495.618	317.3	503.798	316.2	570.408	311.6		
495.703	312.6	503.883	313.3	570.493	301.9		
495.788	318.4	503.968	9999.9	570.578	315.6		
495.873	314.4	504.053	315.8	570.663	314.5		
495.958	317.8	504.138	313.5	570.748	320.7		
496.043	315.1	504.223	312.4	570.833	309.2		
496.128	318.4	504.308	327.2	570.918	9999.9		
496.213	310.2	504.393	324.2	571.003	315.2		
496.298	316.2	504.478	306.1	571.088	300.9		
496.383	317.3	504.563	312.9	571.173	310.9		
496.468	324.8	504.648	309.5	572.458	305.2		
496.553	327.5	504.733	314.7	572.543	299.6		
496.638	322.9	504.818	309.5	572.628	317.2		
496.723	309.0	504.903	309.7	572.713	318.5		
496.808	314.4	504.988	314.7	572.798	331.4		
496.893	317.5	505.073	310.9	572.883	321.0		
496.978	321.1	505.158	307.9	572.968	298.5		
497.063	317.1	505.243	306.9	573.053	308.5		
497.148	9999.9	505.328	325.5	573.138	298.8		
497.233	306.4	505.413	323.3	573.223	305.6		
497.318	326.5	505.498	313.1	573.308	293.7		
497.403	303.7	505.583	302.0	573.393	333.1		
497.488	9999.9	505.668	316.9	574.848	301.2		
497.573	297.6	505.753	299.3	574.933	299.3		
497.658	309.4	505.838	311.8	575.018	304.7		
497.743	308.5	505.923	316.2	575.103	306.8		
497.828	9999.9	506.008	311.8	575.188	309.9		
497.913	329.4	506.093	303.9	575.273	302.7		
497.998	316.4	506.178	297.1	575.358	319.4		
498.083	305.3	506.263	301.3	575.443	307.1		
498.168	319.3	506.348	300.9	575.528	317.8		
498.253	313.3	506.433	9999.9	575.613	313.2		
498.338	316.2	506.868	298.4	575.698	305.9		
498.423	307.6	506.953	9999.9	575.783	309.2		
498.508	314.9	507.038	304.1	577.238	313.1		
498.593	298.1	507.123	319.8	577.323	9999.9		
498.678	326.4	507.208	319.6	577.408	306.5		
498.763	320.9	507.293	9999.9	577.493	302.8		
498.848	311.5	507.378	319.1	577.578	305.6		
498.933	314.4	507.463	310.2	577.663	304.9		
499.018	317.5	507.548	9999.9	577.748	318.1		
499.103	316.4	507.633	303.0	577.833	9999.9		
499.188	324.5	507.718	302.0	577.918	312.0		
499.273	307.8	507.803	304.1	578.003	322.3		
499.358	325.8	508.398	277.1	578.088	9999.9		
499.443	318.0	508.483	301.1	578.173	4813.2		
499.528	315.5	508.568	302.7	579.458	313.4		
499.613	318.7	508.653	307.4	579.543	334.6		
499.698	312.4	508.738	323.9	579.632	332.3		
499.783	316.7	508.823	322.2	579.722	320.8		
499.868	314.9	508.908	314.2	579.804	318.5		
499.953	298.0	508.993	309.3	579.884	319.4		
500.038	318.0	509.078	309.7	579.968	310.9		
500.123	313.8	509.163	302.5	580.053	310.6		
500.208	317.8	509.248	307.2	580.142	309.8		
500.293	317.1	509.333	312.9	580.232	307.0		
500.378	309.4	509.418	317.8	580.318	9999.9		
500.463	314.2	509.503	290.6	580.403	311.2		
500.548	311.1	510.268	299.3	580.488	9999.9		
500.633	9999.9	510.353	306.0	580.573	305.1		
500.722	310.6	510.438	318.5	582.028	322.3		
500.812	315.1	510.523	306.0	582.113	313.8		
500.898	297.6	510.608	314.5	582.198	304.2		
500.983	313.8	510.693	295.9	582.283	314.9		
501.068	317.1	510.778	305.6	582.372	309.6		

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TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(o) Thermocouple 22: s = 0.0895 m; d = 0.0101 m

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
400.121	283.3	408.081	278.9	470.006	1607.3	478.136	9999.9	486.296	191.5
400.286	277.9	408.246	283.0	470.176	1588.8	478.306	214.5	486.466	281.4
400.451	279.3	408.416	280.0	470.346	1583.7	478.476	213.5	486.635	192.5
400.616	285.1	408.581	283.7	470.516	1577.1	478.646	9999.9	486.806	224.4
400.781	281.9	408.746	282.8	470.681	1567.7	478.816	9999.9	486.976	196.8
400.946	280.0	408.911	285.8	470.846	1547.8	478.986	9999.9	487.146	200.6
401.116	284.4	409.076	287.5	471.016	1549.6	479.156	187.2	487.311	181.7
401.281	279.0	409.241	288.6	471.186	1551.7	479.326	194.5	487.482	336.7
401.441	282.8	409.406	287.0	471.356	1552.6	479.496	9999.9	487.656	9999.9
401.606	280.7	409.571	280.8	471.526	1546.6	479.666	9999.9	487.826	193.4
401.776	279.8	409.736	282.4	471.696	1536.9	479.836	9999.9	487.996	163.1
401.941	283.1	409.906	284.5	471.866	1526.1	480.006	189.3	488.166	167.9
402.106	284.3	410.071	280.8	472.036	1526.1	480.176	194.2	488.336	221.0
402.271	288.2	410.236	286.3	472.206	1532.0	480.346	170.8	488.506	9999.9
402.436	283.5	410.401	289.7	472.376	1523.7	480.516	170.0	488.676	181.5
402.601	282.8	464.446	1406.4	472.546	1527.6	480.686	175.3	488.846	160.3
402.766	276.5	464.611	1454.7	472.716	1529.6	480.856	186.0	489.016	161.7
402.936	284.4	464.776	1498.5	472.886	1542.1	481.026	9999.9	489.186	180.0
403.101	285.4	464.941	1475.1	473.056	1553.0	481.196	175.1	489.356	175.2
403.266	283.3	465.106	1491.4	473.226	1548.9	481.366	200.8	489.526	176.5
403.436	280.0	465.276	1512.4	473.396	1561.5	481.536	177.2	489.696	185.1
403.601	278.4	465.446	1538.5	473.566	1580.5	481.706	192.7	489.866	178.7
403.766	283.3	465.611	9999.9	473.731	1579.2	481.876	214.3	490.036	190.6
403.931	283.5	465.776	1531.7	473.902	1589.9	482.046	169.6	490.206	195.3
404.096	280.8	465.946	1571.8	474.071	1597.5	482.216	162.1	490.376	181.7
404.266	281.3	466.111	1594.5	474.236	1596.4	482.386	199.9	490.546	179.7
404.431	282.1	466.276	1616.7	474.406	1578.6	482.556	141.7	490.716	201.6
404.596	282.1	466.446	1609.7	474.576	1596.5	482.726	197.4	490.886	179.3
404.766	282.1	466.616	1570.8	474.746	1604.4	482.896	176.3	491.056	187.9
404.931	285.6	466.786	1559.8	474.916	1581.2	483.066	191.3	491.226	178.4
405.096	281.2	466.956	1563.8	475.086	1541.0	483.236	186.9	491.396	173.3
405.261	282.2	467.121	1577.1	475.256	1547.1	483.406	187.5	491.566	248.0
405.426	278.6	467.286	1581.6	475.426	157.2	483.571	183.0	491.736	172.0
405.596	278.4	467.456	1584.0	475.596	190.1	483.736	201.7	491.906	169.7
405.761	283.1	467.626	1584.1	475.766	183.1	483.906	186.0	492.076	158.0
405.926	286.5	467.796	1576.6	475.936	177.9	484.076	168.8	492.246	219.0
406.091	282.6	467.972	1583.0	476.106	9999.9	484.246	196.6	492.416	176.4
406.256	278.6	468.141	1583.7	476.276	1272.6	484.416	183.3	492.586	186.5
406.426	281.5	468.306	1593.7	476.446	166.5	484.586	212.8	492.756	179.2
406.591	293.2	468.476	1614.4	476.616	1759.4	484.756	190.2	492.926	176.9
406.756	286.3	468.646	1621.2	476.786	9999.9	484.926	184.5	493.096	174.7
406.921	283.3	468.816	1626.2	476.956	1725.2	485.095	179.6	493.266	183.8
407.086	281.9	468.986	1634.4	477.126	9999.9	485.266	170.9	493.436	178.1
407.256	280.5	469.156	1635.6	477.296	132.5	485.442	197.3	493.606	189.5
407.421	285.1	469.326	1618.0	477.461	203.4	485.616	175.1	493.776	182.4
407.586	283.7	469.496	1617.7	477.626	197.6	485.786	9999.9	493.946	9999.9
407.751	282.2	469.666	1614.2	477.796	223.5	485.956	181.4	494.116	155.7
407.916	283.3	469.836	1613.1	477.966	9999.9	486.126	9999.9	494.286	189.3

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TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(o) Thermocouple 22 - Concluded

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
494.456	184.9	502.632	181.5	514.206	414.1
494.626	193.3	502.806	9999.9	514.376	9999.9
494.796	176.7	502.976	218.2	514.546	9999.9
494.966	176.7	503.316	9999.9	567.536	491.8
495.136	178.5	503.486	234.3	567.706	515.3
495.306	184.2	503.656	238.1	567.876	482.0
495.476	185.1	503.826	253.2	568.046	466.5
495.646	177.2	503.996	252.0	568.901	475.1
495.816	9999.9	504.166	9999.9	570.436	502.2
495.986	9999.9	504.336	278.9	570.606	489.6
496.156	735.7	504.506	275.7	570.776	489.6
496.326	185.3	504.676	313.2	570.946	503.6
496.496	189.0	504.846	337.2	571.116	491.7
496.666	181.6	505.016	352.8	572.486	9999.9
496.836	200.2	505.186	9999.9	572.656	9999.9
497.006	185.3	505.356	371.5	572.826	506.0
497.176	182.4	505.526	346.3	572.996	9999.9
497.346	180.6	505.696	373.8	573.166	468.3
497.516	182.0	505.866	398.7	573.336	490.1
497.686	180.5	506.036	389.3	574.876	489.5
497.856	195.5	506.206	401.0	575.046	9999.9
498.026	178.8	506.376	9999.9	575.216	9999.9
498.196	181.8	506.896	417.7	575.386	488.9
498.366	168.9	507.066	389.7	575.556	493.6
498.536	192.8	507.236	9999.9	575.726	487.1
498.706	174.0	507.406	429.4	577.266	515.1
498.876	170.5	507.576	419.4	577.436	502.3
499.046	180.6	507.746	410.0	577.606	505.3
499.216	252.6	508.426	9999.9	577.776	493.8
499.386	187.2	508.596	9999.9	577.946	486.2
499.556	179.7	508.766	432.9	578.116	4270.5
499.726	182.5	508.936	416.1	579.486	9999.9
499.896	170.4	509.106	9999.9	579.662	516.9
500.066	187.2	509.276	432.5	579.831	9999.9
500.236	194.7	509.446	9999.9	579.996	9999.9
500.406	9999.9	510.296	433.3	580.172	478.6
500.576	202.7	510.466	436.5	580.346	9999.9
500.752	179.3	510.636	433.8	580.516	9999.9
500.926	179.9	510.806	451.3	582.056	492.9
501.096	173.9	510.976	9999.9	582.226	497.0
501.266	176.8	511.146	447.9	582.402	473.1
501.436	203.7	512.166	427.5	582.576	478.6
501.606	179.8	512.336	435.2	582.746	509.3
501.776	189.9	512.506	433.2	584.112	467.6
501.946	189.9	512.676	420.6	584.286	513.6
502.116	193.4	512.846	448.2	584.456	495.2
502.286	9999.9	513.866	428.5	584.626	9999.9
502.456	195.8	514.036	436.7	584.796	454.6

[redacted]

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(p) Thermocouple 23: s = 0.0895 m; d = 0.0229 m

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
400.250	282.1	408.050	286.7	470.045	294.7	477.970	330.0	485.855	379.2
400.330	288.5	408.130	283.0	470.130	294.3	478.055	330.8	485.980	380.3
400.415	289.2	408.210	287.2	470.215	281.4	478.140	9999.9	486.060	379.4
400.500	290.4	408.295	287.1	470.300	289.0	478.220	323.0	486.140	354.9
400.580	290.1	408.380	285.0	470.380	290.6	478.300	327.9	486.225	390.7
400.660	289.4	408.460	288.1	470.460	295.9	478.385	328.4	486.310	393.3
400.740	283.9	408.540	288.5	470.540	287.9	478.470	338.3	486.395	377.6
400.820	285.7	408.625	280.9	470.620	294.1	478.550	342.1	486.480	380.2
400.905	281.8	408.710	284.6	470.705	293.9	478.630	338.3	486.560	380.3
400.990	286.0	408.790	277.0	470.790	297.5	478.715	332.0	486.640	376.5
401.070	280.0	408.870	281.2	470.875	294.3	478.800	328.9	486.725	381.8
401.150	283.7	408.955	279.0	470.960	293.1	478.885	341.3	486.810	382.0
401.235	283.7	409.040	282.2	471.040	291.8	478.970	316.4	486.890	375.3
401.320	285.5	409.120	283.7	471.120	293.4	479.050	337.3	486.970	380.6
401.400	284.0	409.200	287.7	471.205	289.6	479.130	336.4	487.055	382.1
401.480	285.1	409.280	281.3	471.290	291.0	479.215	329.1	487.140	380.2
401.560	282.5	409.360	282.7	471.375	288.2	479.300	336.6	487.225	377.4
401.640	285.5	409.445	283.0	471.460	292.1	479.385	337.9	487.310	384.1
401.725	279.9	409.530	287.2	471.540	293.7	479.470	338.1	487.390	368.8
401.810	285.5	409.610	284.0	471.620	292.6	479.555	339.1	487.470	371.0
401.890	287.6	409.690	286.5	471.705	290.4	479.640	336.7	487.555	374.5
401.970	290.1	409.775	281.4	471.790	295.0	479.720	339.7	487.640	376.9
402.050	289.5	409.860	284.0	471.875	295.1	479.800	341.1	487.720	379.5
402.130	289.9	409.940	280.9	471.960	295.1	479.885	340.0	487.800	381.7
402.215	282.2	410.020	284.4	472.040	296.0	479.970	342.4	487.885	375.5
402.300	286.0	410.105	288.8	472.120	295.8	480.050	341.9	487.970	377.7
402.380	283.0	410.190	293.0	472.205	295.8	480.130	343.7	488.220	376.0
402.460	285.5	410.270	288.6	472.290	291.9	480.215	347.5	488.300	374.2
402.545	281.1	410.350	291.6	472.375	295.2	480.300	346.4	488.385	372.4
402.630	282.3	410.435	283.9	472.460	291.7	480.385	347.6	488.470	9999.9
402.710	282.1	410.520	285.3	472.545	301.8	480.470	351.6	488.555	369.7
402.790	282.8	410.605	283.4	472.630	296.5	480.555	357.1	488.640	372.8
402.870	284.4	410.650	9999.9	472.710	296.5	480.640	363.9	488.725	375.7
402.950	286.7	410.770	293.1	472.790	297.2	480.720	355.3	488.810	381.7
403.035	280.2	410.850	294.0	472.875	292.6	480.800	363.5	488.890	373.4
403.120	285.8	465.085	297.7	472.960	300.5	480.885	357.6	488.970	373.7
403.250	280.4	465.170	289.6	473.045	290.6	480.970	363.6	489.055	374.0
403.380	285.0	465.250	287.4	473.130	292.9	481.055	359.8	489.140	377.6
403.415	288.8	465.330	291.1	473.215	303.5	481.140	369.6	489.225	378.0
403.450	290.9	465.410	289.4	473.300	304.2	481.220	364.3	489.310	379.6
403.530	288.5	465.490	292.2	473.380	298.0	481.300	369.6	489.390	376.5
403.610	291.6	465.570	289.5	473.460	297.5	481.385	369.3	489.470	379.4
403.695	286.5	465.650	9999.9	473.545	284.1	481.470	370.2	489.555	377.7
403.780	289.7	465.735	294.3	473.630	285.2	481.555	375.0	489.640	376.4
403.860	283.2	465.820	293.7	473.715	287.2	481.640	376.8	489.890	378.6
403.940	284.1	465.900	294.0	473.800	295.9	481.720	375.1	489.970	379.7
404.020	283.2	465.980	295.7	473.880	281.5	481.800	375.8	490.055	377.0
404.100	283.5	466.060	291.5	473.960	288.7	481.885	371.3	490.140	378.3
404.185	283.5	466.140	291.1	474.045	294.8	481.970	373.7	490.220	379.9
404.270	286.3	466.225	288.3	474.130	296.4	482.055	384.8	490.300	374.8
404.350	283.5	466.310	291.3	474.215	293.3	482.140	389.6	490.385	372.3
404.430	285.1	466.390	285.3	474.300	297.7	482.220	384.0	490.470	374.5
404.510	286.0	466.470	290.2	474.385	290.7	482.300	383.3	490.555	379.4
404.590	288.1	466.555	286.3	474.470	297.4	482.385	383.1	490.640	379.6
404.675	284.6	466.640	288.6	474.550	299.5	482.470	382.2	490.725	381.3
404.760	286.0	466.725	284.4	474.630	300.9	482.555	379.8	490.810	382.7
404.840	282.5	466.810	287.6	474.715	301.4	482.640	384.4	490.890	376.8
404.920	283.6	466.895	281.4	474.800	305.8	482.720	386.3	490.970	378.3
405.005	285.1	466.980	290.4	474.880	307.6	482.800	389.9	491.055	375.9
405.090	289.0	467.060	284.2	474.960	307.4	482.885	385.8	491.140	375.5
405.170	289.0	467.140	293.9	475.045	305.1	482.970	383.2	491.225	374.6
405.250	291.8	467.225	288.3	475.130	308.8	483.055	375.5	491.310	375.7
405.335	281.6	467.310	286.0	475.215	306.7	483.140	381.7	491.390	376.3
405.420	284.6	467.390	293.9	475.300	309.0	483.225	382.4	491.470	374.1
405.500	284.4	467.470	294.1	475.385	313.1	483.310	383.3	491.555	371.7
405.580	285.8	467.555	297.1	475.470	314.8	483.390	379.4	491.640	378.1
405.665	285.6	467.640	295.3	475.550	318.6	483.470	382.3	491.725	374.0
405.750	285.1	467.725	292.9	475.630	325.6	483.555	375.3	491.810	373.4
405.830	282.6	467.810	291.6	475.715	312.6	483.640	380.7	491.890	374.2
405.910	286.0	467.890	286.8	475.800	313.1	483.720	367.2	491.970	374.0
405.990	283.2	467.970	286.6	475.885	321.2	483.800	375.4	492.055	370.4
406.070	285.3	468.055	288.8	475.970	315.7	483.885	373.9	492.140	378.6
406.155	288.1	468.140	293.4	476.055	315.7	483.970	9999.9	492.140	378.6
406.240	289.0	468.220	289.0	476.140	310.8	484.055	376.2	492.225	368.0
406.320	284.6	468.300	293.4	476.220	310.8	484.140	379.5	492.310	372.0
406.400	286.0	468.385	291.6	476.300	308.5	484.225	380.5	492.390	367.8
406.485	280.9	468.470	293.9	476.385	307.4	484.310	9999.9	492.470	371.1
406.570	284.1	468.555	291.8	476.470	320.2	484.390	376.5	492.555	370.4
406.650	286.2	468.640	289.7	476.550	327.4	484.470	377.6	492.640	372.9
406.730	286.9	468.720	293.4	476.630	330.5	484.555	380.2	492.725	369.8
406.815	283.0	468.800	294.5	476.715	299.5	484.640	376.2	492.810	375.4
406.900	286.9	468.885	287.6	476.800	298.8	484.725	384.5	492.890	369.5
406.980	283.7	468.970	291.0	476.885	321.9	484.810	387.6	492.970	369.1
407.060	285.3	469.050	285.5	476.970	329.7	484.890	375.3	493.055	375.3
407.140	279.2	469.130	286.7	477.050	311.5	484.970	380.2	493.140	373.6
407.220	282.5	469.215	282.3	477.130	326.4	485.055	379.2	493.225	378.7
407.305	282.1	469.300	286.7	477.215	327.2	485.140	379.9	493.310	378.5
407.390	283.3	469.380	289.1	477.300	323.5	485.225	377.3	493.390	372.4
407.470	279.3	469.460	291.1	477.385	329.4	485.310	380.4	493.470	372.0
407.550	282.1	469.545	296.8	477.470	336.3	485.390	368.1	493.555	372.8
407.635	283.7	469.630	298.2	477.550	327.9	485.470	376.1	493.640	373.2
407.720	287.6	469.710	286.2	477.630	9999.9	485.555	382.1	493.725	374.2
407.800	282.8	469.790	290.8	477.715	325.9	485.640	386.1	493.810	375.1
407.880	287.4	469.875	283.6	477.800	326.6	485.725	384.3	493.890	374.8
407.965	282.8	469.960	289.4	477.885	329.4	485.810	379.4	493.970	371.7
								494.055	380.5

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(p) Thermocouple 23 - Concluded

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
494.140	375.2	502.120	370.7	510.955	358.7	565.790	381.5	575.715	375.3
494.220	374.1	502.205	373.8	511.080	367.8	565.875	381.7	575.800	381.2
494.300	373.8	502.290	370.9	511.160	5118.1	565.960	382.4	575.885	378.6
494.385	374.1	502.370	368.0	511.240	9999.9	566.045	380.6	575.970	369.5
494.470	375.4	502.450	367.3	511.325	364.9	566.130	382.6	577.055	381.5
494.555	376.0	502.535	371.4	511.410	357.4	566.210	360.7	577.140	385.0
494.640	375.1	502.620	371.2	511.990	374.6	566.290	369.4	577.220	377.4
494.720	366.3	502.705	366.5	512.070	368.9	566.375	367.3	577.300	375.6
494.800	367.2	502.790	373.2	512.155	361.5	566.460	372.6	577.385	378.5
495.055	377.5	502.870	373.7	512.240	368.1	566.545	372.1	577.470	381.1
495.140	377.1	502.950	369.9	512.320	361.0	566.630	370.7	577.555	383.8
495.220	377.0	503.035	370.8	512.400	362.6	566.715	375.1	577.640	372.1
495.300	373.7	503.120	367.2	512.485	362.6	566.800	9999.9	577.720	377.8
495.385	373.3	503.200	361.2	512.570	366.3	566.880	344.8	577.800	380.3
495.470	371.6	503.280	363.6	512.650	364.2	566.960	370.2	577.885	368.3
495.555	371.4	503.365	372.2	512.730	368.8	567.045	375.3	577.970	370.8
495.640	369.9	503.450	369.7	512.815	367.4	567.130	382.6	578.055	375.5
495.720	373.2	503.535	365.5	512.900	367.4	567.380	367.9	578.140	375.7
495.800	372.9	503.620	363.7	512.980	358.1	567.460	372.5	578.220	376.2
495.885	372.9	503.700	372.7	513.060	361.4	567.545	381.0	578.300	9999.9
495.970	374.7	503.780	376.9	513.145	354.5	567.630	377.2	578.385	9999.9
496.055	371.0	503.865	372.3	513.230	360.7	567.710	378.2	578.470	363.6
496.140	371.9	503.950	372.7	513.645	356.6	567.790	375.9	579.385	376.0
496.220	371.4	504.030	382.7	513.730	363.7	567.875	376.8	579.470	377.2
496.300	372.9	504.110	378.1	513.810	366.3	567.960	381.9	579.555	379.0
496.385	375.4	504.195	368.9	513.890	359.2	568.045	372.1	579.640	377.5
496.470	376.3	504.280	370.0	513.975	363.2	568.130	377.4	579.720	373.3
496.550	372.4	504.360	367.9	514.060	362.3	568.210	370.1	579.800	374.7
496.630	369.1	504.440	368.4	514.145	368.2	568.290	365.4	579.885	372.8
496.715	371.8	504.525	372.5	514.230	364.4	568.375	365.7	579.970	370.8
496.800	375.8	504.610	371.2	514.310	361.8	568.460	9999.9	580.055	376.4
496.885	374.1	504.695	364.6	514.390	359.6	568.710	380.4	580.140	379.5
496.970	376.3	504.780	367.5	514.470	367.0	568.790	376.9	580.220	372.8
497.050	367.0	504.860	368.4	514.550	367.0	568.875	375.2	580.300	375.5
497.130	371.2	504.940	368.4	514.635	366.2	568.960	375.2	580.385	376.1
497.215	365.3	505.025	369.2	514.720	373.4	569.045	379.7	580.470	379.2
497.300	369.1	505.110	368.7	514.805	364.2	569.130	376.6	580.555	380.4
497.385	364.0	505.190	366.4	514.890	371.7	569.215	365.2	580.640	377.3
497.470	368.6	505.270	367.3	515.630	357.8	569.300	379.3	581.890	373.7
497.550	368.3	505.355	367.2	515.710	365.3	569.380	389.1	581.970	382.5
497.630	367.2	505.440	366.1	515.795	366.2	569.460	383.2	582.055	378.3
497.715	367.6	505.525	370.9	515.880	362.2	569.545	347.2	582.140	379.4
497.800	369.2	505.610	374.9	515.965	365.6	569.630	9999.9	582.225	376.6
497.885	363.8	505.690	360.6	516.050	360.9	570.045	368.3	582.310	380.2
497.970	375.1	505.770	362.8	516.130	357.2	570.130	361.8	582.390	376.8
498.050	366.5	505.855	364.0	516.210	373.8	570.215	369.9	582.470	379.0
498.130	367.8	505.940	369.1	517.455	353.1	570.300	367.1	582.555	377.0
498.215	371.9	506.020	367.6	517.540	364.7	570.380	364.2	582.640	381.0
498.300	368.6	506.100	365.4	517.620	366.1	570.460	366.0	582.720	384.6
498.385	372.1	506.185	368.4	517.700	368.8	570.545	375.1	582.800	382.0
498.470	376.1	506.270	367.9	518.780	354.3	570.630	374.3	582.885	395.2
498.550	367.1	506.350	363.5	518.860	357.8	570.715	378.5	582.970	9999.9
498.630	368.6	506.430	364.6	518.945	361.8	570.800	376.1	584.055	367.2
498.715	371.5	506.515	362.1	519.030	368.0	570.880	378.6	584.140	370.8
498.800	375.9	506.600	9999.9	519.110	357.4	570.960	377.0	584.225	375.8
498.880	369.7	506.850	371.4	519.190	358.2	571.045	375.2	584.310	380.9
498.960	369.9	506.930	370.9	519.275	358.3	571.130	378.7	584.390	370.5
499.045	362.0	507.015	366.6	519.360	359.8	571.215	375.9	584.470	381.1
499.130	371.3	507.100	365.3	519.445	366.1	571.300	374.8	584.555	365.5
499.210	366.1	507.180	363.5	519.530	367.0	571.380	375.5	584.640	367.1
499.290	366.6	507.260	365.1	519.610	352.8	571.460	378.4	584.725	374.3
499.375	368.6	507.345	363.8	519.690	353.0	572.380	367.5	584.810	374.1
499.460	370.4	507.430	365.2	519.770	361.0	572.460	370.6	584.890	377.9
499.545	367.4	507.510	362.9	519.850	9999.9	572.545	373.2	584.970	377.9
499.630	370.5	507.590	367.3	520.440	353.2	572.630	378.5	585.055	375.8
499.710	367.5	507.675	361.2	520.520	350.6	572.715	371.9	585.140	375.4
499.790	370.0	507.760	369.4	520.605	371.8	572.800	377.8	585.225	376.9
499.875	367.6	507.845	365.7	520.690	369.0	572.885	372.5	585.310	382.0
499.960	368.9	507.930	367.5	520.770	358.8	572.970	375.8	589.735	379.3
500.045	369.2	508.340	363.3	520.850	337.6	573.050	375.5	589.820	377.3
500.130	371.4	508.420	360.4	520.935	362.2	573.130	383.0	589.905	355.5
500.210	366.3	508.505	352.8	521.020	361.7	573.215	369.2	589.990	374.6
500.290	373.8	508.590	353.3	521.100	353.0	573.300	374.7		
500.375	364.8	508.675	358.2	521.180	357.2	573.385	370.0		
500.460	370.6	508.760	361.9	522.260	361.1	573.470	377.5		
500.540	367.2	508.840	355.8	522.340	314.4	573.550	371.2		
500.620	368.8	508.920	361.3	522.425	346.9	573.630	374.8		
500.705	371.6	509.005	359.7	522.510	366.1	573.715	376.7		
500.790	375.5	509.090	361.5	522.595	355.4	573.800	376.3		
500.875	372.1	509.170	366.1	522.680	361.1	573.885	9999.9		
500.960	370.8	509.250	375.6	538.375	359.4	573.970	9999.9		
501.045	366.9	509.335	368.0	538.460	375.8	574.215	389.0		
501.130	370.2	509.420	364.9	538.540	360.7	574.300	383.5		
501.210	370.5	509.505	364.4	538.620	362.3	574.715	375.5		
501.290	368.7	509.590	364.7	538.705	347.2	574.800	373.3		
501.375	367.0	510.165	365.8	538.790	9999.9	574.885	379.7		
501.460	372.1	510.250	367.3	541.205	347.6	574.970	377.3		
501.540	363.0	510.330	357.0	541.290	368.4	575.050	379.5		
501.620	363.9	510.410	358.8	541.370	364.4	575.130	386.6		
501.705	375.1	510.495	369.4	541.450	9999.9	575.215	380.9		
501.790	373.8	510.580	368.7	565.375	386.8	575.300	381.3		
501.875	373.6	510.660	363.6	565.460	384.4	575.385	372.2		
501.960	375.3	510.740	364.2	565.545	369.7	575.470	376.6		
502.040	375.2	510.825	359.1	565.630	379.0	575.550	377.7		
		510.910	359.6	565.710	383.5	575.630	378.8		

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(q) Thermocouple 24: s = 0.0895 m; d = 0.0306 m

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
400.261	289.7	408.141	286.5	470.226	293.6	478.231	295.7	486.236	332.8
400.426	286.7	408.306	284.6	470.391	301.0	478.396	290.8	486.406	320.8
400.591	284.3	408.471	285.3	470.551	300.3	478.561	301.6	486.571	323.8
400.751	283.9	408.636	279.9	470.716	296.2	478.726	286.9	486.736	316.7
400.916	289.0	408.801	275.2	470.886	297.0	478.896	294.2	486.901	306.4
401.081	286.4	408.966	286.4	471.051	294.7	479.061	294.9	487.066	323.4
401.246	288.1	409.131	289.7	471.216	294.4	479.226	289.1	487.236	315.8
401.411	289.0	409.291	284.3	471.386	287.3	479.396	289.2	487.401	306.1
401.571	287.2	409.456	289.3	471.551	286.8	479.566	9999.9	487.566	313.2
401.736	282.9	409.621	289.0	471.716	292.5	479.731	290.5	487.731	315.8
401.901	284.3	409.786	288.1	471.886	299.1	479.896	299.0	487.896	313.8
402.061	288.3	409.951	284.4	472.051	297.6	480.061	288.2	488.231	317.8
402.226	286.4	410.116	290.4	472.216	294.2	480.226	295.1	488.396	314.1
402.391	288.3	410.281	288.3	472.386	292.2	480.396	293.3	488.566	318.3
402.556	288.1	410.446	282.5	472.556	297.9	480.566	301.2	488.736	319.6
402.721	288.8	410.616	282.2	472.721	294.9	480.731	292.7	488.901	315.6
402.881	287.4	410.781	293.1	472.886	292.4	480.896	292.2	489.066	318.3
403.046	285.3	465.096	294.7	473.056	294.5	481.066	296.3	489.236	318.7
403.267	283.9	465.261	295.9	473.226	303.2	481.231	293.5	489.401	316.7
403.420	289.9	465.421	292.4	473.391	296.4	481.396	290.3	489.566	317.2
403.541	288.8	465.581	290.0	473.556	294.9	481.566	294.9	489.901	325.8
403.706	286.5	465.746	293.4	473.726	296.2	481.731	294.5	490.066	325.4
403.871	287.4	465.911	293.3	473.891	287.3	481.896	283.9	490.231	319.8
404.031	288.8	466.071	291.3	474.056	300.1	482.066	294.3	490.396	316.7
404.196	291.6	466.236	291.1	474.226	272.1	482.231	300.2	490.566	321.6
404.361	286.7	466.401	292.7	474.396	297.9	482.396	302.8	490.736	321.6
404.521	289.2	466.566	291.8	474.561	294.0	482.566	285.2	490.901	323.8
404.686	284.1	466.736	293.2	474.726	303.7	482.731	303.5	491.066	322.7
404.851	283.4	466.906	291.6	474.891	302.0	482.896	299.5	491.236	320.9
405.016	288.3	467.071	295.3	475.056	299.0	483.066	293.7	491.401	321.2
405.181	292.9	467.236	294.8	475.226	299.3	483.236	298.1	491.566	320.7
405.346	286.2	467.401	293.4	475.396	298.4	483.401	298.0	491.736	321.2
405.511	289.2	467.566	294.1	475.561	307.6	483.566	296.7	491.901	319.8
405.676	288.3	467.736	295.2	475.726	288.0	483.731	286.5	492.066	324.3
405.841	287.0	467.901	289.2	475.896	308.3	483.896	301.4	492.236	319.2
406.001	290.2	468.066	296.6	476.066	297.0	484.066	309.0	492.401	315.8
406.166	288.1	468.231	291.8	476.231	291.0	484.236	303.7	492.566	319.6
406.331	285.5	468.396	287.4	476.396	291.9	484.401	313.3	492.736	313.8
406.496	285.7	468.566	288.1	476.561	302.1	484.566	305.3	492.901	313.8
406.661	284.8	468.731	289.7	476.726	277.8	484.736	322.3	493.066	320.5
406.826	286.5	468.896	290.3	476.896	303.2	484.901	306.0	493.236	320.9
406.991	285.0	469.061	293.2	477.061	295.1	485.066	310.4	493.401	315.0
407.151	285.0	469.226	291.8	477.226	300.9	485.236	310.1	493.566	317.4
407.316	288.1	469.391	294.1	477.396	298.4	485.401	313.0	493.736	315.0
407.481	288.8	469.556	303.5	477.561	303.2	485.566	313.7	493.901	312.3
407.646	286.7	469.721	297.7	477.726	294.2	485.736	9999.9	494.066	319.4
407.811	290.2	469.886	293.8	477.896	301.9	485.906	311.0	494.231	321.4
407.976	287.4	470.056	298.2	478.066	300.9	486.071	312.8	494.396	324.3

[redacted]

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(q) Thermocouple 24 - Concluded

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
494.566	324.2	502.716	326.4	512.166	321.2	566.556	329.2	577.566	322.8
494.731	316.1	502.881	320.8	512.331	326.8	566.726	9999.9	577.731	322.2
495.066	324.0	503.046	317.0	512.496	320.3	566.891	334.4	577.896	326.3
495.231	322.9	503.211	315.7	512.661	325.0	567.056	324.0	578.066	325.4
495.396	322.7	503.376	314.1	512.826	327.1	567.391	316.8	578.231	330.4
495.566	317.6	503.546	308.2	512.991	315.4	567.556	331.3	578.396	337.3
495.731	320.0	503.711	320.6	513.156	309.4	567.721	327.2	579.396	331.1
495.896	323.5	503.876	329.7	513.656	325.9	567.886	334.6	579.566	330.2
496.066	318.7	504.041	324.3	513.821	312.6	568.056	326.8	579.731	321.3
496.231	319.6	504.206	317.0	513.986	321.4	568.221	318.2	579.896	318.7
496.396	320.9	504.371	317.9	514.156	318.1	568.386	324.3	580.066	320.2
496.561	319.4	504.536	319.5	514.321	314.1	568.721	330.8	580.231	317.4
496.726	317.1	504.706	317.3	514.481	323.0	568.886	333.3	580.396	321.2
496.896	322.2	504.871	321.9	514.646	333.3	569.056	325.7	580.566	324.3
497.061	314.5	505.036	312.8	514.816	301.3	569.226	331.1	581.901	333.5
497.226	318.0	505.201	323.5	515.641	324.5	569.391	347.1	582.066	334.0
497.396	313.1	505.366	315.0	515.806	326.3	569.556	361.7	582.236	332.8
497.561	319.1	505.536	320.8	515.976	322.6	570.056	318.2	582.401	334.4
497.726	320.5	505.701	314.4	516.141	331.4	570.226	316.3	582.566	331.3
497.896	316.7	505.866	316.1	517.466	310.0	570.391	319.4	582.731	325.8
498.061	318.9	506.031	315.0	517.631	321.9	570.556	325.0	582.896	324.6
498.226	318.9	506.196	318.8	518.791	329.2	570.726	325.5	584.066	321.0
498.396	325.1	506.361	312.1	518.956	318.3	570.891	325.6	584.236	327.9
498.561	314.5	506.526	329.3	519.121	309.7	571.056	326.6	584.401	313.8
498.726	323.3	506.861	317.5	519.286	311.2	571.226	325.5	584.566	309.5
498.891	322.2	507.026	313.7	519.456	317.2	571.391	324.4	584.736	318.6
499.056	319.8	507.191	315.0	519.621	315.2	572.391	328.0	584.901	323.7
499.221	310.7	507.356	316.8	519.781	310.1	572.556	322.5	585.066	327.1
499.386	319.6	507.521	314.1	520.451	327.5	572.726	325.1	585.236	368.3
499.556	313.8	507.686	315.3	520.616	317.3	572.896	326.0	589.746	329.5
499.721	321.1	507.856	306.2	520.781	347.5	573.061	331.8	589.916	331.9
499.886	315.6	508.351	310.1	520.946	322.3	573.226	328.4		
500.056	318.5	508.516	312.8	521.111	296.9	573.396	330.2		
500.221	315.1	508.686	311.5	522.271	319.0	573.561	327.7		
500.386	312.9	508.851	314.8	522.436	319.5	573.726	316.0		
500.551	310.2	509.016	318.8	522.606	328.9	573.896	9999.9		
500.716	317.8	509.181	319.9	538.386	331.3	574.226	335.8		
500.886	321.6	509.346	320.3	538.551	331.2	574.726	327.4		
501.056	317.1	509.516	321.4	538.716	9999.9	574.896	330.2		
501.221	323.1	510.176	329.8	541.216	316.6	575.061	341.1		
501.386	312.7	510.341	317.5	541.381	341.4	575.226	335.8		
501.551	310.4	510.506	326.7	565.386	338.1	575.396	328.0		
501.716	319.7	510.671	319.7	565.556	317.2	575.561	327.3		
501.886	324.8	510.836	313.2	565.721	339.5	575.726	331.3		
502.051	327.5	511.006	322.1	565.886	335.1	575.896	328.4		
502.216	9999.9	511.171	1999.9	566.056	332.2	577.066	329.3		
502.381	319.7	511.336	320.1	566.221	321.5	577.231	316.4		
502.546	319.7	511.001	325.6	566.386	330.6	577.396	325.3		

[redacted]

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(r) Thermocouple 25: s = 0.0895 m; d = 0.0128 m

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
400.266	284.4	408.146	287.2	470.232	404.3	478.236	1112.7	486.242	1041.2
400.432	287.4	408.312	284.6	470.396	402.3	478.402	9999.9	486.412	1035.7
400.596	284.3	408.476	285.3	470.556	399.0	478.566	1105.5	486.576	1036.7
400.756	281.5	408.642	283.6	470.722	399.6	478.732	1097.0	486.742	1035.6
400.922	280.2	408.806	279.8	470.892	407.5	478.902	1101.0	486.906	1038.2
401.086	282.3	408.972	276.9	471.056	400.8	479.066	1090.2	487.072	1037.8
401.252	283.2	409.136	284.0	471.222	403.6	479.232	1086.6	487.242	1036.4
401.416	285.6	409.296	281.3	471.392	398.8	479.402	1080.9	487.406	1034.9
401.576	287.2	409.462	284.2	471.556	420.2	479.572	1080.3	487.572	1041.0
401.742	282.9	409.626	285.0	471.722	415.2	479.736	1070.2	487.736	1037.9
401.906	286.4	409.792	285.6	471.892	426.8	479.902	1065.5	487.902	1042.6
402.066	285.3	409.956	284.4	472.056	438.5	480.066	1055.0	488.236	1047.7
402.232	280.6	410.122	288.6	472.222	449.5	480.232	1053.4	488.402	1052.3
402.396	277.5	410.286	287.6	472.352	464.2	480.402	1049.3	488.572	1047.5
402.562	279.3	410.452	279.5	472.562	486.3	480.572	1054.1	488.742	1057.8
402.726	283.0	410.622	279.4	472.726	505.7	480.736	1049.6	488.906	1063.3
402.886	285.3	410.786	288.5	472.892	518.0	480.902	1047.4	489.072	1057.3
403.052	285.1	465.102	399.8	473.062	525.4	481.072	1040.9	489.242	1057.9
403.276	285.7	465.266	395.2	473.232	537.0	481.236	1043.1	489.406	1061.8
403.422	285.1	465.426	397.5	473.396	542.8	481.402	1043.7	489.572	1061.7
403.546	284.4	465.586	393.6	473.562	562.6	481.572	1045.4	489.906	1060.3
403.712	282.3	465.752	391.3	473.732	609.2	481.736	1045.5	490.072	1064.7
403.876	279.3	465.916	395.6	473.896	642.1	481.902	1035.8	490.236	1058.4
404.036	280.0	466.076	394.1	474.062	672.4	482.072	1041.6	490.402	1065.4
404.202	286.3	466.242	385.7	474.232	680.8	482.236	1042.2	490.572	1065.5
404.366	282.6	466.406	392.1	474.402	696.7	482.402	1044.7	490.742	1065.3
404.526	285.2	466.572	389.9	474.566	702.1	482.572	1032.7	490.906	1061.0
404.692	286.5	466.742	392.5	474.732	730.4	482.736	1038.8	491.072	1056.4
404.856	282.7	466.912	394.2	474.896	745.3	482.902	1033.2	491.242	1059.1
405.022	286.0	467.076	394.1	475.062	766.5	483.072	1031.0	491.406	1060.4
405.186	288.8	467.242	395.1	475.232	788.9	483.242	1032.7	491.572	1067.6
405.352	279.5	467.406	399.5	475.402	825.6	483.406	1031.1	491.742	1060.7
405.516	279.1	467.572	400.4	475.566	905.8	483.572	1031.4	491.906	1066.5
405.682	281.7	467.742	399.5	475.732	962.1	483.736	1027.2	492.072	1071.9
405.846	285.1	467.906	399.3	475.902	1017.3	483.902	1029.6	492.242	1072.1
406.006	283.0	468.072	394.0	476.072	1045.2	484.072	1035.8	492.406	1073.7
406.172	290.2	468.236	393.2	476.236	1059.8	484.242	1033.4	492.572	1078.3
406.336	286.9	468.402	402.0	476.402	1085.2	484.406	1032.1	492.742	1090.4
406.502	283.6	468.572	396.7	476.566	1097.3	484.572	1041.3	492.906	1093.5
406.666	284.4	468.736	395.5	476.732	1118.0	484.742	1036.4	493.072	1100.5
406.832	281.1	468.902	396.4	476.902	1120.3	484.906	1035.0	493.242	1114.5
406.996	278.6	469.066	400.0	477.066	1121.8	485.072	1038.8	493.406	1120.1
407.156	273.7	469.232	395.7	477.232	1124.8	485.242	1033.8	493.572	1128.1
407.322	277.5	469.396	401.7	477.402	1118.8	485.406	1032.5	493.742	1127.2
407.486	278.6	469.562	408.6	477.566	1123.1	485.572	1038.4	493.906	1151.6
407.652	285.6	469.726	398.5	477.732	1117.7	485.742	9999.9	494.072	1164.0
407.816	285.8	469.892	402.0	477.902	1119.8	485.912	1034.0	494.236	1180.4
407.982	287.4	470.062	405.1	478.072	1117.1	486.076	1039.2	494.402	1194.4

[redacted]

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(r) Thermocouple 25 - Concluded

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
494.572	1217.8	502.722	1182.6	512.172	1105.9	566.562	376.7	577.572	392.9
494.736	1230.8	502.886	1173.3	512.336	1092.0	566.732	9999.9	577.736	428.4
495.072	1272.2	503.052	1175.0	512.502	1101.1	566.896	385.3	577.902	434.3
495.236	1288.4	503.216	1176.2	512.666	1104.2	567.062	401.3	578.072	442.5
495.402	1300.6	503.382	1169.2	512.832	1112.6	567.396	397.2	578.236	446.4
495.572	1312.7	503.552	1170.6	512.996	1117.4	567.562	390.7	578.402	390.9
495.736	1318.6	503.716	1170.0	513.162	1107.8	567.726	379.5	579.402	404.0
495.902	1317.6	503.882	1174.9	513.662	1118.4	567.892	406.8	579.572	390.3
496.072	1321.5	504.046	1172.5	513.826	1112.4	568.062	403.1	579.736	419.1
496.236	1317.6	504.212	1165.4	513.992	1107.5	568.226	397.8	579.902	435.4
496.402	1317.8	504.376	1169.9	514.162	1112.1	568.392	409.7	580.072	446.5
496.566	1320.5	504.542	1165.8	514.326	1119.2	568.726	381.1	580.236	426.2
496.732	1325.2	504.712	1165.6	514.486	1116.3	568.892	396.6	580.402	390.1
496.902	1314.4	504.876	1162.6	514.652	1110.1	569.062	413.2	580.572	388.0
497.066	1310.0	505.042	1159.7	514.822	1119.3	569.232	404.8	581.906	462.8
497.232	1312.6	505.206	1158.1	515.646	1106.5	569.396	428.4	582.072	462.4
497.402	1315.0	505.372	1151.6	515.812	1118.1	569.562	401.3	582.242	416.1
497.566	1304.6	505.542	1155.5	515.982	1119.9	570.062	410.8	582.406	392.7
497.732	1298.3	505.706	1143.0	516.146	1114.9	570.232	409.0	582.572	419.6
497.902	1296.6	505.872	1144.1	517.472	974.7	570.396	409.6	582.736	454.2
498.066	1287.7	506.036	1136.6	517.636	1098.0	570.562	385.8	582.902	471.2
498.232	1282.8	506.202	1146.3	518.796	1010.5	570.732	374.1	584.072	437.7
498.402	1284.6	506.366	1141.9	518.962	1031.4	570.896	404.1	584.242	406.2
498.566	1284.7	506.532	1135.0	519.126	1084.6	571.062	421.1	584.406	394.8
498.732	1277.2	506.666	1140.2	519.292	1051.4	571.232	436.0	584.572	427.1
498.896	1271.2	507.032	1143.9	519.462	943.7	571.396	419.5	584.742	445.7
499.062	1265.2	507.196	1134.4	519.626	908.5	572.396	438.7	584.906	452.9
499.226	1263.2	507.362	1132.9	519.786	990.8	572.562	401.2	585.072	425.4
499.392	1259.3	507.526	1126.6	520.456	863.2	572.732	386.9	585.242	416.7
499.562	1255.7	507.692	1123.1	520.622	980.1	572.902	416.1	589.752	458.1
499.726	1257.6	507.862	1123.9	520.786	971.3	573.066	438.4	589.922	454.0
499.892	1249.5	508.356	1113.2	520.952	842.6	573.232	439.6		
500.062	1245.2	508.522	1115.8	521.116	737.9	573.402	409.1		
500.226	1239.1	508.692	1117.2	522.276	844.3	573.566	376.5		
500.392	1223.6	508.856	1116.1	522.442	736.0	573.732	379.2		
500.556	1224.1	509.022	1122.4	522.612	699.1	573.902	9999.9		
500.722	1215.0	509.186	1120.6	538.392	754.2	574.232	455.5		
500.892	1211.3	509.352	1121.7	538.556	761.1	574.732	402.1		
501.062	1205.7	509.522	1120.2	538.722	771.9	574.902	433.5		
501.226	1199.5	510.182	1122.9	541.222	762.1	575.066	451.2		
501.392	1198.9	510.346	1117.1	541.386	820.7	575.232	455.4		
501.556	1186.9	510.512	1120.1	565.392	385.9	575.402	420.7		
501.722	1187.4	510.676	1117.9	565.562	373.9	575.566	390.7		
501.892	1181.7	510.842	1116.3	565.726	393.2	575.732	424.0		
502.056	1177.6	511.012	1116.6	565.892	402.2	575.902	439.5		
502.222	1184.8	511.176	4629.1	566.062	409.6	577.072	455.8		
502.386	1177.7	511.342	1105.7	566.226	401.2	577.236	444.6		
502.552	1180.0	512.006	1113.5	566.392	387.2	577.402	397.1		

[redacted]

[redacted]

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(s) Thermocouple 27: s = 0.0895 m; d = 0.0178 m

