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CHAPTER III

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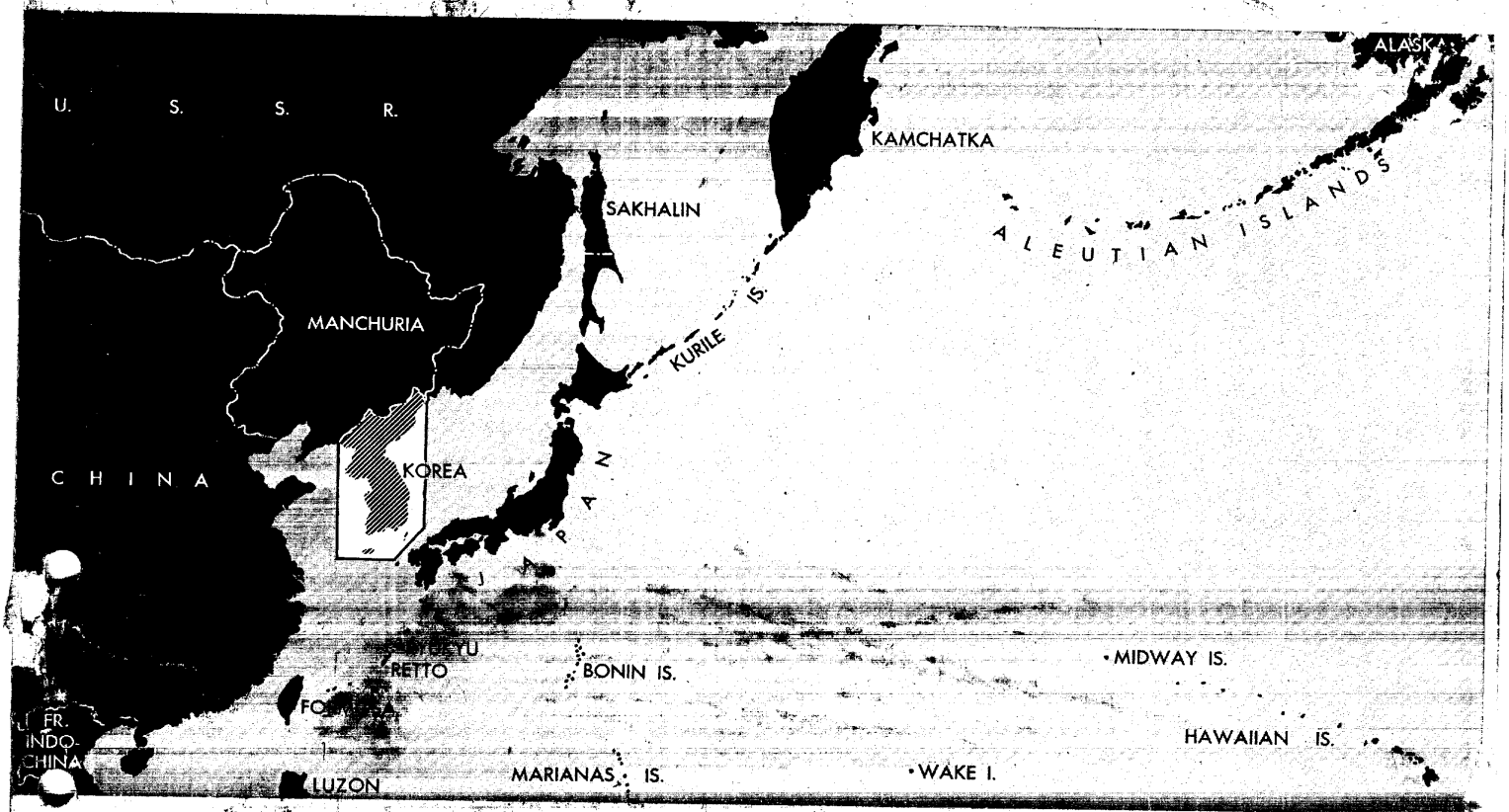

JOINT ARMY-NAVY INTELLIGENCE STUDY
OF
KOREA
(INCLUDING TSUSHIMA AND QUELPART)
OCEANOGRAPHY

APRIL 1945

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OCEANOGRAPHY

30. Introduction

The waters of Korea (Chōsen) are characterized by: (1) moderate to large tides on the south and west coasts, (2) strong tidal currents at times, (3) thin ice and slush in certain areas which may occasionally become a hindrance to navigation. High seas are commonest from October through March and low seas are most frequent from May through August.

Part of the data for this report was obtained from Japanese and British publications. These data have been supplemented by reports published by the U. S. Hydrographic Office and the U. S. Coast and Geodetic Survey, as well as by data obtained from unpublished files in both institutions, and some of the subsurface temperature data has been derived from submarine bathythermograph records. Data pertaining to offshore conditions were too meager for an adequate coverage of this area.

The characteristic features of the tide and tide predictions for certain localities in Korea (Chōsen), Cheju-do (Saishū-tō), and Tsushima are given in TABLES III - 4 and III - 5 and FIGURES III - 1 and III - 16 to III - 34. Notes on the currents experienced in various localities appear in Topic 31, B, and FIGURES III - 35 to III - 55. These currents must be considered in navigating small boats, in locating various harbor installations, in mine warfare, in floating supplies ashore, and in other coastal operations. An understanding of the oceanic circulation offshore (FIGURE III - 3) is important in planning air-sea operations and in air-sea rescue work.

Sea and swell conditions are important in the choice and use of anchorages. In addition, they affect fueling, small boat, aircraft carrier, and seaplane operations, as well as those requiring the transfer of personnel and heavy equipment at sea or from anchored vessels. The frequency distribution of the amounts of sea and swell for each month and the directions from which they come (FIGURES III - 5 to III - 7) are given in Topic 32. Short-range predictions of sea conditions and surf, however, must be made by trained aerologists using the methods outlined in HO Misc. 11,275 and HO 234.

The variation of the temperature of the surface waters (FIGURES III - 8 to III - 10) may affect the performance of personnel and equipment. The salinity of the surface water (FIGURE III - 11) has a direct influence on the conductivity of sea water and therefore is useful in predicting the performance of electrical systems which utilize this factor. The transparency of the water delimits the effectiveness of aerial observation, as well as the facility with which diving operations may be carried out, and the color of the water may assist in camouflage preparations (FIGURES III - 12 and III - 13).

Submarine and antisubmarine warfare are affected by surface temperature and salinity gradients, as well as by the amount of background noise, the distribution of wind forces, and the type of bottom. These factors will affect ranges and depths at which surface vessels can locate submerged submarines by echo ranging, and they will also influence distances at which surface craft can be heard by submarines. In addition, the temperature and salinity gradients are factors in determining the amount of ballast a submarine will have to flood in or pump out in going from one depth to another, and they will therefore affect the time interval involved before a submarine reaches a depth at which it can best avoid detection (FIGURE III - 14).

The numbers appearing in parentheses after place names throughout this chapter refer to encircled numbers on the Location Maps, Figures III - 56a and III - 56b, which appear as the last 2 pages and may be unfolded for continuous use with the text.

Variants of the place names are given in Topic 37.

31. Tides and Currents

A. Tides.

(1) Tidal differences and constants.

The data shown in TABLE III - 4 give the characteristics of the tide and permit tide predictions for the places listed by applying the tidal differences to daily predictions for the appropriate reference stations taken from TABLES III - 5a to III - 5g. For most places on the Sea of Japan the tides are very small, and no tidal differences have been given because the day-to-day variation in water level due to weather is frequently greater than that due to the tide. There is also a variation in average sea level from month to month. The monthly average level varies more than 1 foot during the year, being lowest in April and highest in August. Subtopics (*a*) through (*e*), following, explain the method for calculating predictions and for drawing tide curves.

(*a*) *Time differences.* These differences are applicable to both high and low water, unless otherwise indicated, and will give predictions for all places in the kind of time indicated in TABLE III - 4. It should be noted that standard time of the meridian 135° E is used and not "summer time" or "daylight saving time." A plus sign means that the tide is later than at the reference station, and the difference should be added; a minus sign means that the tide is earlier, and the difference should be subtracted.

(*b*) *Height differences.* The height of the tide, referred to the datum of charts, is obtained by means of a ratio together with a correction of datum. Multiply the heights of high water and low water at the reference station by the ratio. The correction for datum must then be applied to the resulting heights by adding or subtracting, as indicated.