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
400.271	287.6	408.151	287.2	470.238	396.4	478.241	389.1	486.248	386.5
400.438	287.4	408.318	284.6	470.401	398.2	478.408	9999.9	486.418	369.1
400.601	285.7	408.481	286.7	470.561	393.2	478.571	384.3	486.581	374.1
400.761	283.6	408.648	281.8	470.728	397.8	478.738	383.4	486.748	377.6
400.928	281.8	408.811	279.8	470.898	397.7	478.908	392.9	486.911	376.6
401.091	282.3	408.978	280.9	471.061	394.8	479.071	383.8	487.078	377.5
401.258	285.5	409.141	286.0	471.228	393.9	479.238	376.3	487.248	377.2
401.421	286.5	409.301	281.3	471.398	393.4	479.408	385.5	487.411	370.1
401.581	287.2	409.468	284.2	471.561	396.6	479.578	385.0	487.578	376.5
401.748	285.7	409.631	287.4	471.728	392.1	479.741	382.4	487.741	381.9
401.911	287.1	409.798	283.5	471.898	390.0	479.908	390.7	487.908	379.1
402.071	288.8	409.961	283.2	472.061	391.5	480.071	381.9	488.241	375.3
402.238	284.6	410.128	291.6	472.228	390.6	480.238	384.4	488.408	377.9
402.401	282.5	410.291	290.2	472.398	388.0	480.408	389.7	488.578	377.9
402.568	281.6	410.458	283.6	472.568	391.8	480.578	387.2	488.748	380.3
402.731	283.2	410.628	281.3	472.731	385.2	480.741	386.5	488.911	375.2
402.891	285.3	410.791	292.2	472.898	385.9	480.908	389.1	489.078	376.7
403.058	285.3	465.108	332.3	473.068	386.9	481.078	383.7	489.248	377.4
403.285	286.6	465.271	329.1	473.238	353.3	481.241	388.0	489.411	375.6
403.424	287.6	465.431	331.6	473.401	394.7	481.408	383.3	489.578	370.8
403.551	288.3	465.591	325.5	473.568	387.2	481.578	387.2	489.911	371.3
403.718	286.9	465.758	329.3	473.738	393.0	481.741	385.3	490.078	372.5
403.881	284.3	465.921	333.6	473.901	392.6	481.908	376.2	490.241	373.0
404.041	283.7	466.081	338.0	474.068	400.6	482.078	388.5	490.408	367.2
404.208	286.3	466.248	335.1	474.238	386.2	482.241	381.6	490.578	375.0
404.371	284.6	466.411	345.3	474.408	398.4	482.408	383.1	490.748	372.9
404.531	289.0	466.578	349.4	474.571	395.7	482.578	376.4	490.911	371.0
404.698	287.8	466.748	358.1	474.738	403.9	482.741	388.8	491.078	369.9
404.861	285.3	466.918	367.6	474.901	394.0	482.908	387.4	491.248	370.1
405.028	288.1	467.081	371.1	475.068	388.9	483.078	377.3	491.411	374.5
405.191	289.2	467.248	377.6	475.238	389.4	483.248	378.6	491.578	381.4
405.358	284.4	467.411	382.4	475.408	385.9	483.411	378.7	491.748	371.2
405.521	285.1	467.578	384.4	475.571	401.8	483.578	374.9	491.911	376.2
405.688	280.0	467.748	388.5	475.738	386.5	483.741	375.7	492.078	375.3
405.851	283.3	467.911	384.5	475.908	387.8	483.908	378.4	492.248	367.3
406.011	285.1	468.078	391.2	476.078	387.3	484.078	386.3	492.411	368.9
406.178	290.2	468.241	387.7	476.241	389.0	484.248	380.7	492.578	370.9
406.341	286.9	468.408	387.0	476.408	390.0	484.411	382.3	492.748	373.2
406.508	284.6	468.578	386.9	476.571	395.3	484.578	382.4	492.911	366.0
406.671	284.4	468.741	388.1	476.738	366.4	484.748	383.9	493.078	372.7
406.838	287.4	468.908	388.9	476.908	390.3	484.911	376.6	493.248	375.2
407.001	283.4	469.071	389.0	477.071	387.5	485.078	382.3	493.411	368.2
407.161	279.0	469.238	385.1	477.238	391.5	485.248	376.4	493.578	368.1
407.328	283.3	469.401	390.8	477.408	393.3	485.411	375.6	493.748	369.4
407.491	282.1	469.568	397.9	477.571	390.6	485.578	379.2	493.911	370.1
407.658	285.1	469.731	390.0	477.738	393.6	485.748	9999.9	494.078	373.9
407.821	285.8	469.898	393.2	477.908	397.2	485.918	377.7	494.241	370.7
407.988	286.9	470.068	397.9	478.078	390.5	486.081	369.3	494.408	369.2

[redacted]

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(s) Thermocouple 27 - Concluded

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
494.578	372.9	502.728	366.1	512.178	375.6	566.568	402.4	577.578	414.9
494.741	360.5	502.891	363.2	512.341	371.9	566.738	9999.9	577.741	409.2
495.078	373.1	503.058	365.2	512.508	374.7	566.901	410.2	577.908	408.2
495.241	371.0	503.221	357.6	512.671	379.6	567.068	410.7	578.078	406.4
495.408	369.4	503.388	363.0	512.838	379.4	567.401	397.2	578.241	413.6
495.578	365.9	503.558	355.9	513.001	363.0	567.568	403.7	578.408	412.4
495.741	367.8	503.721	366.7	513.168	376.0	567.731	402.6	579.408	416.9
495.908	372.7	503.888	367.0	513.668	387.1	567.898	406.5	579.578	412.4
496.078	368.4	504.051	368.9	513.831	363.2	568.068	403.1	579.741	407.7
496.241	370.5	504.218	366.9	513.998	367.8	568.231	397.8	579.908	402.2
496.408	372.3	504.381	365.5	514.168	372.4	568.398	404.2	580.078	408.7
496.571	371.0	504.548	367.0	514.331	375.1	568.731	412.3	580.241	408.8
496.738	375.4	504.718	367.9	514.491	378.7	568.898	402.9	580.408	411.2
496.908	372.3	504.881	366.9	514.658	368.6	569.068	411.6	580.578	404.0
497.071	369.5	505.048	364.8	514.828	377.3	569.238	404.8	581.911	424.7
497.238	369.1	505.211	365.5	515.651	372.9	569.401	423.7	582.078	411.9
497.408	375.1	505.378	359.6	515.818	376.0	569.568	408.3	582.248	416.1
497.571	371.0	505.548	363.6	515.988	380.0	570.068	405.1	582.411	417.2
497.738	371.9	505.711	367.9	516.151	373.1	570.238	409.0	582.578	414.2
497.908	361.1	505.878	368.9	517.478	374.5	570.401	396.9	582.741	420.0
498.071	362.0	506.041	354.2	517.641	375.4	570.568	399.2	582.908	407.5
498.238	370.6	506.208	367.1	518.801	384.9	570.738	404.2	584.078	411.9
498.408	370.5	506.371	362.1	518.968	381.0	570.901	404.1	584.248	420.8
498.571	368.0	506.538	349.9	519.131	377.7	571.068	407.2	584.411	417.8
498.738	372.8	506.871	368.3	519.298	377.7	571.238	402.5	584.578	410.1
498.901	365.2	507.038	363.9	519.468	387.3	571.401	409.5	584.748	419.2
499.068	367.8	507.201	364.0	519.631	380.2	572.401	400.7	584.911	417.0
499.231	361.4	507.368	362.7	519.791	383.7	572.568	405.0	585.078	421.7
499.398	366.8	507.531	363.5	520.461	394.7	572.738	405.2	585.248	441.1
499.568	363.1	507.698	366.0	520.628	394.3	572.908	404.7	589.758	431.7
499.731	368.9	507.868	368.4	520.791	389.3	573.071	412.7	589.928	422.1
499.898	361.1	508.361	356.6	520.958	377.1	573.238	405.8		
500.068	367.2	508.528	362.2	521.121	381.2	573.408	429.1		
500.231	366.3	508.698	367.9	522.281	381.3	573.571	407.4		
500.398	360.1	508.861	369.3	522.448	387.0	573.738	398.7		
500.561	366.6	509.028	361.3	522.618	385.0	573.908	9999.9		
500.728	366.7	509.191	374.1	538.398	407.1	574.238	416.6		
500.898	368.5	509.358	377.4	538.561	389.7	574.738	402.1		
501.068	361.1	509.528	372.9	538.728	385.0	574.908	409.2		
501.231	367.2	510.188	376.1	541.228	388.4	575.071	417.7		
501.398	367.9	510.351	370.1	541.391	410.1	575.238	413.9		
501.561	359.0	510.518	378.0	565.398	396.7	575.408	400.3		
501.728	362.0	510.681	372.0	565.568	410.2	575.571	407.8		
501.898	373.6	510.848	364.0	565.731	412.3	575.738	407.4		
502.061	367.0	511.018	374.2	565.898	410.8	575.908	410.1		
502.228	375.6	511.181	4008.6	566.068	423.9	577.078	406.9		
502.391	365.8	511.348	367.8	566.231	401.2	577.241	401.2		
502.558	368.7	512.011	388.5	566.398	399.9	577.408	406.6		

[redacted]

TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Continued

(t) Thermocouple 28: s = 0.0895 m; d = 0.0153 m

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
400.277	287.6	408.157	287.2	470.243	396.4	478.247	389.1	486.253	386.5
400.443	287.4	408.323	284.6	470.407	398.2	478.413	9999.9	486.423	376.9
400.607	285.7	408.487	286.7	470.567	393.2	478.577	384.3	486.587	374.5
400.767	283.6	408.653	282.5	470.733	397.8	478.743	381.6	486.753	380.3
400.933	281.8	408.817	279.1	470.903	397.7	478.913	392.9	486.917	380.6
401.097	282.3	408.983	280.9	471.067	394.8	479.077	385.8	487.083	377.5
401.263	285.5	409.147	286.0	471.233	393.9	479.243	9999.9	487.253	377.2
401.427	289.3	409.307	281.3	471.403	389.9	479.413	385.5	487.417	371.9
401.587	287.2	409.473	284.2	471.567	392.3	479.583	386.1	487.583	378.2
401.753	286.0	409.637	287.4	471.733	388.3	479.747	388.9	487.747	382.2
401.917	287.1	409.803	284.2	471.903	390.6	479.913	387.5	487.913	379.1
402.077	288.8	409.967	285.5	472.067	391.5	480.077	381.9	488.247	375.3
402.243	284.6	410.133	291.6	472.233	390.6	480.243	384.4	488.413	377.9
402.407	284.6	410.297	288.8	472.403	388.0	480.413	387.1	488.583	375.2
402.573	281.6	410.463	283.6	472.573	386.5	480.583	387.8	488.753	381.4
402.737	283.2	410.633	281.3	472.737	385.2	480.747	387.0	488.917	383.6
402.897	285.3	410.797	293.1	472.903	386.2	480.913	383.3	489.083	380.7
403.063	285.1	465.113	384.1	473.073	390.1	481.083	380.9	489.253	378.9
403.293	283.4	465.277	397.4	473.243	393.3	481.247	383.6	489.417	381.0
403.427	287.6	465.437	393.8	473.407	394.7	481.413	383.3	489.583	378.6
403.557	288.3	465.597	390.5	473.573	387.2	481.583	382.5	489.917	383.9
403.723	286.9	465.763	390.2	473.743	393.0	481.747	385.3	490.083	384.8
403.887	281.6	465.927	395.1	473.907	388.1	481.913	376.2	490.247	385.6
404.047	283.7	466.087	393.9	474.073	400.6	482.083	384.5	490.413	383.2
404.213	286.3	466.253	390.8	474.243	386.2	482.247	384.0	490.583	394.7
404.377	282.3	466.417	391.0	474.413	393.5	482.413	383.1	490.753	394.2
404.537	289.0	466.583	390.7	474.577	392.1	482.583	378.4	490.917	394.3
404.703	286.9	466.753	389.4	474.743	401.1	482.747	388.8	491.083	402.2
404.867	283.9	466.923	392.9	474.907	394.0	482.913	383.4	491.253	392.7
405.033	288.5	467.087	390.6	475.073	392.2	483.083	381.1	491.417	397.6
405.197	289.2	467.253	389.4	475.243	389.4	483.253	378.6	491.583	404.9
405.363	284.4	467.417	396.6	475.413	386.8	483.417	383.6	491.753	399.3
405.527	285.5	467.583	393.2	475.577	401.8	483.583	377.8	491.917	402.6
405.693	283.7	467.753	391.2	475.743	386.5	483.747	375.7	492.083	410.7
405.857	283.3	467.917	387.4	475.913	385.3	483.913	379.1	492.253	400.4
406.017	284.6	468.083	396.3	476.083	387.3	484.083	382.1	492.417	401.0
406.183	290.2	468.247	387.5	476.247	389.0	484.253	380.7	492.583	404.8
406.347	286.9	468.413	387.0	476.413	390.0	484.417	382.3	492.753	405.5
406.513	284.3	468.583	386.9	476.577	397.6	484.583	378.0	492.917	402.6
406.677	284.4	468.747	386.1	476.743	366.4	484.753	386.1	493.083	415.4
406.843	287.4	468.913	388.9	476.913	390.0	484.917	376.6	493.253	415.1
407.007	283.4	469.077	389.0	477.077	392.1	485.083	382.3	493.417	405.7
407.167	281.6	469.243	390.2	477.243	393.7	485.253	372.6	493.583	416.0
407.333	283.3	469.407	390.8	477.413	397.8	485.417	373.6	493.753	417.9
407.497	282.1	469.573	398.8	477.577	390.6	485.583	376.8	493.917	422.6
407.663	285.1	469.737	391.8	477.743	393.6	485.753	9999.9	494.083	428.4
407.827	285.8	469.903	393.2	477.913	392.8	485.923	375.7	494.247	429.6
407.993	286.9	470.073	397.9	478.083	391.8	486.087	377.1	494.413	430.6

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TABLE V.- TEMPERATURE HISTORIES OF NOSE-CAP THERMOCOUPLES - Concluded

(t) Thermocouple 28 - Concluded

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
494.583	436.6	502.733	524.3	512.183	556.1	566.573	484.1	577.583	463.8
494.747	432.8	502.897	521.9	512.347	557.6	566.743	9999.9	577.747	475.3
495.083	448.5	503.063	530.2	512.513	556.8	566.907	498.4	577.913	464.5
495.247	445.3	503.227	528.3	512.677	566.8	567.073	503.1	578.083	444.8
495.413	445.0	503.393	533.2	512.843	561.6	567.407	515.4	578.247	438.2
495.583	447.1	503.563	527.9	513.007	551.7	567.573	526.0	578.413	428.3
495.747	452.4	503.727	536.0	513.173	561.2	567.737	536.3	579.413	421.9
495.913	459.7	503.893	537.8	513.673	565.2	567.903	543.6	579.583	425.1
496.083	451.9	504.057	542.3	513.837	553.2	568.073	546.3	579.747	431.0
496.247	456.7	504.223	540.4	514.003	554.7	568.237	567.9	579.913	424.9
496.413	460.7	504.387	539.7	514.173	557.3	568.403	576.9	580.083	421.9
496.577	458.0	504.553	539.9	514.337	556.9	568.737	578.9	580.247	408.8
496.743	464.6	504.723	539.2	514.497	562.4	568.903	591.5	580.413	405.3
496.913	469.0	504.887	536.0	514.663	558.7	569.073	586.4	580.583	417.7
497.077	459.4	505.053	537.8	514.833	552.4	569.243	570.7	581.917	419.3
497.243	463.2	505.217	536.8	515.657	556.8	569.407	564.4	582.083	403.3
497.413	469.5	505.383	537.8	515.823	559.0	569.573	9999.9	582.253	401.1
497.577	472.0	505.553	542.4	515.993	564.9	570.073	583.3	582.417	409.2
497.743	470.5	505.717	540.6	516.157	560.7	570.243	573.5	582.583	418.7
497.913	470.6	505.883	546.1	517.483	563.4	570.407	533.0	582.747	420.0
498.077	472.6	506.047	539.8	517.647	562.3	570.573	505.5	582.913	424.1
498.243	475.5	506.213	552.6	518.807	562.0	570.743	513.6	584.083	390.6
498.413	484.2	506.377	538.2	518.973	564.6	570.907	531.9	584.253	389.6
498.577	473.4	506.543	9999.9	519.137	567.7	571.073	539.6	584.417	401.4
498.743	487.5	506.877	542.3	519.303	561.0	571.243	539.5	584.583	400.2
498.907	491.0	507.043	547.4	519.473	569.3	571.407	517.5	584.753	398.2
499.073	486.2	507.207	543.1	519.637	561.0	572.407	514.9	584.917	393.4
499.237	486.1	507.373	539.3	519.797	566.0	572.573	490.3	585.083	389.1
499.403	490.0	507.537	542.3	520.467	564.3	572.743	485.2	585.253	411.4
499.573	491.2	507.703	546.4	520.633	578.0	572.913	493.0	589.763	393.3
499.737	495.8	507.873	545.6	520.797	581.1	573.077	515.2	589.933	382.9
499.903	501.4	508.367	542.0	520.963	587.5	573.243	506.7		
500.073	498.9	508.533	541.0	521.127	578.2	573.413	486.2		
500.237	501.2	508.703	547.6	522.287	574.3	573.577	466.4		
500.403	503.3	508.867	546.3	522.453	583.0	573.743	482.7		
500.567	498.9	509.033	547.9	522.623	578.6	573.913	9999.9		
500.733	506.3	509.197	553.8	538.403	676.4	574.243	511.3		
500.903	505.8	509.363	554.1	538.567	646.5	574.743	497.0		
501.073	512.5	509.533	547.0	538.733	662.5	574.913	505.6		
501.237	517.0	510.193	551.7	541.233	588.7	575.077	518.9		
501.403	518.3	510.357	548.4	541.397	614.7	575.243	517.7		
501.567	515.3	510.523	551.0	565.403	530.7	575.413	509.5		
501.733	525.9	510.687	555.1	565.573	509.5	575.577	515.4		
501.903	522.1	510.853	548.2	565.737	513.7	575.743	505.1		
502.067	527.2	511.023	550.9	565.903	509.8	575.913	498.1		
502.233	524.1	511.187	295.1	566.073	518.1	577.083	488.2		
502.397	523.0	511.353	548.2	566.237	506.6	577.247	467.4		
502.563	528.0	512.017	561.6	566.403	506.7	577.413	468.0		

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TABLE VI.- TEMPERATURE HISTORIES OF CORNER NOSE-CAP THERMOCOUPLES

(a) Thermocouple 46: s = 0.1293 m; d = 0.0127 m

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
400.255	281.1	408.135	283.0	470.221	740.7	478.225	822.5	486.231	214.6
400.421	281.4	408.301	279.0	470.385	810.3	478.391	483.5	486.401	199.5
400.585	285.0	408.465	278.1	470.545	875.5	478.555	257.1	486.565	204.5
400.745	283.9	408.631	280.9	470.711	922.6	478.721	200.1	486.731	203.6
400.911	282.7	408.795	277.0	470.881	939.7	478.891	215.5	486.895	203.8
401.075	280.0	408.961	279.0	471.045	964.9	479.055	198.4	487.061	208.2
401.241	280.9	409.125	283.7	471.211	988.0	479.221	184.4	487.231	211.8
401.405	279.3	409.285	279.2	471.381	1028.1	479.391	187.6	487.395	209.3
401.565	281.6	409.451	276.6	471.545	1066.4	479.561	9999.9	487.561	212.8
401.731	276.4	409.615	281.0	471.711	1095.0	479.725	201.6	487.725	221.0
401.895	280.2	409.781	281.4	471.881	1104.0	479.891	396.9	487.891	219.1
402.055	286.0	409.945	276.7	472.045	1124.5	480.055	341.9	488.225	221.9
402.221	282.2	410.111	281.9	472.211	1172.4	480.221	704.2	488.391	218.1
402.385	279.7	410.275	284.6	472.381	1198.6	480.391	759.3	488.561	213.8
402.551	281.1	410.441	282.5	472.551	1263.1	480.561	655.0	488.731	218.2
402.715	277.7	410.611	280.1	472.715	1305.7	480.725	524.9	488.895	224.7
402.875	278.6	410.775	293.1	472.881	1402.7	480.891	516.0	489.061	221.1
403.041	280.2	465.091	389.9	473.051	1612.3	481.061	247.0	489.231	221.4
403.259	280.4	465.255	393.7	473.221	1586.4	481.225	237.8	489.395	217.6
403.417	282.3	465.415	388.9	473.385	1690.6	481.391	226.3	489.561	218.5
403.535	283.5	465.575	388.7	473.551	1263.0	481.561	234.8	489.895	222.1
403.701	283.9	465.741	388.6	473.721	1140.9	481.725	228.2	490.061	222.0
403.865	279.0	465.905	398.2	473.885	1219.1	481.891	208.0	490.225	219.7
404.025	283.2	466.065	393.2	474.051	1533.4	482.061	213.6	490.391	216.6
404.191	282.1	466.231	394.8	474.221	205.9	482.225	252.7	490.561	227.1
404.355	277.9	466.395	392.1	474.391	1453.2	482.391	238.6	490.731	225.9
404.515	282.3	466.561	392.7	474.555	1318.7	482.561	211.5	490.895	225.5
404.681	284.6	466.731	393.0	474.721	1472.3	482.725	220.4	491.061	221.3
404.845	279.5	466.901	393.3	474.885	1684.2	482.891	219.4	491.231	221.8
405.011	281.2	467.065	391.3	475.051	1705.3	483.061	205.3	491.395	218.7
405.175	285.8	467.231	387.6	475.221	1704.5	483.231	202.5	491.561	227.4
405.341	281.6	467.395	388.6	475.391	1707.6	483.395	204.0	491.731	218.0
405.505	279.3	467.561	392.3	475.555	1704.6	483.561	210.2	491.895	225.0
405.671	280.5	467.731	386.8	475.721	1703.5	483.725	200.7	492.061	221.3
405.835	283.5	467.895	381.2	475.891	1693.3	483.891	199.3	492.231	219.6
405.995	279.3	468.061	392.0	476.061	1700.9	484.061	214.2	492.395	217.5
406.161	283.0	468.225	387.0	476.225	1709.3	484.231	203.9	492.561	225.1
406.325	283.2	468.391	405.7	476.391	1696.1	484.395	209.2	492.731	225.6
406.491	280.9	468.561	430.8	476.555	1724.8	484.561	211.4	492.895	214.2
406.655	277.4	468.725	484.0	476.721	1708.9	484.731	212.0	493.061	225.3
406.821	282.5	468.891	559.1	476.891	1713.9	484.895	204.9	493.231	228.5
406.985	282.3	469.055	616.2	477.055	1701.6	485.061	201.7	493.395	219.7
407.145	275.3	469.221	649.3	477.221	1704.9	485.231	208.7	493.561	217.6
407.311	276.8	469.385	677.8	477.391	1400.2	485.395	193.1	493.731	218.5
407.475	279.3	469.551	692.0	477.555	904.0	485.561	201.5	493.895	220.2
407.641	281.2	469.715	694.4	477.721	1099.2	485.731	9999.9	494.061	234.4
407.805	282.8	469.881	700.9	477.891	1012.8	485.901	195.3	494.225	219.7
407.971	282.8	470.051	714.2	478.061	782.5	486.065	205.9	494.391	224.0

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TABLE VI.- TEMPERATURE HISTORIES OF CORNER NOSE-CAP THERMOCOUPLES - Continued

(a) Thermocouple 46 - Concluded

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
494.561	228.3	502.541	227.3	511.331	231.1	566.051	258.5	577.061	261.2
494.725	215.7	502.711	231.5	511.995	240.3	566.215	255.5	577.225	254.7
495.061	230.3	502.875	224.9	512.161	237.6	566.381	263.0	577.391	259.5
495.225	221.2	503.041	227.2	512.325	225.2	566.551	256.0	577.561	264.1
495.391	222.7	503.205	220.2	512.491	235.3	566.715	9999.9	577.725	261.6
495.561	226.7	503.371	226.3	512.655	232.7	566.881	263.5	577.891	247.8
495.725	223.2	503.541	214.0	512.821	241.8	567.051	269.3	578.061	254.7
495.891	228.8	503.705	230.5	512.985	220.5	567.381	269.7	578.225	257.8
496.061	223.3	503.871	230.9	513.151	224.5	567.551	256.6	578.391	9999.9
496.225	229.5	504.035	237.1	513.651	236.1	567.715	260.0	579.391	262.4
496.391	231.0	504.201	225.7	513.815	218.0	567.881	250.9	579.561	258.5
496.555	222.7	504.365	235.7	513.981	225.3	568.051	251.5	579.725	248.5
496.721	224.6	504.531	224.1	514.151	231.6	568.215	264.6	579.891	249.6
496.891	232.1	504.701	234.2	514.315	232.9	568.381	271.3	580.061	261.2
497.055	225.1	504.865	231.5	514.475	234.9	568.715	261.5	580.225	258.6
497.221	216.0	505.031	232.5	514.641	234.2	568.881	255.4	580.391	254.7
497.391	224.2	505.195	226.8	514.811	230.2	569.051	256.4	580.561	255.3
497.555	223.9	505.361	217.3	515.635	225.5	569.215	268.4	581.895	264.1
497.721	226.3	505.531	234.6	515.801	225.0	569.381	267.5	582.061	260.0
497.891	220.8	505.695	232.9	515.971	238.8	570.051	261.4	582.231	257.9
498.055	220.1	505.861	234.4	516.135	232.7	570.221	254.8	582.395	255.3
498.221	227.7	506.025	225.3	517.461	225.9	570.385	252.2	582.561	263.3
498.391	231.5	506.191	235.5	517.625	237.5	570.551	252.0	582.725	260.6
498.555	227.2	506.355	233.2	518.785	232.9	570.721	250.5	582.891	255.8
498.721	232.8	506.521	215.3	518.951	227.5	570.885	255.8	584.061	259.7
498.885	225.9	506.855	237.4	519.115	230.3	571.051	247.8	584.231	262.3
499.051	224.7	507.021	220.8	519.281	225.4	571.221	257.9	584.395	257.5
499.215	227.1	507.185	229.1	519.451	240.5	571.385	268.3	584.561	253.8
499.381	226.4	507.351	220.5	519.615	225.1	572.385	253.6	584.731	261.6
499.551	228.0	507.515	228.1	519.775	218.9	572.551	251.1	584.895	261.3
499.715	225.8	507.681	226.3	520.445	248.2	572.721	254.2	585.061	264.1
499.881	226.3	507.851	236.2	520.611	252.5	572.891	251.7	585.231	265.2
500.051	222.0	508.345	220.8	520.775	233.7	573.055	257.7	589.741	268.6
500.215	224.6	508.511	222.6	520.941	238.4	573.221	249.2	589.911	247.0
500.381	222.8	508.681	227.4	521.105	230.5	573.391	259.1		
500.545	225.8	508.845	233.0	522.265	219.7	573.555	258.1		
500.711	226.6	509.011	229.0	522.431	233.0	573.721	253.2		
500.881	224.4	509.175	236.4	522.601	241.7	573.891	9999.9		
501.051	229.4	509.341	232.5	538.381	246.4	574.221	258.2		
501.215	221.4	509.511	237.9	538.545	223.6	574.721	245.1		
501.381	225.8	510.171	235.6	538.711	245.4	574.891	263.3		
501.545	222.5	510.335	233.2	541.211	231.1	575.055	267.3		
501.711	224.5	510.501	241.1	541.375	248.1	575.221	261.3		
501.881	230.2	510.665	230.3	565.381	272.1	575.391	250.0		
502.045	231.2	510.831	226.6	565.551	255.1	575.555	258.8		
502.211	226.8	511.001	234.5	565.715	264.9	575.721	256.3		
502.375	227.8	511.165	4821.2	565.881	258.5	575.891	260.9		

[redacted]

TABLE VI.- TEMPERATURE HISTORIES OF CORNER NOSE-CAP THERMOCOUPLES - Continued

(b) Thermocouple 47: s = 0.1295 m; d = 0.0178 m

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
400.126	286.5	407.922	284.7	469.672	402.0	477.632	1441.2	485.622	195.0
400.292	281.8	408.086	279.8	469.842	401.8	477.802	1530.5	485.792	9999.9
400.456	279.3	408.252	282.8	470.012	402.8	477.972	1575.0	485.962	227.2
400.622	285.1	408.422	280.0	470.182	389.7	478.142	9999.9	486.132	9999.9
400.786	283.0	408.586	280.7	470.352	402.9	478.312	9999.9	486.302	220.8
400.952	280.0	408.752	282.8	470.522	405.5	478.482	9999.9	486.472	230.9
401.122	284.4	408.916	283.8	470.686	404.7	478.652	9999.9	486.642	241.2
401.286	279.3	409.082	287.5	470.852	396.0	478.822	1537.6	486.812	192.1
401.446	282.8	409.246	288.6	471.022	393.3	478.992	1621.0	486.982	249.6
401.612	283.9	409.412	287.0	471.192	395.5	479.162	9999.9	487.152	9999.9
401.782	279.8	409.576	286.3	471.362	397.3	479.332	1650.4	487.316	9999.9
401.946	283.1	409.742	287.7	471.532	395.3	479.502	1741.8	487.488	735.8
402.112	284.3	409.912	284.5	471.702	397.6	479.672	1724.2	487.662	9999.9
402.276	288.2	410.076	282.2	471.872	393.8	479.842	1716.1	487.832	400.7
402.442	283.5	410.242	289.5	472.042	411.2	480.012	1736.5	488.002	9999.9
402.606	282.8	410.406	294.3	472.212	399.2	480.182	1742.9	488.172	414.0
402.772	276.5	464.452	312.0	472.382	389.1	480.352	1738.1	488.342	424.7
402.942	284.4	464.616	342.3	472.552	393.3	480.522	1730.4	488.512	9999.9
403.106	280.5	464.782	303.8	472.722	393.7	480.692	1745.4	488.682	446.4
403.272	280.3	464.946	317.5	472.892	393.5	480.862	861.2	488.852	430.1
403.442	280.0	465.112	318.9	473.062	403.5	481.032	386.1	489.022	445.0
403.606	278.4	465.282	316.0	473.232	394.1	481.202	247.1	489.192	460.1
403.772	283.3	465.452	325.1	473.402	399.6	481.372	9999.9	489.362	434.7
403.936	284.0	465.616	9999.9	473.572	398.1	481.542	498.9	489.532	433.8
404.102	280.8	465.782	313.0	473.736	396.1	481.712	1732.2	489.702	434.9
404.272	283.6	465.952	330.5	473.908	396.0	481.882	1732.5	489.872	9999.9
404.436	284.0	466.116	334.1	474.076	391.3	482.052	1736.0	490.042	444.2
404.602	282.1	466.282	335.7	474.242	393.8	482.222	1734.2	490.212	447.1
404.772	279.1	466.452	328.8	474.412	407.8	482.392	1733.3	490.382	458.8
404.936	286.1	466.622	338.0	474.582	399.7	482.562	1720.5	490.552	442.7
405.102	279.8	466.792	343.2	474.752	399.8	482.732	1227.8	490.722	476.0
405.266	283.5	466.962	349.4	474.922	392.0	482.902	1100.2	490.892	461.9
405.432	282.6	467.126	351.4	475.092	402.5	483.072	406.3	491.062	487.3
405.602	278.4	467.292	359.3	475.262	398.3	483.242	549.6	491.232	454.6
405.766	281.9	467.462	364.0	475.432	368.7	483.412	359.5	491.402	445.3
405.932	281.0	467.632	364.4	475.602	385.6	483.576	9999.9	491.572	456.9
406.096	282.6	467.802	364.6	475.772	370.0	483.742	697.6	491.742	457.0
406.262	278.9	467.978	376.4	475.942	414.6	483.912	9999.9	491.912	443.0
406.432	281.5	468.146	378.9	476.112	9999.9	484.082	958.9	492.082	485.3
406.596	278.6	468.312	384.7	476.282	177.7	484.252	9999.9	492.252	440.8
406.762	280.3	468.482	386.9	476.452	458.1	484.422	9999.9	492.422	439.6
406.926	283.3	468.652	390.5	476.622	540.6	484.592	257.7	492.592	424.8
407.092	281.0	468.822	391.8	476.792	9999.9	484.762	236.4	492.762	446.0
407.262	283.7	468.992	404.4	476.962	790.0	484.932	217.1	492.932	456.8
407.426	285.1	469.162	395.9	477.132	9999.9	485.102	223.4	493.102	435.8
407.592	283.3	469.332	396.4	477.302	626.0	485.272	215.5	493.272	438.5
407.756	283.8	469.502	400.4	477.466	1062.2	485.448	225.1	493.442	452.9

TABLE VI.- TEMPERATURE HISTORIES OF CORNER NOSE-CAP THERMOCOUPLES - Concluded

(b) Thermocouple 47 - Concluded

t, sec	T, °K	t, sec	T, °K	t, sec	T, °K
493.612	462.5	501.782	471.8	512.512	482.1
493.782	468.3	501.952	486.3	512.682	471.5
493.952	9999.9	502.122	473.6	512.852	497.7
494.122	420.9	502.292	9999.9	513.872	503.2
494.292	453.9	502.462	9999.9	514.042	492.8
494.462	467.5	502.638	465.7	514.212	467.2
494.632	459.8	502.812	481.5	514.382	9999.9
494.802	471.3	502.982	481.2	514.552	9999.9
494.972	460.4	503.322	459.2	570.442	501.1
495.142	474.9	503.492	471.3	570.612	516.1
495.312	479.2	503.662	491.9	570.782	507.8
495.482	478.2	503.832	487.3	570.952	505.3
495.652	467.2	504.002	482.7	571.122	504.1
495.822	9999.9	504.172	494.8	572.492	516.9
495.992	474.9	504.342	519.2	572.662	9999.9
496.162	482.6	504.512	493.5	572.832	9999.9
496.332	480.4	504.682	493.4	573.002	519.4
496.502	494.5	504.852	485.5	573.172	9999.9
496.672	476.8	505.022	480.9	573.342	518.6
496.842	474.5	505.192	486.0	574.882	502.1
497.012	480.8	505.362	468.1	575.052	9999.9
497.182	482.2	505.532	475.0	575.222	487.3
497.352	475.4	505.702	477.8	575.392	491.9
497.522	471.2	505.872	482.9	577.272	511.5
497.692	477.2	506.042	470.2	577.442	506.1
497.862	491.0	506.212	472.8	577.612	516.9
498.032	492.6	506.382	9999.9	577.782	493.9
498.202	467.6	506.902	470.1	577.952	513.7
498.372	473.1	507.072	465.8	578.122	531.1
498.542	483.5	507.242	9999.9	579.492	9999.9
498.712	472.1	507.412	485.6	579.668	494.7
498.882	477.6	507.582	467.6	579.838	9999.9
499.052	476.7	507.752	476.3	580.002	9999.9
499.222	487.5	508.432	475.2	580.176	494.2
499.392	473.1	508.602	9999.9	580.352	9999.9
499.562	477.4	508.772	497.5	580.522	9999.9
499.732	472.1	508.942	479.0	582.062	459.4
499.902	473.6	509.112	493.5	582.232	513.7
500.072	472.0	509.282	496.0	582.408	521.6
500.242	485.6	509.452	495.7	582.582	462.3
500.412	471.7	510.302	467.4	582.752	487.9
500.582	472.6	510.472	473.3	584.118	480.5
500.758	467.9	510.642	485.1	584.292	481.6
500.932	474.4	510.812	494.9	584.462	483.5
501.102	469.4	510.982	491.2	584.632	9999.9
501.272	475.8	511.152	496.8	584.802	439.2
501.442	468.7	512.172	484.0	584.972	458.6
501.612	486.9	512.342	506.1		

[redacted]

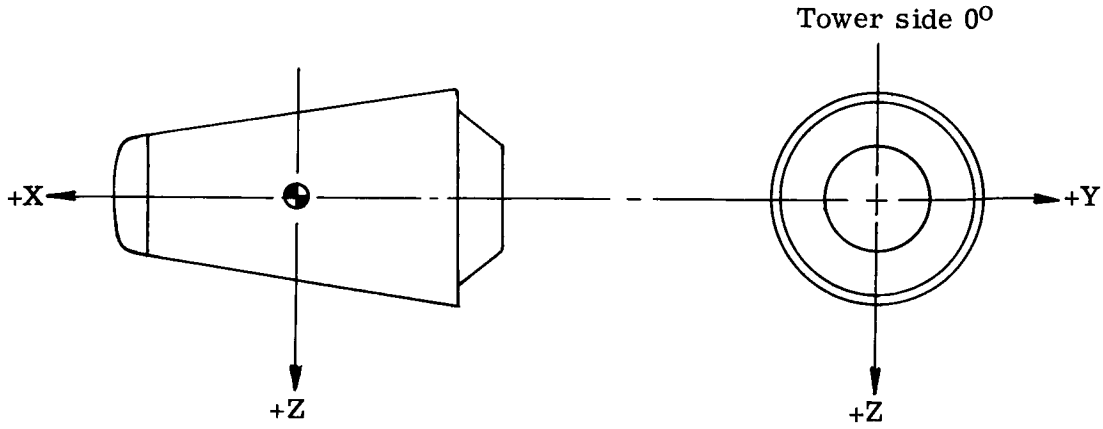
TABLE VII.- ABLATION SENSOR STATUS AFTER BLACKOUT

Location	Sensor	Depth, mm	Status
Outer circle (0.1524-m D)	LP 42	2.54	Sensor was actuated during blackout[a]
	SW 35	2.54	Sensor was actuated during blackout
	SW 38	3.81	Sensor was actuated during blackout
	SW 34	5.07	Sensor was actuated during blackout
	LP 45	6.35	Sensor was actuated during blackout[a]
	SW 41	7.60	Sensor was actuated 1.7 sec after blackout
	LP 43	8.9	Sensor was not actuated
	SW 40	10.40	Sensor was not actuated
	LP 44	13.20	Sensor was not actuated
	SW 39	16.30	Sensor was not actuated
	SW 37	36.70	Sensor was not actuated
	SW 36	53.00	Sensor was not actuated
Inner circle (0.0762-m D)	SW 30	5.07	Sensor was actuated during blackout
	SW 33	7.60	Sensor was not actuated
	SW 31	10.40	Sensor was not actuated
	SW 32	16.30	Sensor was not actuated

[a]LP 42 and LP 45 were exposed to temperatures in excess of 1755° K and it is highly probable that they were exposed to the ablating surface.

[redacted]

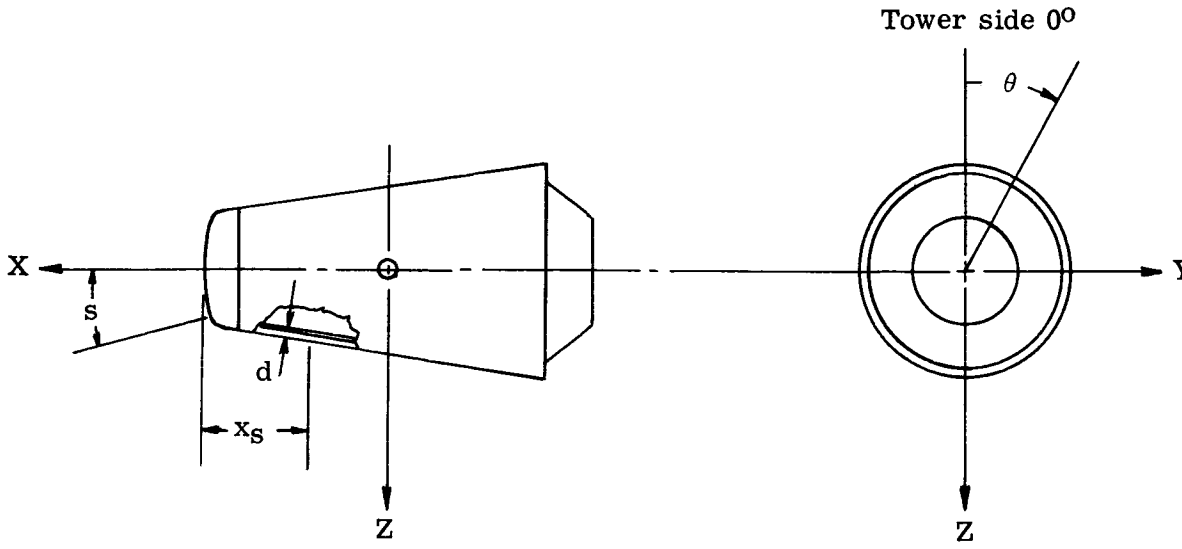
TABLE VIII. - MOTION INSTRUMENTATION LOCATIONS



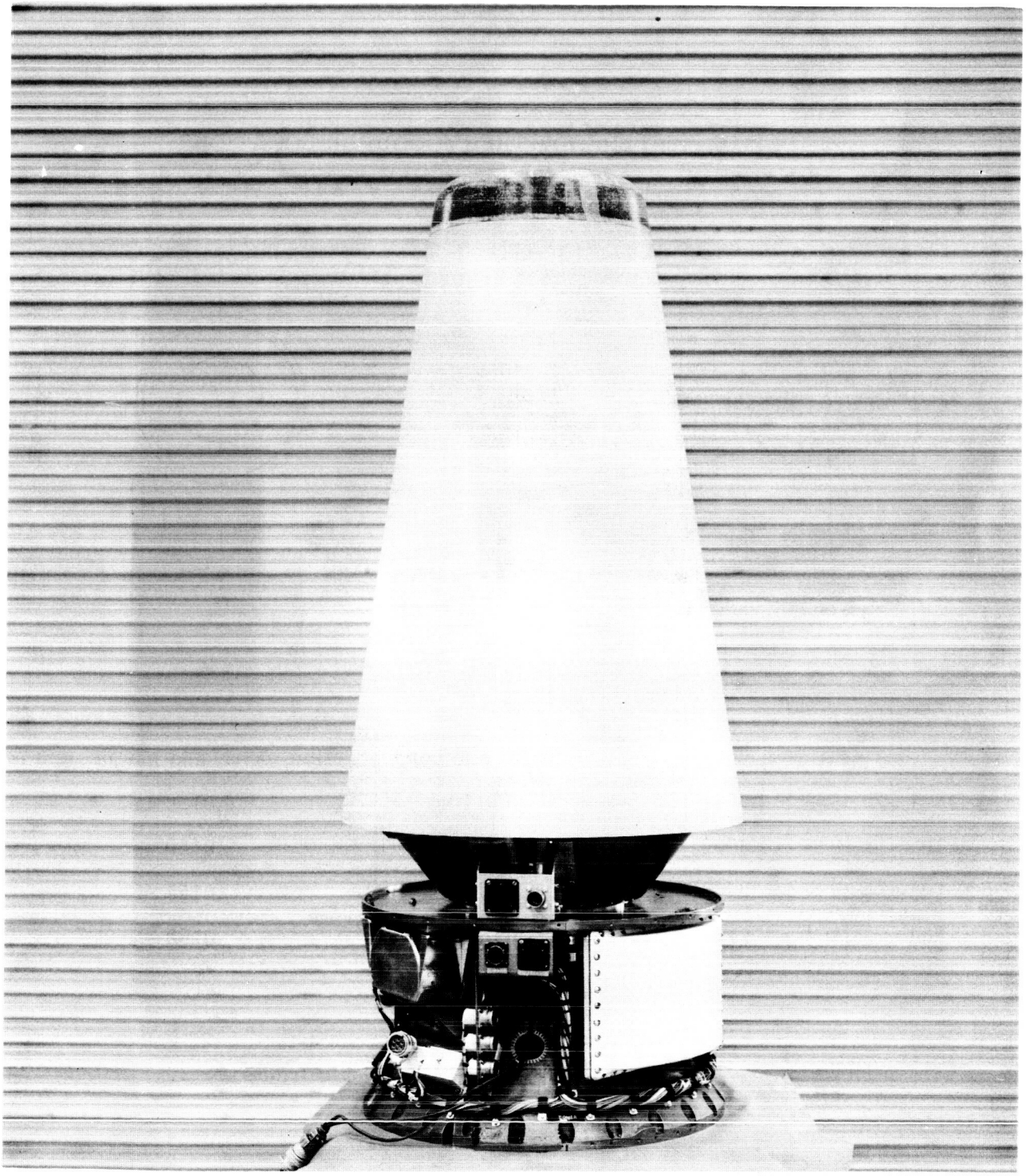
Instrument	Actual full-scale range	Location (a)		
		x, m	y, m	z, m
Longitudinal acceleration	1.0366g to -1.9629g	-0.0389	-0.0507	0.01889
Longitudinal acceleration	14.813g to -34.795g	-.03881	-.0505	-.01922
Transverse acceleration	8.253g to -8.012g	-.0735	.00028	-.0002
Normal acceleration	8.124g to -8.117g	-.03975	.00038	-.00022
Yaw rate gyro	4.65, -4.53 rad/sec	-.04379	.0566	-.1066
Pitch rate gyro	4.42, -4.39 rad/sec	-.0081	-.1269	-.00031

[a]Distance to seismic mass along body axis from payload-stage burnout center of gravity with exception of gyro x dimension which is measured to gyro mounting flange, positive in positive X, Y, and Z directions.

TABLE IX.- AFTERBODY THERMOCOUPLE LOCATIONS



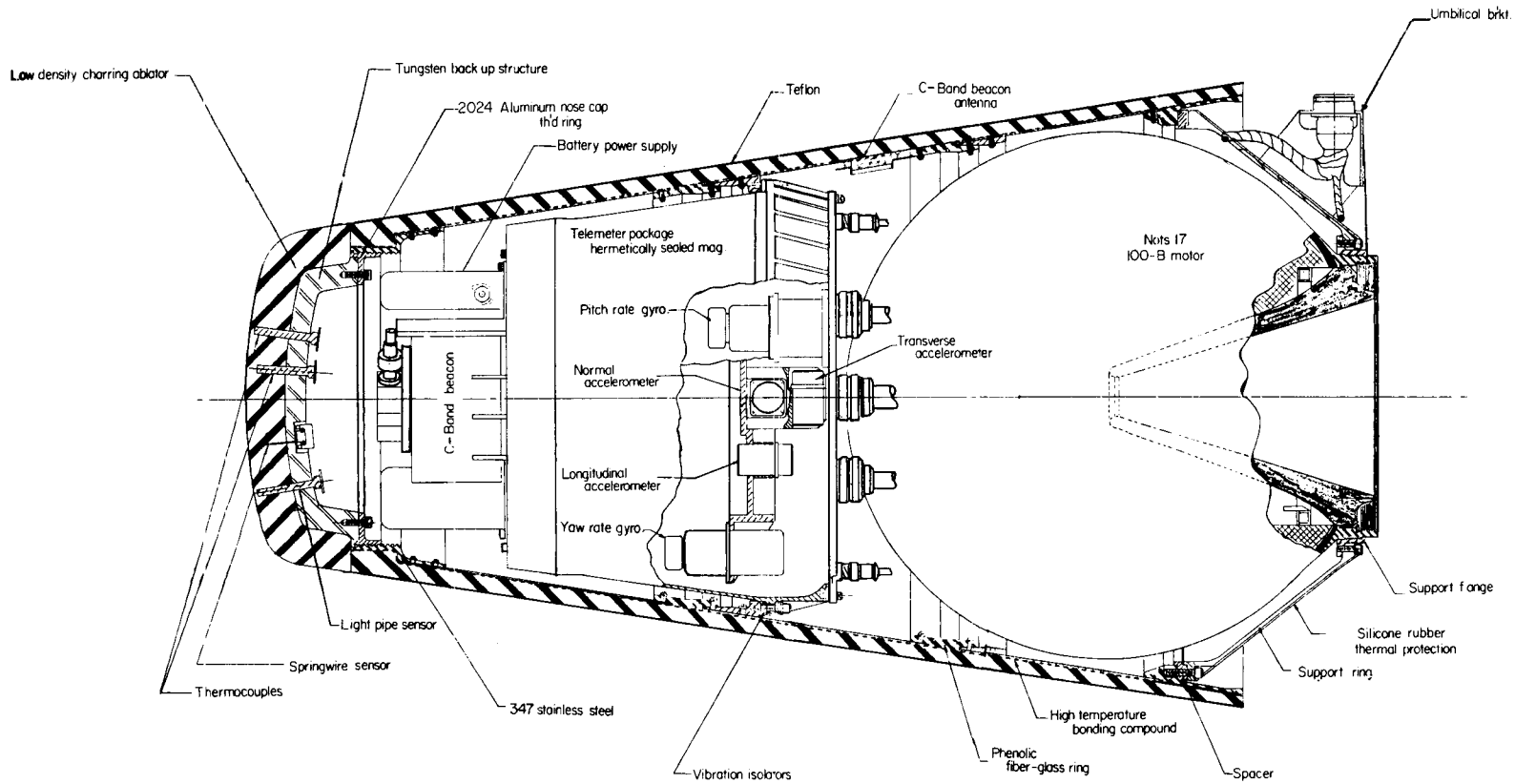
	s, m	x_s, m	θ, rad	d, m	
				Teflon and bond	Teflon, bond, and magnesium
TC 101	0.8069	0.6901	3.141	0.0110	0.0128
TC 102	.6048	.4901	3.141	.0122	.0140
TC 103	.3889	.2766	3.141	.0136	.0154
TC 104	.3294	.2179	3.141	.0142	.0160



(a) Spacecraft plus adapter.

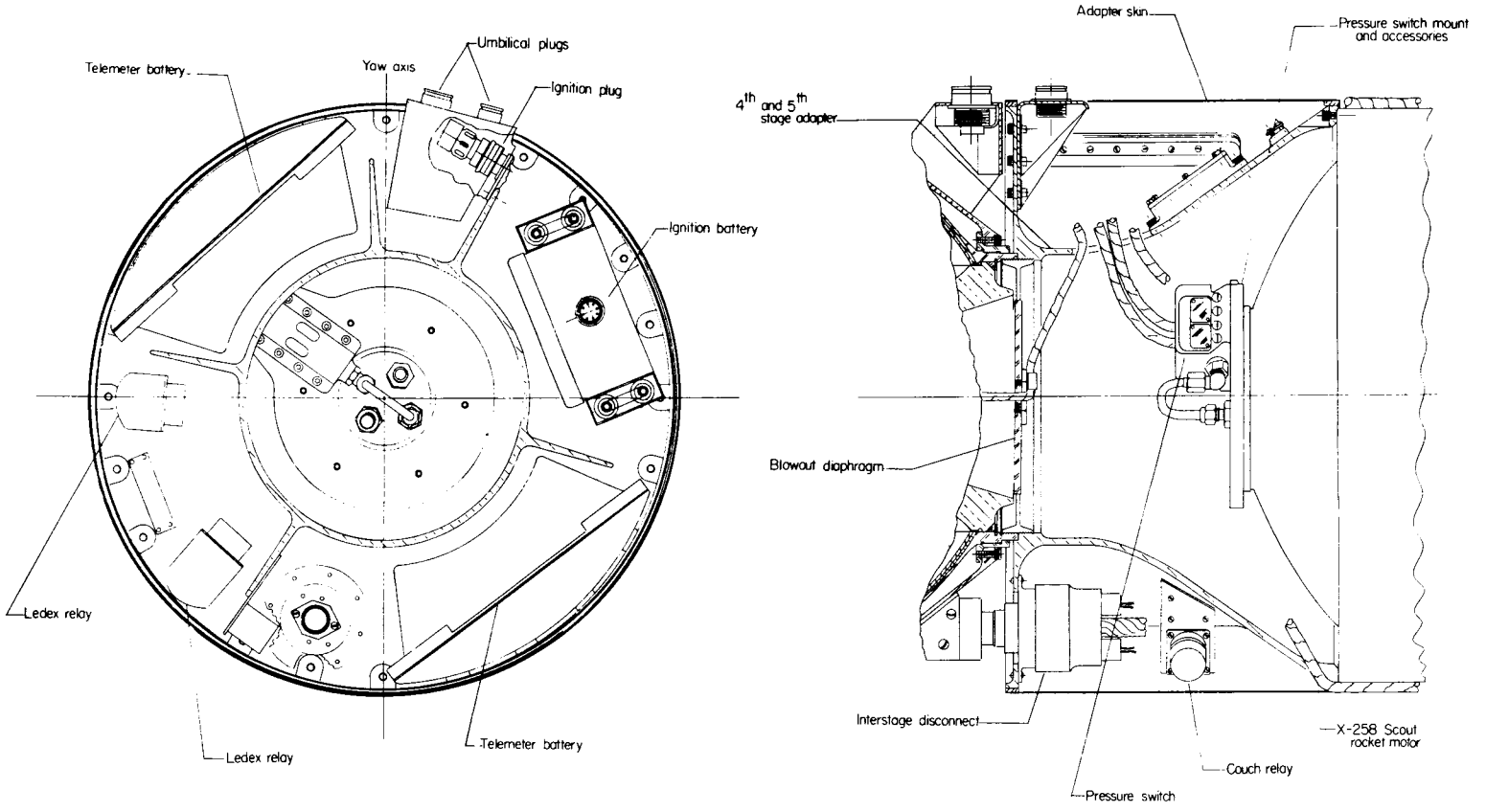
L-66-798

Figure 1.- Spacecraft.