(*c*) *Ranges.* The range of tide is the difference in height between consecutive high and low waters. *Mean range* is the average range over a considerable period of time. Throughout most of this area the tide is of the semidiurnal type with relatively small differences between the heights of morning and afternoon tides, and the principal variations follow the moon's changing phases. For these places *spring range,* which is the average of the large ranges that occur fortnightly near the times of new and full moon, is given.

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Along the east coast of Korea (Chōsen) the ranges are small, but twice a month, near the times of the moon's maximum declination, the difference between the heights of morning and afternoon tides becomes relatively large. For these places *tropic range,* which is the average of the ranges from higher high water to lower low water that occur fortnightly when the moon is near its maximum declination, is given.

(*d*) *Levels.* Mean sea level (MSL) above chart datum is given in the last column. The approximate average levels of the high and low waters at the times of the various tides can be obtained from mean sea level by adding and subtracting one-half the corresponding range.

(*e*) *Example.* To find the times and heights of the high and low waters for Ch'angam-dong (171, Sōgan-dō)* on 25 November 1945, and to draw a curve which will show the height at any time during the day, obtain predictions for Ch'angam-dong (171, Sōgan-dō) in 135° E meridian time by applying a time difference, a height ratio, and a correction for datum (TABLE III - 4) to daily predictions for Dairen-kō (TABLE III - 5d). To obtain such predictions, it is sometimes necessary to use the preceding day's p.m. tide or the following day's a.m. tide at the reference station. In this case the following day's a.m. tide is required. The necessary predictions for Dairen-kō for 25 and 26 November 1945, the tidal differences to be applied, and the resulting predictions for Ch'angam-dong (171, Sōgan-dō) for 25 November are shown in the following tabulation:

	LOW WATER		HIGH WATER		LOW WATER		HIGH WATER	
	H.M.	FT.	H.M.	FT.	H.M.	FT.	H.M.	FT.
Dairen-kō predictions for 25 November 1945	9 37	1.8	15 00	6.9	21 11	1.5		
for 26 November 1945							3 37	9.6
Time difference and height ratio	−4 25	1.1	−4 25	1.1	−4 25	1.1	−4 25	1.1
		2.0		7.6		1.6		10.6
Datum correction		+0.6		+0.6		+0.6		+0.6
Resulting predictions for Ch'angam-dong (171, Sōgan-dō), 25 November 1945	5 12	2.6	10 35	8.2	16 46	2.2	23 12	11.2

The resulting times and heights are plotted on cross-section paper (FIGURE III - 1); these points are then connected by a curve similar in shape to the typical curve for places referred to Dairen-kō (FIGURE III - 16).

From the curve for Ch'angam-dong (171, Sōgan-dō) can be determined the height of the tide at any time during the day, the duration of stand at high and low water, and other characteristics of the tide.

(2) Sun, moon, and tides.

FIGURES III - 17 to III - 34 show the rise and fall of the tides and the changing relationships during the month between the times of tide and daylight, twilight, moonlight, and darkness for Pusan-hang (58, Fusan-kō) and Inch'on-hang (156, Jinsen-kō) for April through December, 1945. With the changes indicated at the bottom of the figure, the diagrams

* Numbers in parentheses following place names refer to encircled numbers on Location Maps, FIGURES III - 56a and III - 56b.

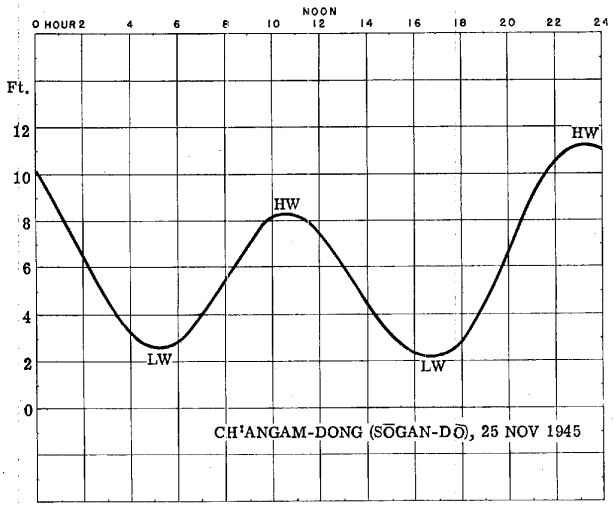

FIGURE III - 1.
Example: Tide Curve for Ch'angam-dong (Sōgan-dō), 25 November 1945.

for Pusan-hang (58, Fusan-kō) are also applicable to Ulsan-man (55, Urusan-wan), Kadok-sudo (62, Katoku-suidō), Ch'onsong-man (63, Tenjō-wan), and Chise-p'o (73, Chise-po) and those for Inch'on-hang (156, Jinsen-kō) to Soya-do (154, Soya-tō) and Taemuui-do (155, Daibui-tō). Subtopics (*a*) through (*g*), following, are explanatory of the Tides, Sunlight, and Moonlight Diagrams, FIGURES III - 17 to III - 34.

(*a*) *Area covered.* The astronomical data are for sea level and will not vary more than 5 minutes over a radius of 60 miles.

(*b*) *Time used.* The times on the diagram are for the time meridian indicated in the heading. When another time meridian is to be used in the field, it will be found convenient to change the figures representing hours on the left of the large diagram to conform to the new time. If the time meridian to be used is east of the one shown on the diagram, increase the figures by 1 hour for each 15°; if west, decrease the figures.

(*c*) *Dates.* In the upper diagram, each day from midnight to midnight is represented by a space between 2 lines. In the lower diagram the days are represented by vertical lines covering the period from noon of one day to noon of the next; therefore, the dates at the bottom differ from those at the top because the date changes in passing through midnight.

(*d*) *Tides.* The times of the tides are shown by curves in the lower diagram. By noting the sequence of the tides during a day, the height of any particular tide can be found from the upper diagram.

(*e*) *Twilight.* Three types of twilight are shown. In the evening, *civil twilight* starts at sunset and ends when the sun is 6° below the horizon. Objects can be distinguished readily, and a newspaper can be read. At the end of civil twilight, the brightness of the sky is still about 20 times as great as when the full moon is at zenith. Civil twilight is followed by *nautical twilight* which ends when the sun is 12° below the horizon. All the brighter stars are visible and general outlines can be distinguished, but the horizon will usually be indistinct. The end of nautical twilight may appear to be the beginning