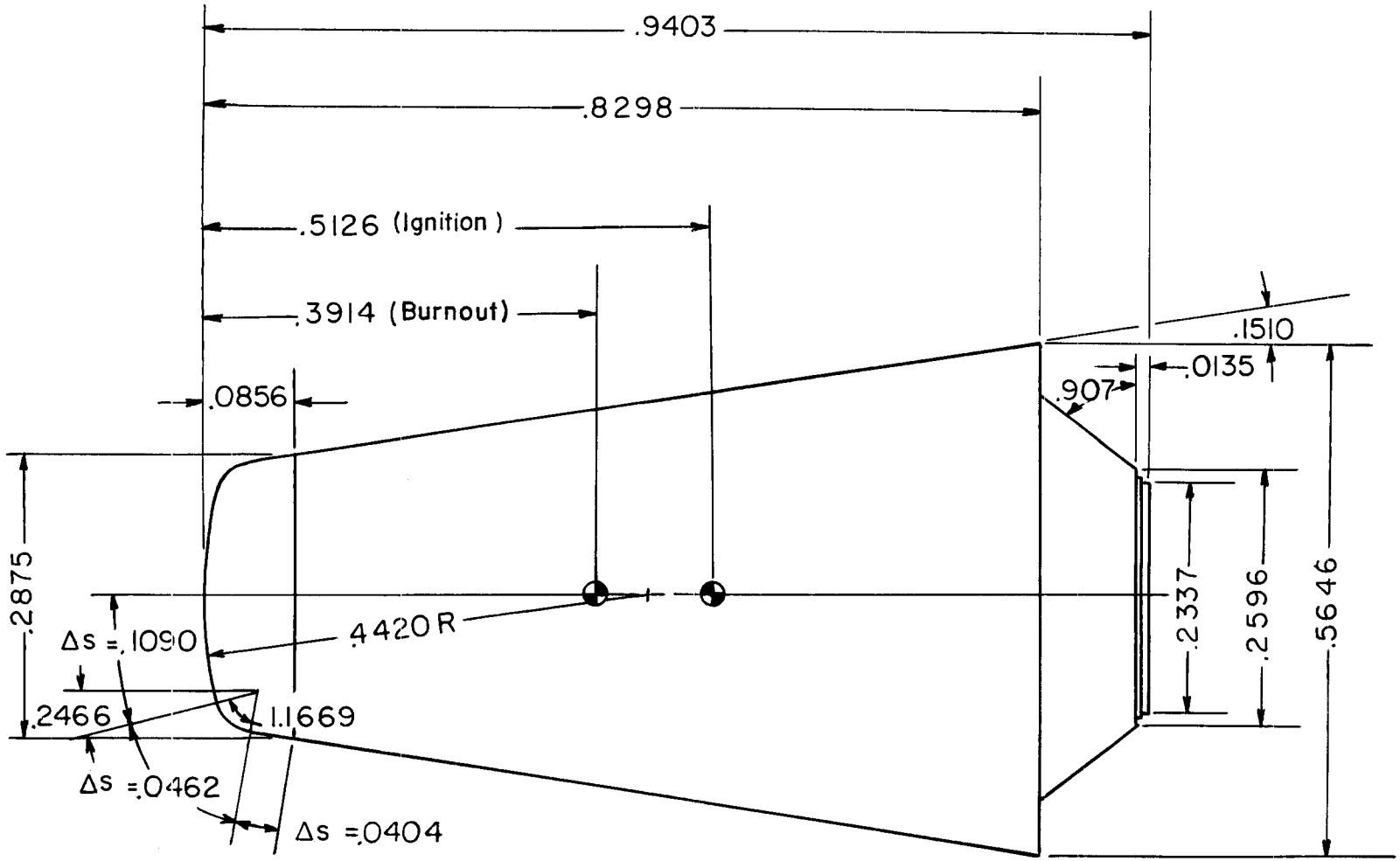
(b) Spacecraft component assembly.

Figure 1.- Continued.



(c) Fourth to fifth stage adapter section.

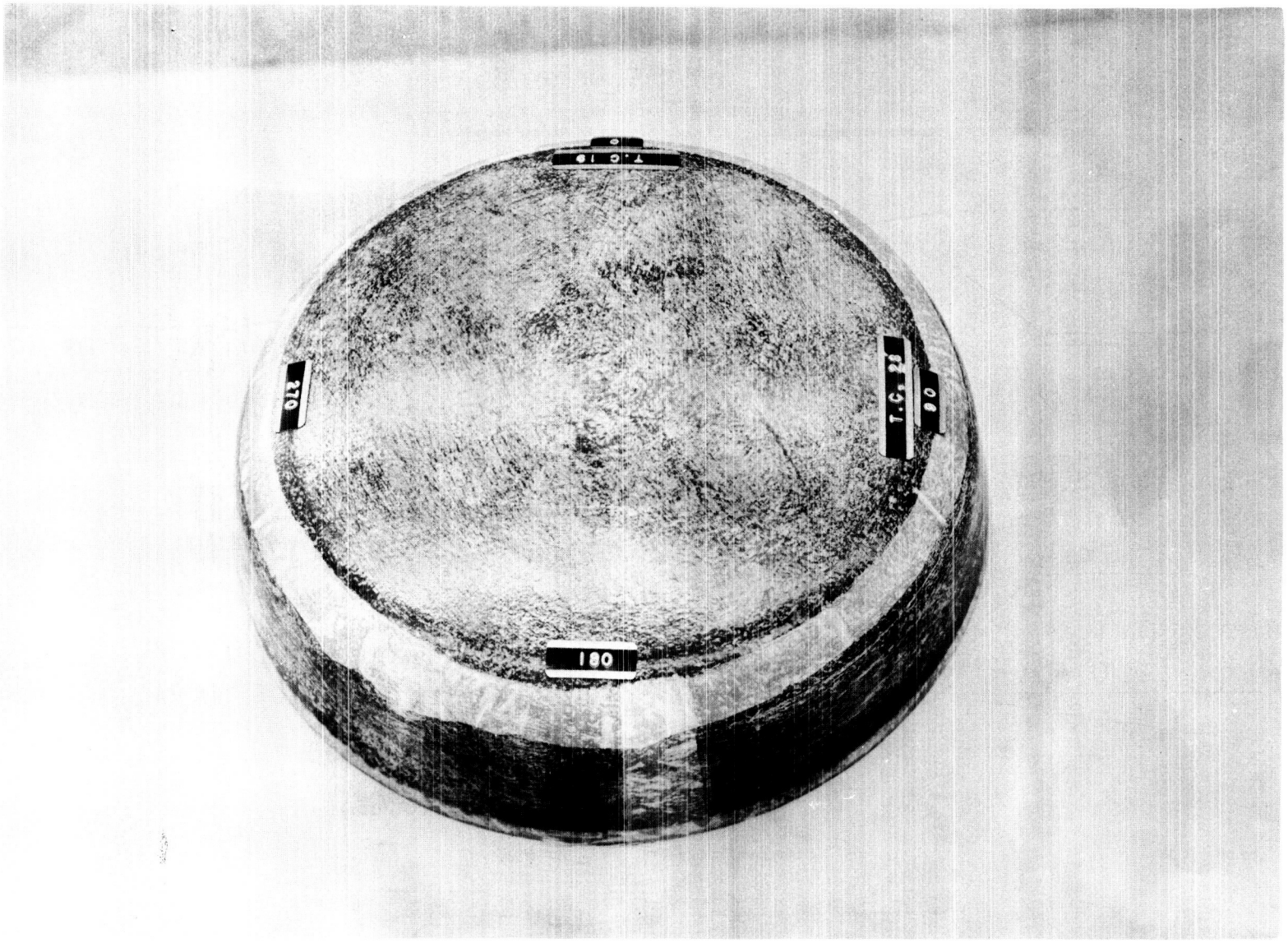
Figure 1.- Continued.



(d) Spacecraft dimensional details. All dimensions are in meters; all angles are in radians.

Figure 1.- Concluded.

[redacted]

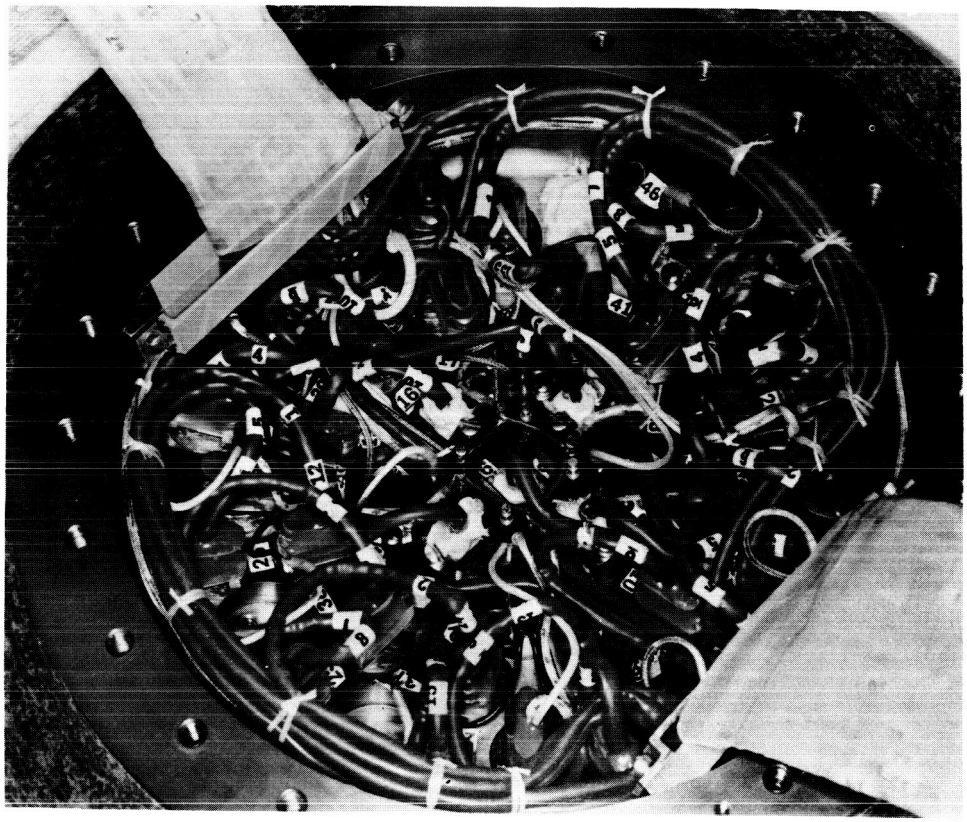


(a) Nose cap with moisture barrier.

L-66-810.1

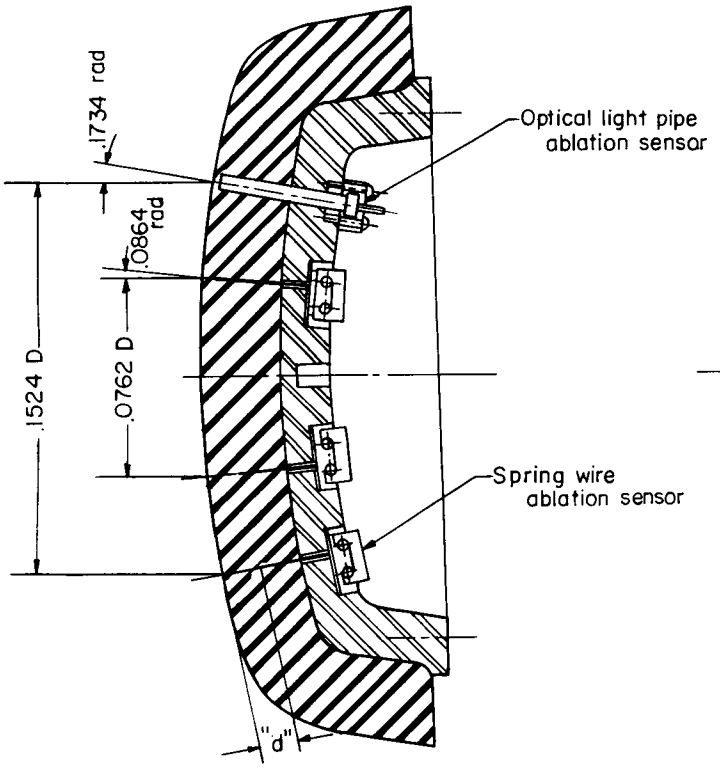
Figure 2.- Nose-cap details.

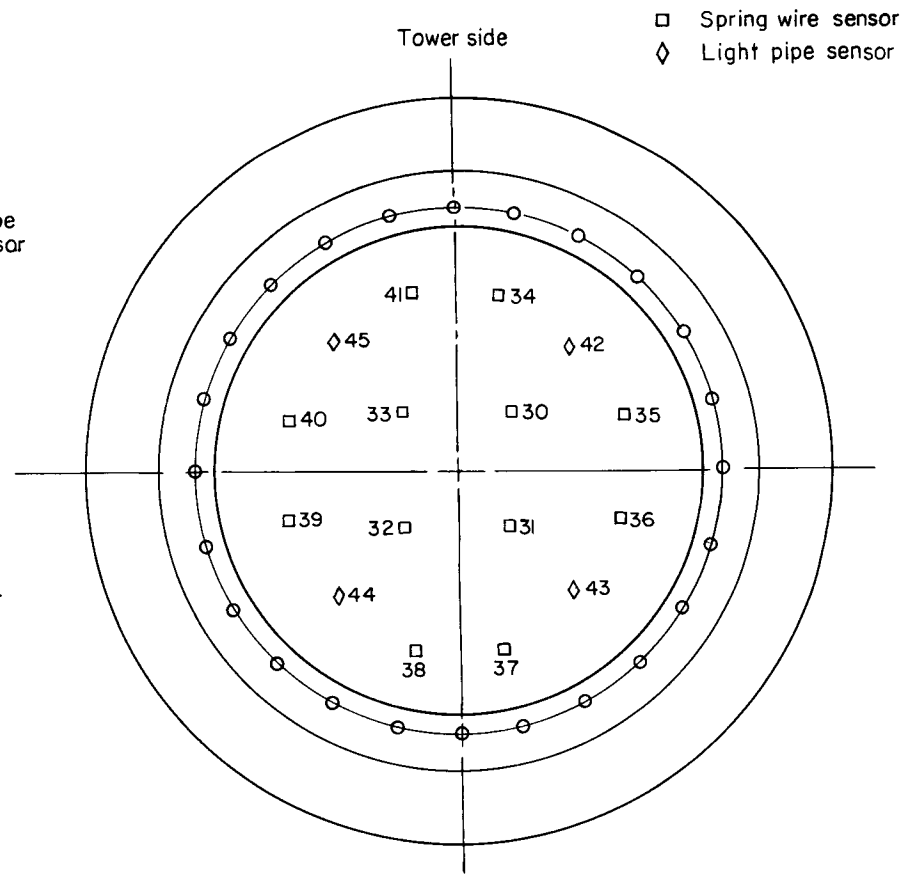
[redacted]



(b) Rear view of nose-cap assembly with sensing devices. L-67-970

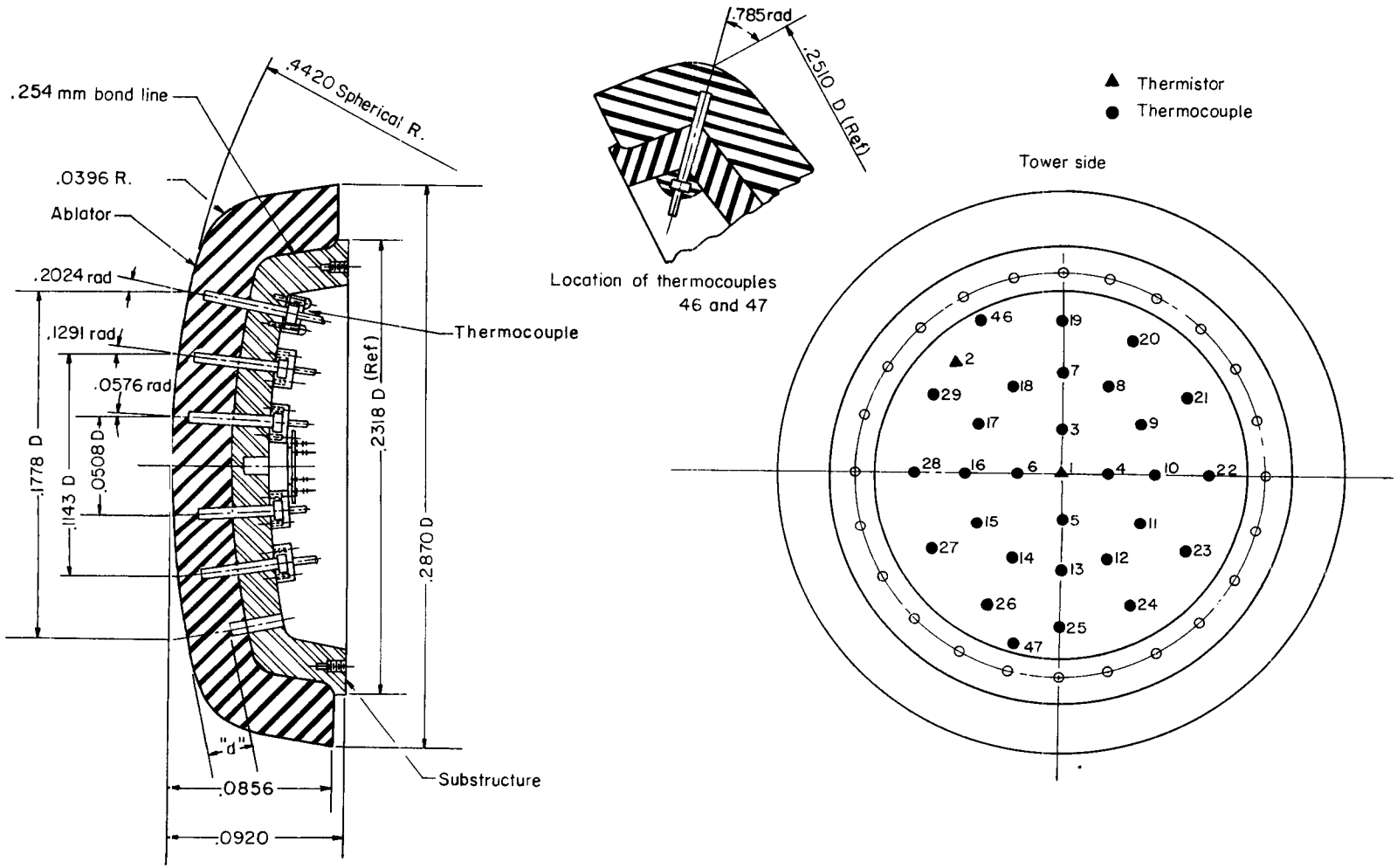
Figure 2.- Continued.





(c) Nose-cap ablation sensor location. All dimensions are in meters unless otherwise noted.

Figure 2.- Continued.



(d) Nose-cap thermocouple and thermistor location. All dimensions are in meters unless otherwise noted.

Figure 2.- Concluded.

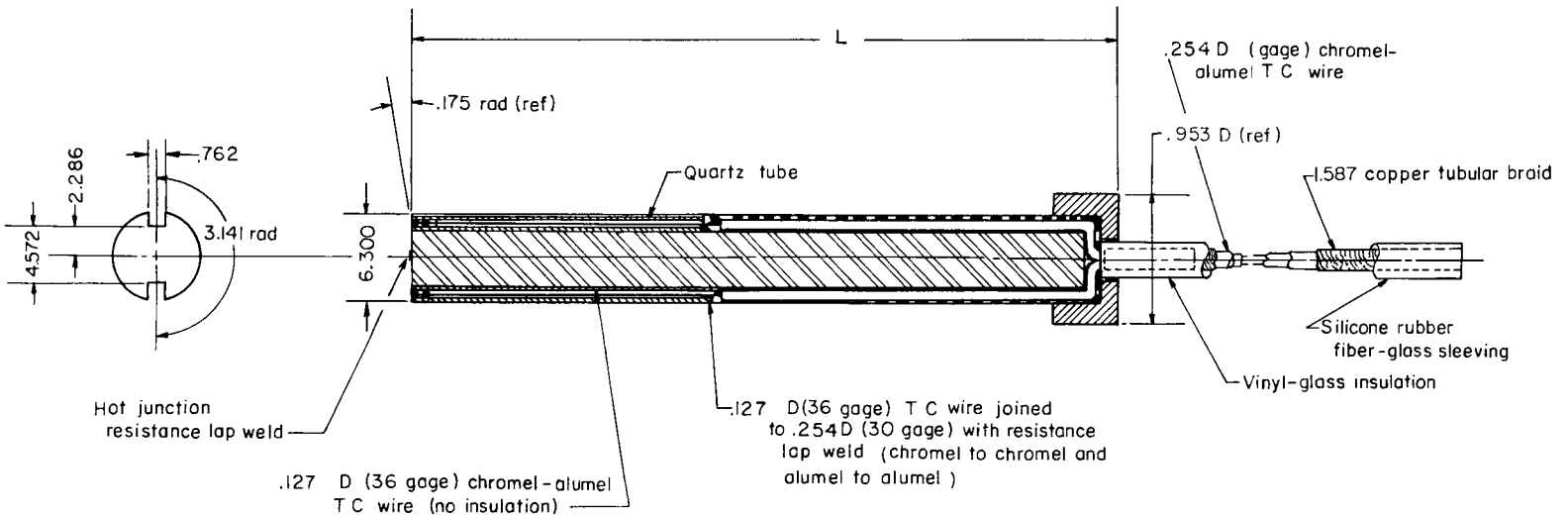


Figure 3.- Nose-cap thermocouple assembly. All dimensions are in millimeters unless otherwise noted.

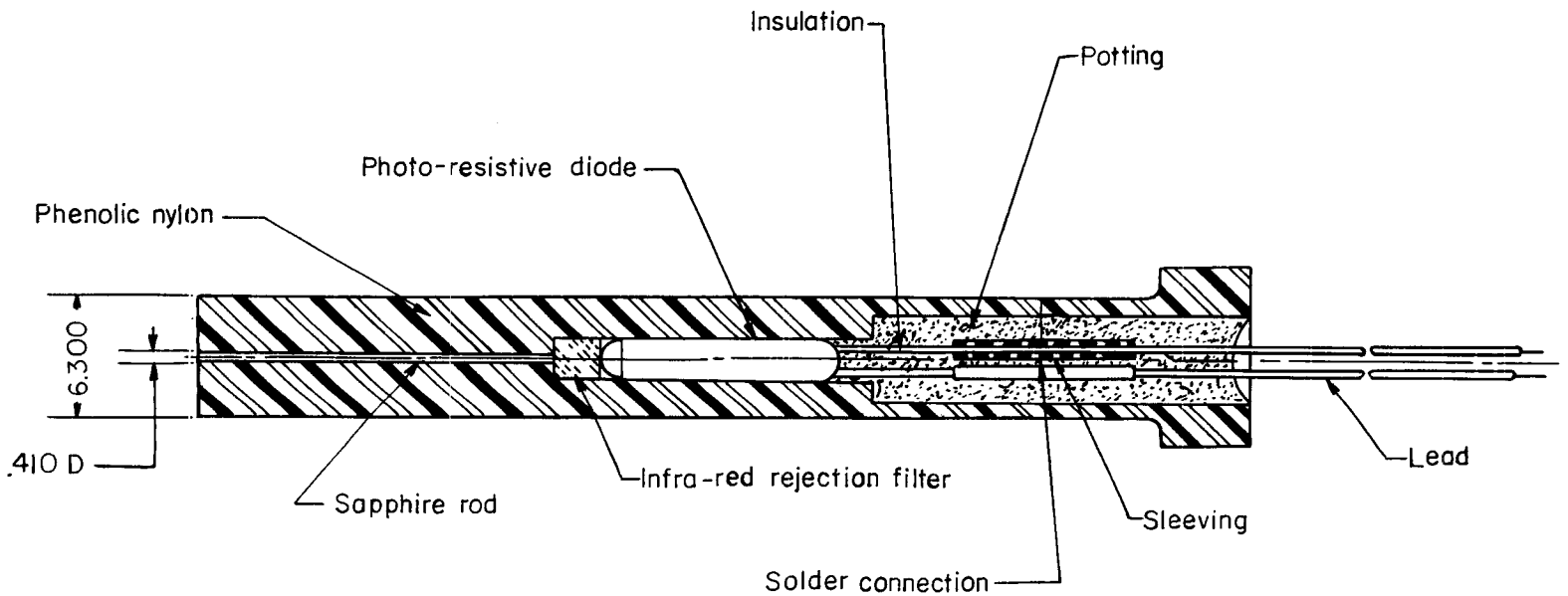


Figure 4.- Nose-cap light pipe ablation sensor assembly. All dimensions are in millimeters.

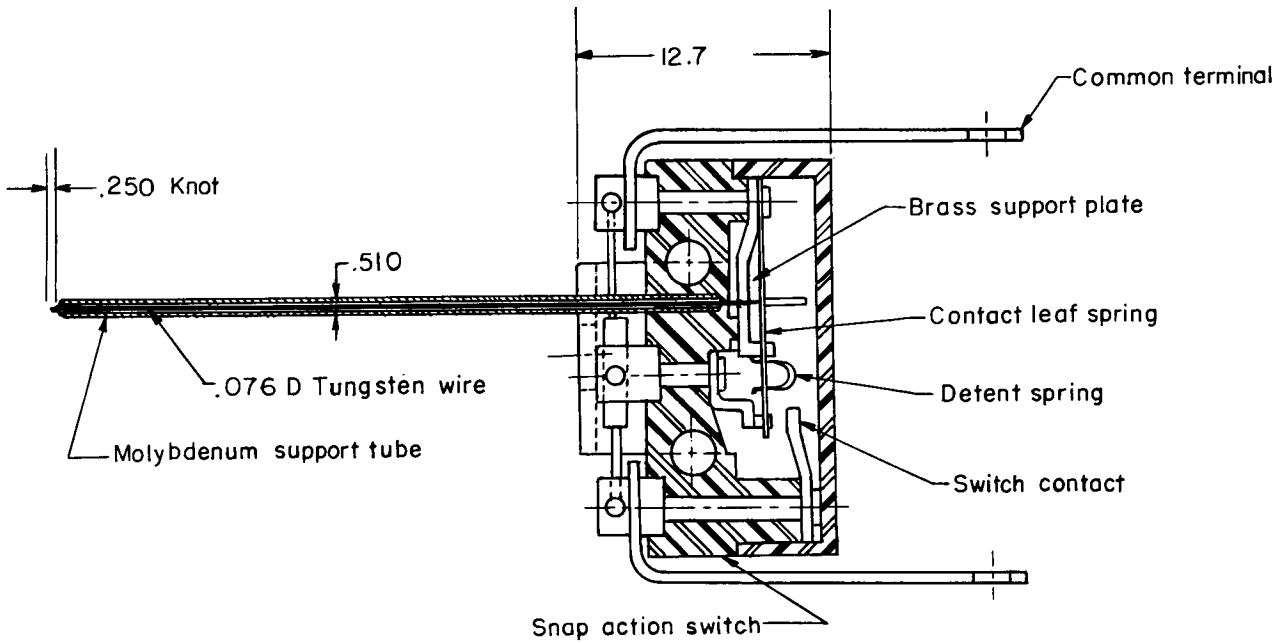


Figure 5.- Nose-cap spring wire ablation sensor assembly. All dimensions are in millimeters.

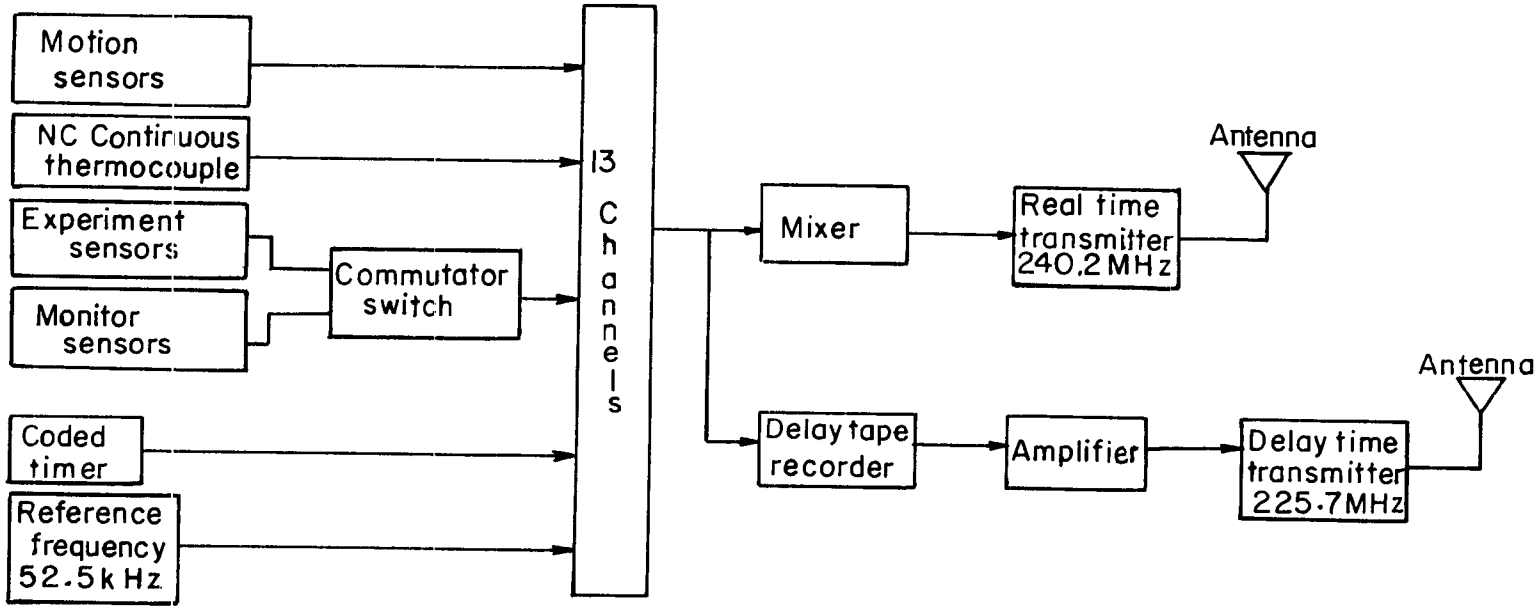


Figure 6.- Telemetry system.

[redacted]

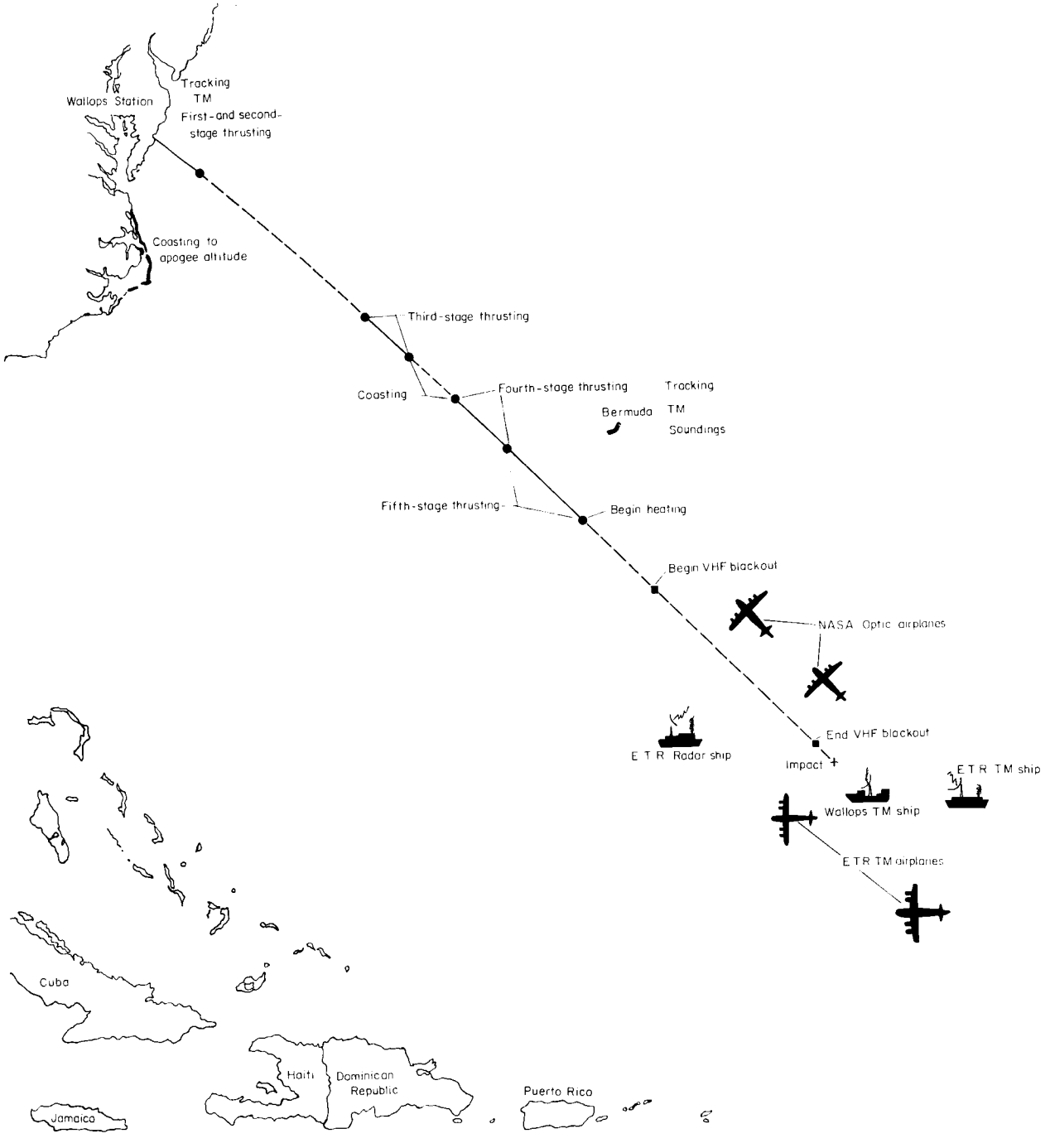
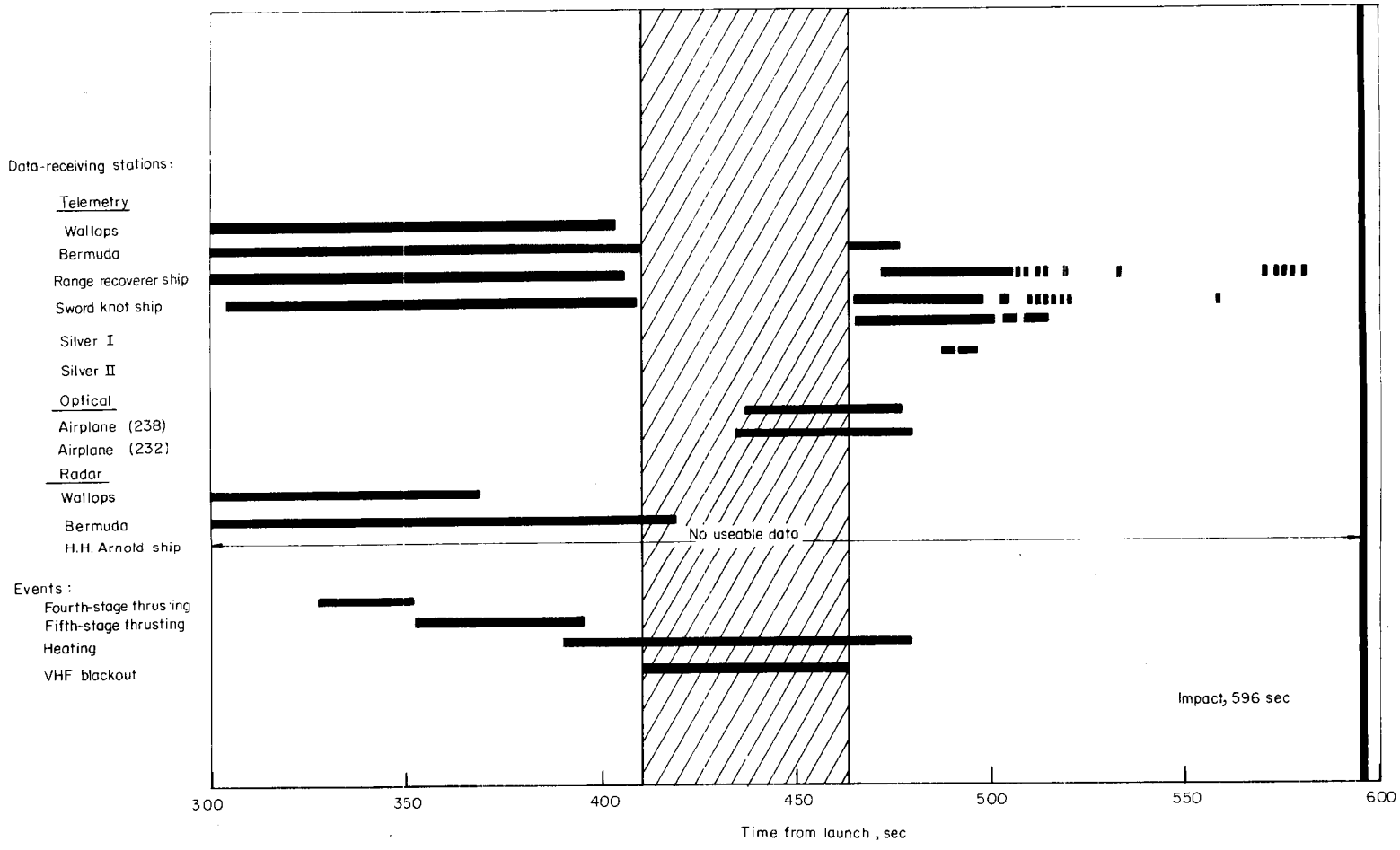


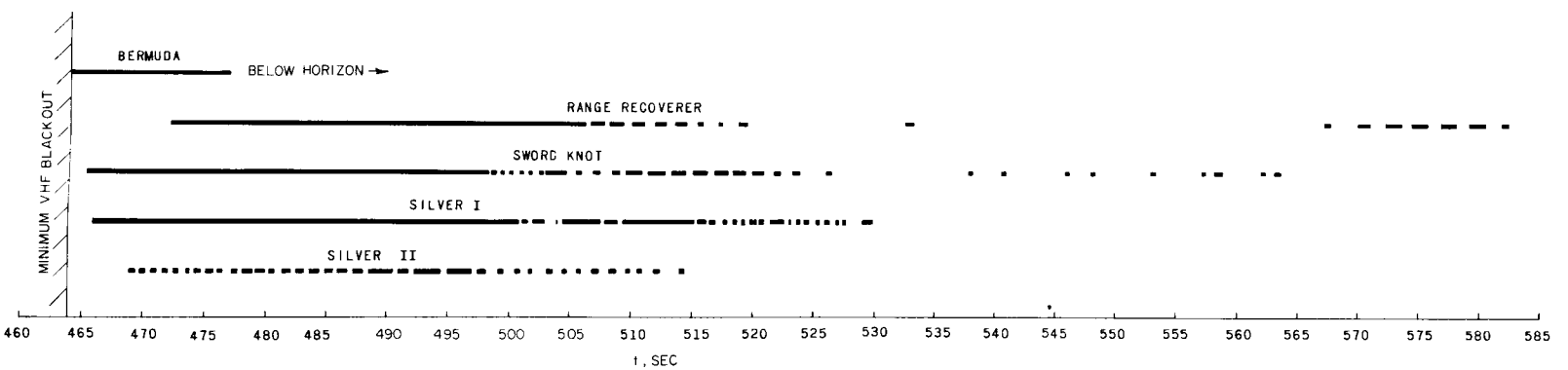
Figure 7.- Plan view of entry trajectory.

[redacted]



(a) During reentry.

Figure 8.- Data coverage by receiving and tracking stations.



(b) Reentry E postblackout telemetry reception.

Figure 8.- Concluded.

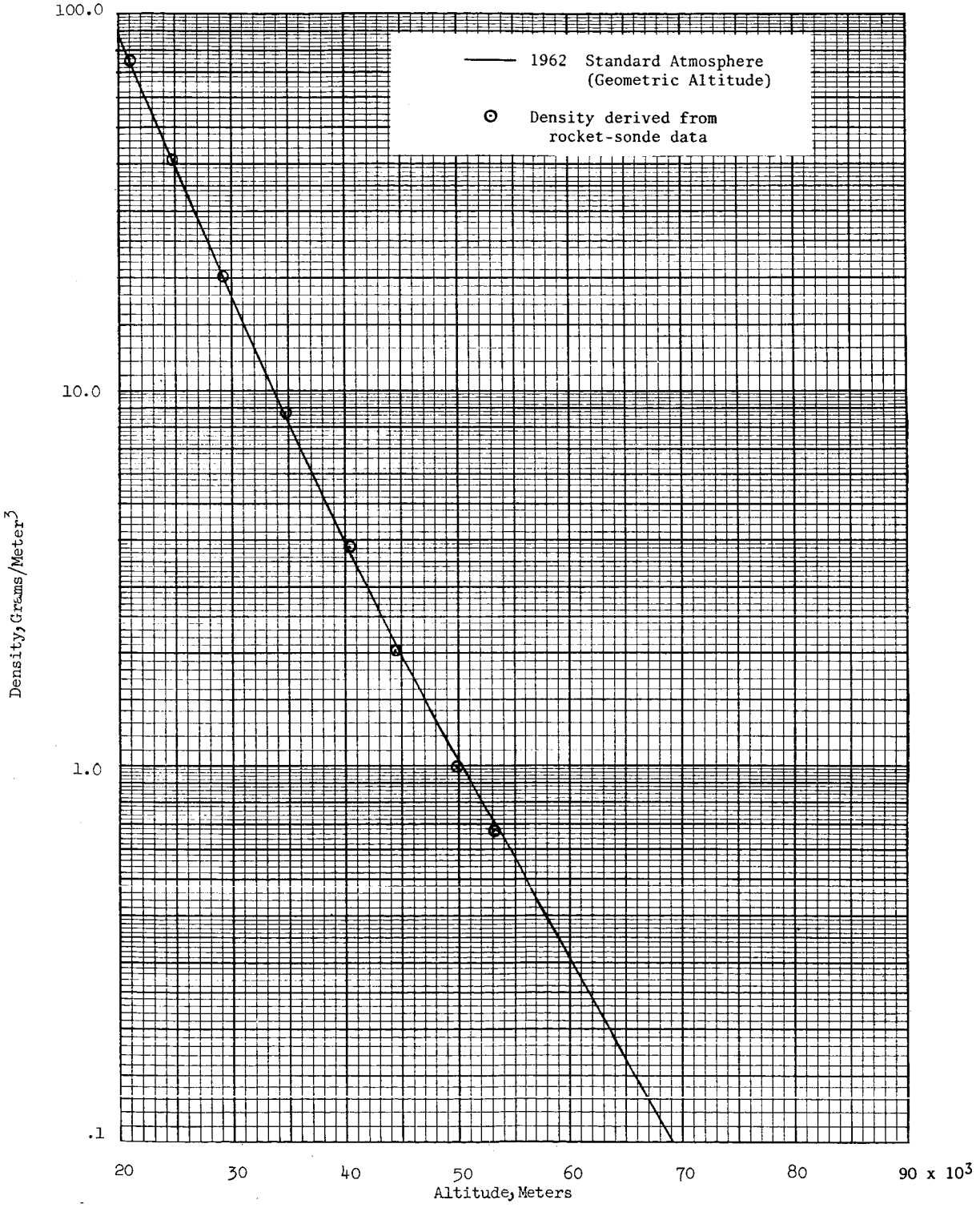


Figure 9.- Flight atmospheric density obtained from rocket sonde compared with U.S. 1962 standard atmosphere.

[redacted]

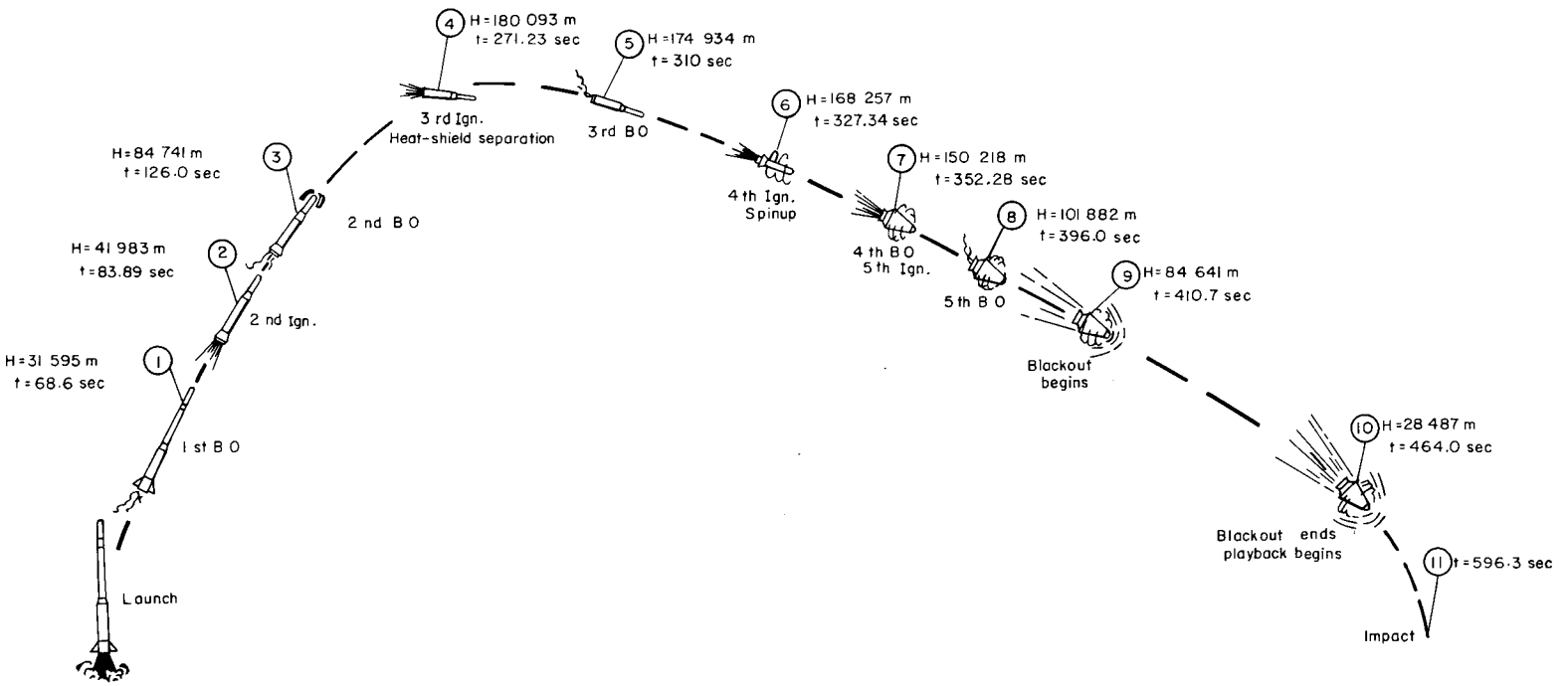
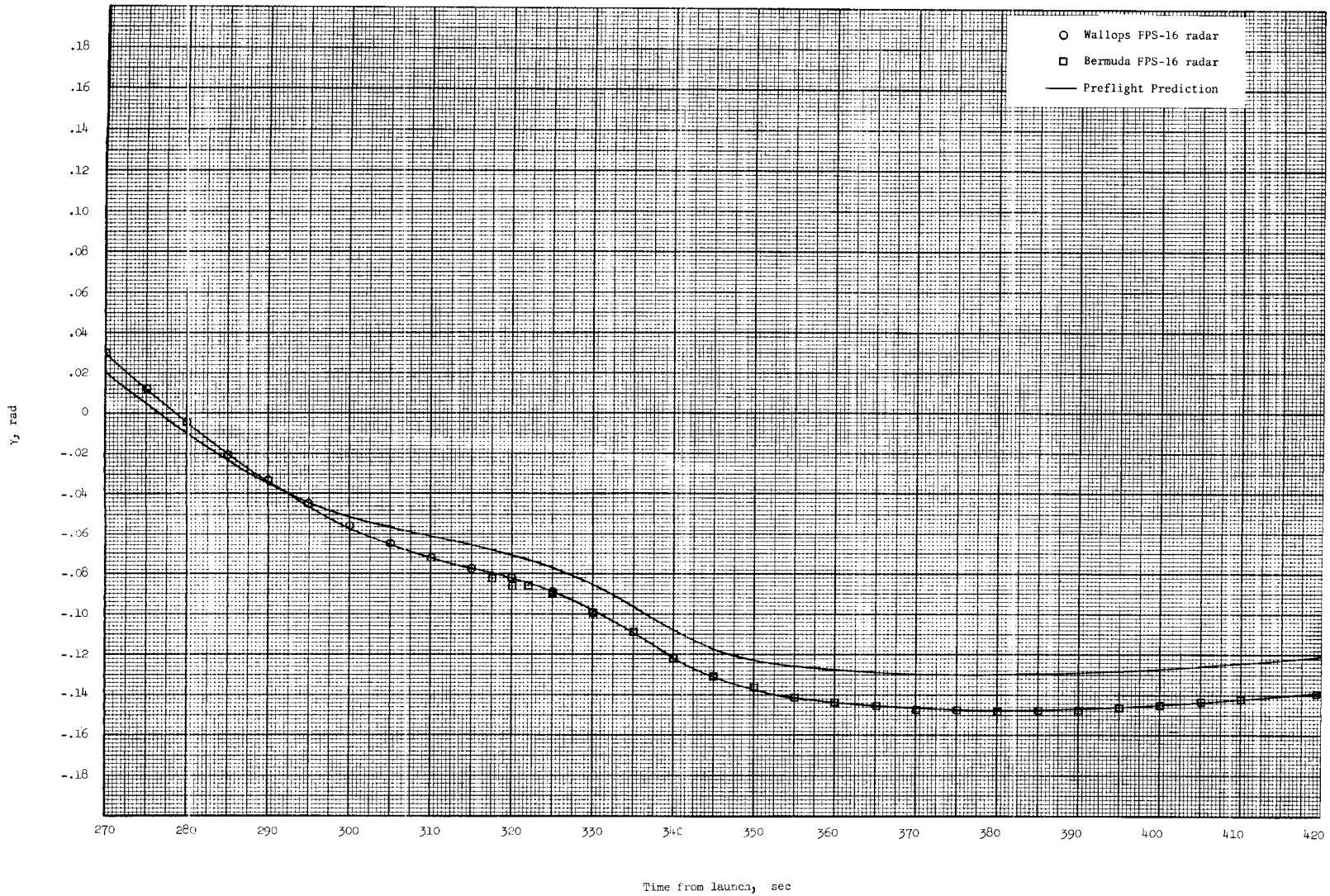


Figure 10.- Schematic of entry trajectory.