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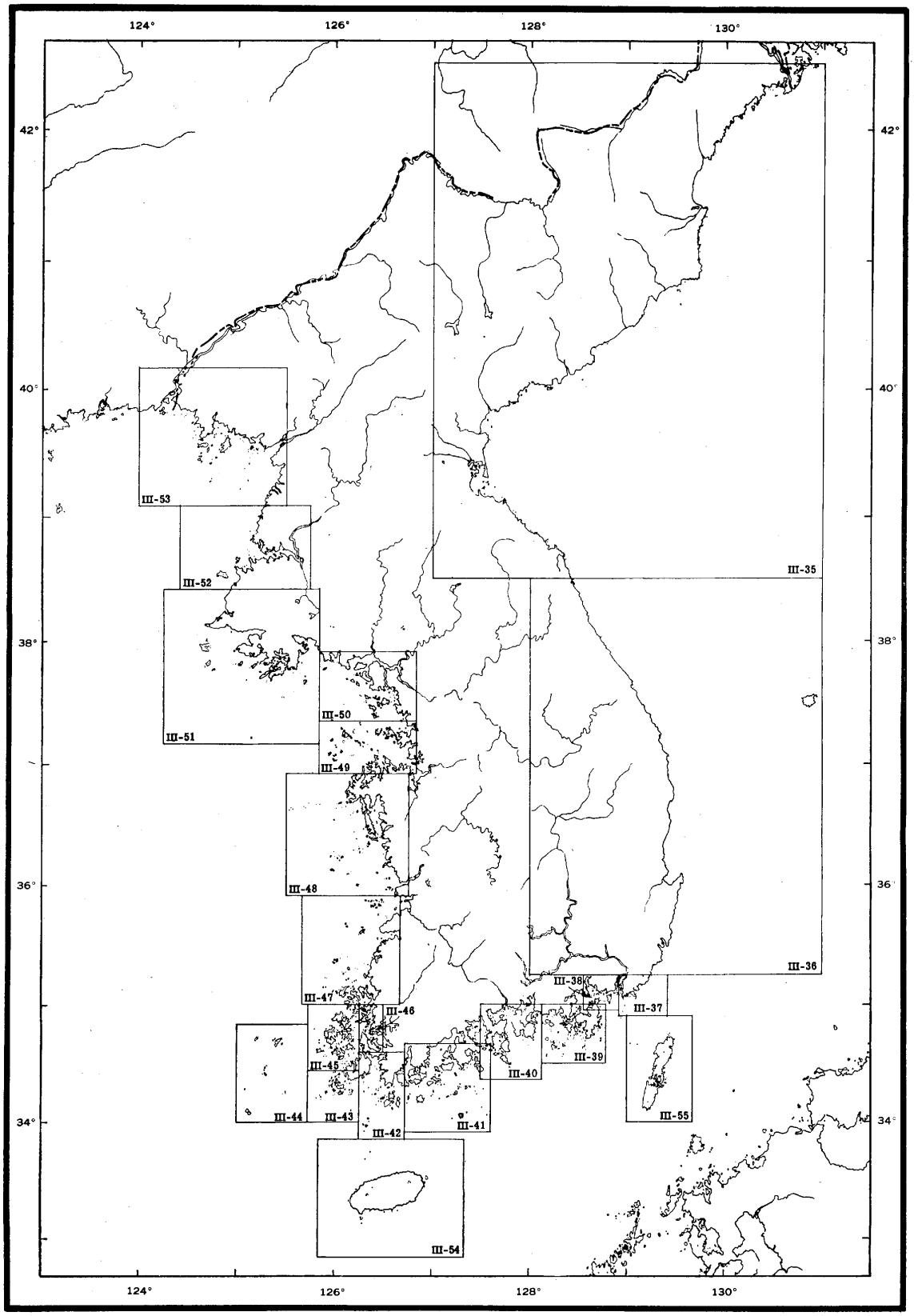

FIGURE III - 2. *Tidal Currents.*
Index to Figures III - 35 to III - 55, which show detailed local data.

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of solar darkness, but a small amount of light from the sun may still be refracted or reflected until the end of *astronomical twilight* when the sun is 18° below the horizon. In the morning the twilights occur in reverse order.

(*f*) *Moonlight.* During astronomical twilight and solar darkness, periods of moonlight and dim moonlight are shown. During the period of *moonlight,* the intensity of light will vary between the brightness of the full moon at zenith and about ⅓ of this value. During the period of *dim moonlight,* the intensity varies from about ⅓ to 1/10 of the brightness of full moon at zenith.

(*g*) *Moon's phases.* The phases of the moon are shown below the day on which they occur.

B. Tidal and local currents.

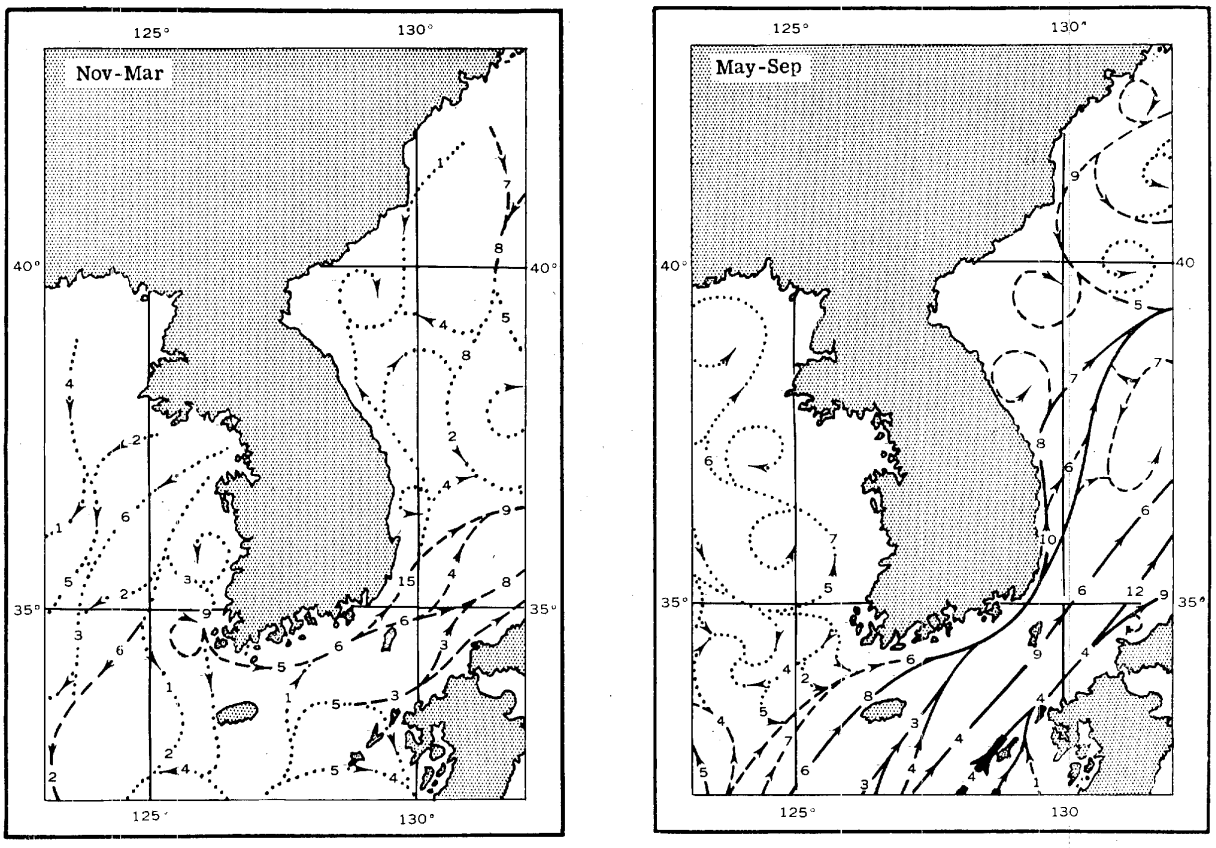
Off the east coast of Korea (Chōsen) the tidal currents are weak and irregular: the velocity seldom exceeds 1 knot. They are strong, however, off the south and west coasts. Along these coasts the currents are semidiurnal, but there is usually a noticeable diurnal inequality when the moon is near its north or south declination. Off the south coast tidal currents attain velocities as great as 5 knots in some of the narrow channels. Off the west coast the velocity may exceed 5 knots, and at times of freshets or under the influence of strong winds it may be as much as 13 knots.

Moderate tidal currents occur near Cheju-do (196, Saishū-tō) and Tsushima. Off Tsushima the direction and velocity is variable and depend upon the wind, local topography, and the influence of the Tsushima Current flowing northeastward through the strait. Along the east coast of Tsushima the flood generally flows southward at 0.5 to 2 knots and the ebb northward at 0.75 to 1.75 knots; slacks occur at about the times of low and high water. Off the south coast the flood flows westward at 1.75 to 2.25 knots and the ebb eastward at 2 to 3 knots. Along the west coast the flood flows southward at 1.5 knots and the ebb northward at 2 to 3 knots; slacks occur at about the times of low and high water.

Detailed current information for various localities in the area is given in FIGURES III - 35 to III - 55. FIGURE III - 2 is an index map showing the areas covered by each figure.

C. General circulation.

The oceanic currents are variable and largely dependent upon the direction and force of the wind except off the south coast and southern part of the east coast of Korea (Chōsen).



Steadiness of Direction Indicated by Weight of Lines

75-100% 50-75% 25-50% 0-25%

Numbers on the lines indicate average velocity in nautical miles in 24 hours.

FIGURE III - 3. *Mean Sea Surface Currents.*

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Off the western part of the south coast the resultant current flows eastward at an average velocity of 5 or 6 nautical miles per day and continues northeastward and northward parallel to the coast at average velocities up to 15 miles per day. At about latitude 37° N it turns northeastward across the Sea of Japan. Off northeast Korea (Chōsen) there is a general southwesterly drift which attains an average velocity of 9 nautical miles per day in summer. (FIGURE III - 3)

32. *Sea and Swell*

The condition of the surface of the ocean is described by the terms sea and swell. *Sea* refers to waves caused by local winds, whereas *swell* refers to waves which have progressed beyond the influence of the generating winds. The direction of sea is usually determined by the local wind, whereas the direction of swell is independent of the local wind but may coincide with it. It frequently happens that both sea and swell are present at the same time.