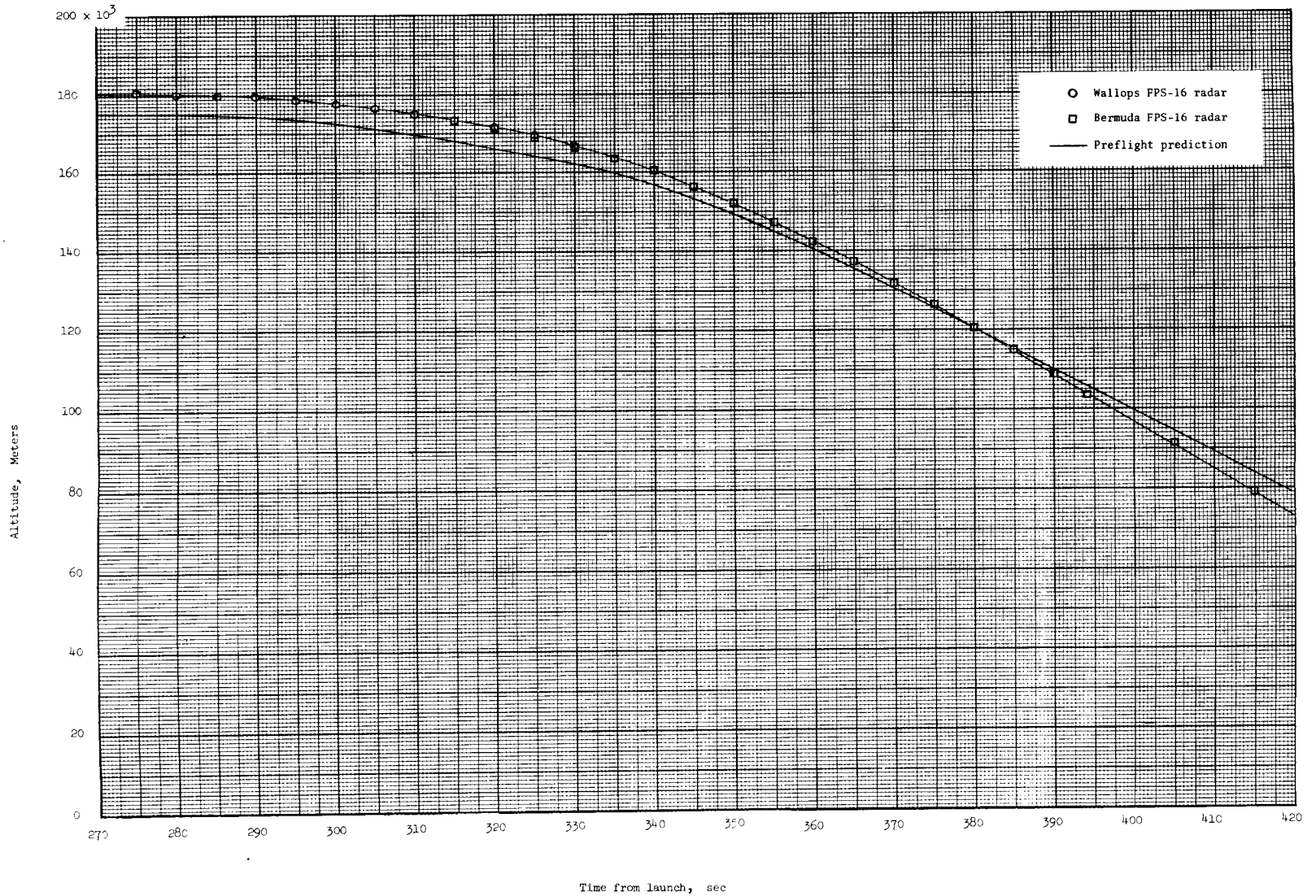
[redacted]



(a) Flight-path angle plotted against time.

Figure 11.- A comparison between the actual and predicted flight-path-angle time history.

[redacted]



(b) Altitude plotted against time.

Figure 11.- Concluded.

[redacted]

[redacted]

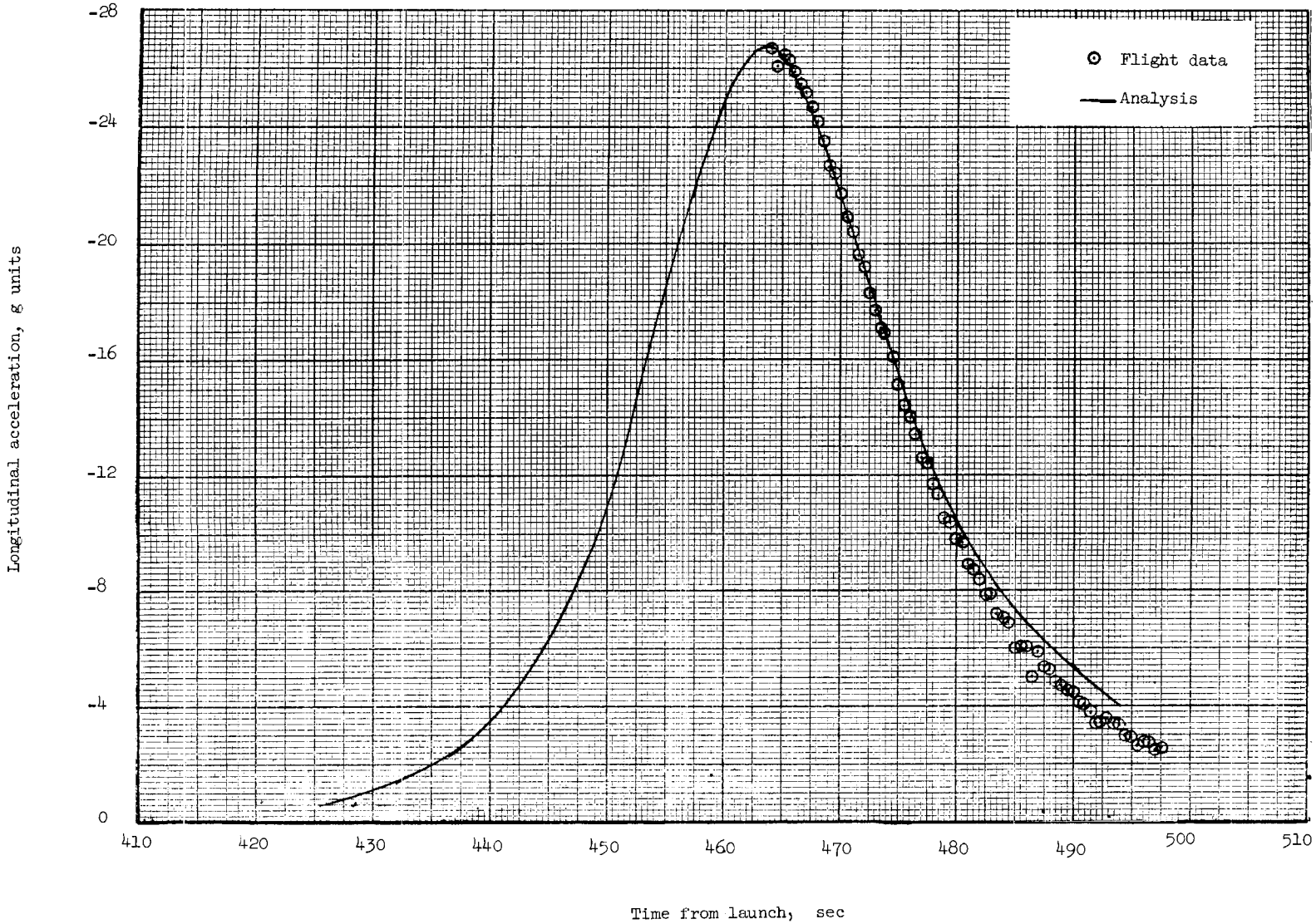


Figure 12.- Longitudinal-acceleration history.

[redacted]

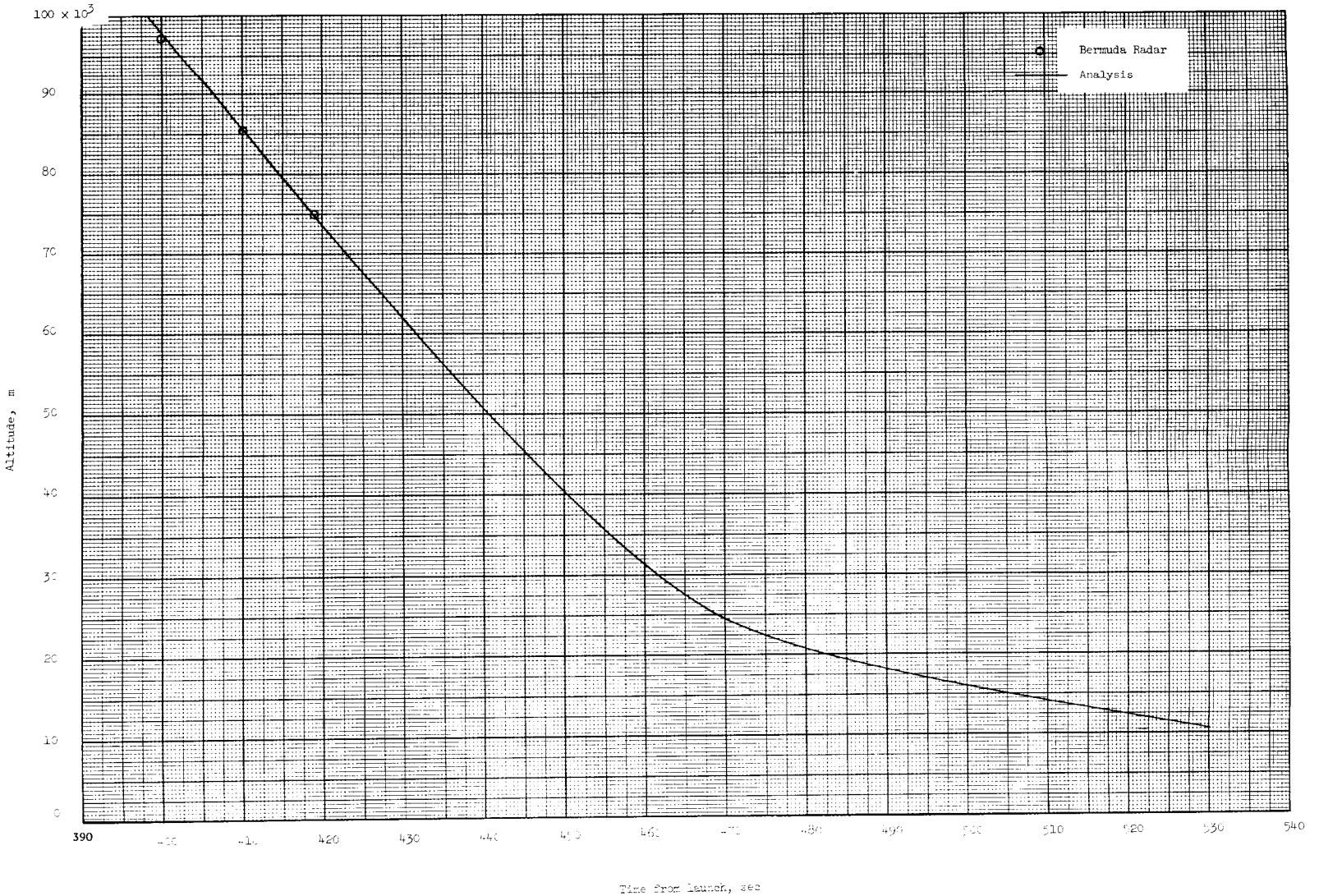


Figure 13.- Altitude history during entry.

[redacted]

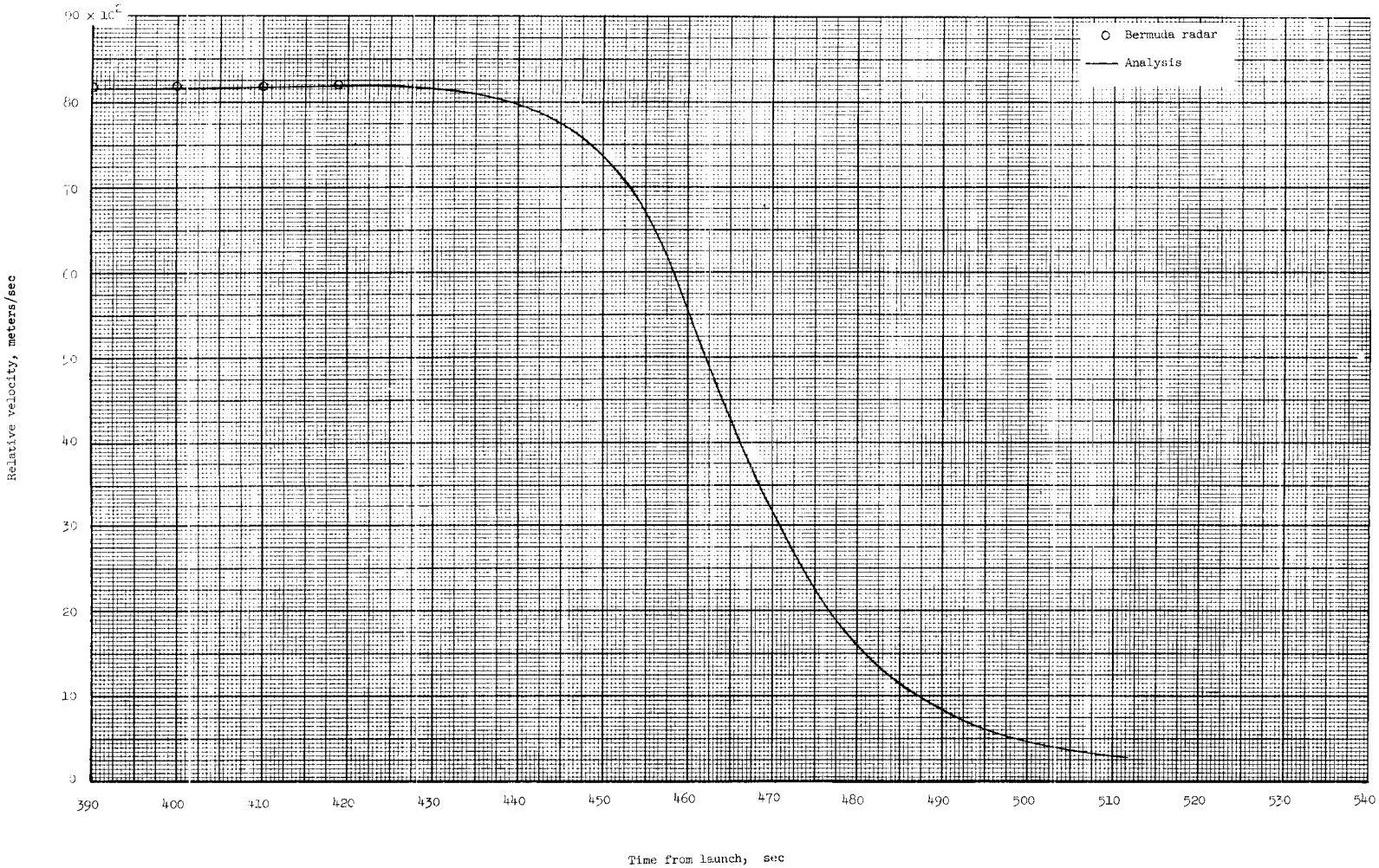


Figure 14.- Earth-relative velocity history.

[redacted]

[redacted]

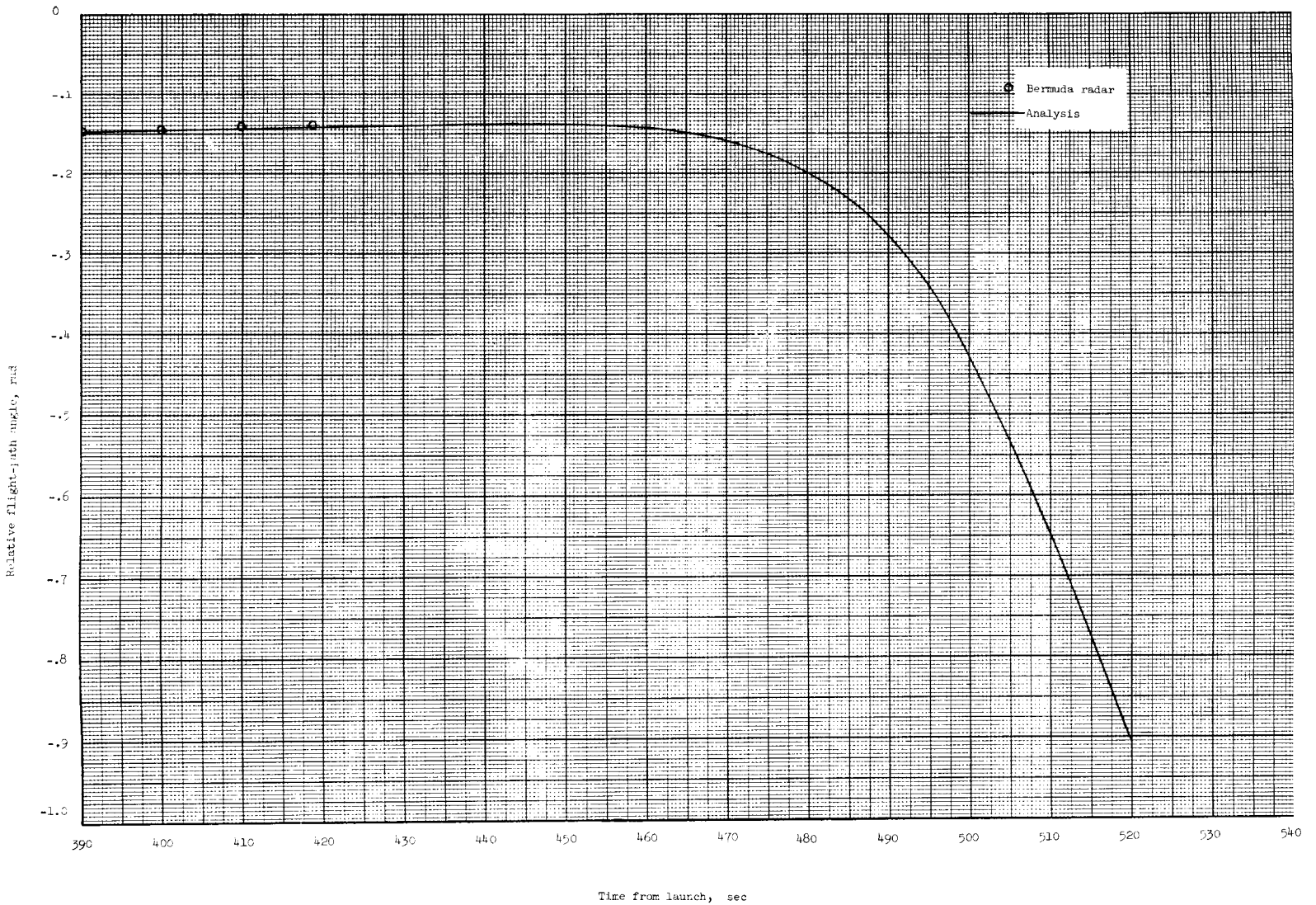


Figure 15.- Earth-relative flight-path-angle history.

[redacted]

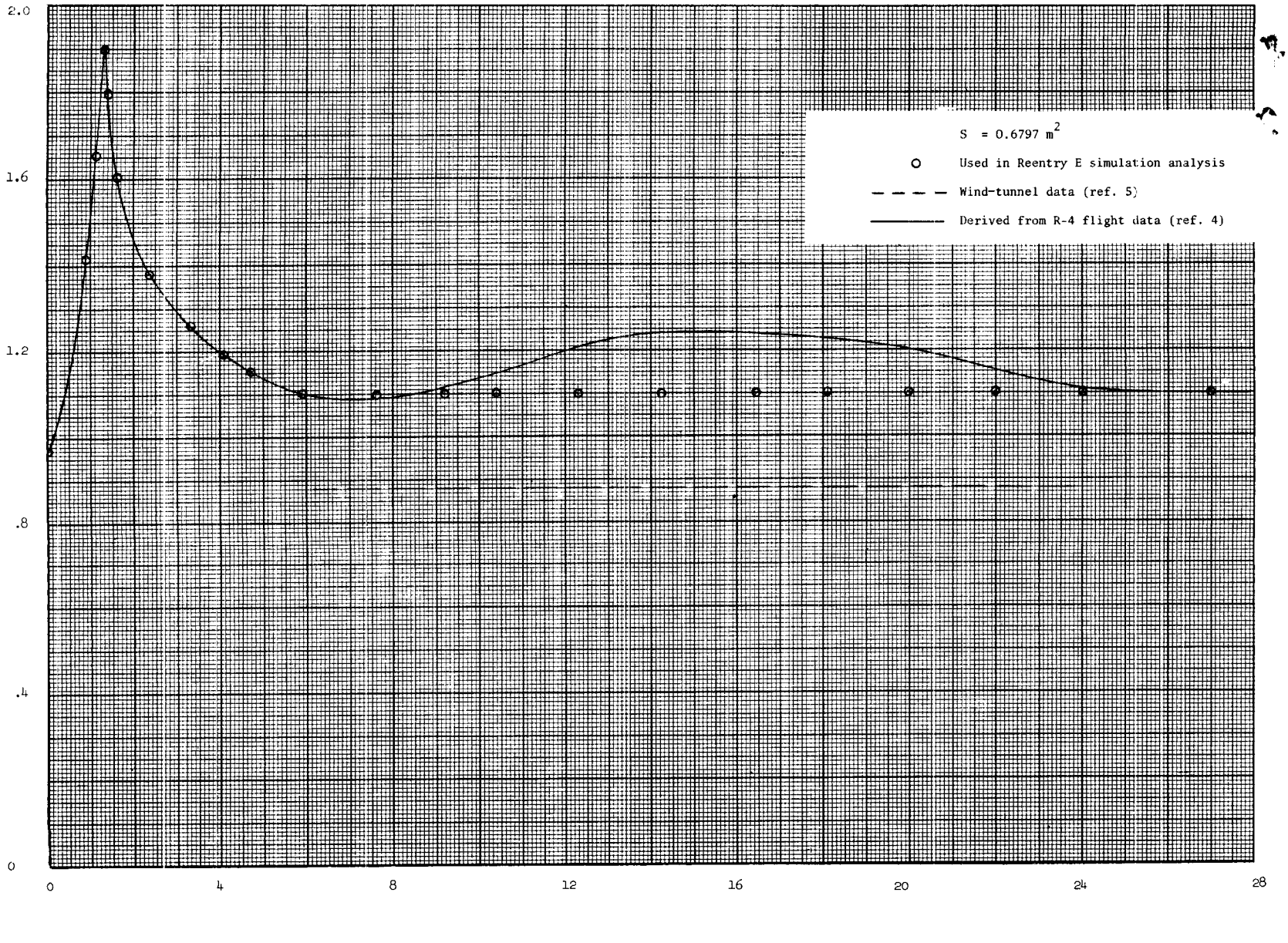
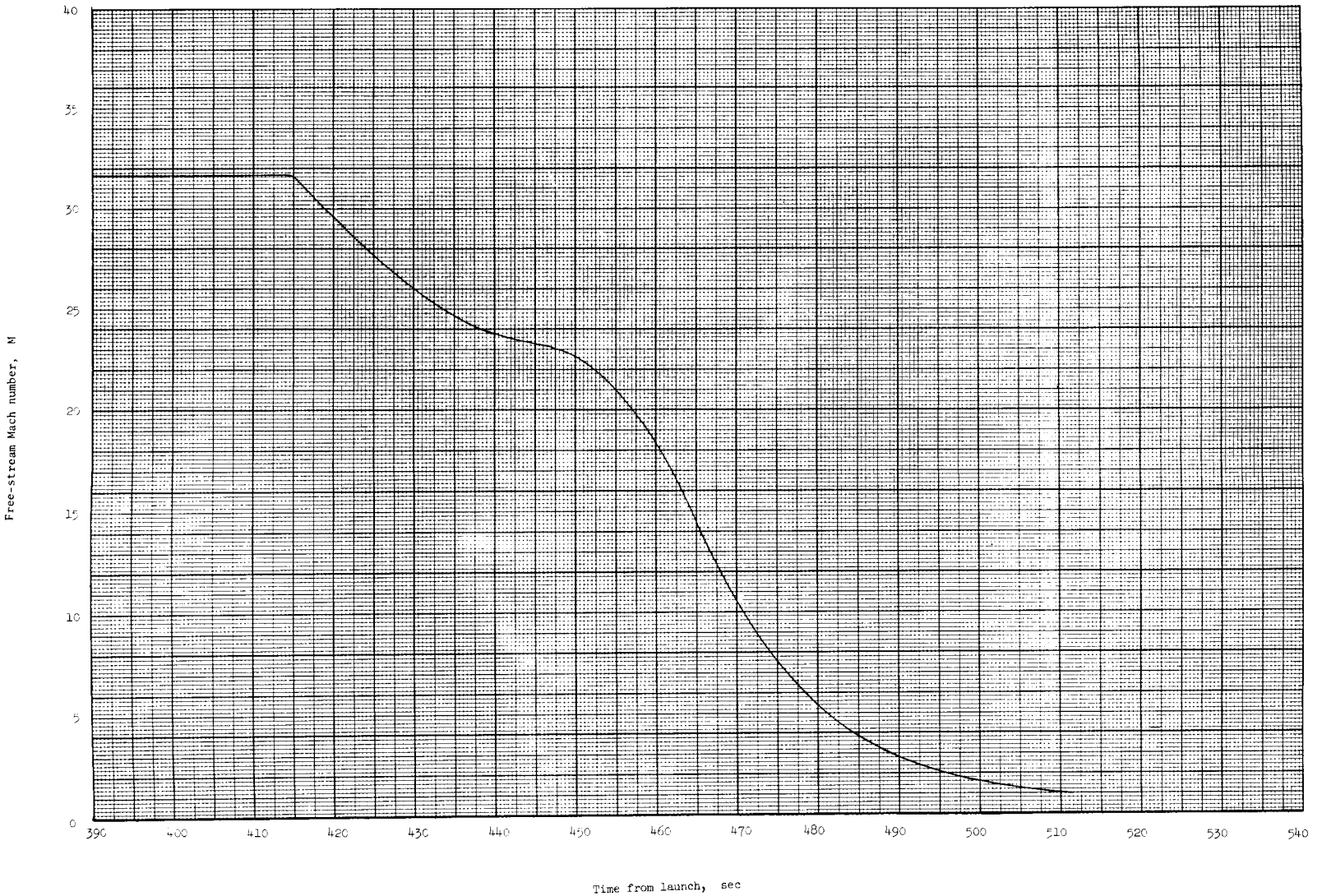


Figure 16.- Drag parameter C_DS plotted against free-stream Mach number.

[redacted]



[redacted]

Figure 17.- Free-stream Mach number history.

[redacted]

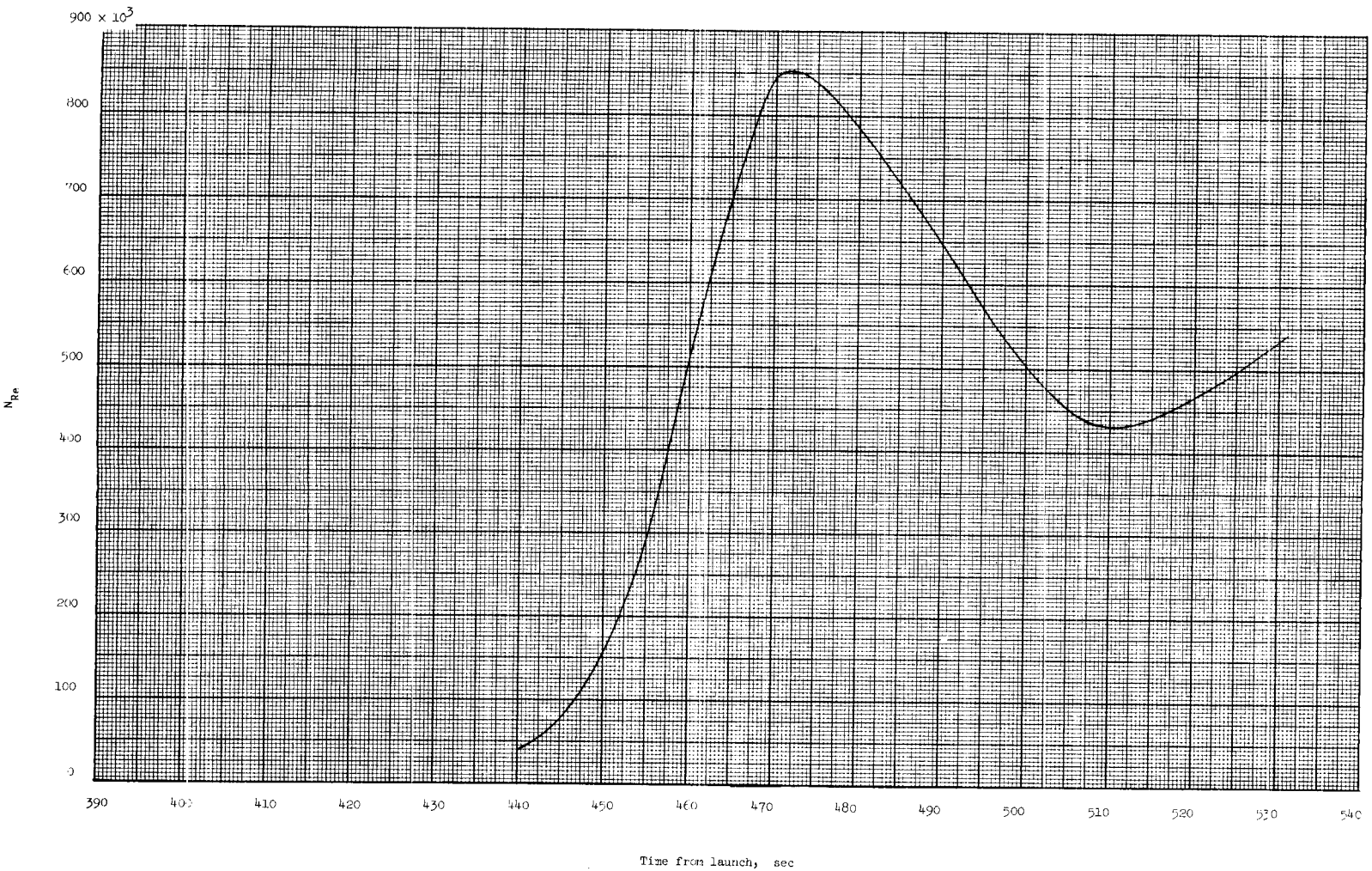


Figure 18.- Free-stream Reynolds number history.

[redacted]

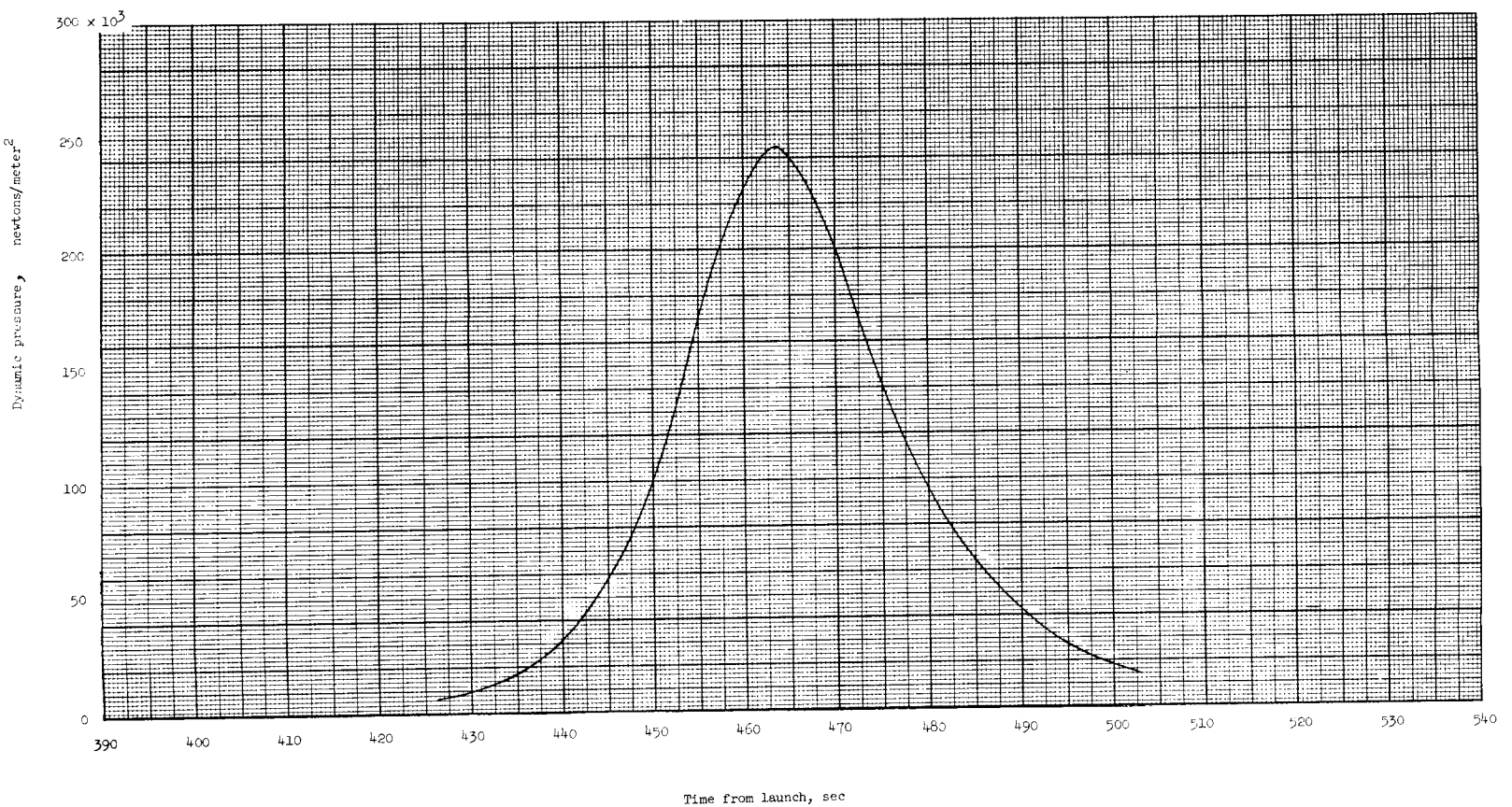


Figure 19.- Free-stream dynamic-pressure history.

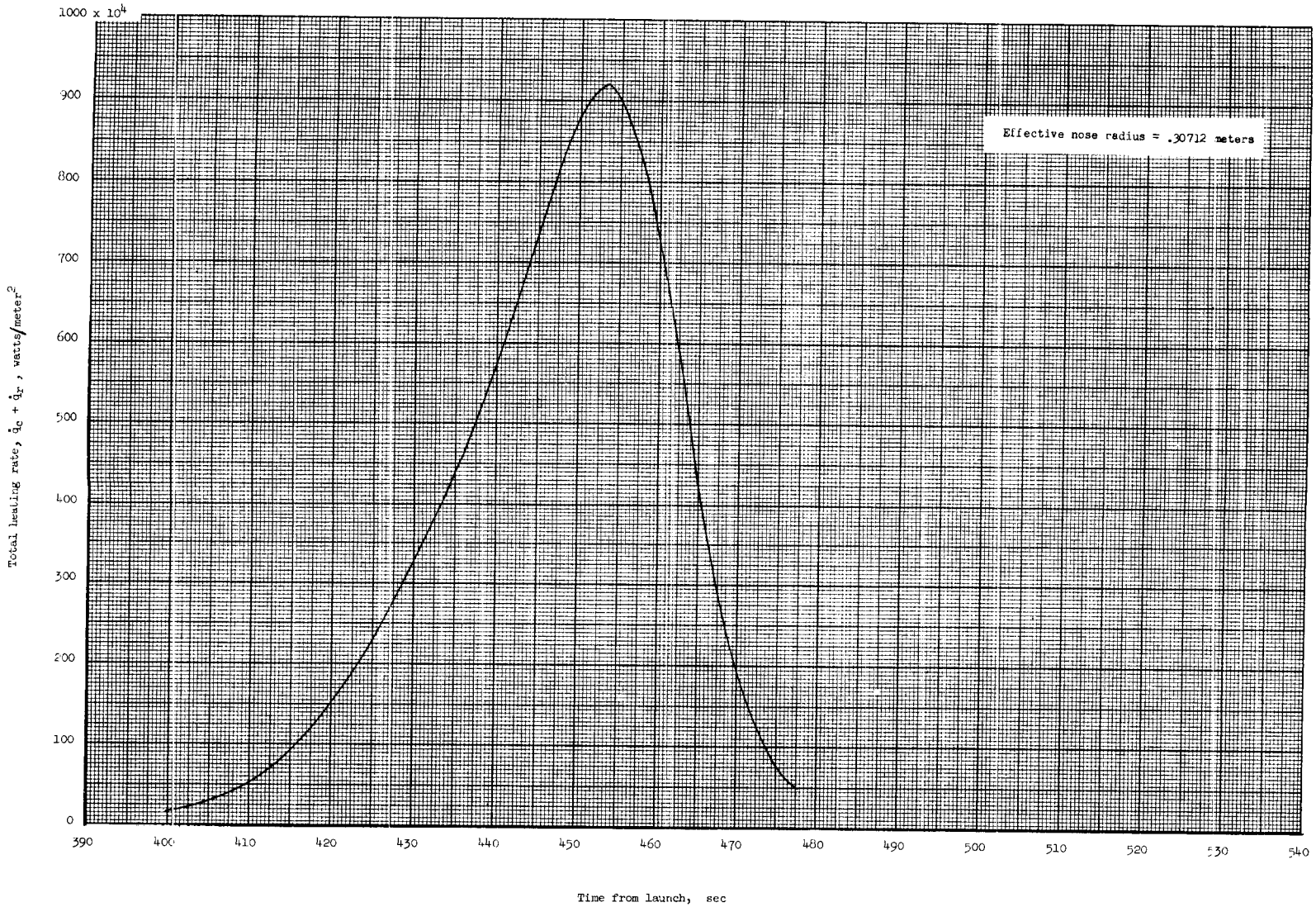


Figure 20.- Total stagnation-point heating-rate history.

[redacted]

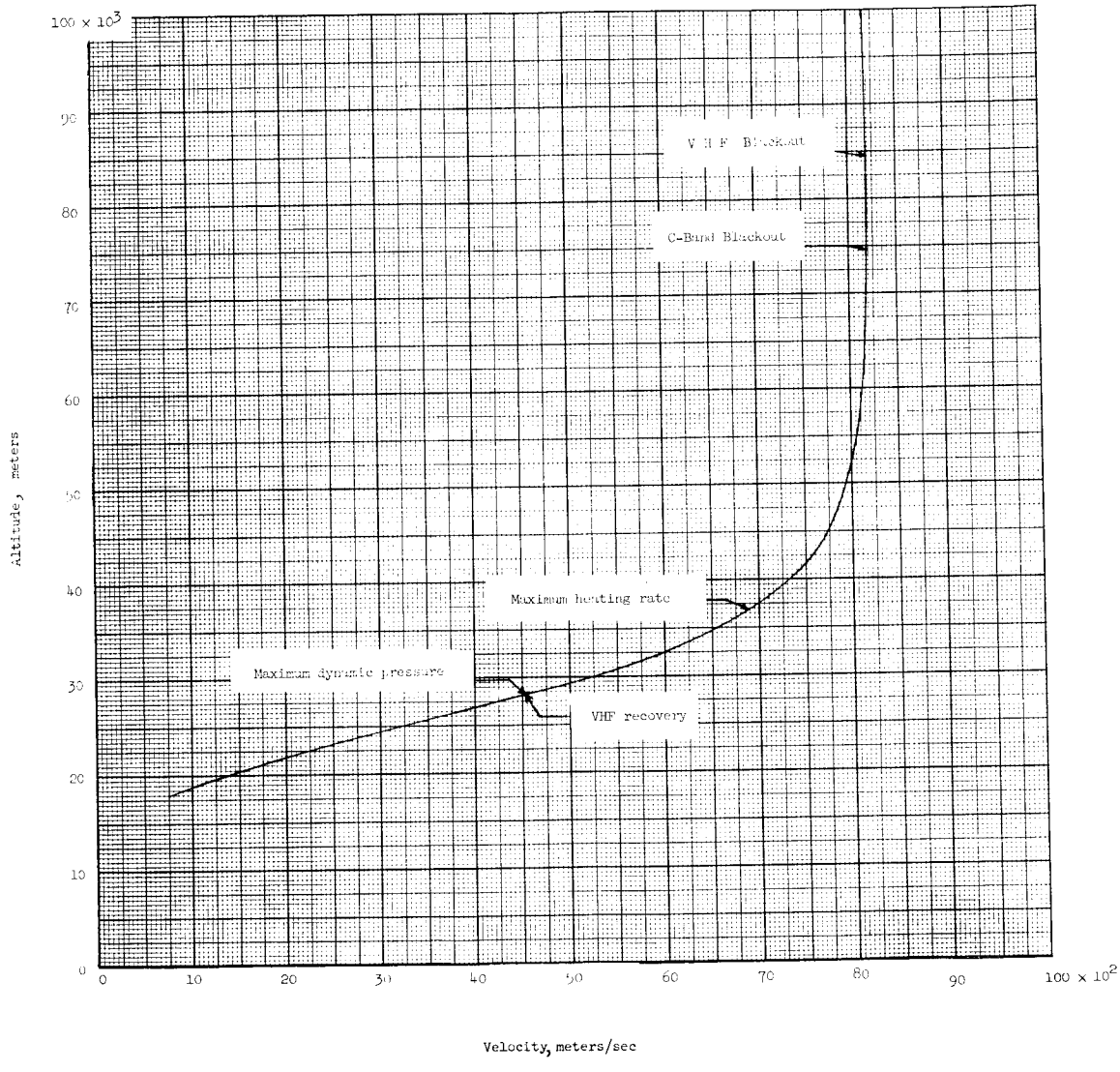
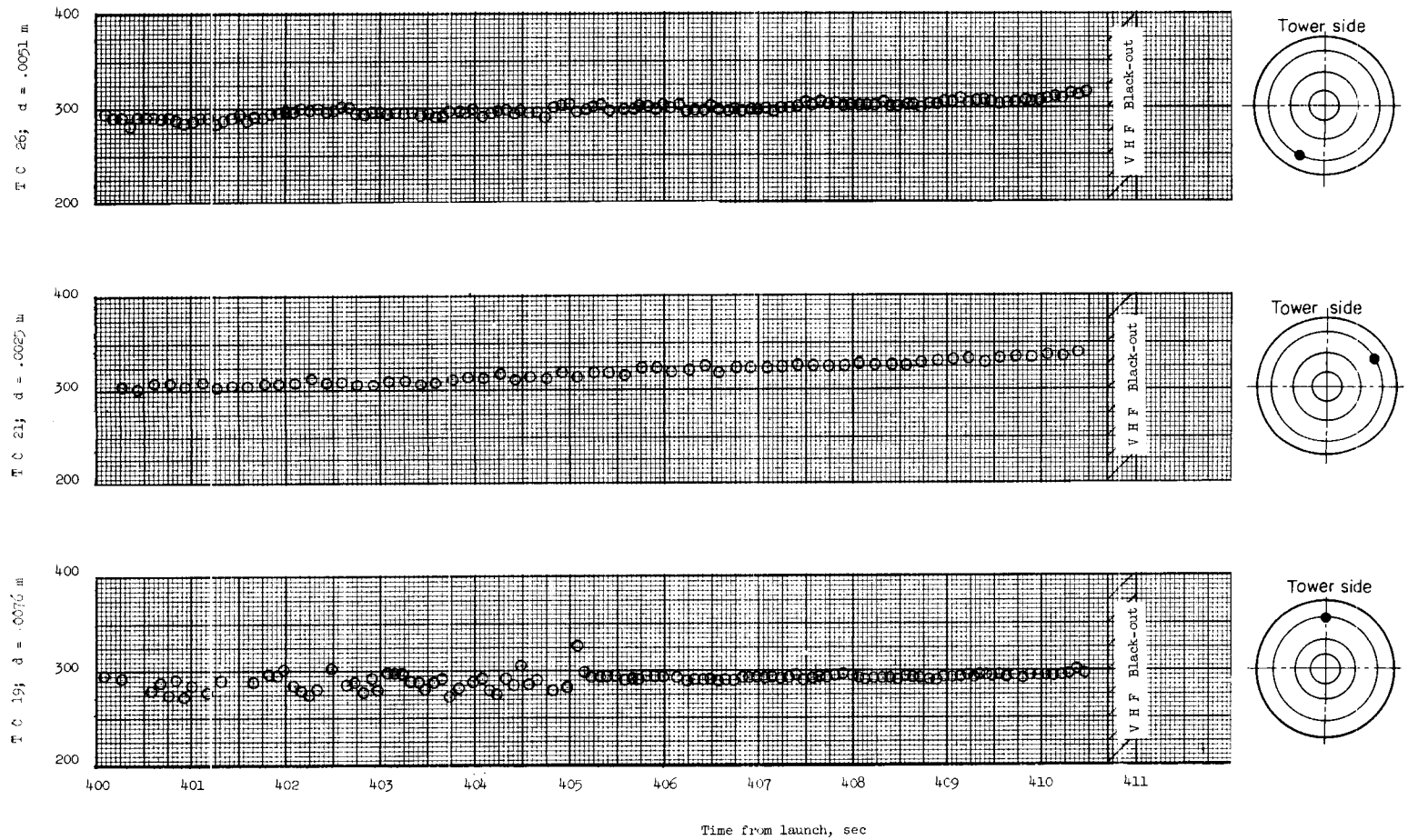


Figure 21.- Altitude as a function of relative velocity during entry.

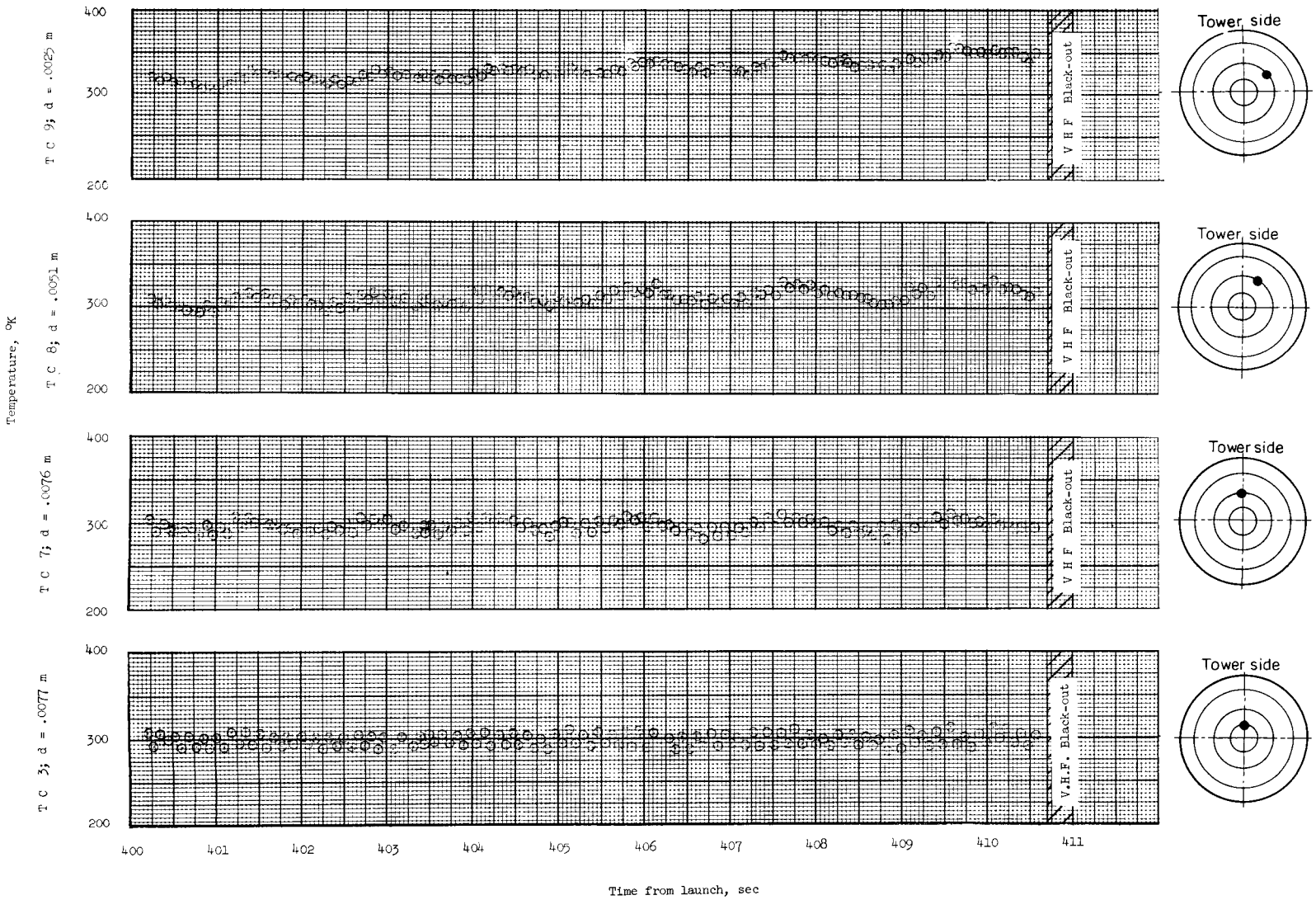
[redacted]



(a) Thermocouples 19, 21, and 26.

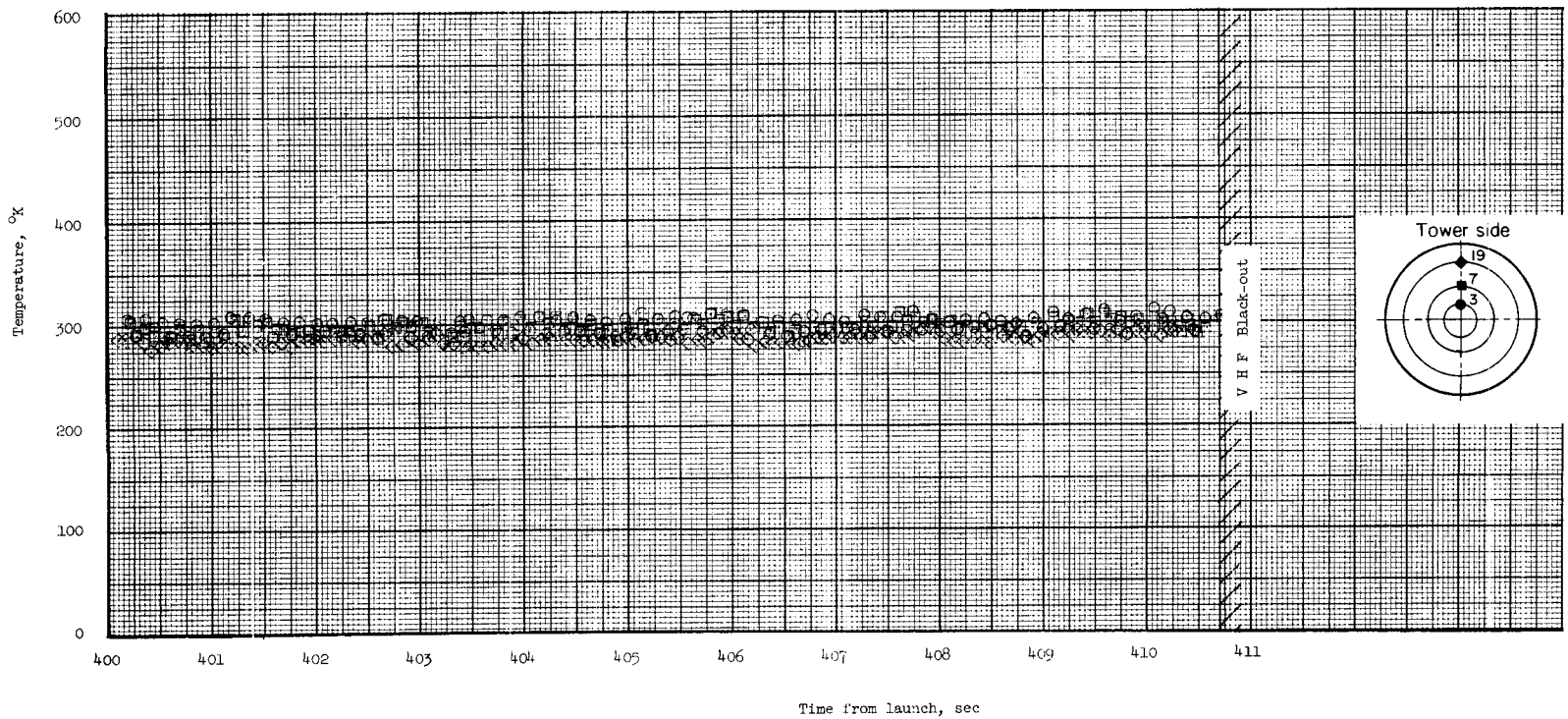
Figure 22.- Preblackout time history of nose-cap thermocouples which indicated off-scale readings upon emergence from blackout.

[redacted]



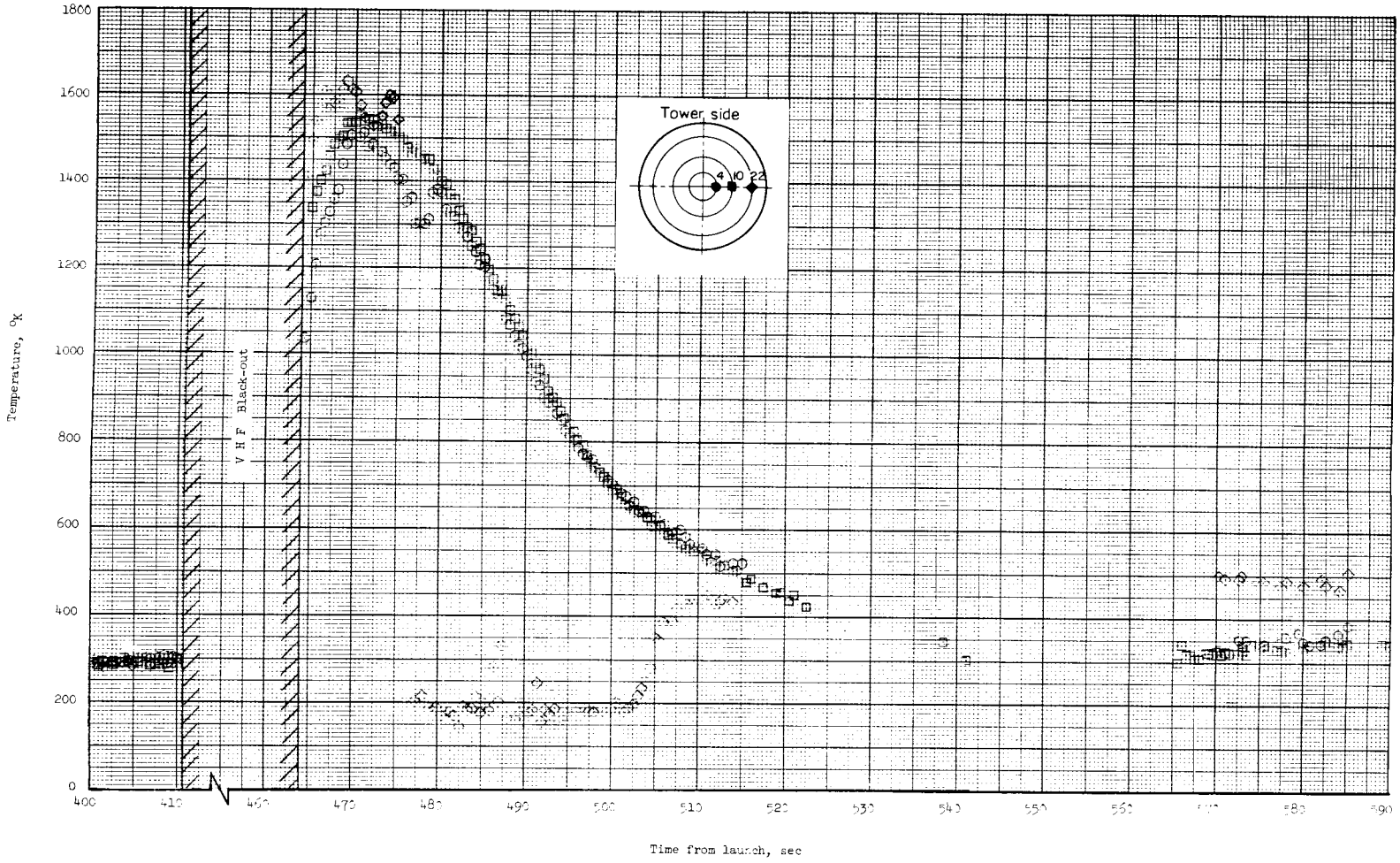
(b) Thermocouples 3, 7, 8, and 9.

Figure 22.- Concluded.



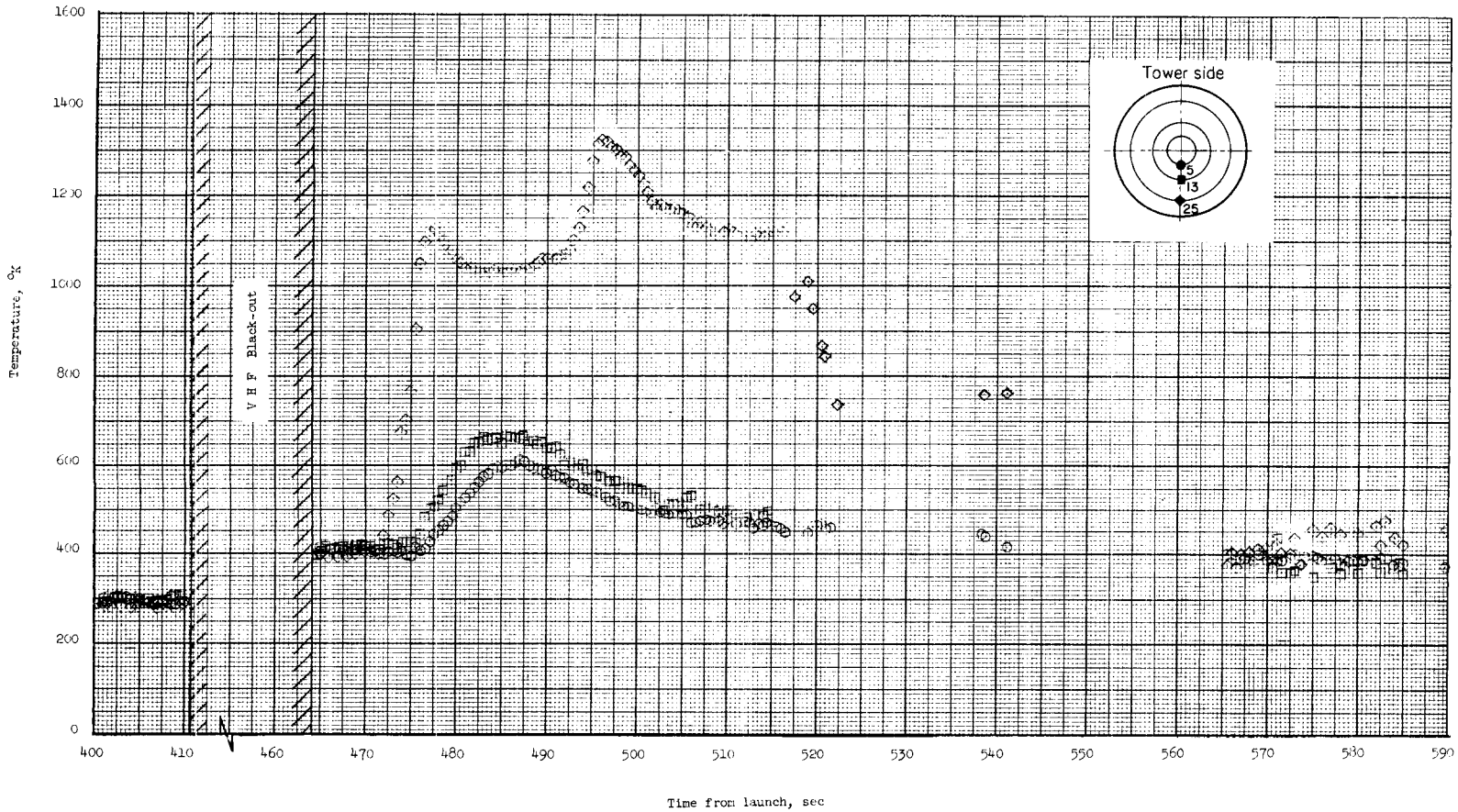
(a) Thermocouples 3, 7, and 19; d = 0.0077 m.

Figure 23.- Temperature histories of thermocouples at the same depth.



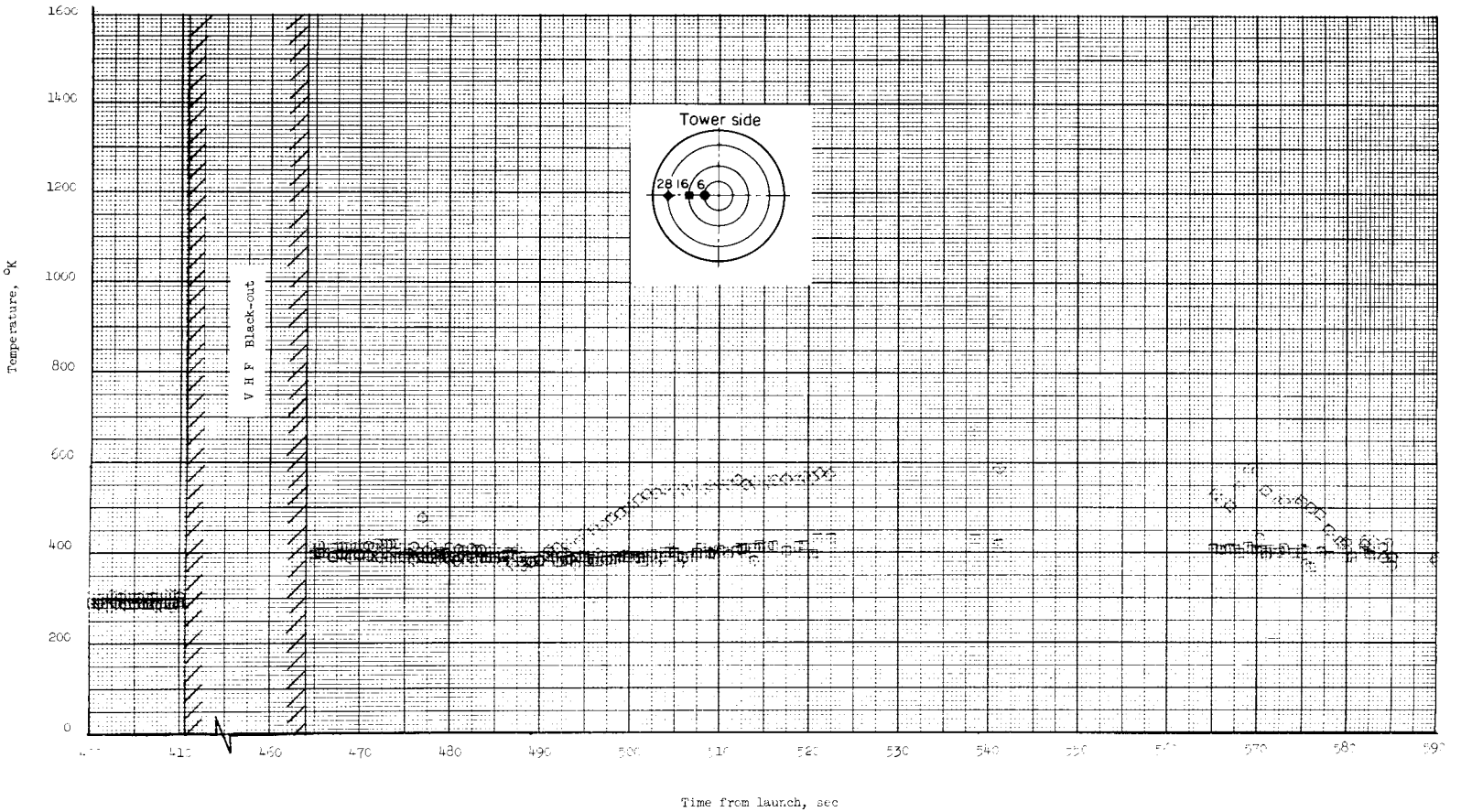
(b) Thermocouples 4, 10, and 22; d = 0.0102 m.

Figure 23.- Continued.



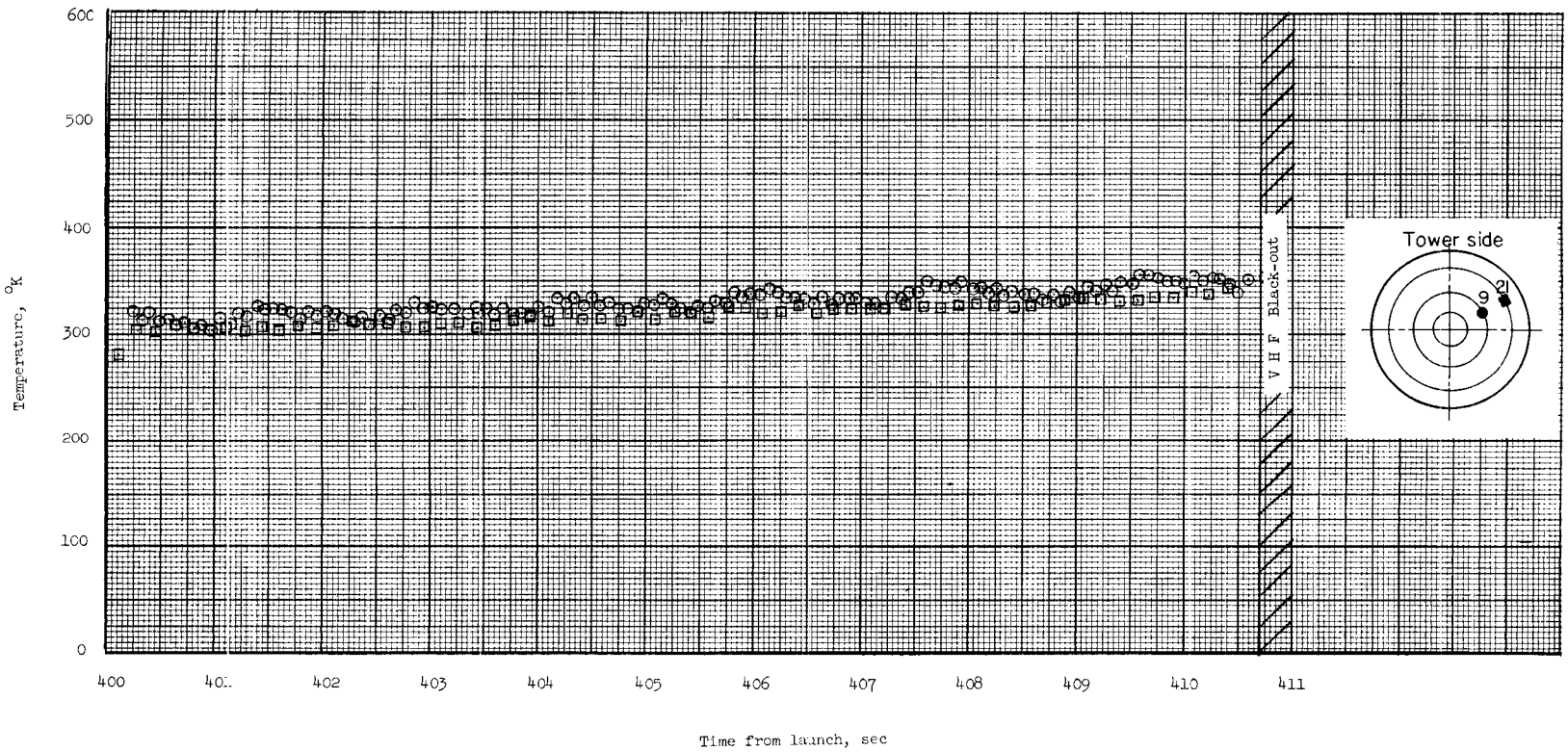
(c) Thermocouples 5, 13, and 25; d = 0.0128 m.

Figure 23.- Continued.



(d) Thermocouples 6, 16, and 28; d = 0.0153 m.

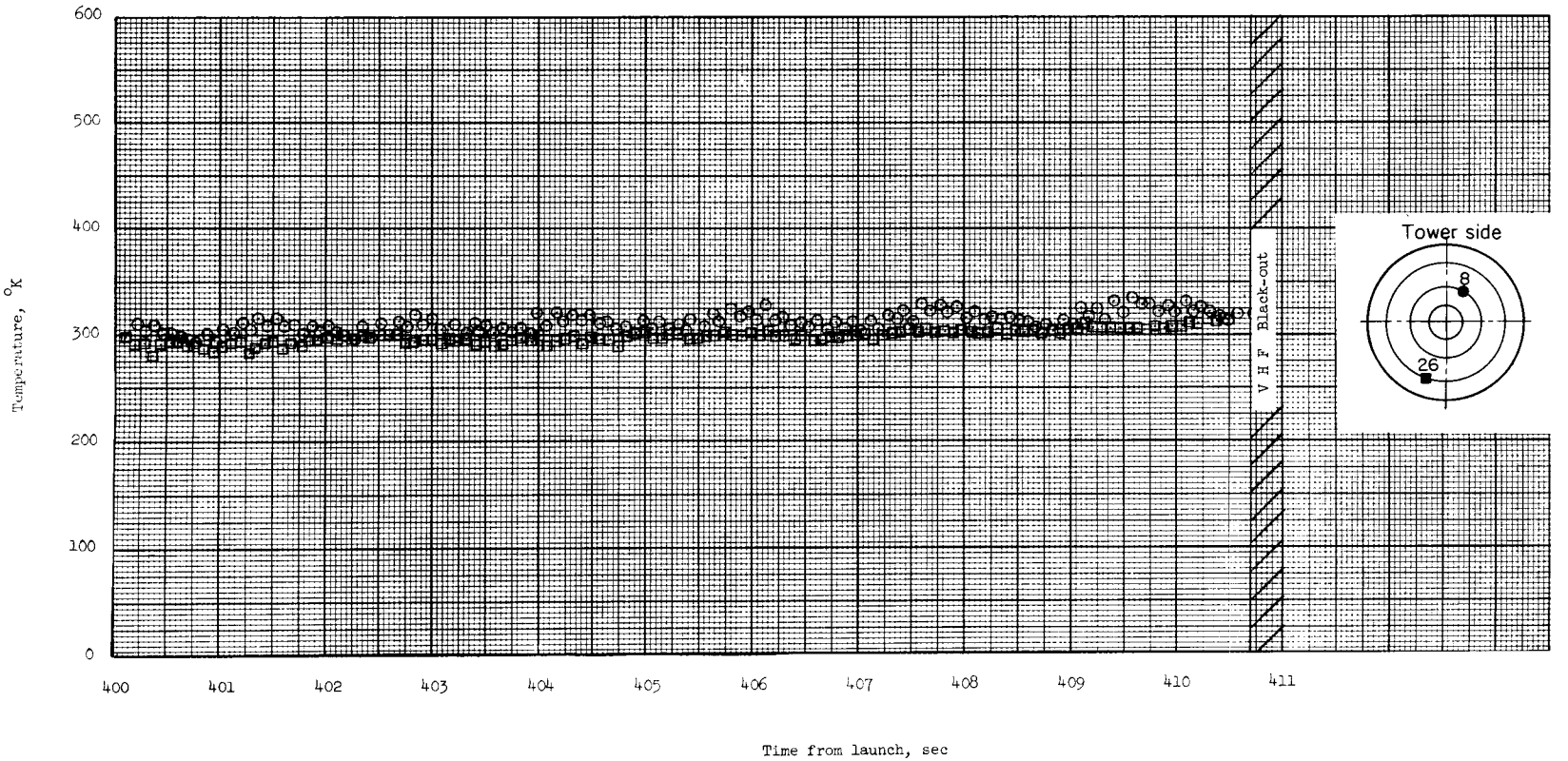
Figure 23.- Continued.



(e) Thermocouples 9 and 21; d = 0.0025 m.

Figure 23.- Continued.

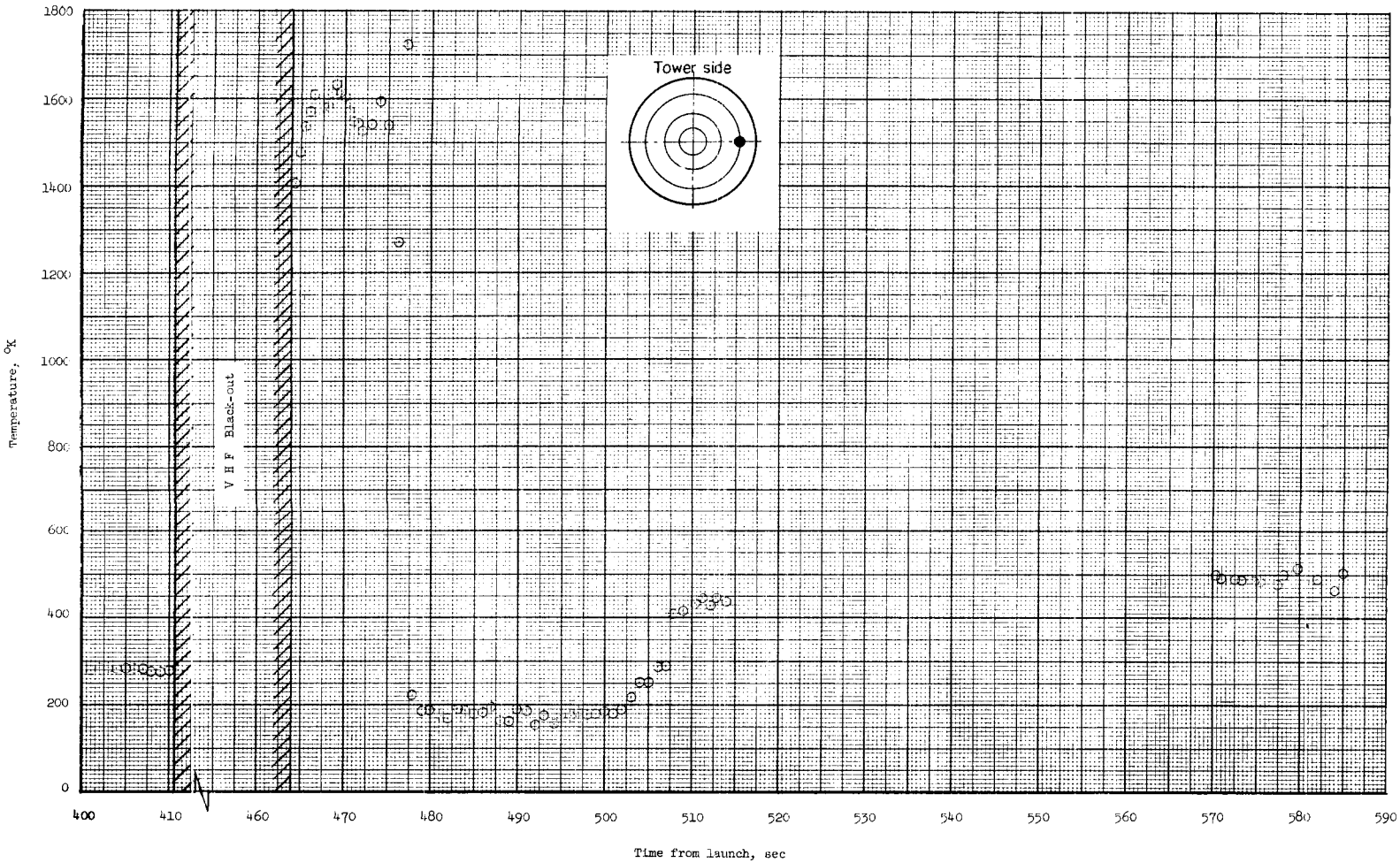
[redacted]



(f) Thermocouples 8 and 26; d = 0.0051 m.

Figure 23.- Concluded.

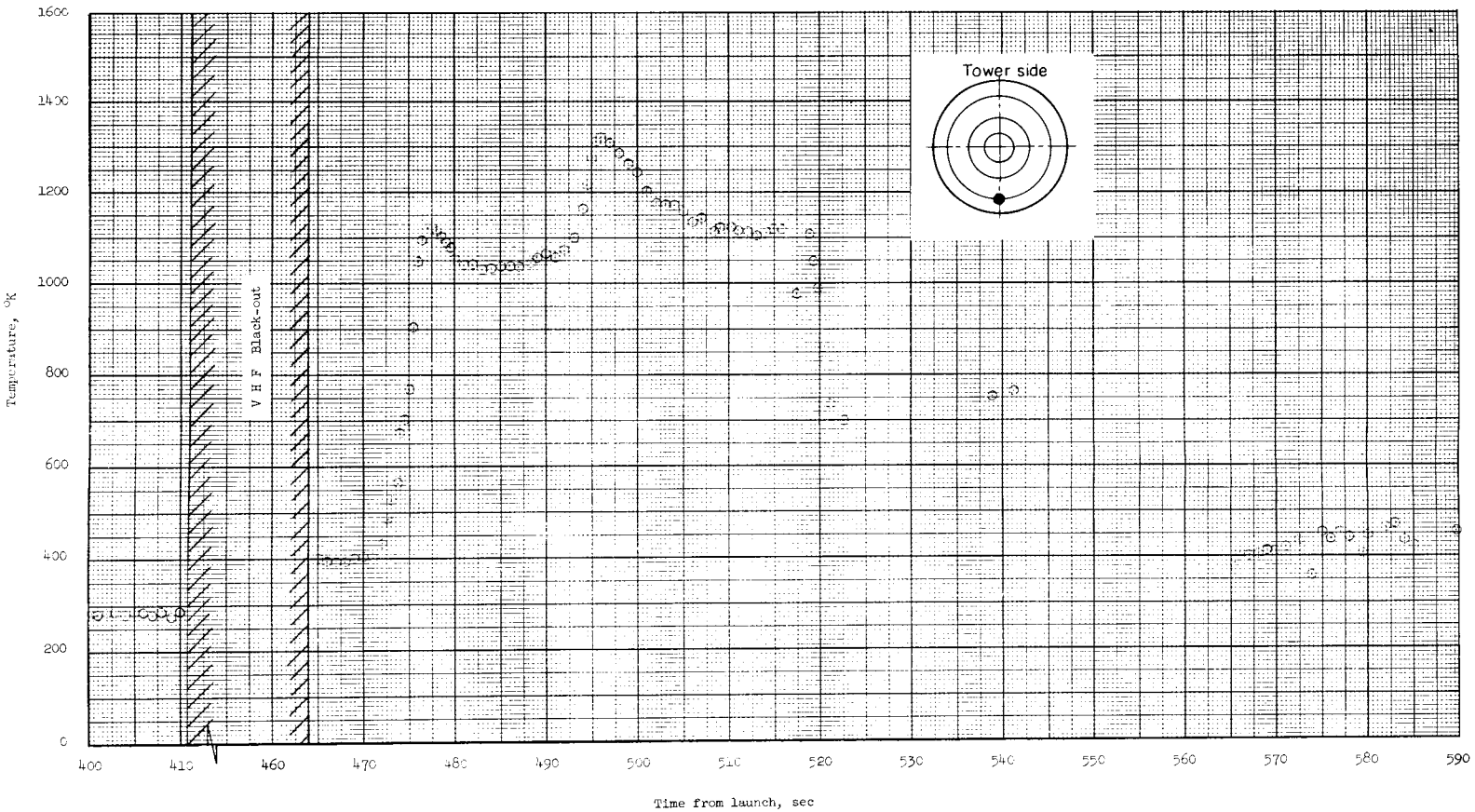
[redacted]



(a) Thermocouple 22; d = 0.0101 m.

Figure 24.- Temperature histories of nose-cap thermocouple on outer radius. s = 0.0895 m.

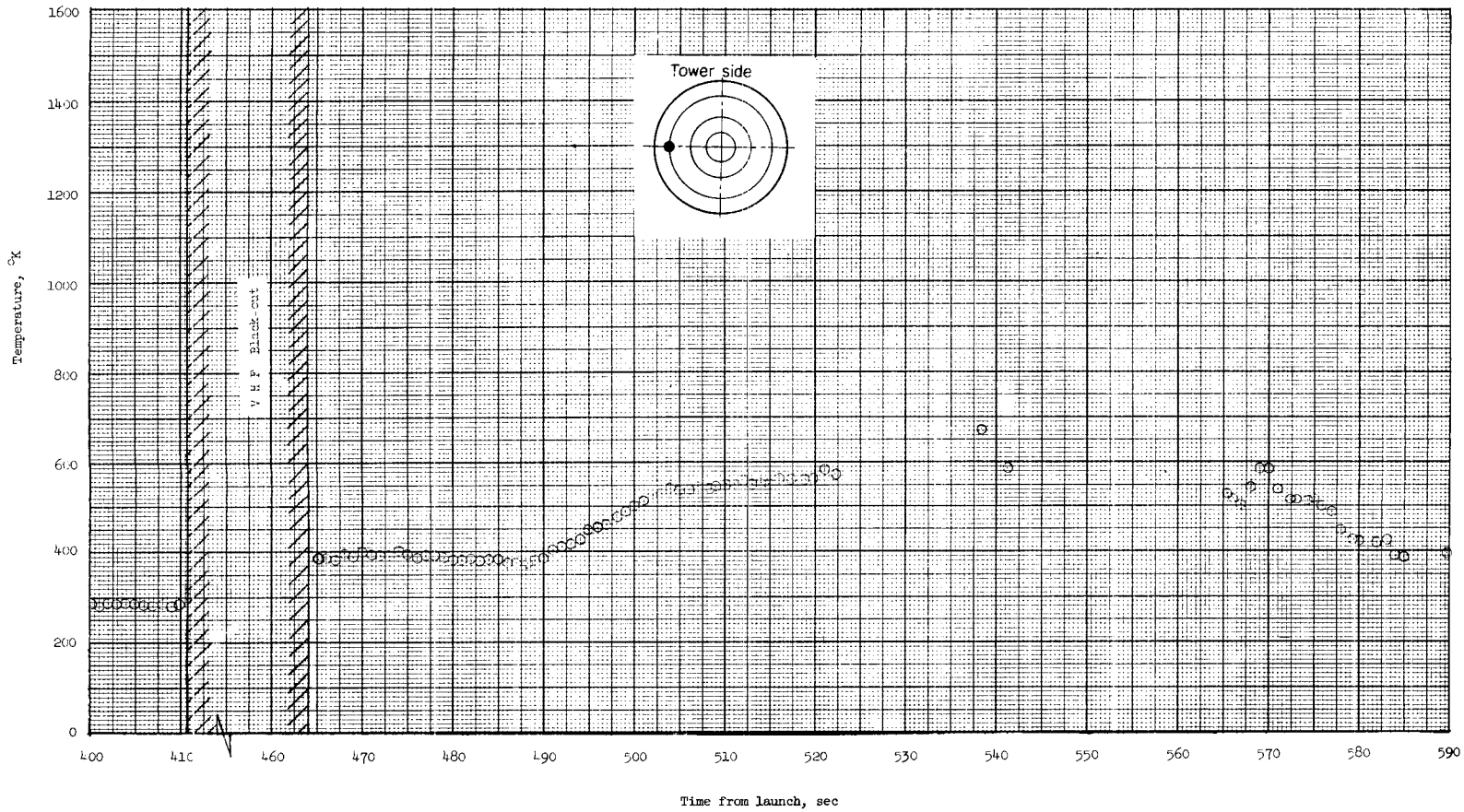
[redacted]



(b) Thermocouple 25; d = 0.0128 m.

Figure 24.- Continued.

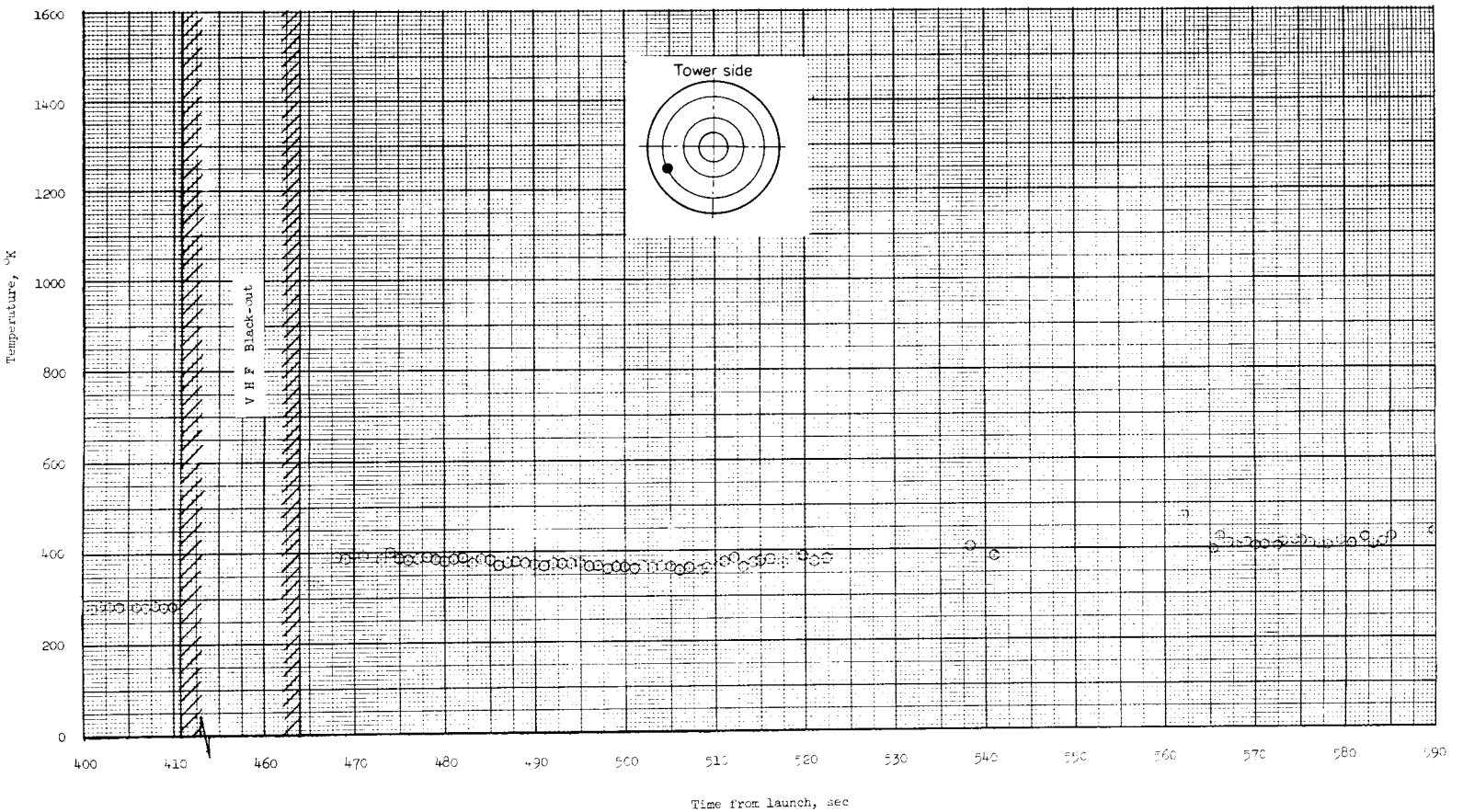
[redacted]



(c) Thermocouple 28; d = 0.0153 m.

Figure 24.- Continued.

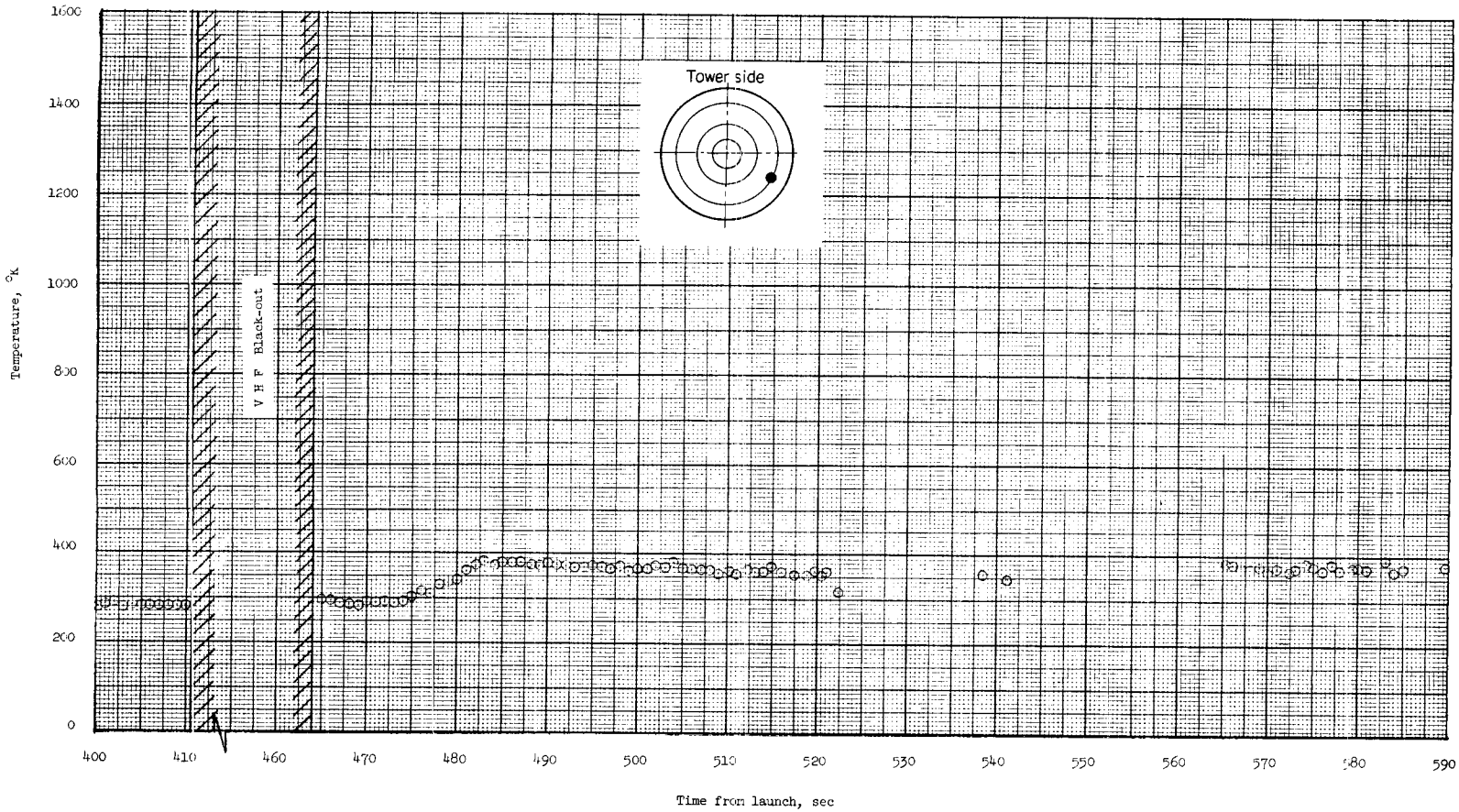
[redacted]



(d) Thermocouple 27; d = 0.0178 m.

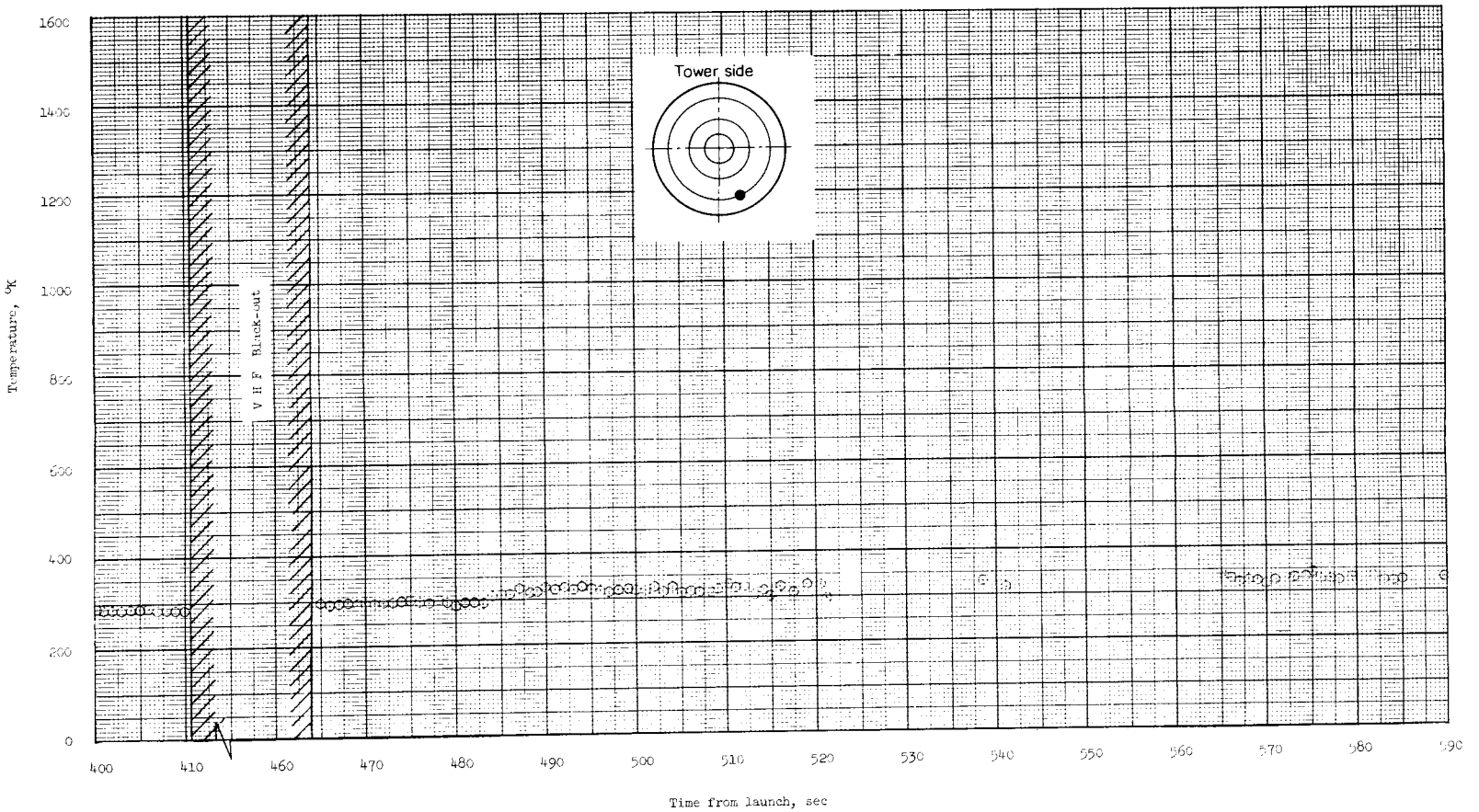
Figure 24.- Continued.

[redacted]



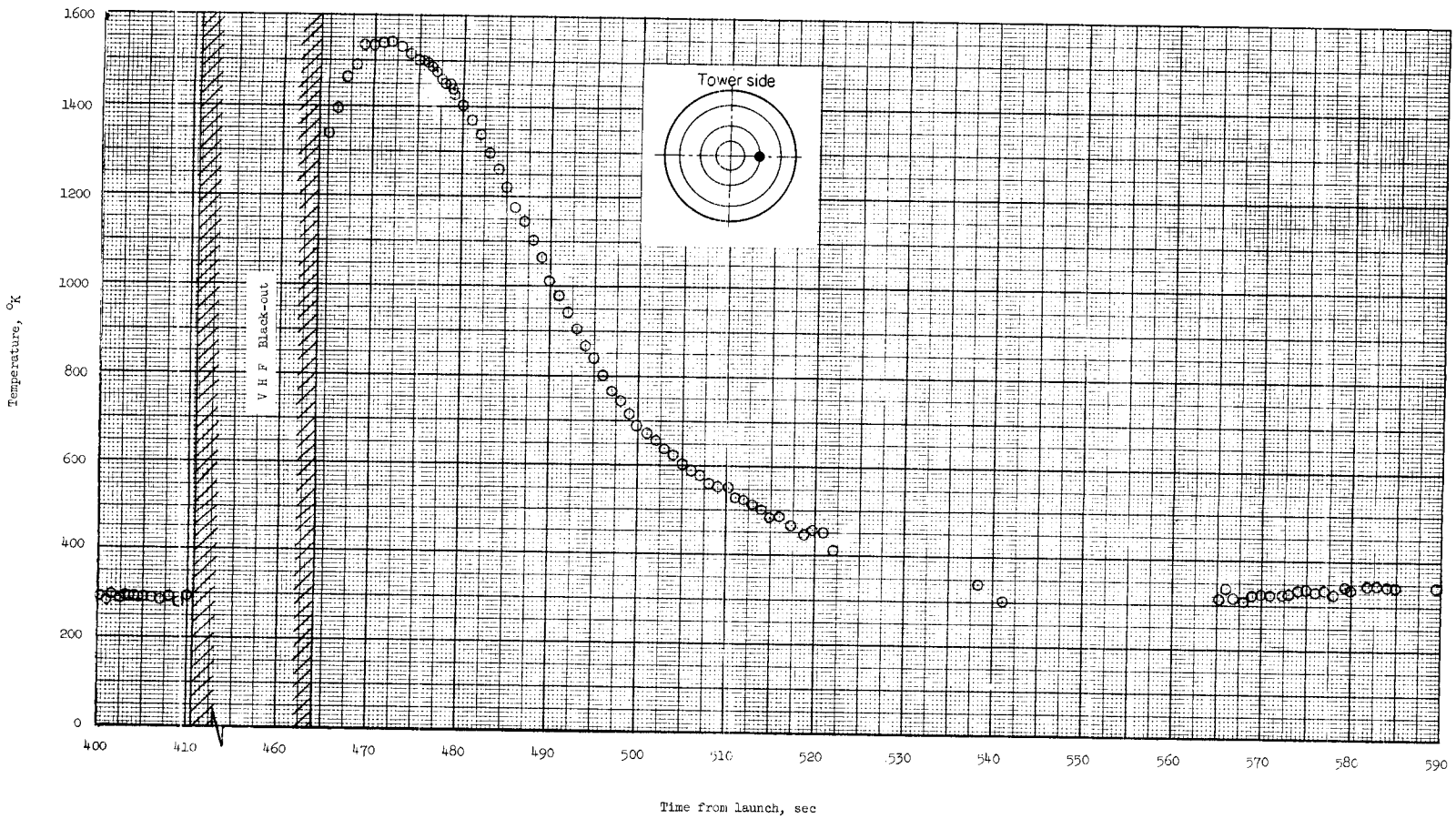
(e) Thermocouple 23; d = 0.0229 m.

Figure 24.- Continued.



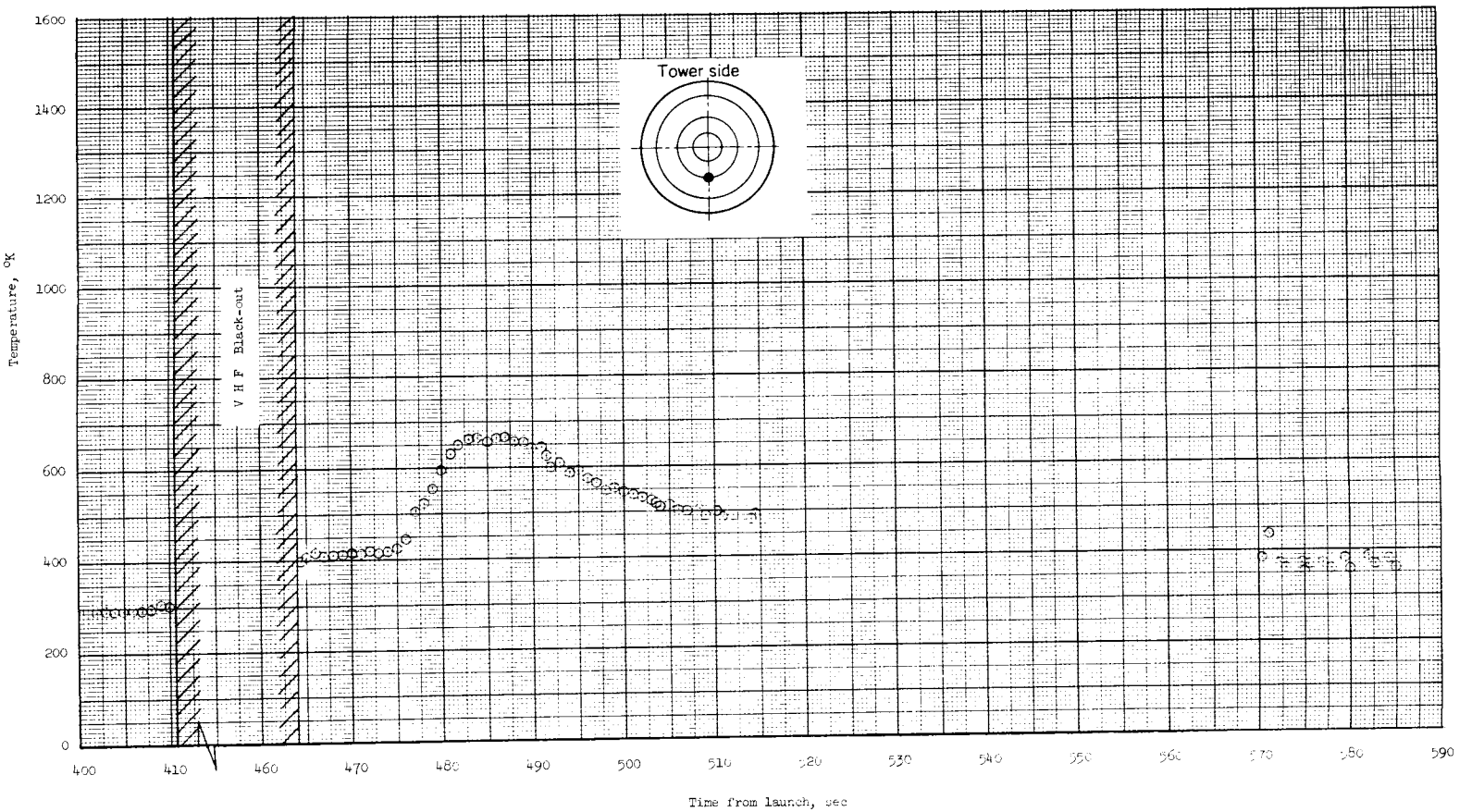
(f) Thermocouple 24; d = 0.0306 m.

Figure 24.- Concluded.



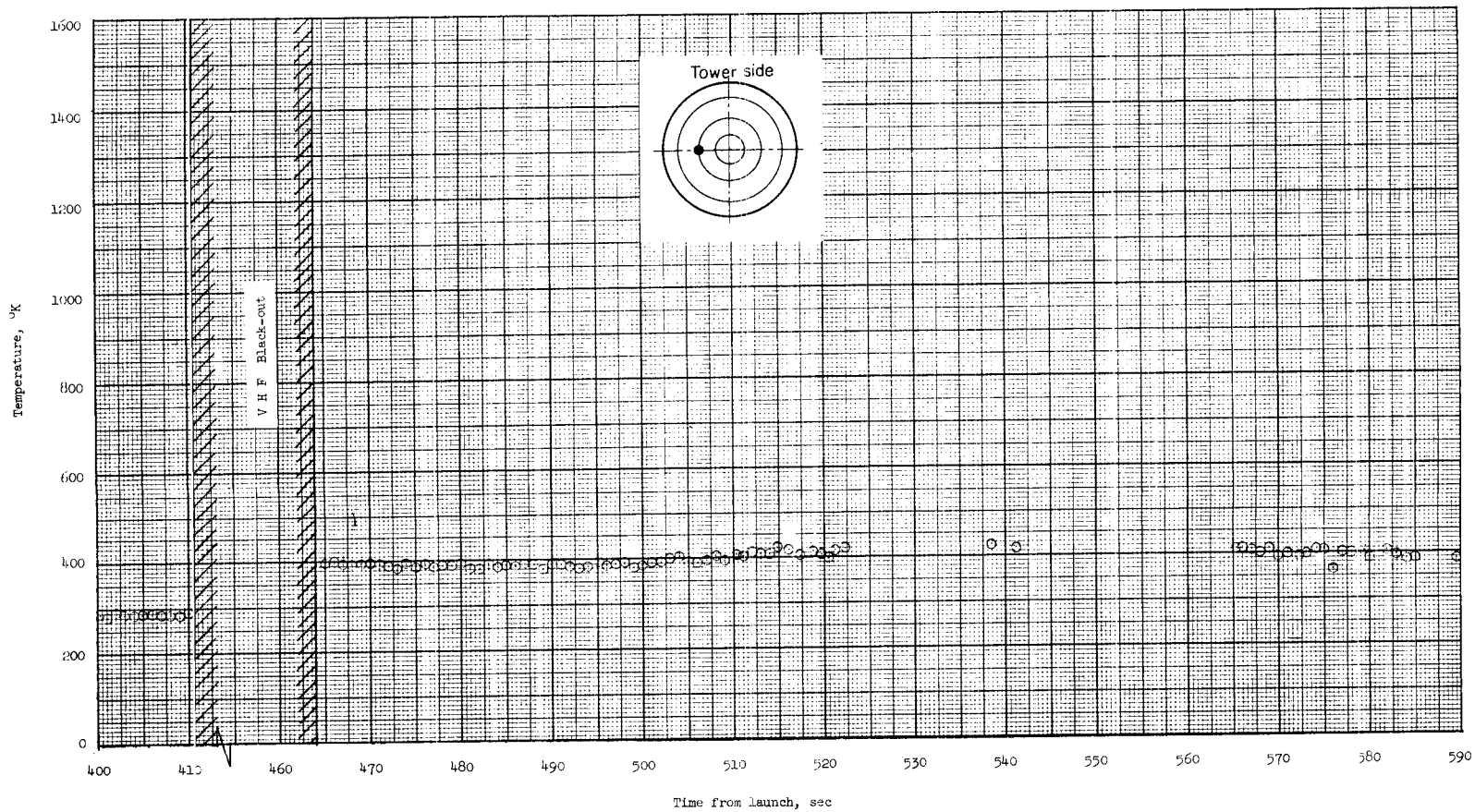
(a) Thermocouple 10; d = 0.0102 m.

Figure 25.- Temperature histories of nose-cap thermocouples on middle radius. s = 0.0573 m.



(b) Thermocouple 13; d = 0.0127 m.

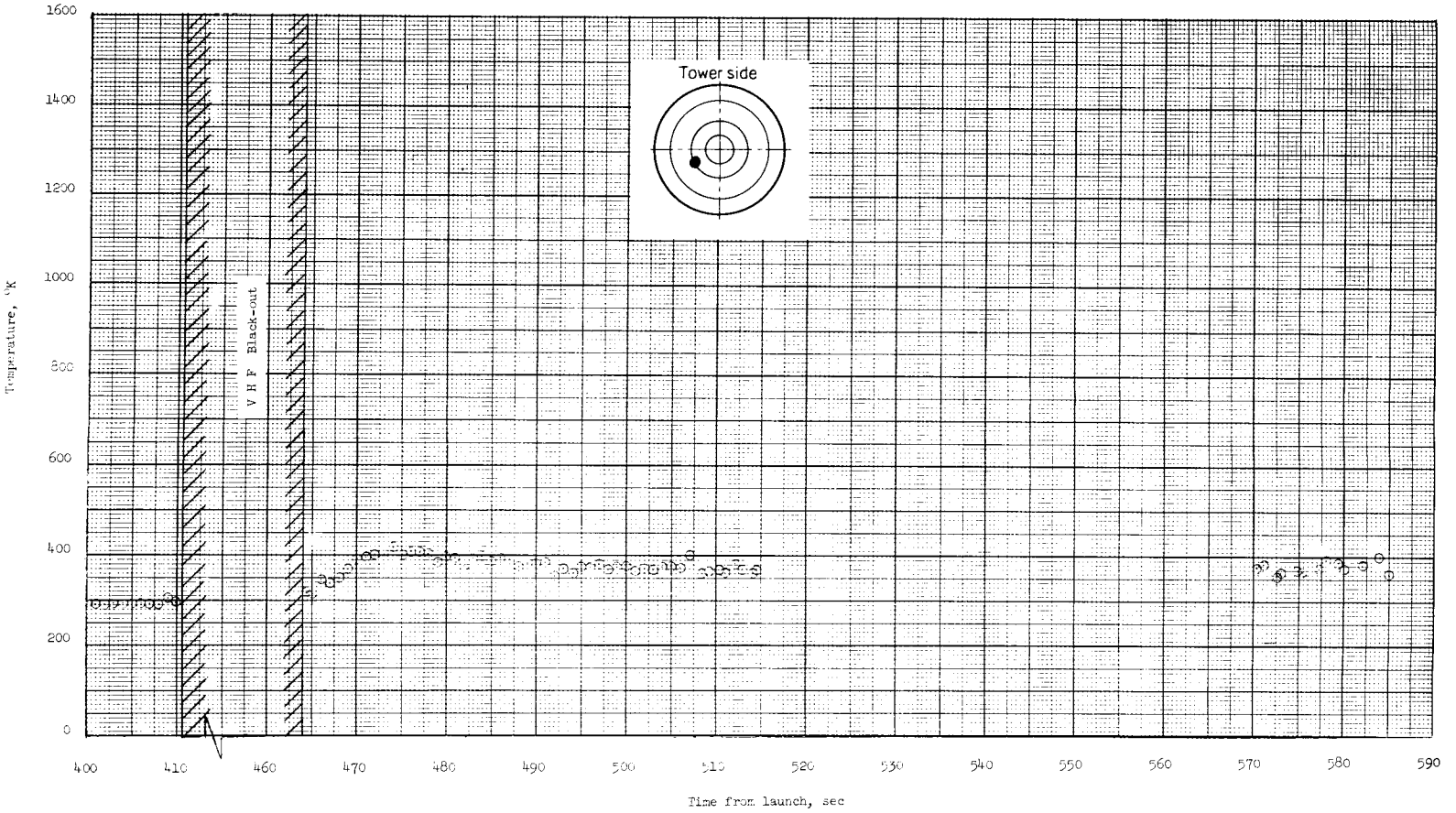
Figure 25.- Continued.



(c) Thermocouple 16; d = 0.0153 m.

Figure 25.- Continued.

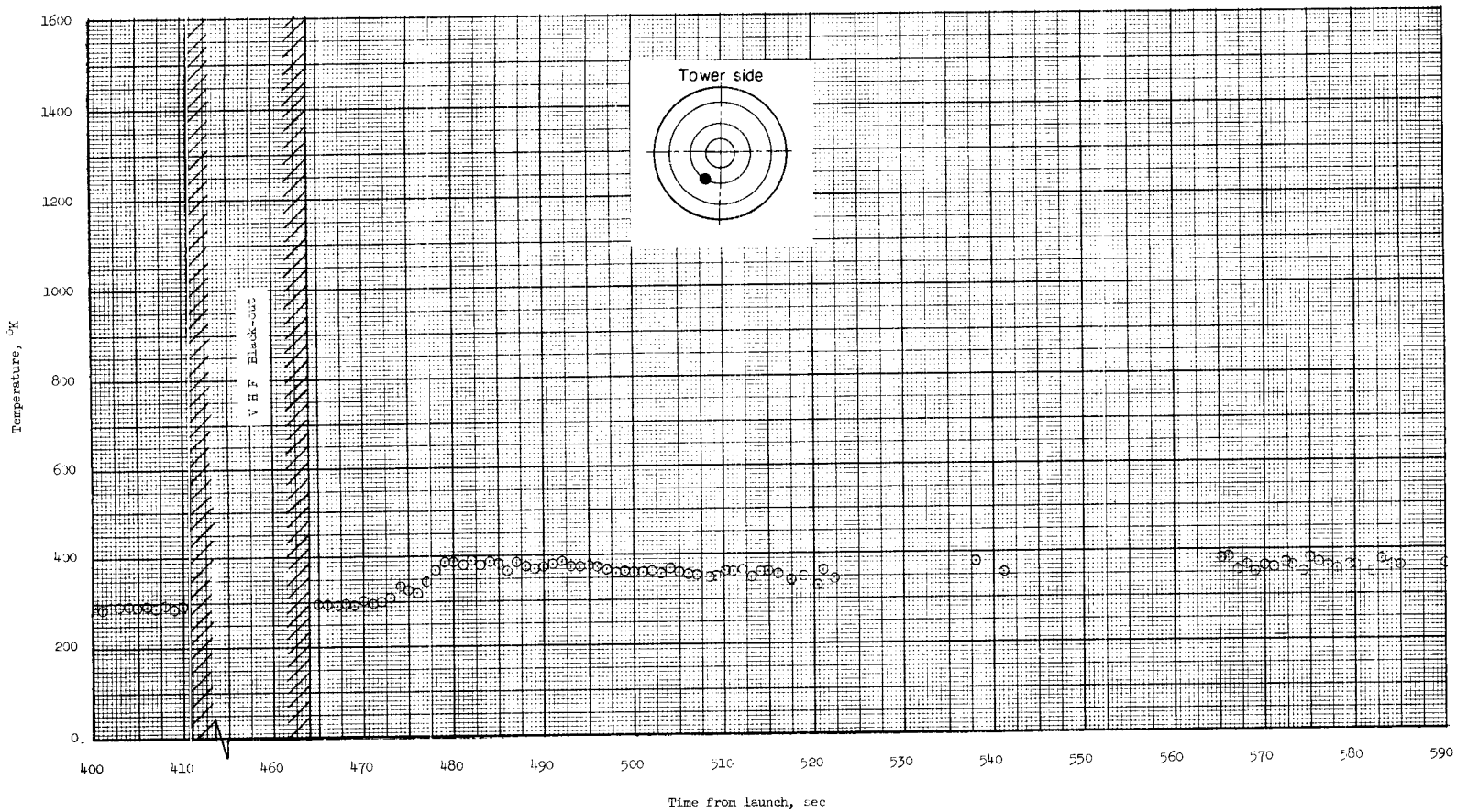
[redacted]



(d) Thermocouple15; d = 0.0178 m.

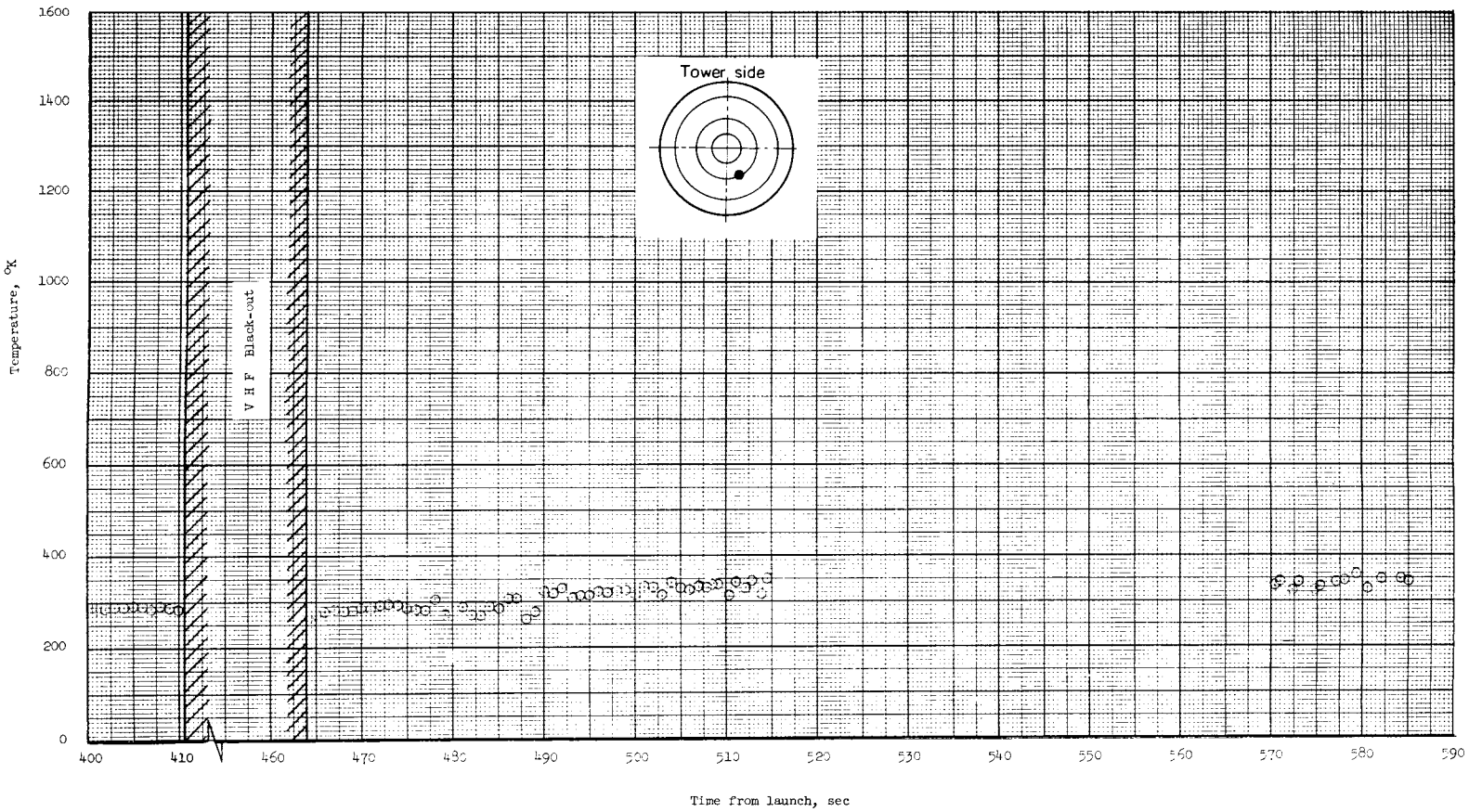
Figure 25.- Continued.

[redacted]



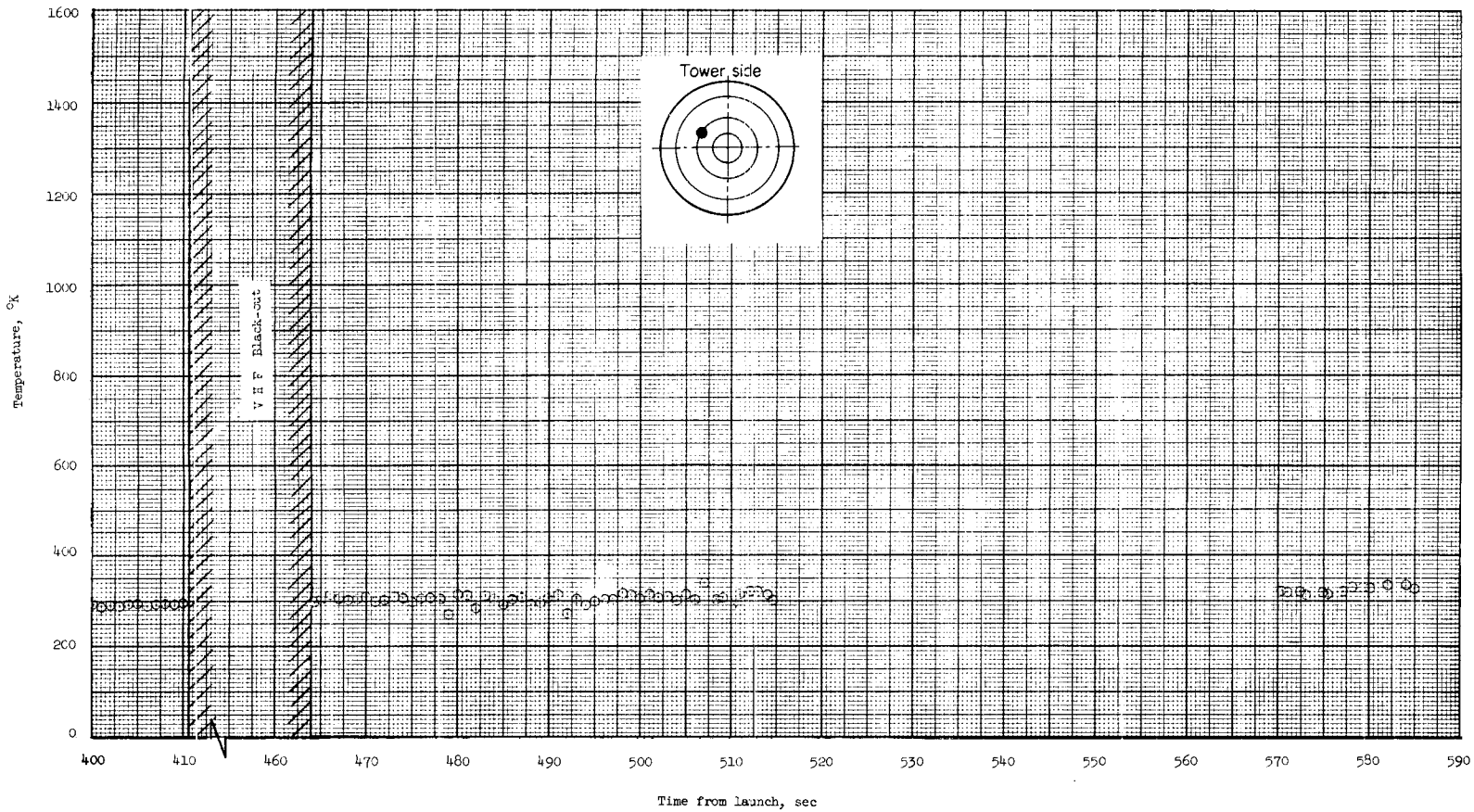
(e) Thermocouple 14; d = 0.0203 m.

Figure 25.- Continued.



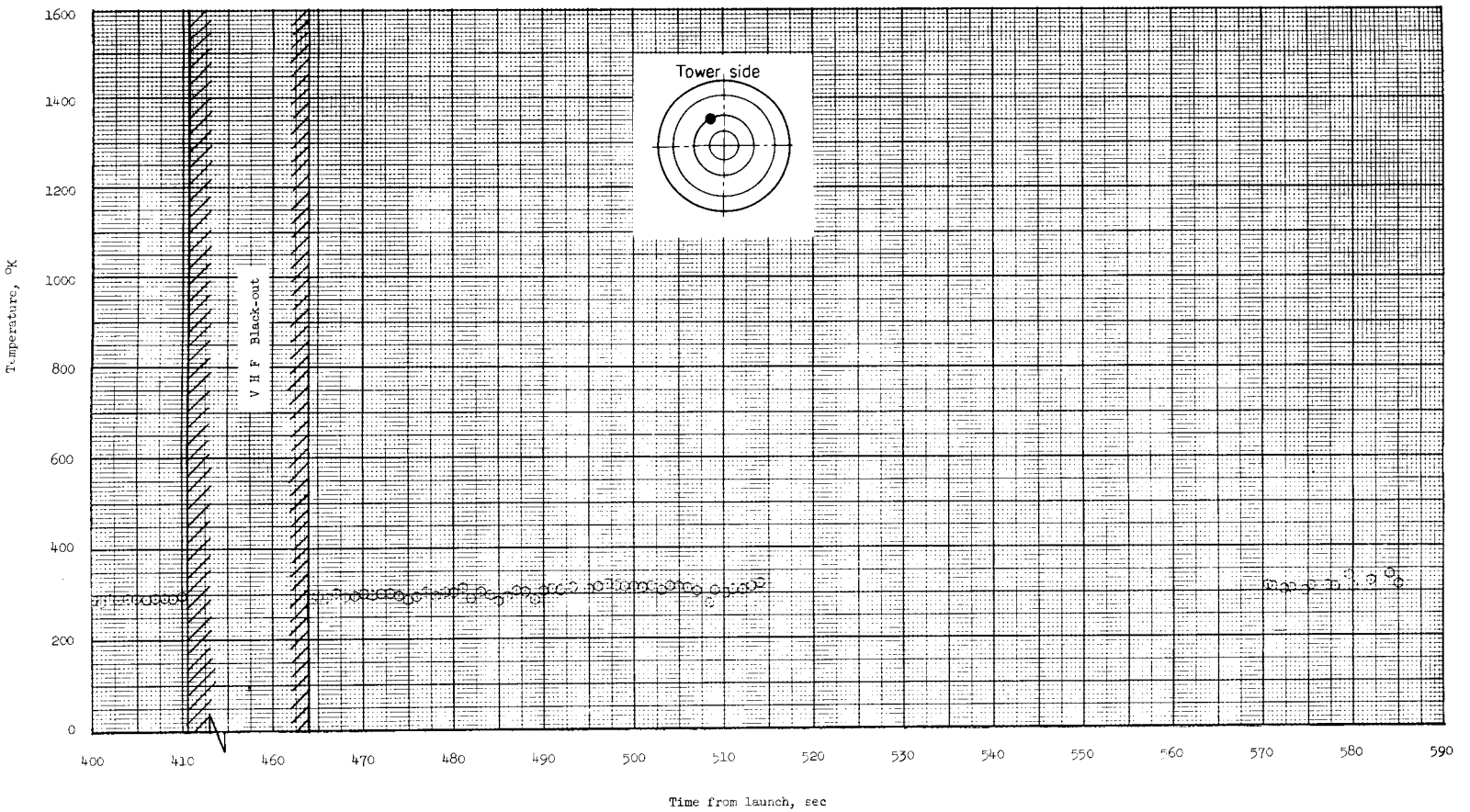
(f) Thermocouple 12; d = 0.0255 m.

Figure 25.- Continued.



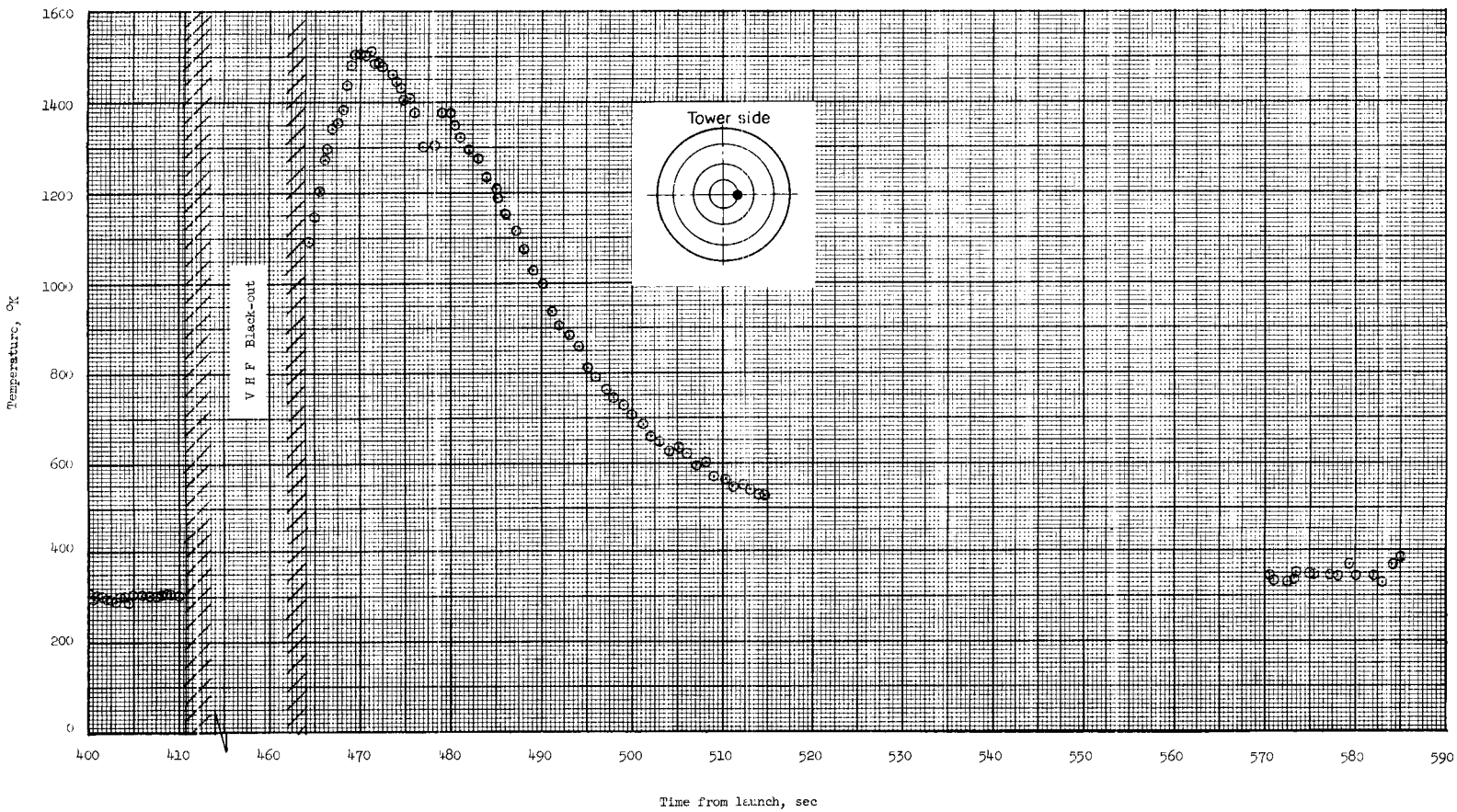
(g) Thermocouple 17; d = 0.0280 m.

Figure 25.- Continued.



(h) Thermocouple 18; d = 0.0306 m.

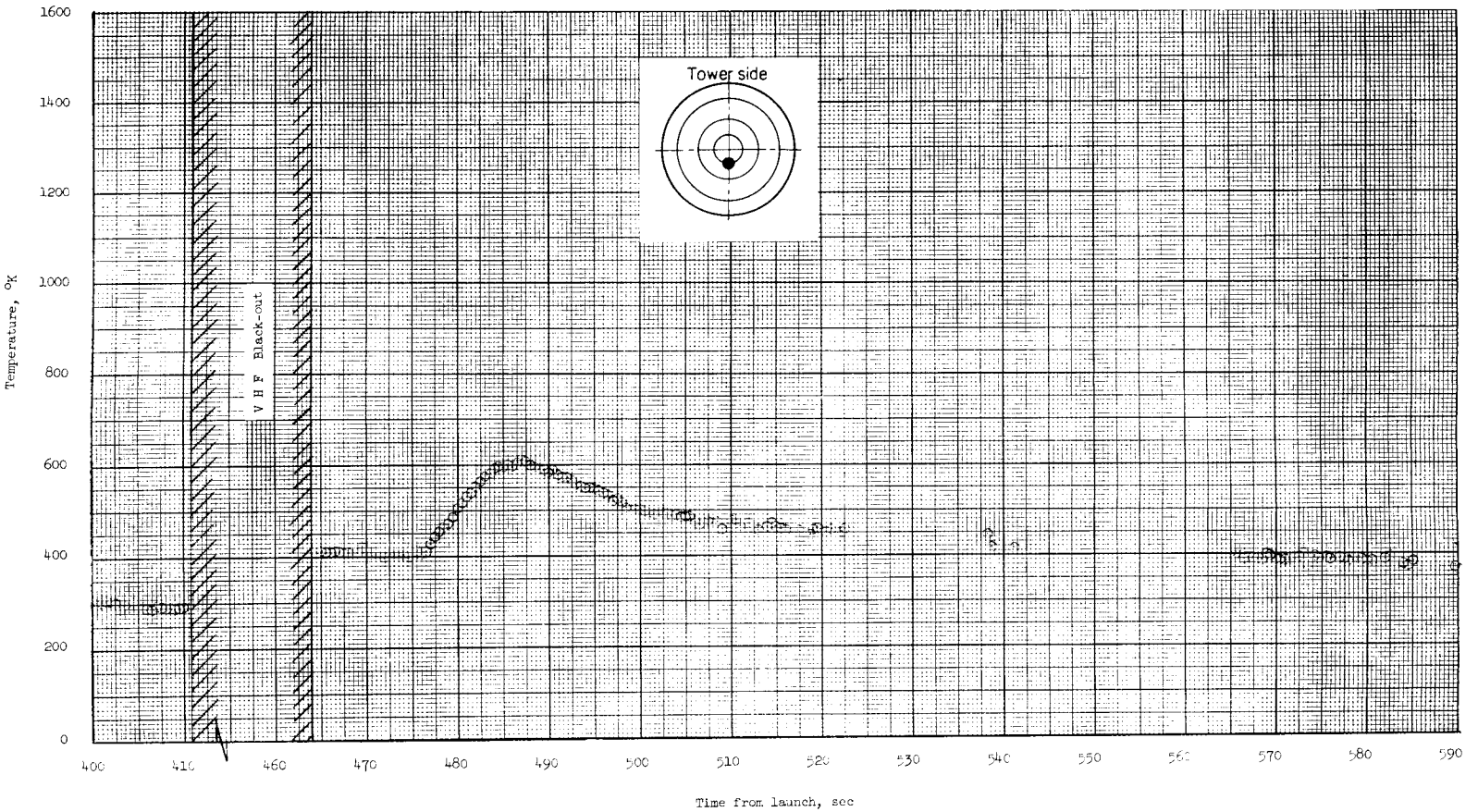
Figure 25.- Concluded.



(a) Thermocouple 4; d = 0.0102 m.

Figure 26.- Temperature histories of nose-cap thermocouples on inner radius. s = 0.0254 m.

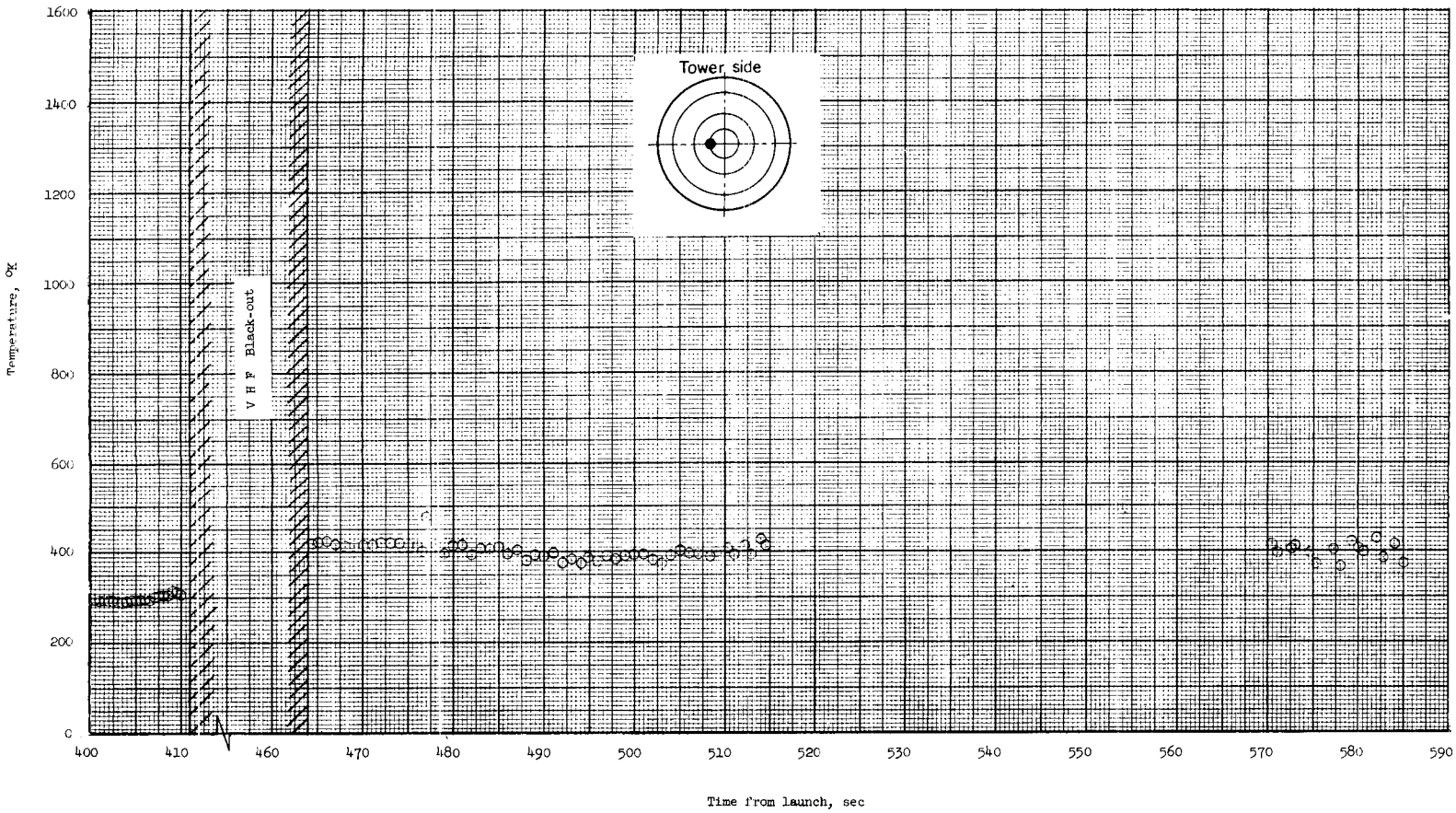
[redacted]



(b) Thermocouple 5; d = 0.0128 m.

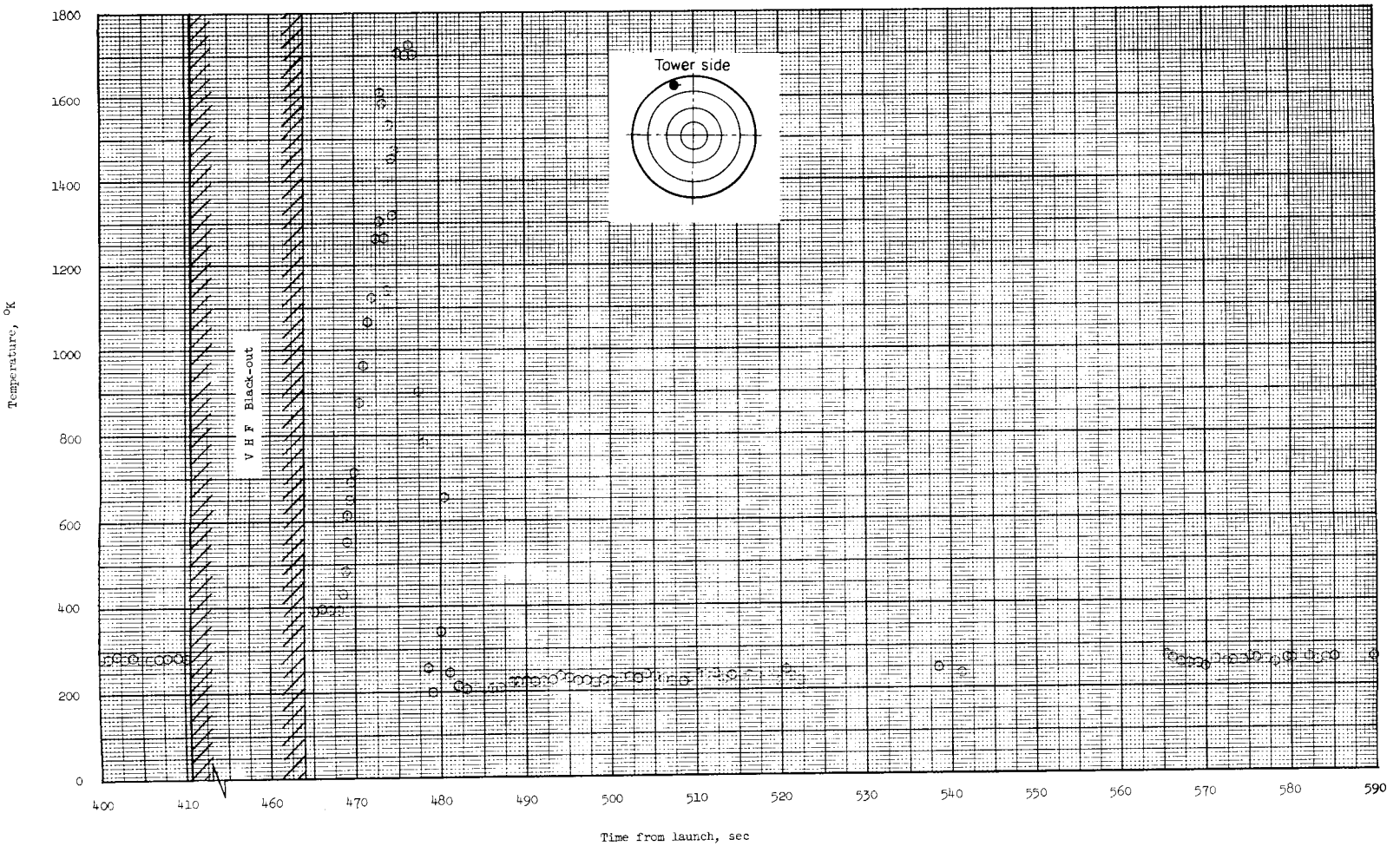
Figure 26.- Continued.

[redacted]



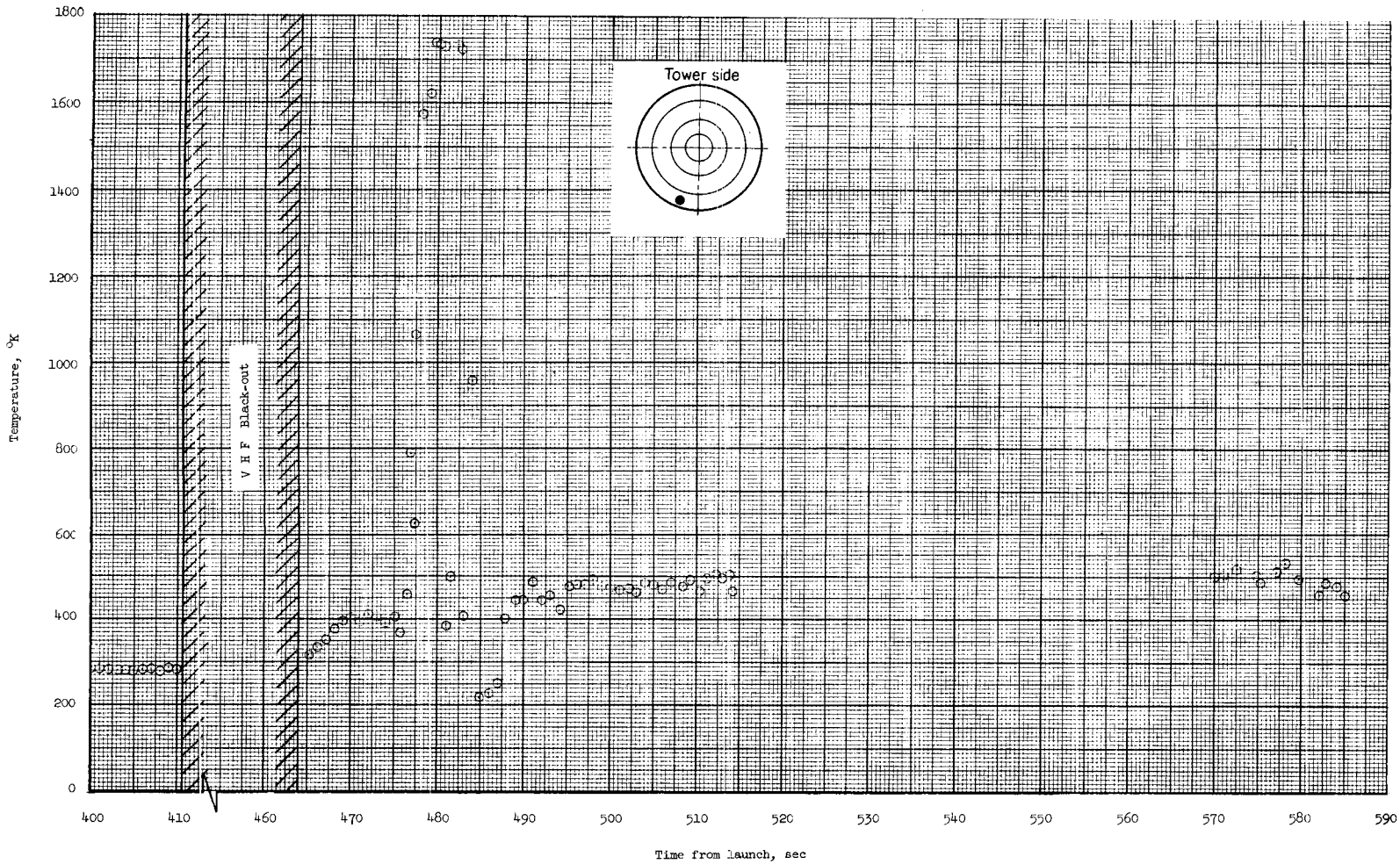
(c) Thermocouple 6; d = 0.0153 m.

Figure 26.- Concluded.



(a) Thermocouple 46; d = 0.0127 m.

Figure 27.- Temperature histories of nose-cap corner thermocouples. s = 0.1293 m.



(b) Thermocouple 47; d = 0.0178 m.

Figure 27.- Concluded.

[redacted]

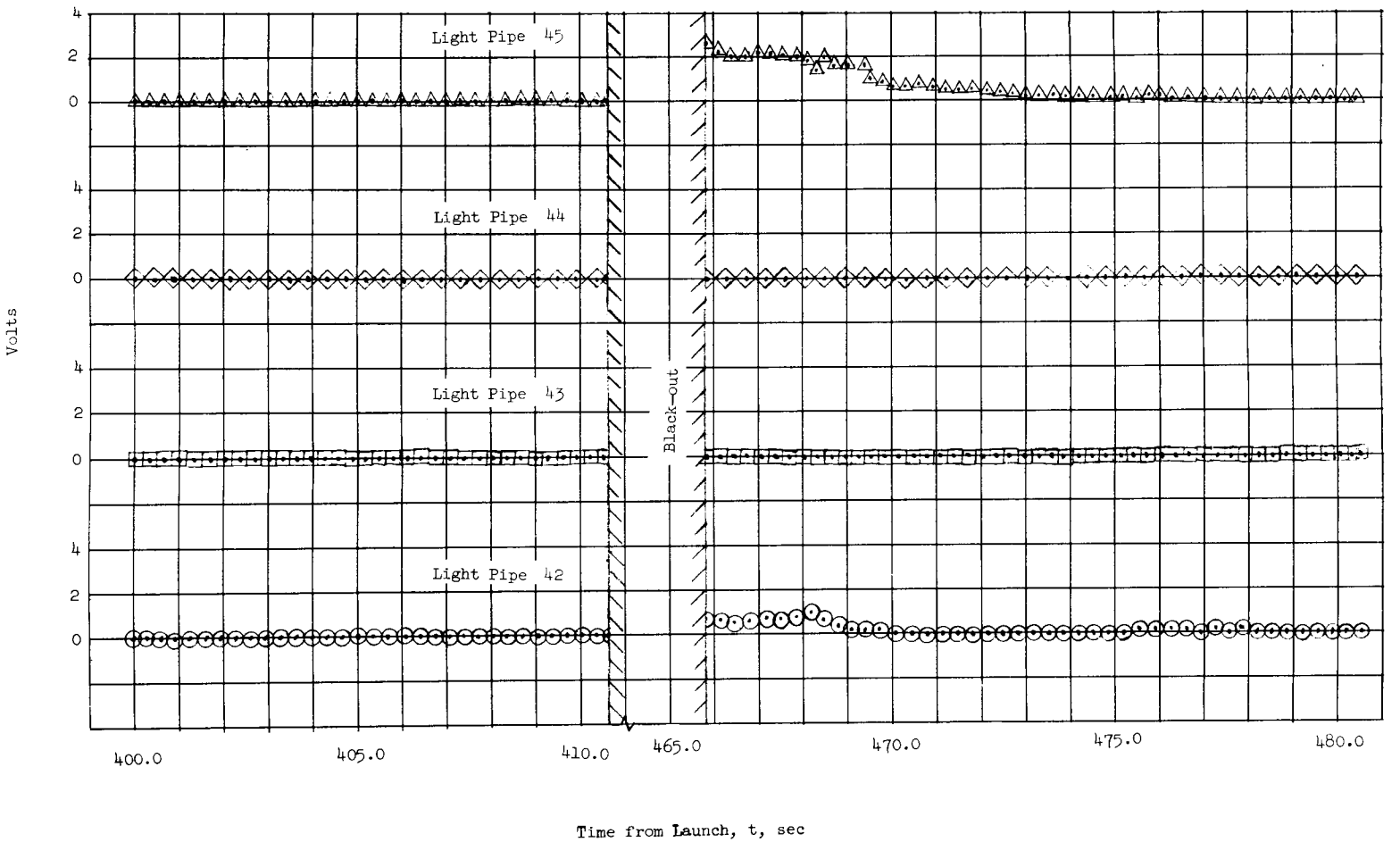
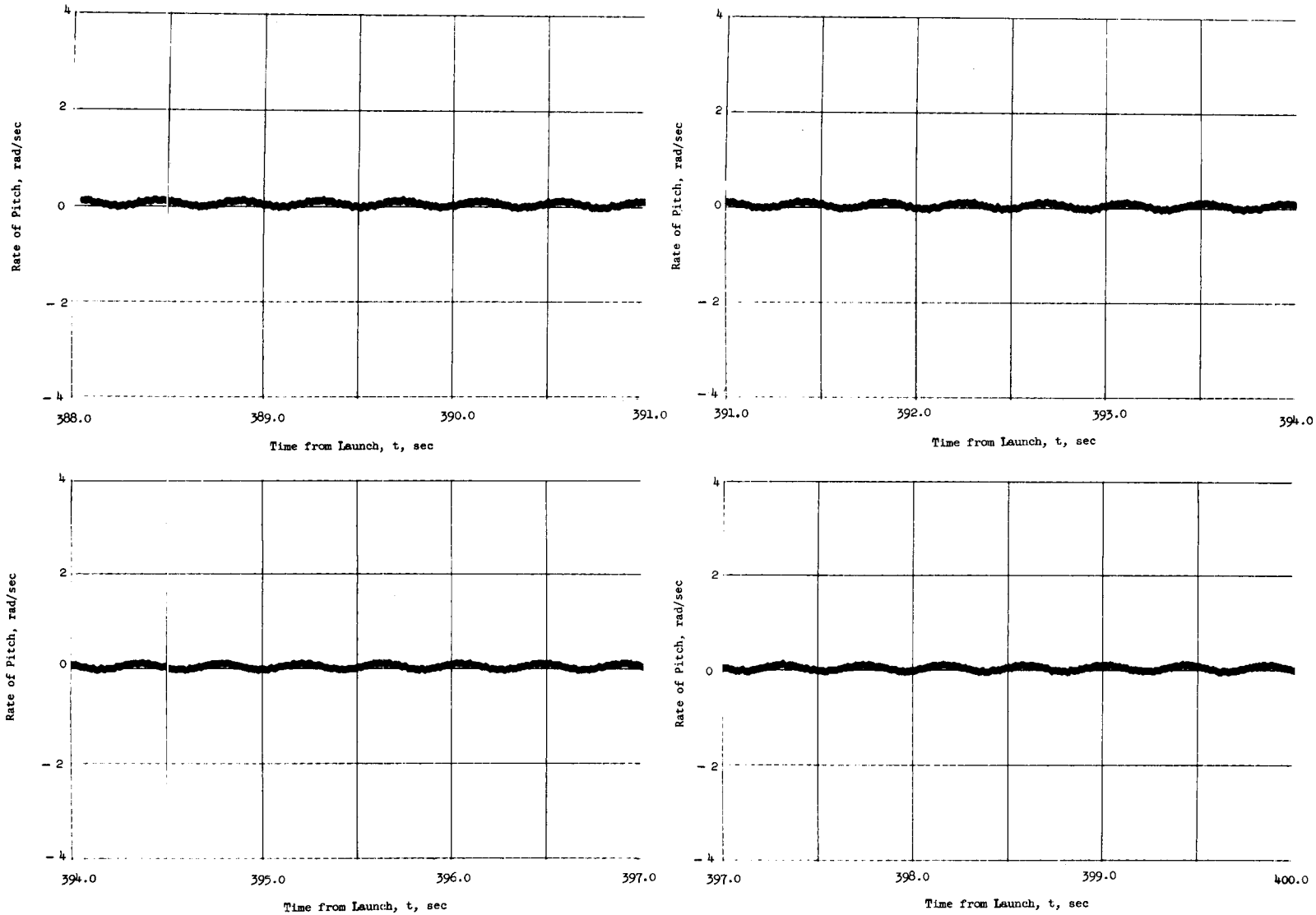


Figure 28.- Light pipe sensor voltage output.

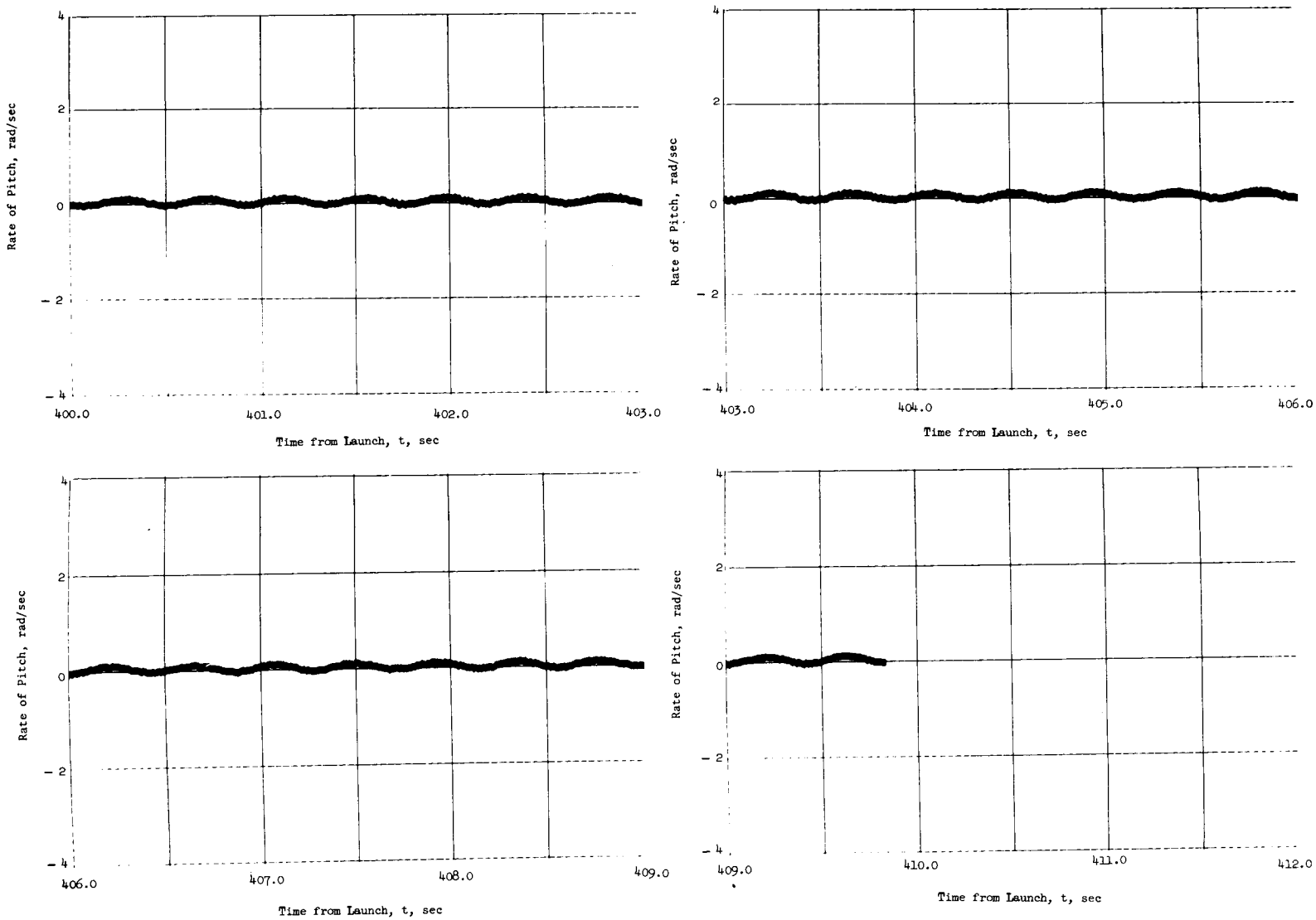
[redacted]



(a) t = 388.0 to 400.0 sec.

Figure 29.- Rate of pitch.

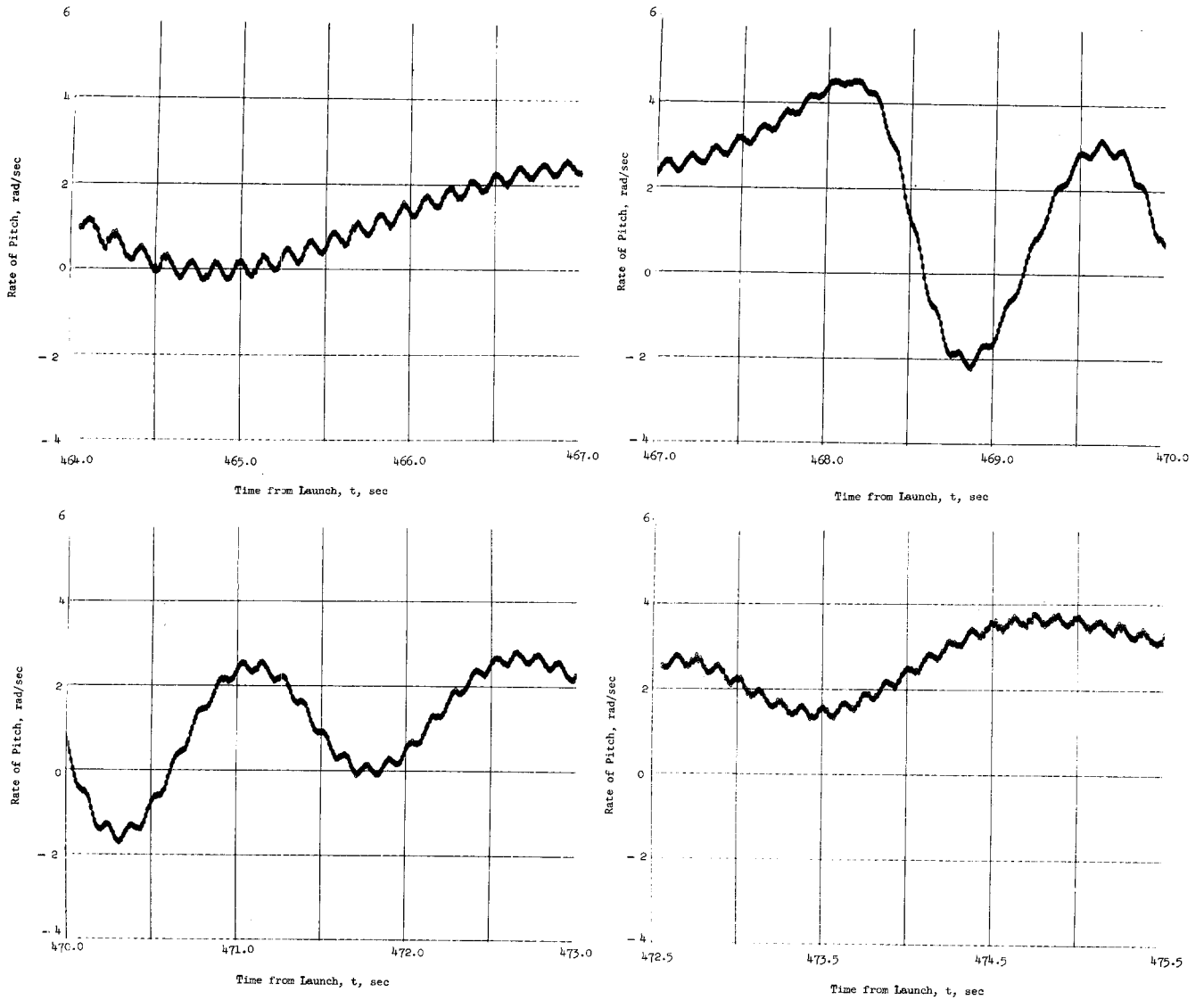
[redacted]



[redacted]

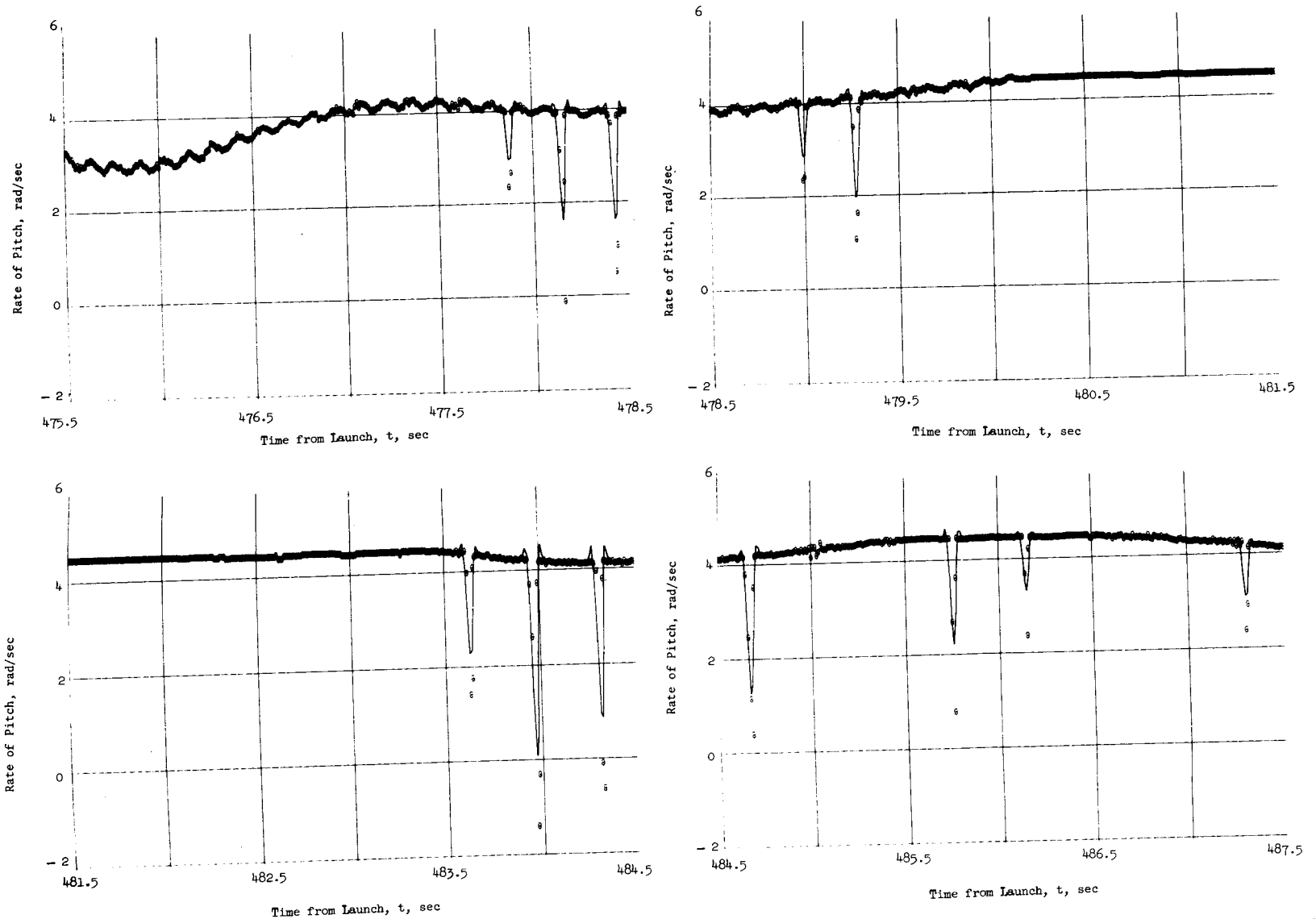
(b) t = 400.0 to 412.0 sec.

Figure 29.- Continued.



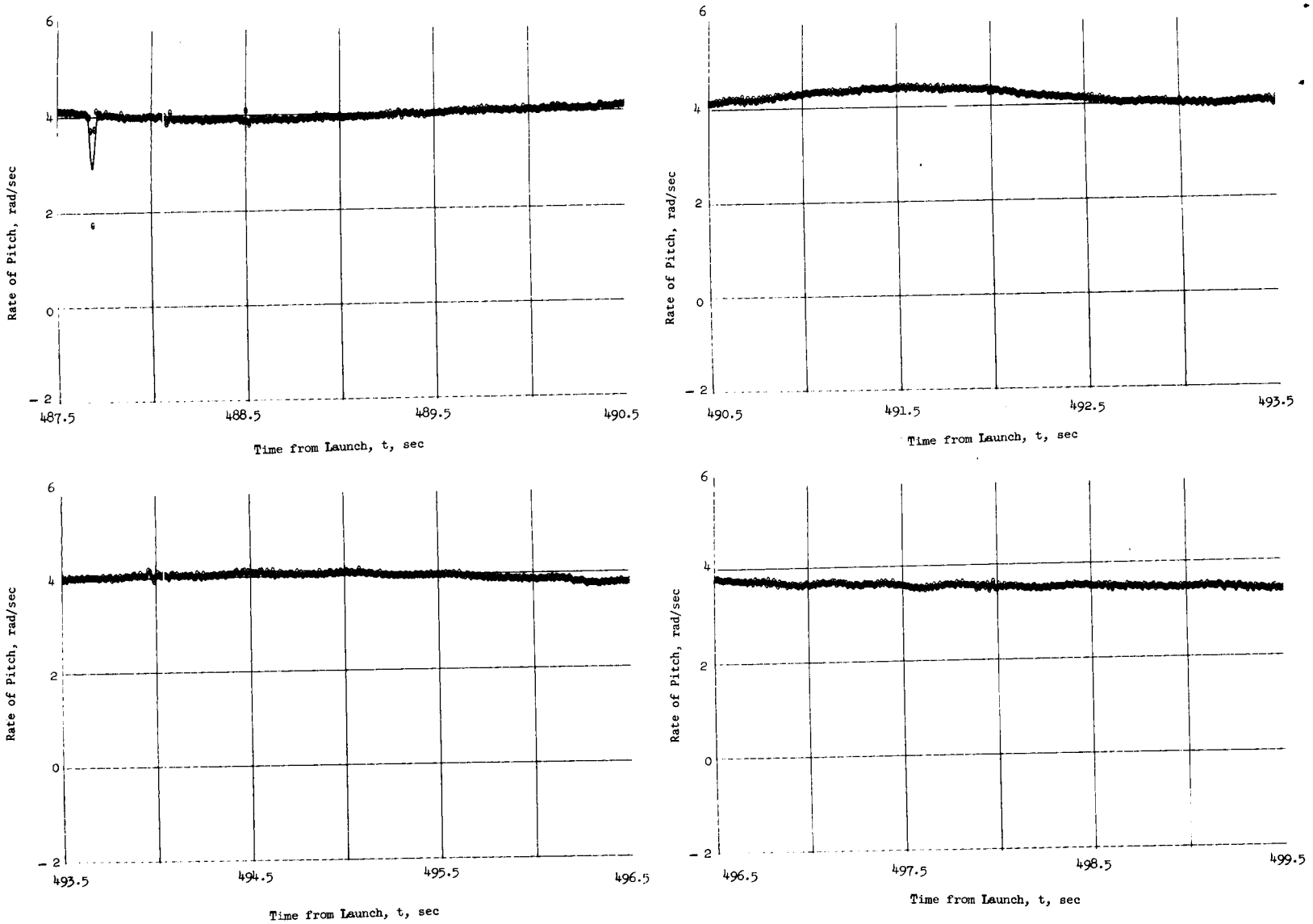
(c) t = 464.0 to 475.5 sec.

Figure 29.- Continued.



(d) t = 475.5 to 487.5 sec.

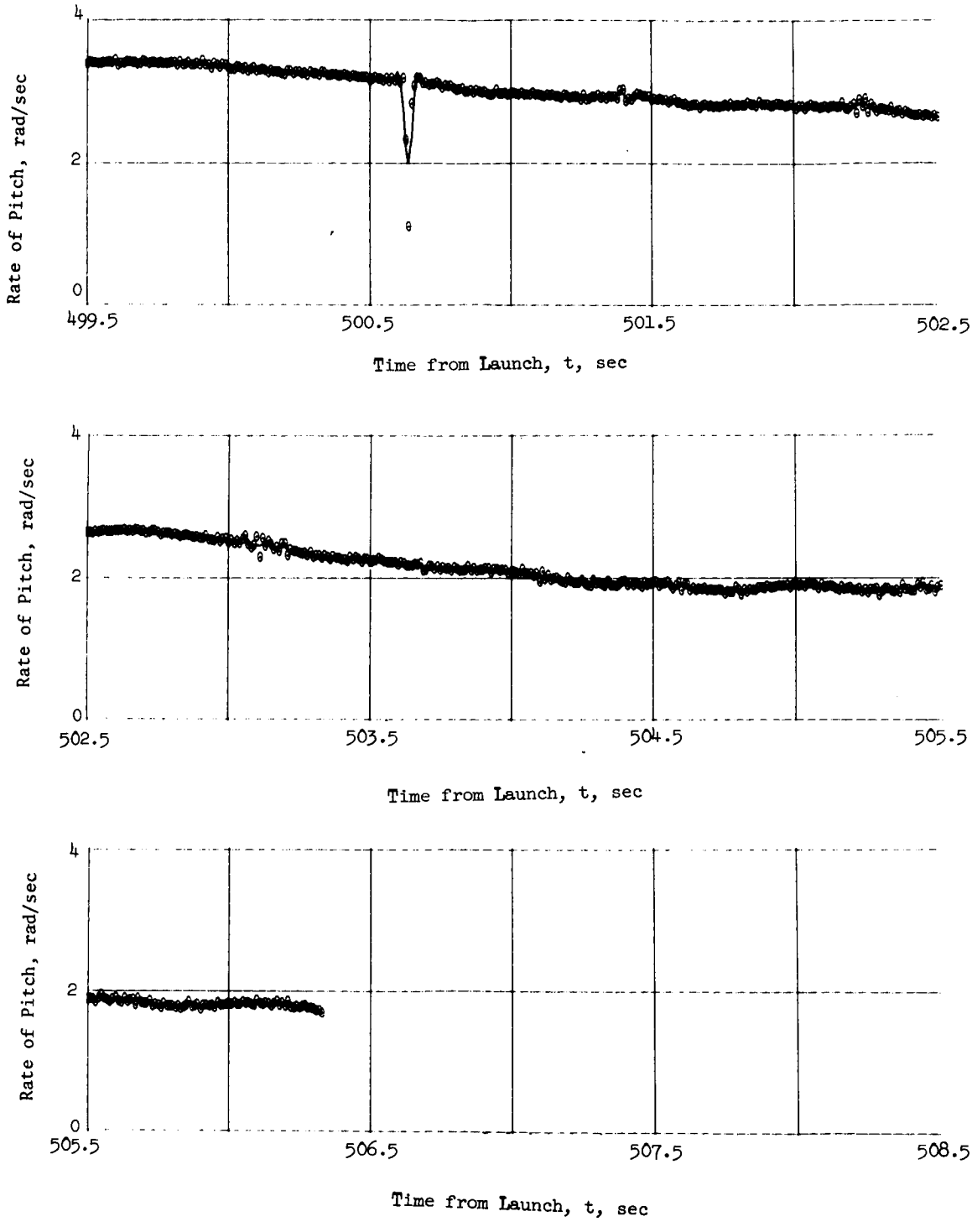
Figure 29.- Continued.



(e) t = 487.5 to 499.5 sec.

Figure 29.- Continued.

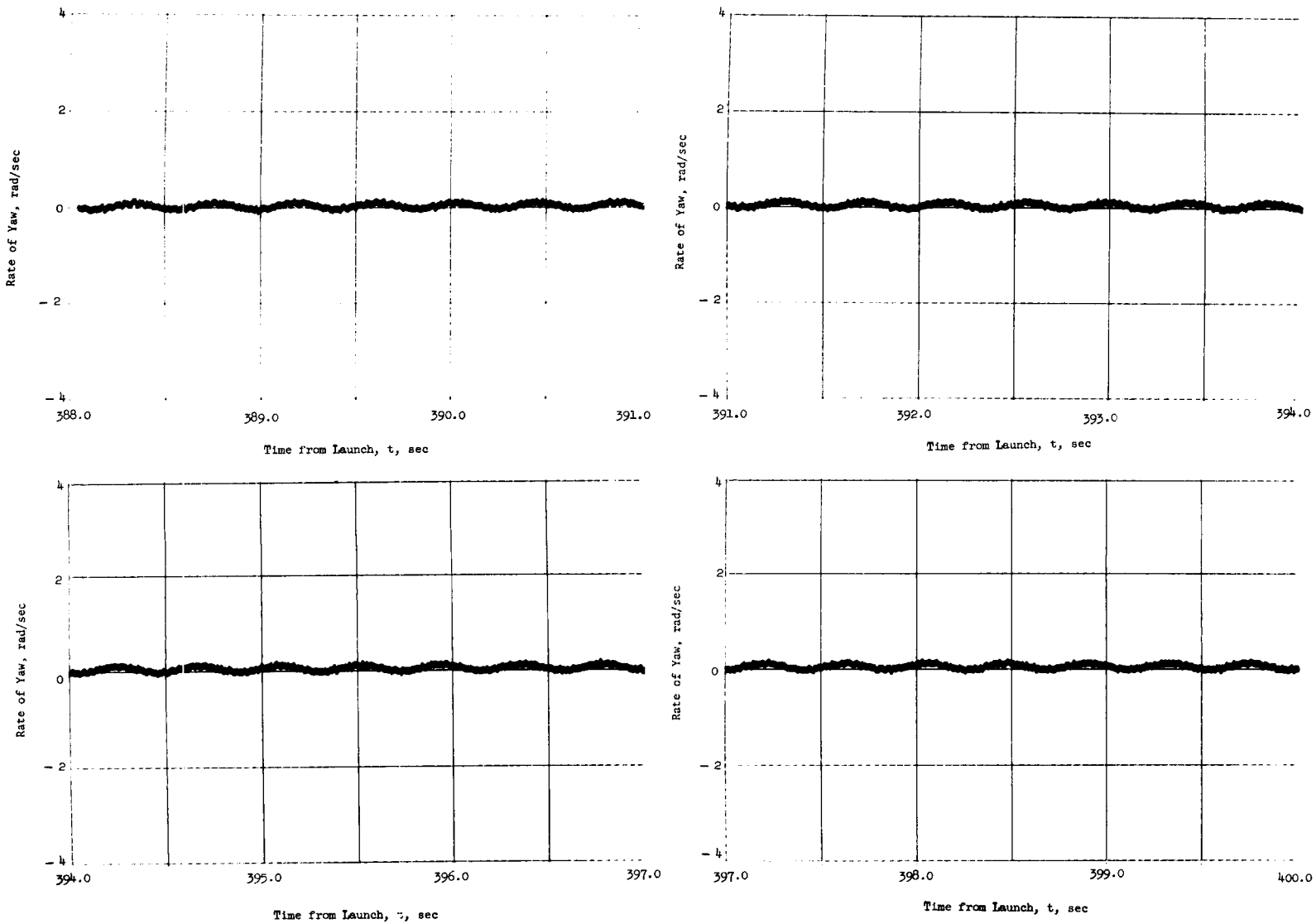
[redacted]



(f) t = 499.5 to 508.5 sec.

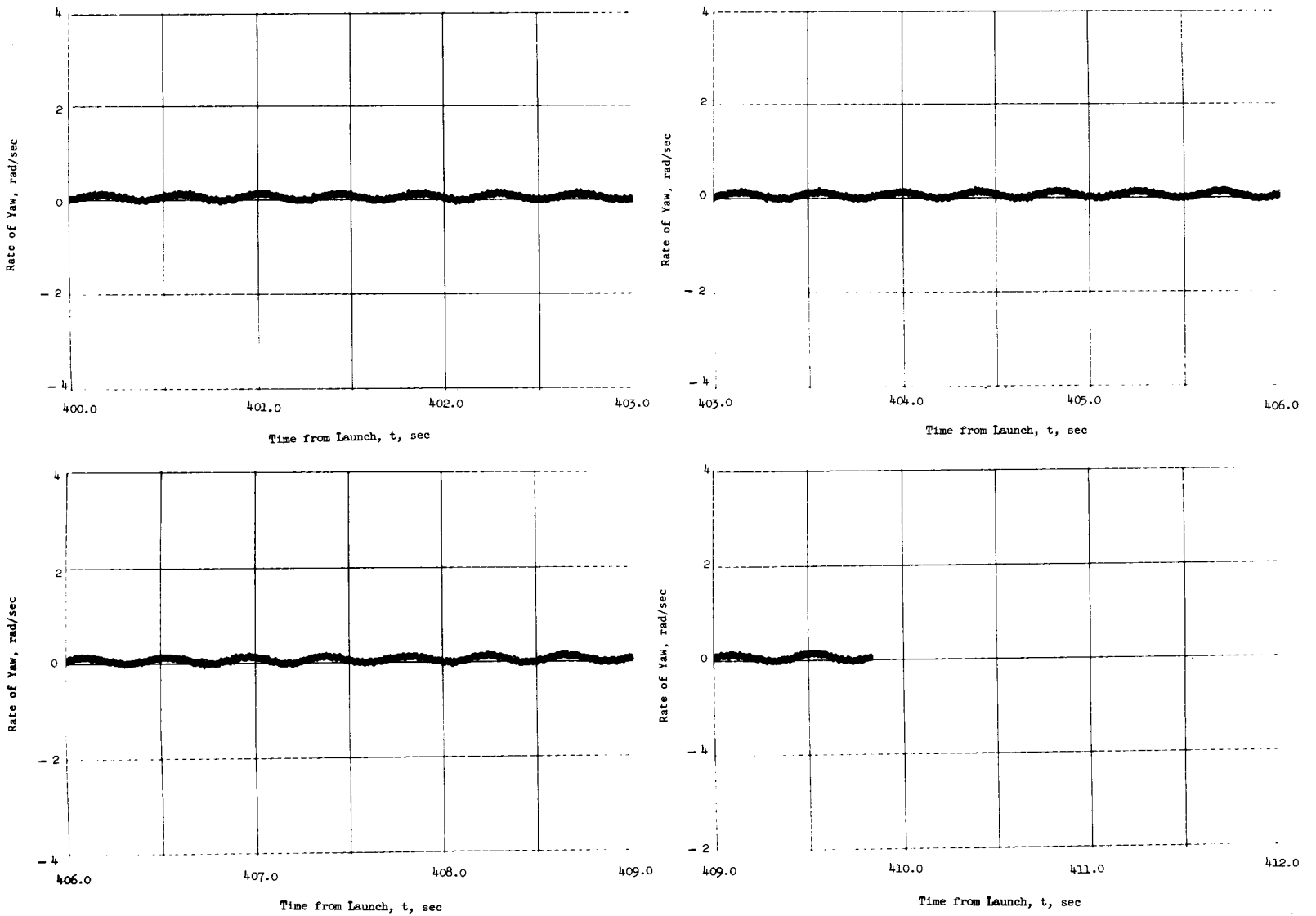
Figure 29.- Concluded.

[redacted]



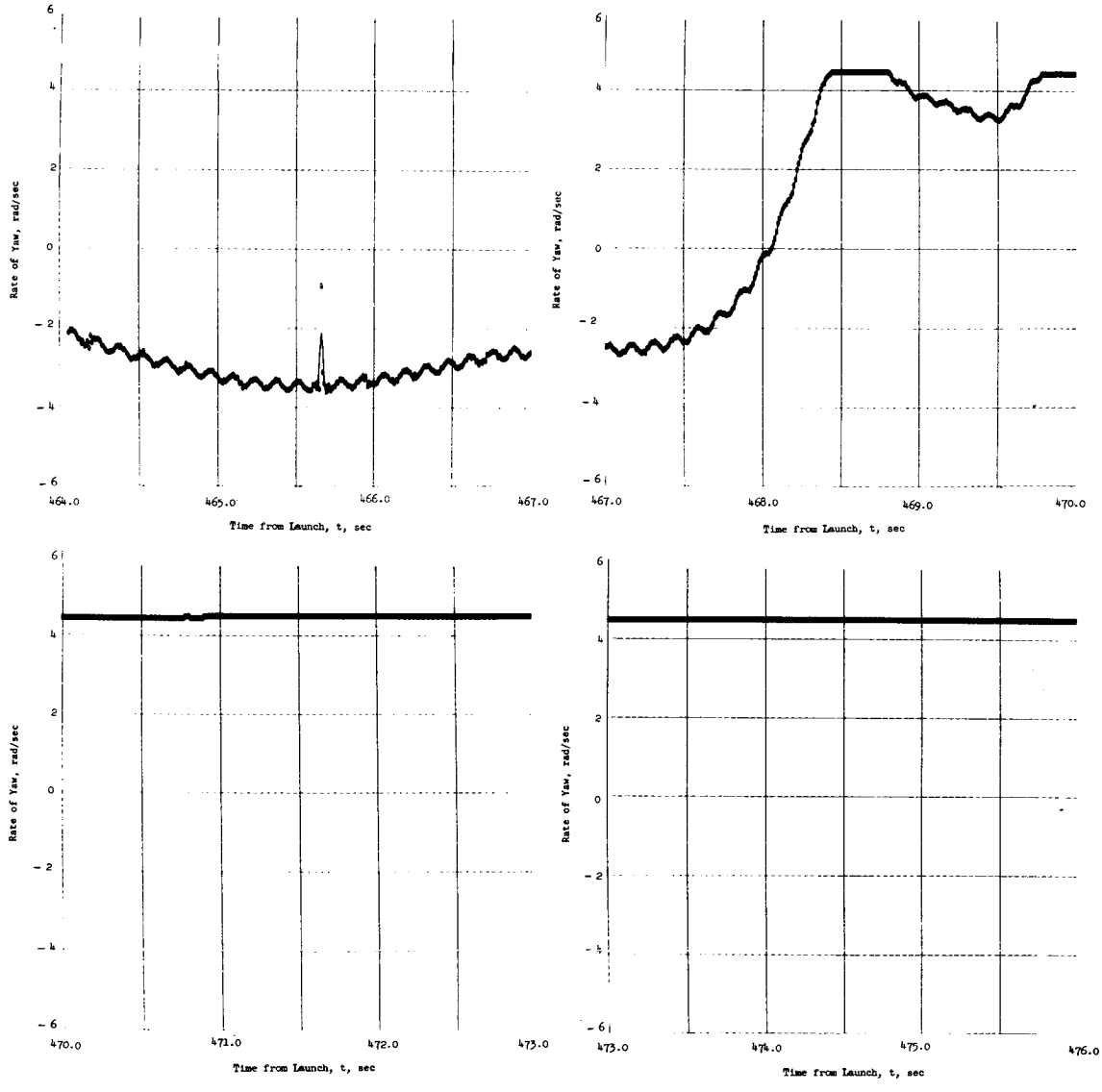
(a) t = 388.0 to 400.0 sec.

Figure 30.- Rate of yaw.



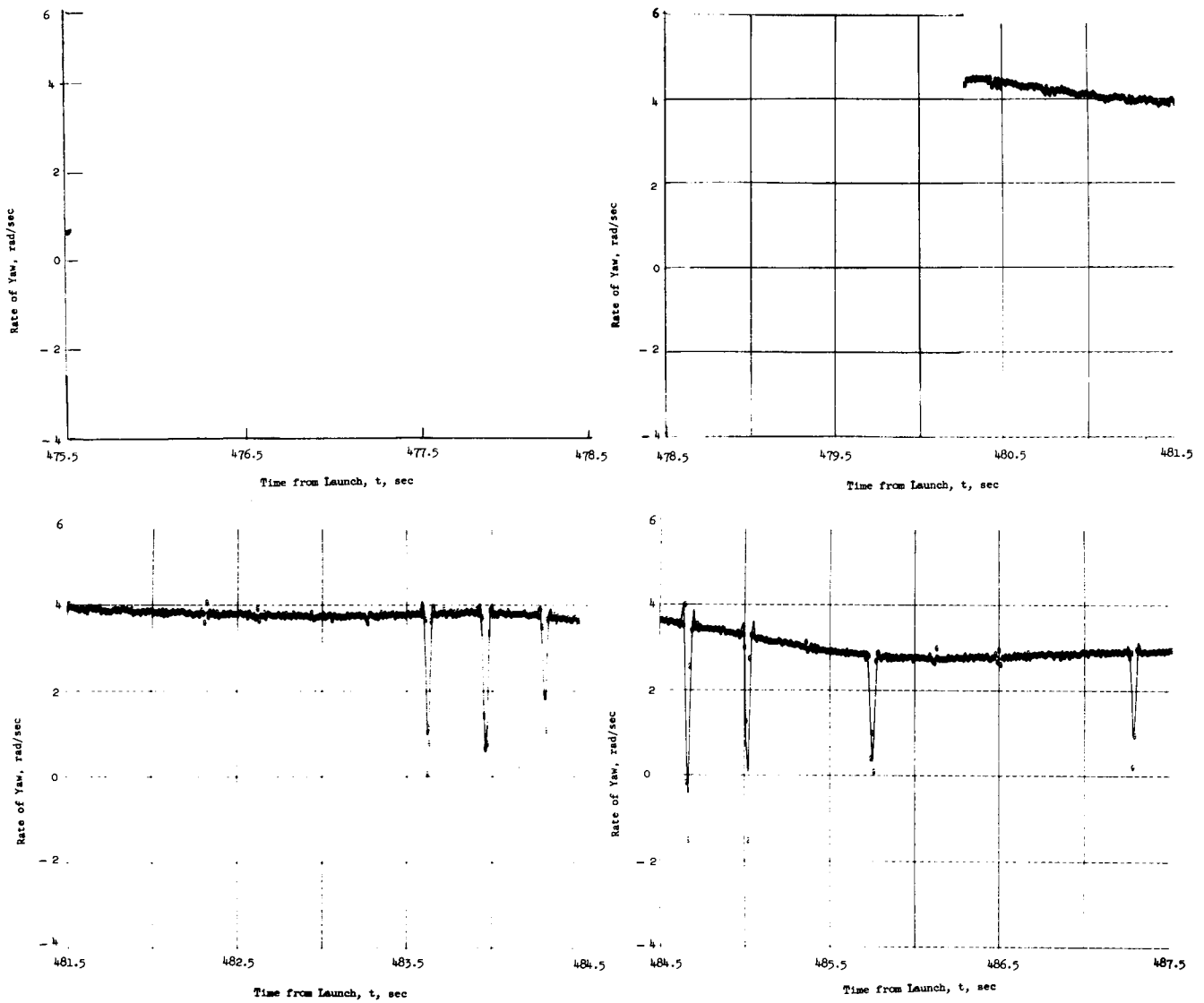
(b) t = 400.0 to 412.0 sec.

Figure 30.- Continued.



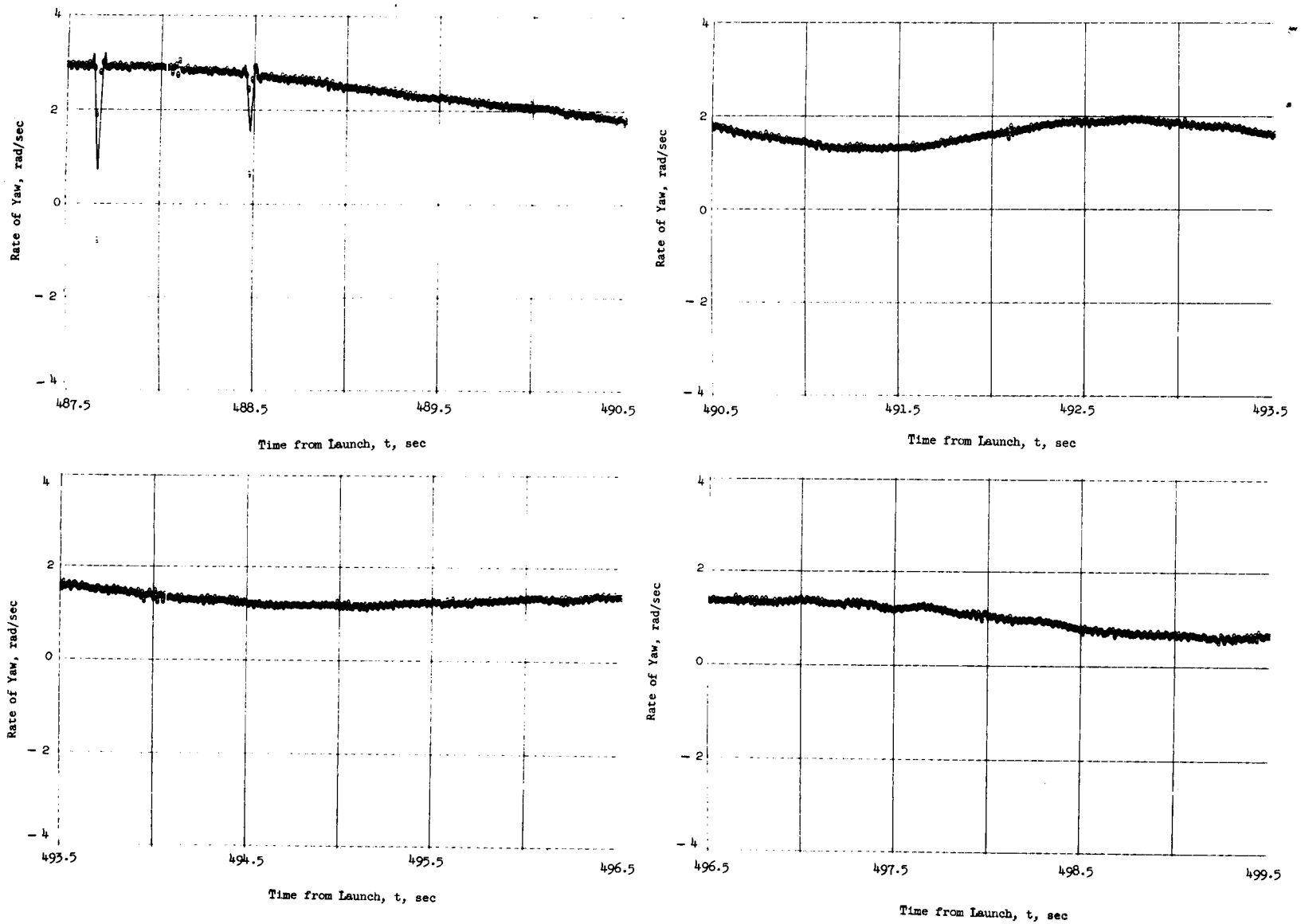
(c) t = 464.0 to 476.0 sec.

Figure 30.- Continued.



(d) t = 475.5 to 487.5 sec.

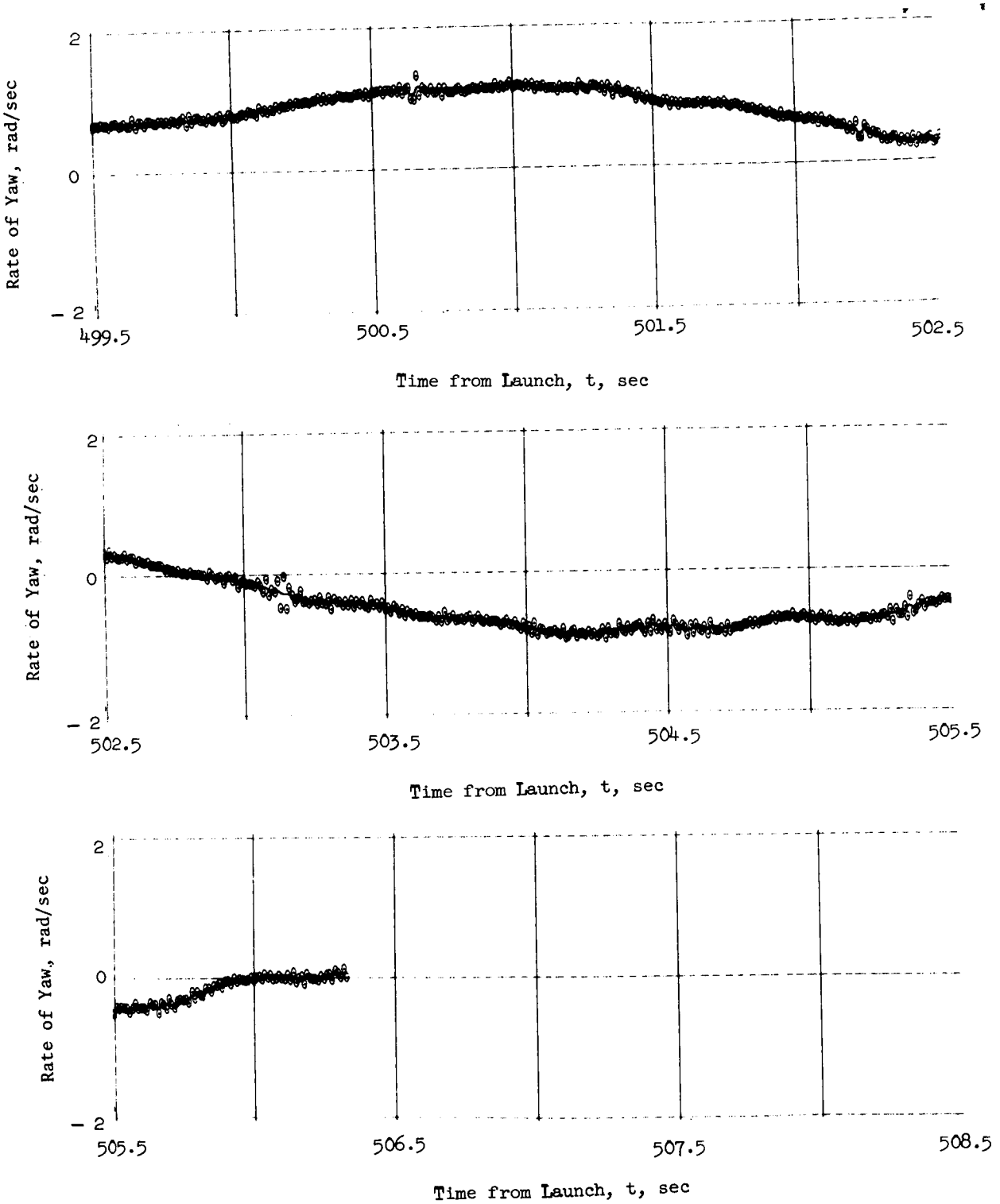
Figure 30.- Continued.



(e) t = 487.5 to 499.5 sec.

Figure 30.- Continued.

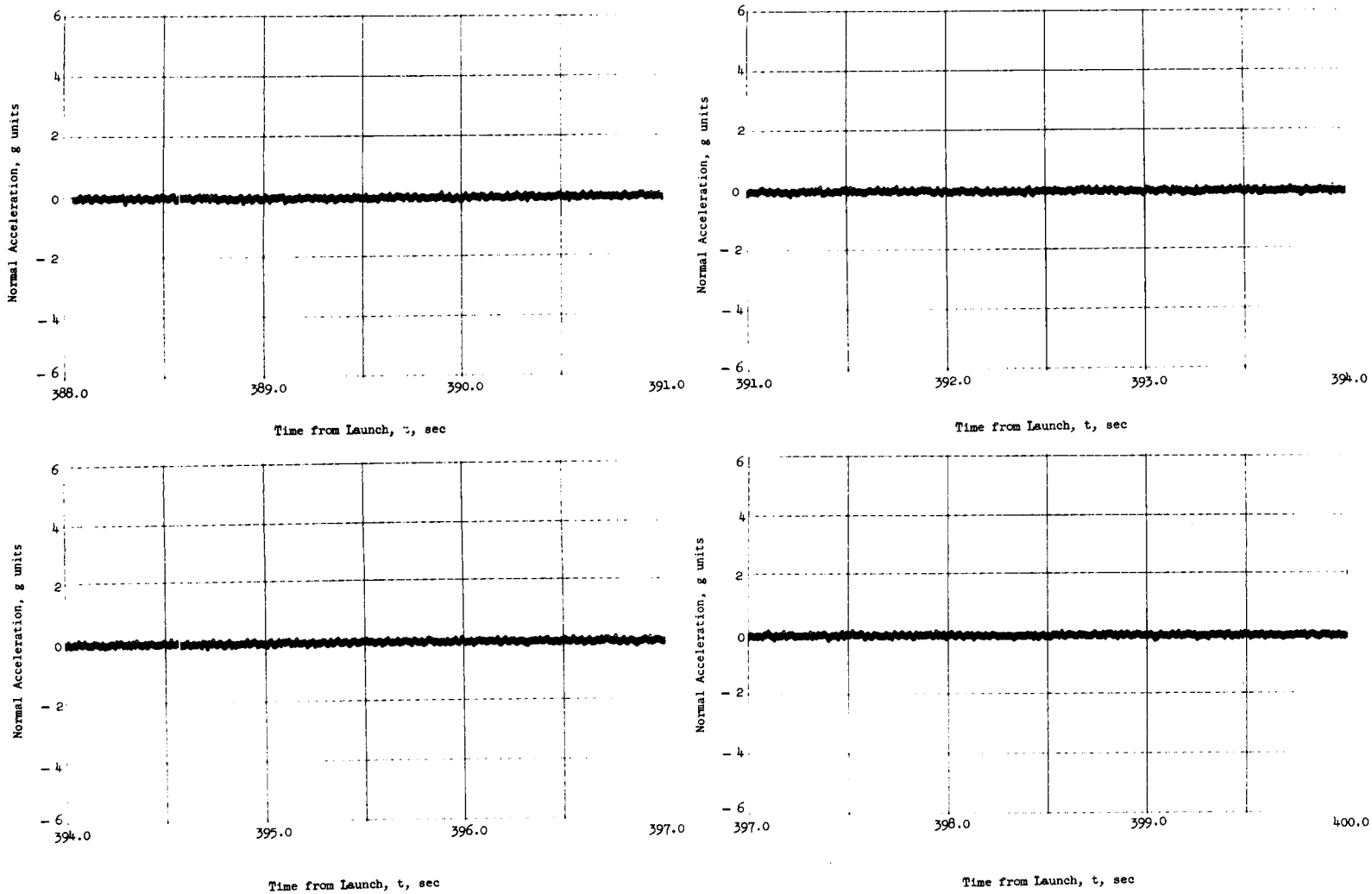
[redacted]



(f) t = 499.5 to 508.5 sec.

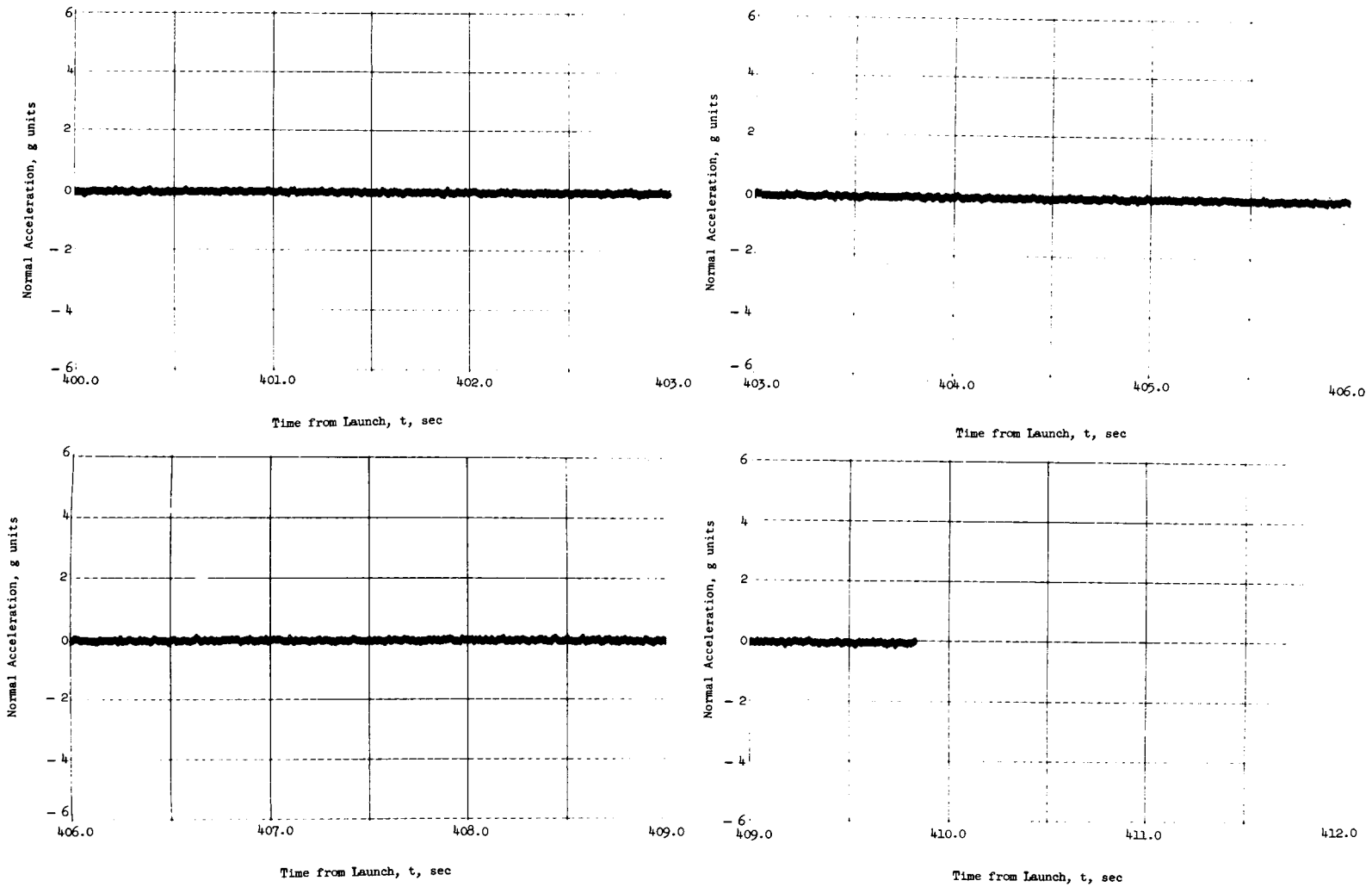
Figure 30.- Concluded.

[redacted]



(a) t = 388.0 to 400.0 sec.

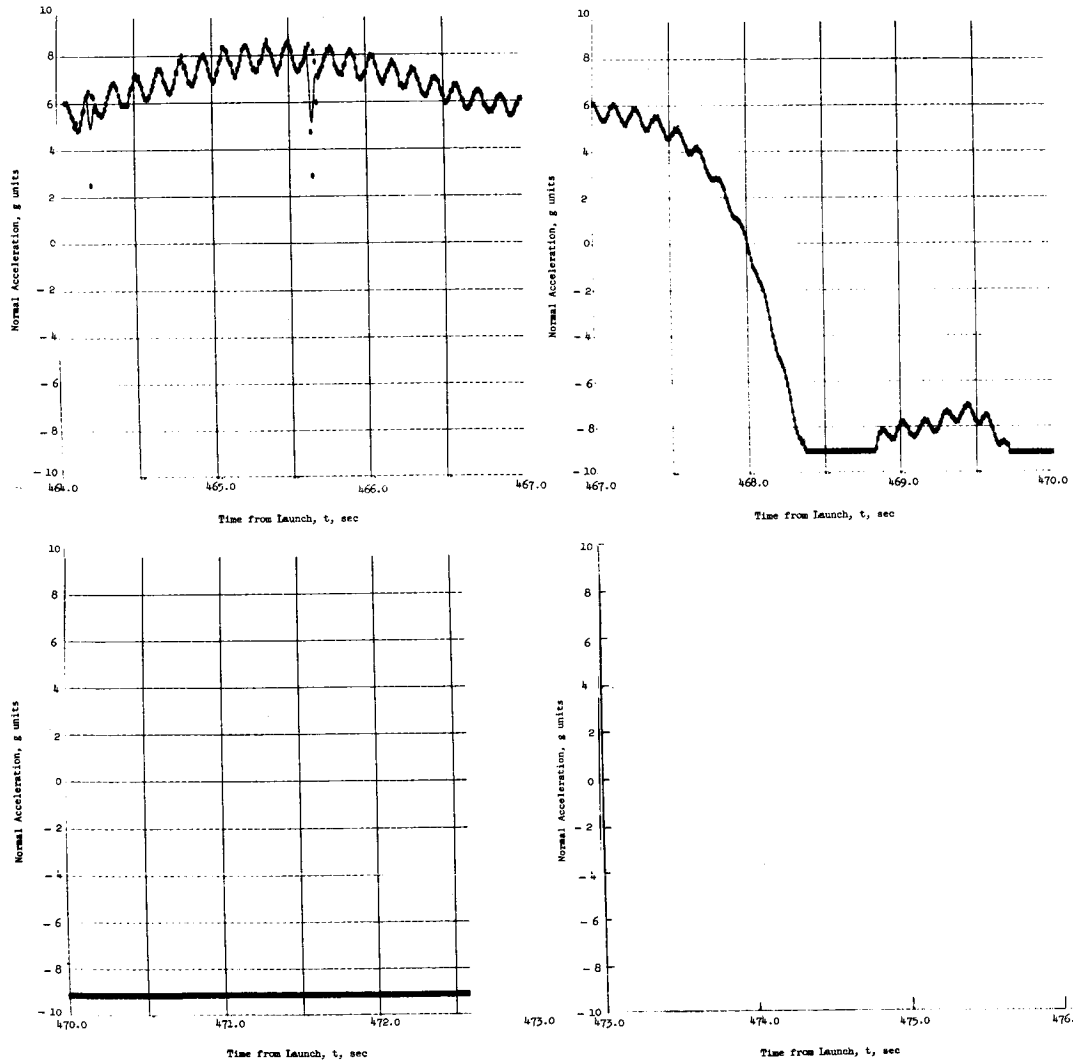
Figure 31.- Normal acceleration.



(b) t = 400.0 to 412.0 sec.

Figure 31.- Continued.

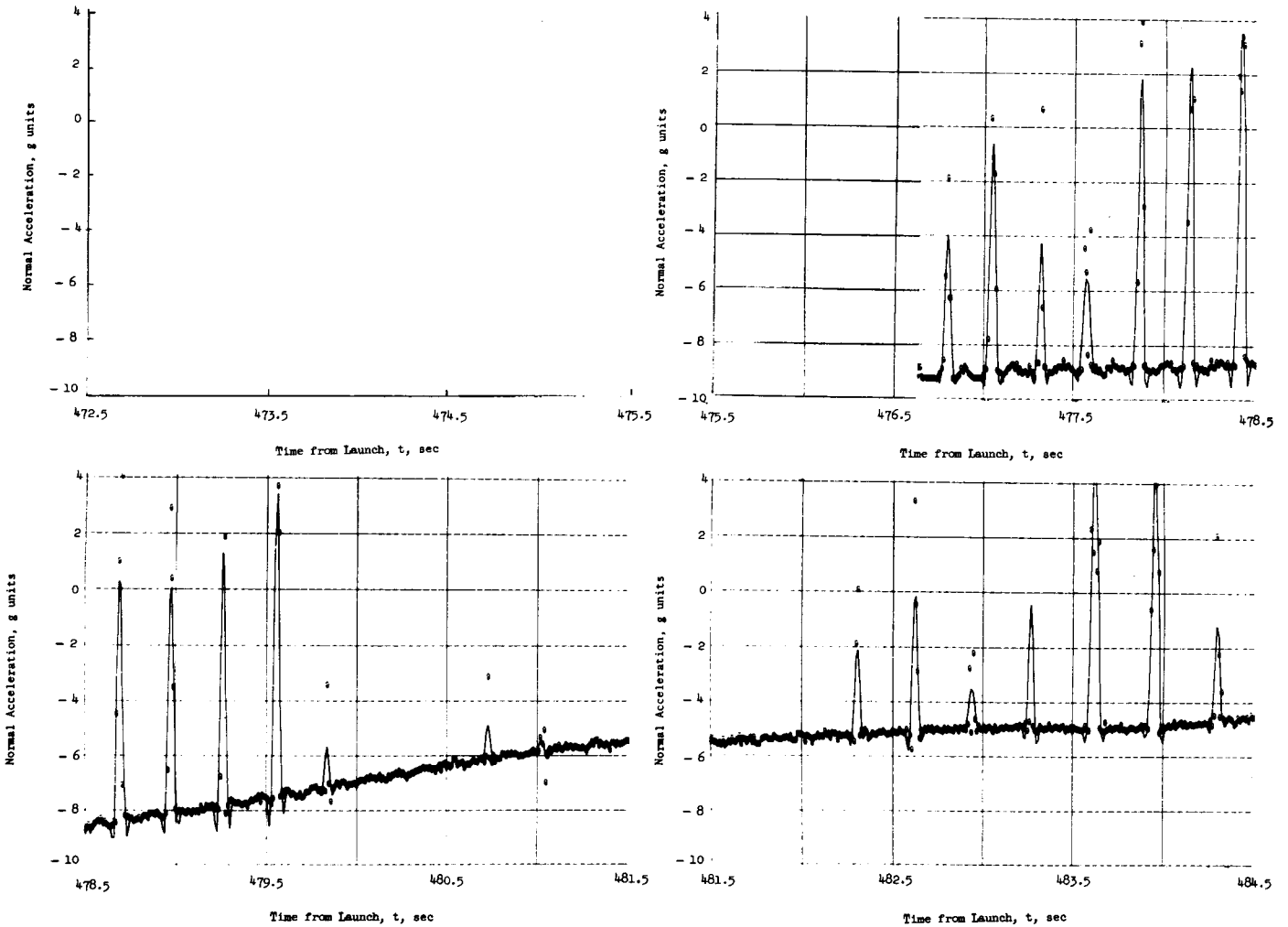
[redacted]



(c) t = 464.0 to 476.0 sec.

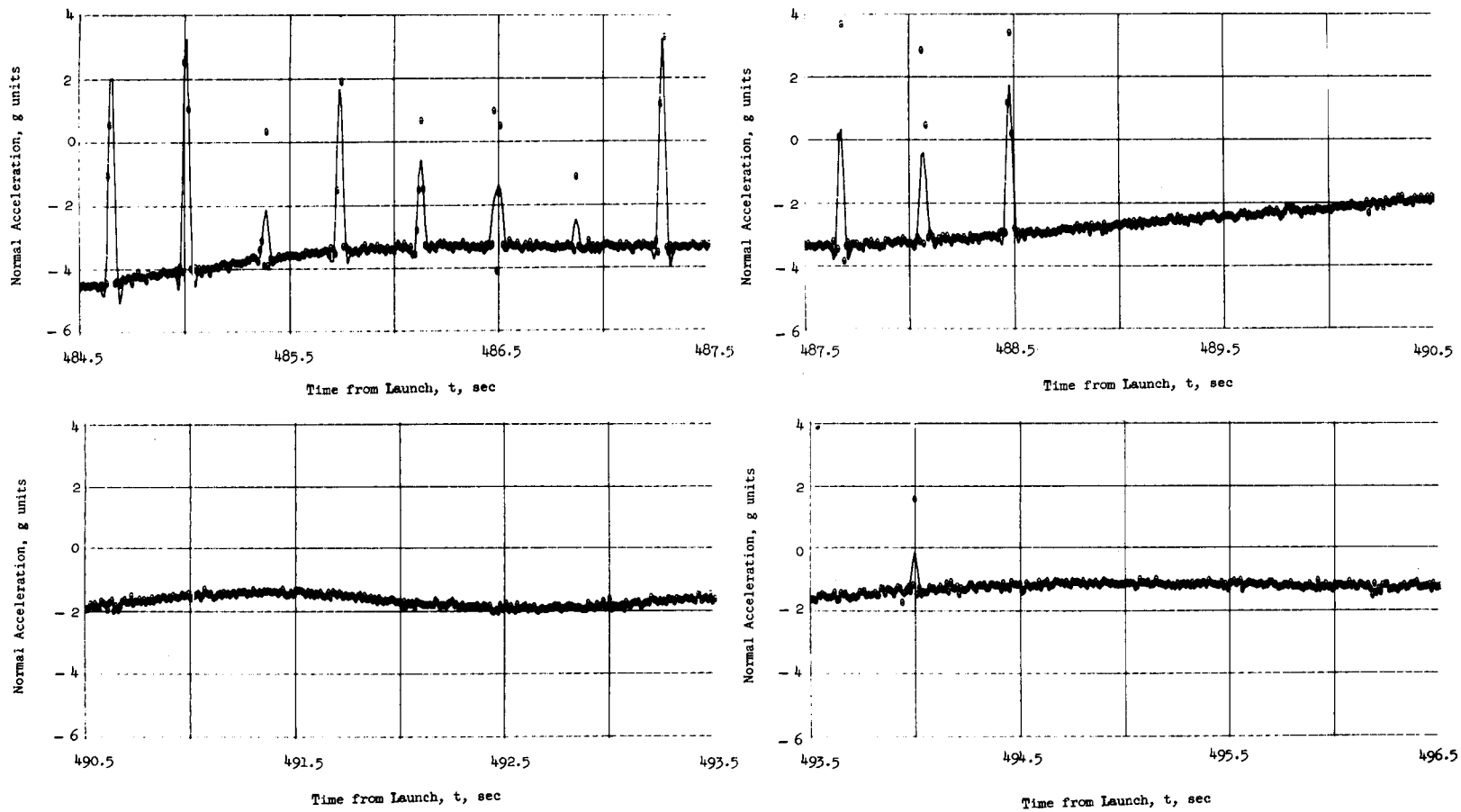
Figure 31.- Continued.

[redacted]



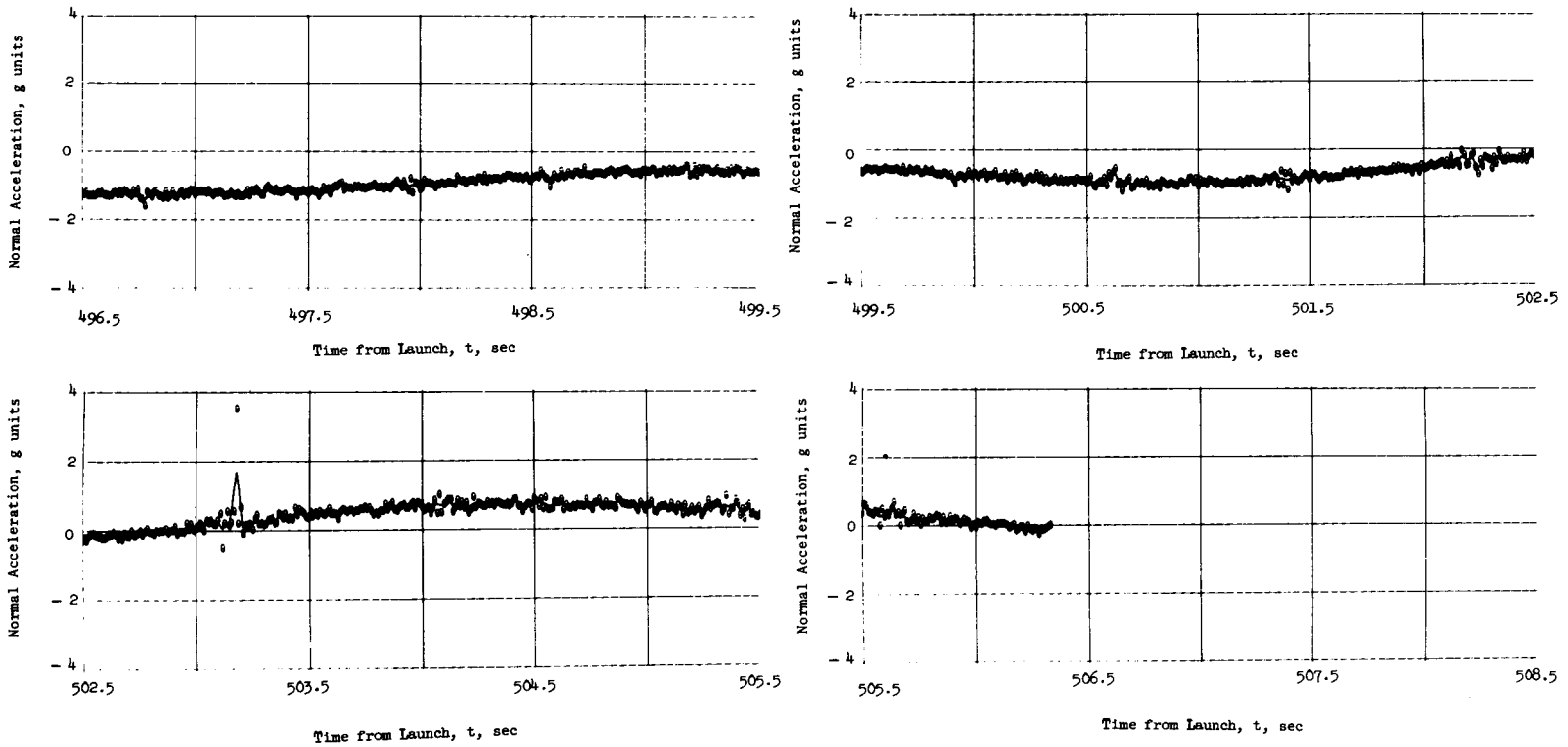
(d) t = 472.5 to 484.5 sec.

Figure 31.- Continued.



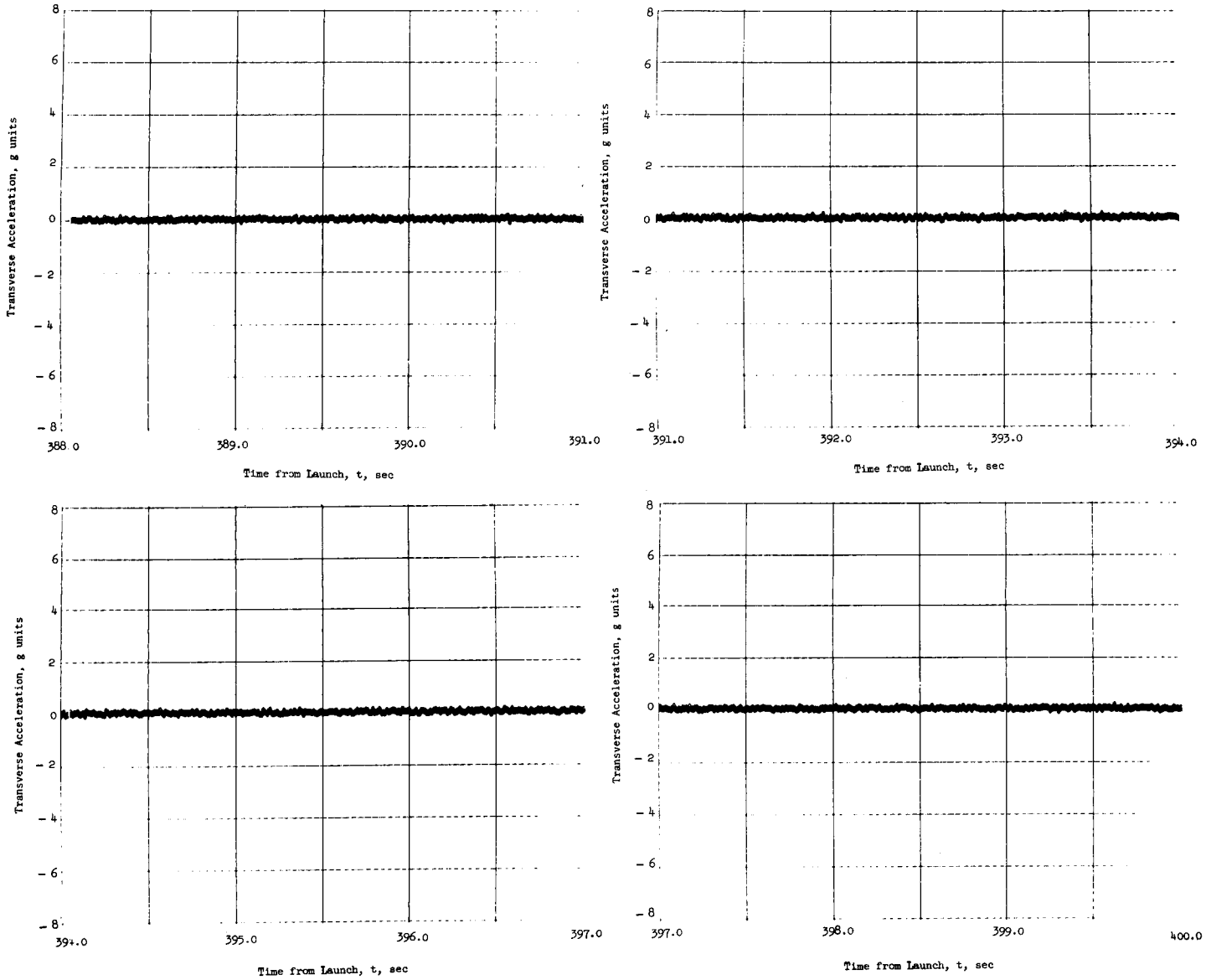
(e) t = 484.5 to 496.5 sec.

Figure 31.- Continued.



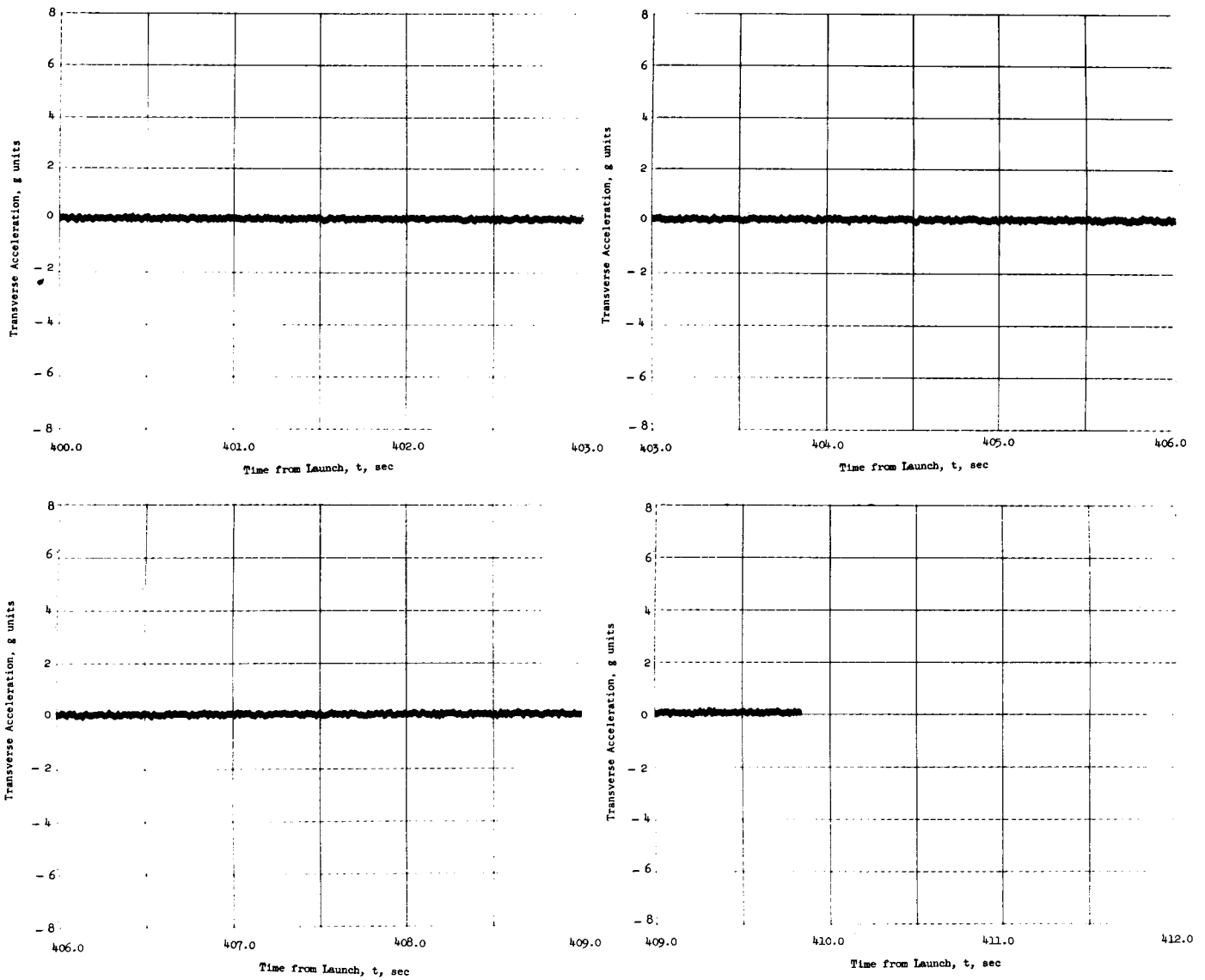
(f) t = 496.5 to 508.5 sec.

Figure 31.- Concluded.



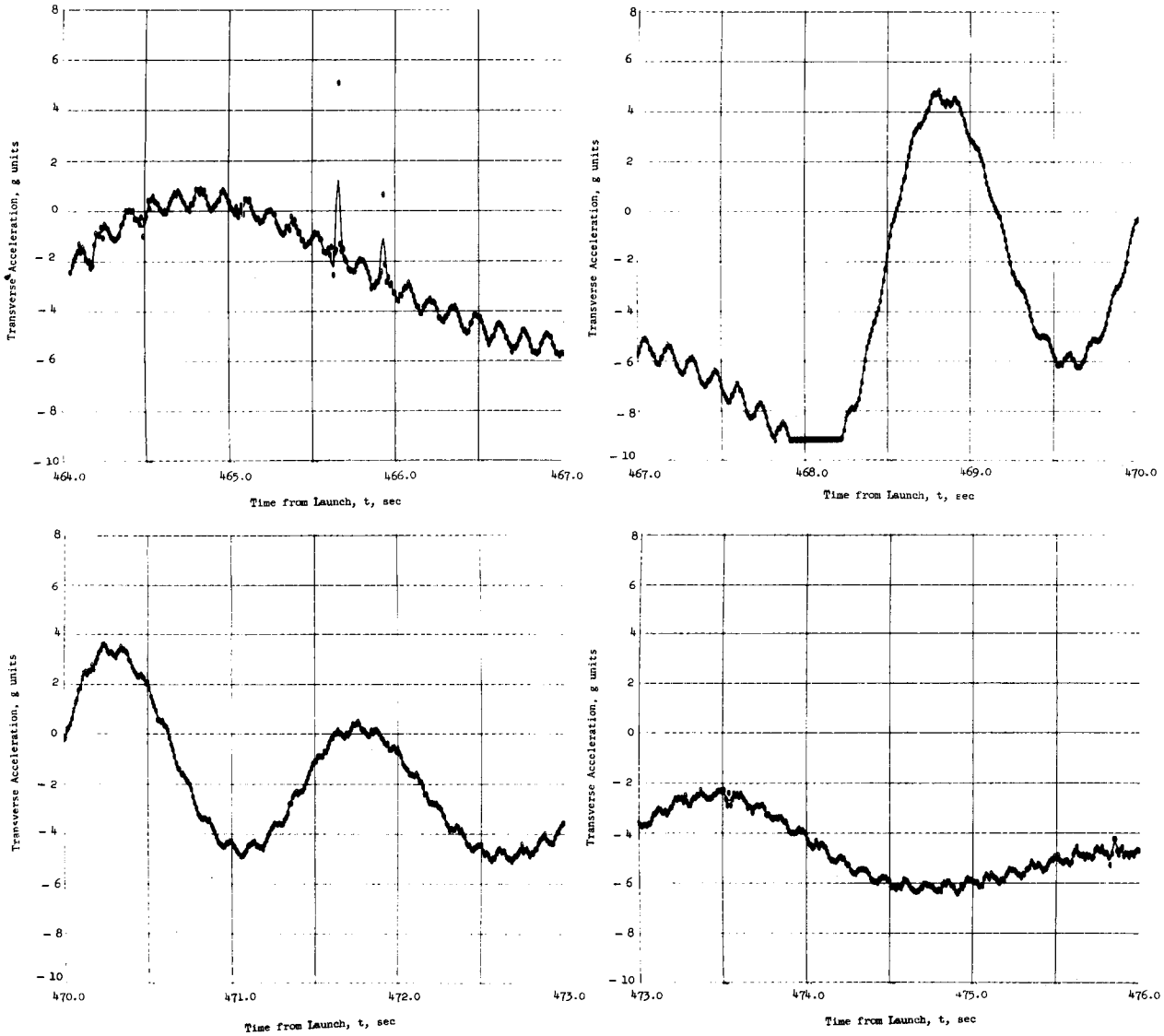
(a) t = 388.0 to 400.0 sec.

Figure 32.- Transverse acceleration.



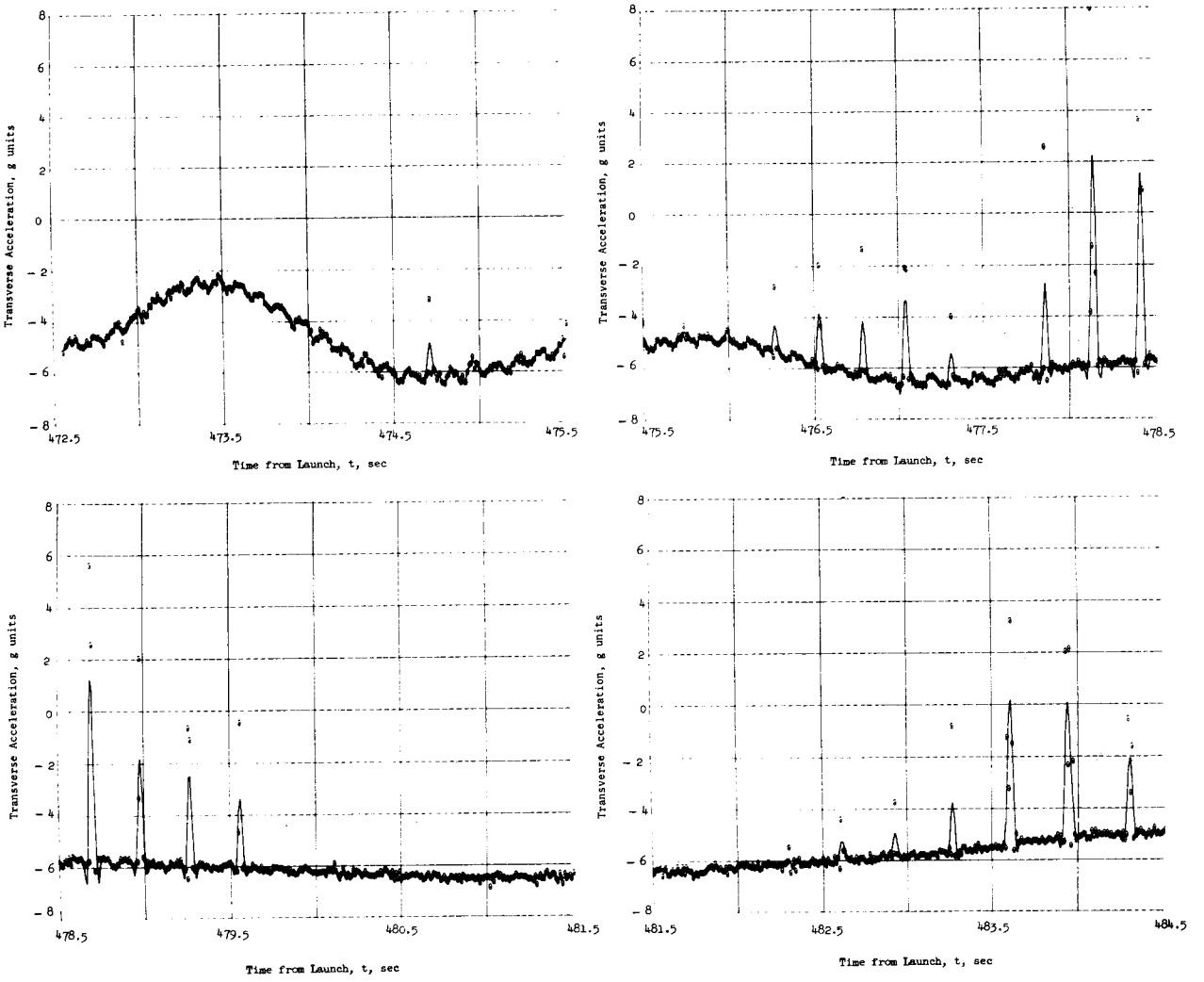
(b) t = 400.0 to 412.0 sec.

Figure 32.- Continued.



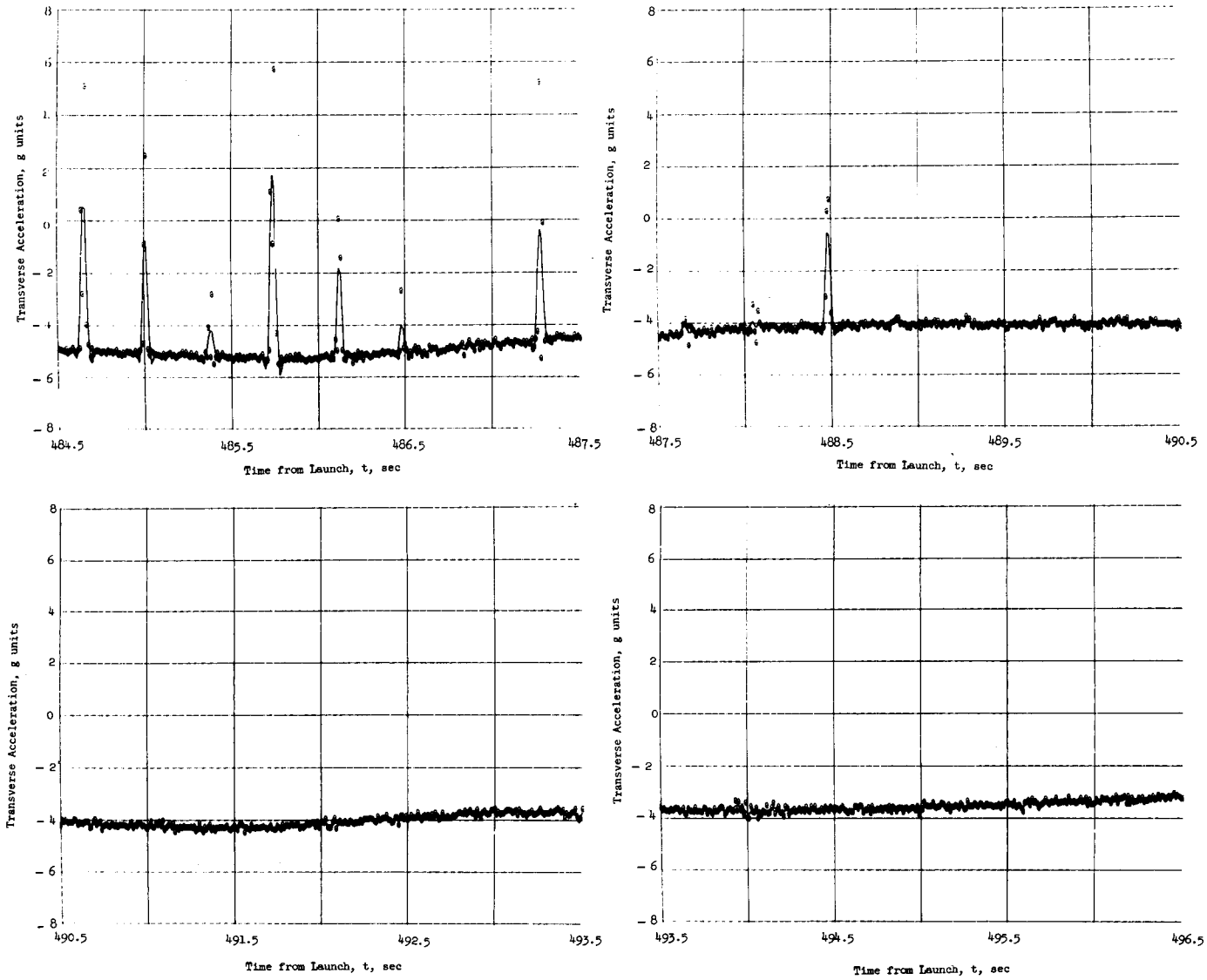
(c) t = 464.0 to 476.0 sec.

Figure 32.- Continued.



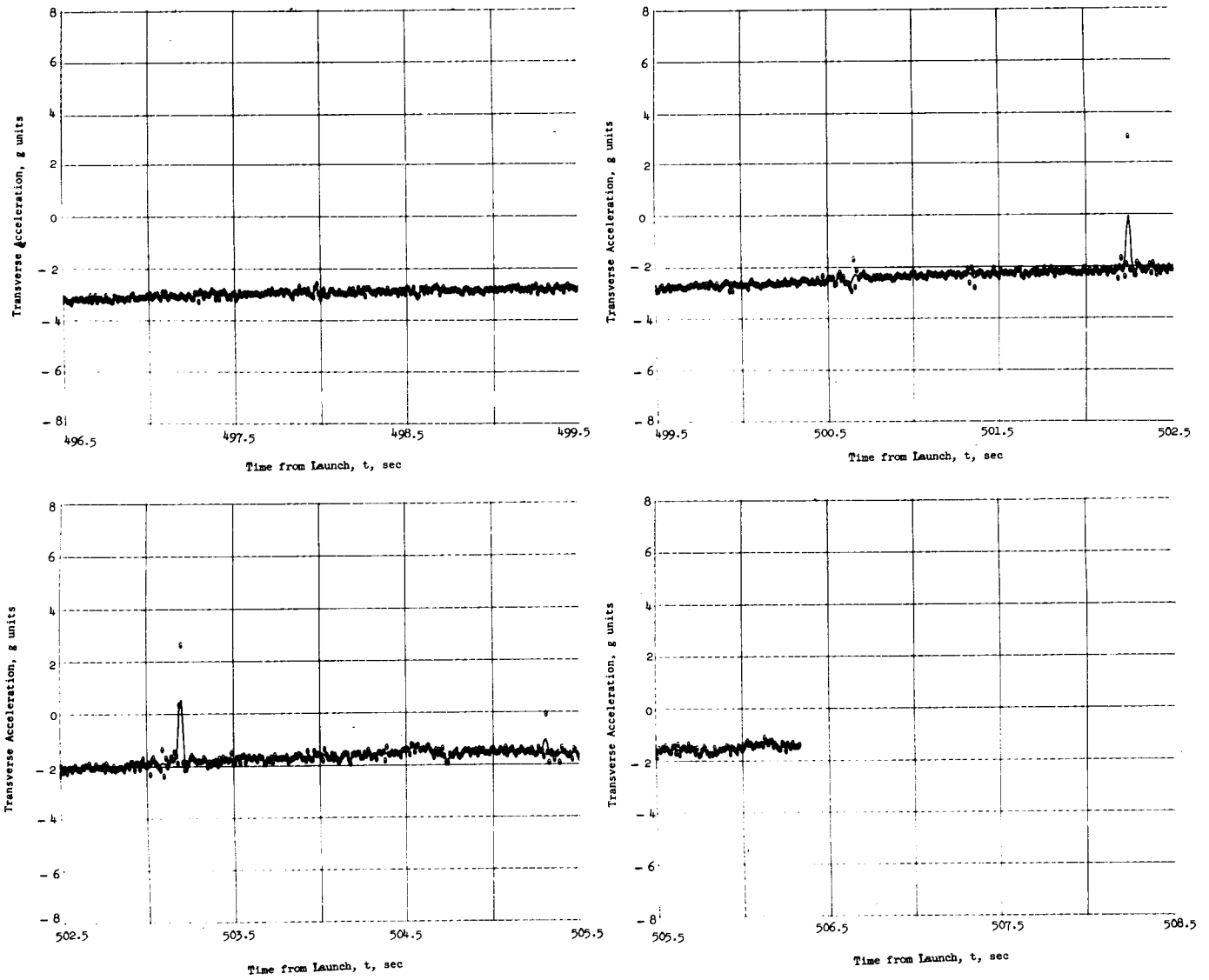
(d) t = 472.5 to 484.5 sec.

Figure 32.- Continued.



(e) t = 484.5 to 496.5 sec.

Figure 32.- Continued.



(f) t = 496.5 to 508.5 sec.

Figure 32.- Concluded.

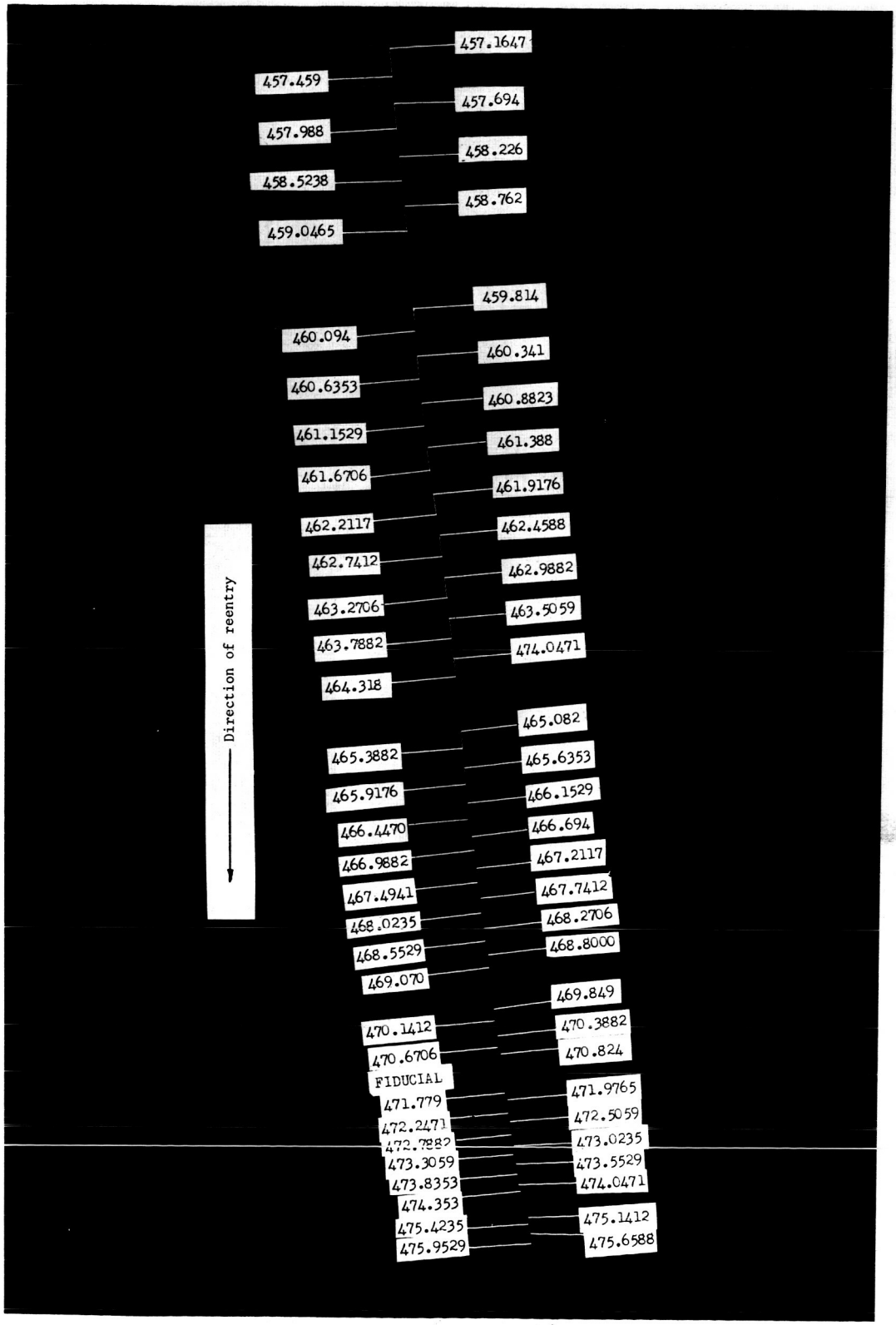


Figure 33.- Visible reentry as recorded by NASA 238 optical airplane utilizing a RC-5 ballistic camera with chopping shutter.

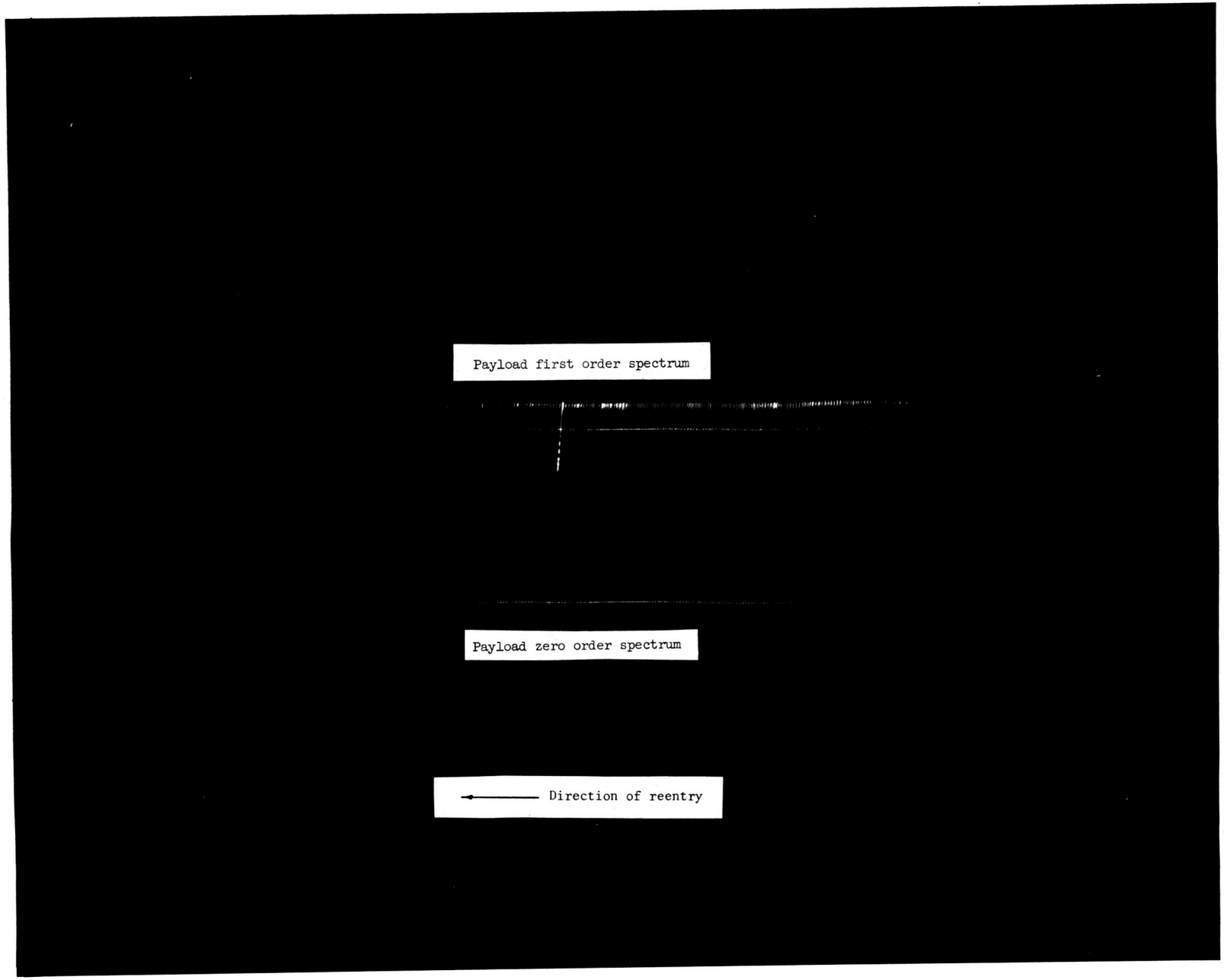
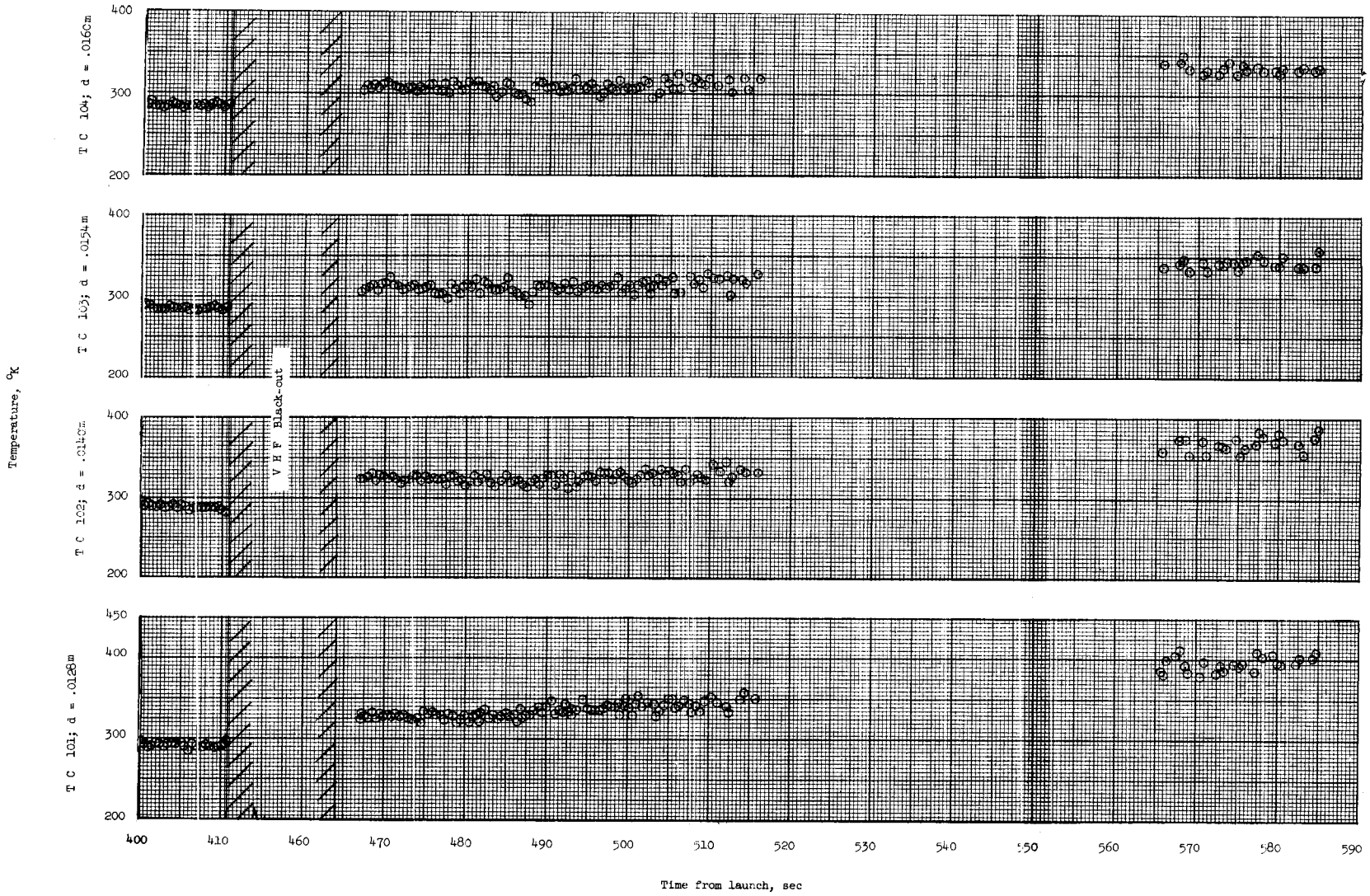
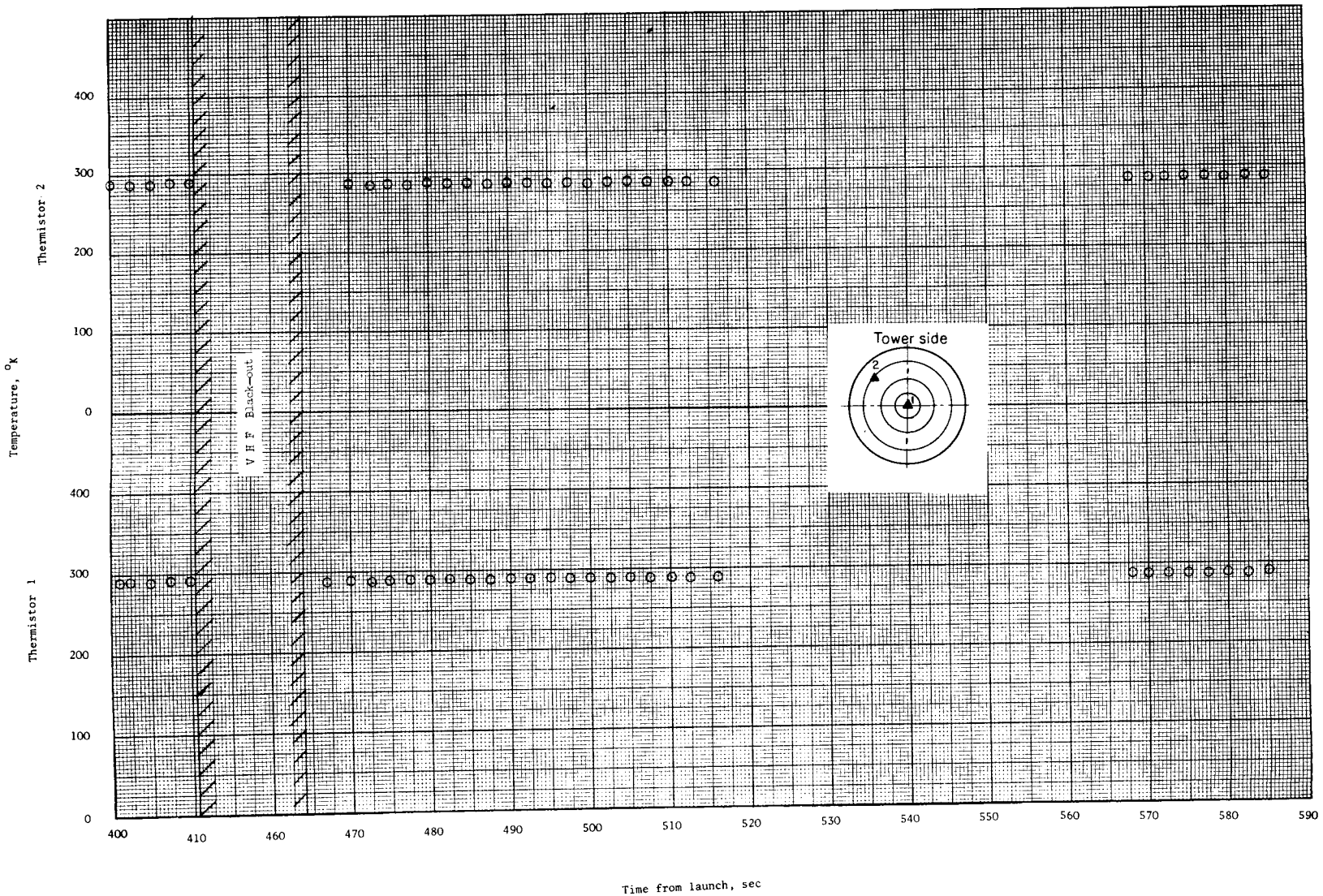


Figure 34.- Visible reentry as recorded by NASA 238 optical airplane utilizing a K-37 ballistic camera film with a 150 line/mm grating.



(a) Thermocouples 101, 102, 103, and 104.

Figure 35.- Temperature histories of afterbody thermocouples and nose-cap thermistors.



(b) Nose-cap thermistors.

Figure 35.- Concluded.