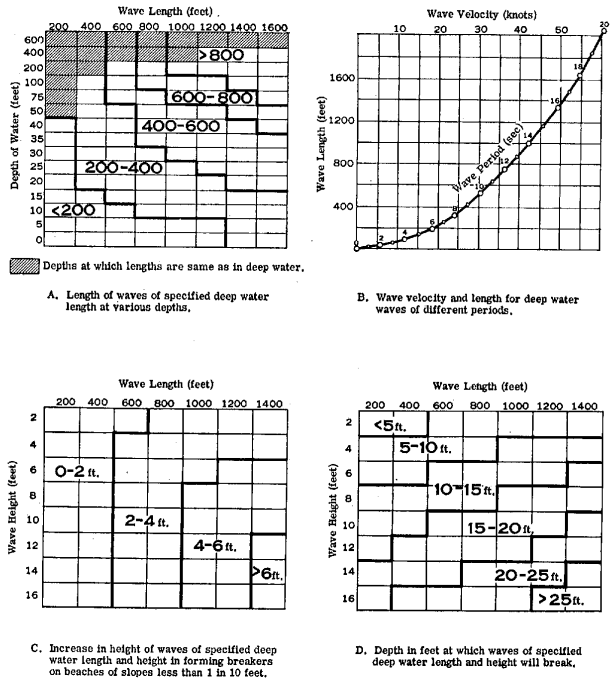
A knowledge of sea and swell conditions is desirable in planning operations utilizing aircraft carriers, as well as those requiring the transfer of personnel and heavy equipment from large to small vessels. This information will also lead to a more accurate estimate of the effectiveness of sonar equipment; a rough sea will cause a high background-noise level and variations in the stratification of the water layers, which may produce differences in the ranges obtained by sonar equipment.

Surf conditions are not only directly related to sea and swell conditions offshore but are affected also by inshore hydrography and the configuration of the coast. Where the shore is exposed to the prevailing swell, breakers will usually be higher than the waves offshore. A satisfactory method for forecasting surf has been developed. With this technique a team composed of a photographic unit, a photointerpreter, and an aerologist trained in the use of HO 234* can make operational forecasts for selected beach areas.

However, because of the time required to prepare such forecasts, it is impractical to prepare them for an area as large as that covered by this report.

In the absence of forecasts for specific areas, considerable information may be obtained from FIGURE III - 4 which shows the characteristics of deep water waves and the changes they undergo as they enter shallow water and form breakers. From the 4 graphs in the figure it is possible to determine: (1) The changes in length of waves of specified deep water length as they approach the shore (FIGURE III - 4A). At the moment of breaking, the waves may be slightly longer than the values determined from this graph. (2) The relationship of wave period and velocity to waves of specified deep water length (FIGURE III - 4B). (3) The *increase* in height of waves of specified deep water height and length in forming breakers on beaches of slopes of less than 1 in 10 feet (FIGURE III - 4C). (4) The approximate depth at which these waves will break (FIGURE III - 4D).

The following generalizations apply to conditions not covered by FIGURE III - 4: (1) If the underwater slope in front of the beach is gentle (less than 1 foot in 50 feet) and the waves in deep water are short (less than 250 feet in length), the height of the breakers on an open beach will be about equal to the height of the wave in deep water. (2) If the underwater slope is steep (more than 1 foot in 10 feet) or the waves in deep water are long (600 feet or more in length), the height of the highest breakers on an open beach which faces the direction of the swell will be about twice the height of the wave in deep water. (3) If the wave crests in deep water are at an angle of more than 70° to the shore line, the breakers will be lower in height than the waves offshore because of refraction. (4) Where the surf approaches the beach at an angle, there will be a current flowing parallel to the shore away from the direction of the approaching waves. This current must be considered in landing operations because it is a factor in causing boats to broach.



A. Length of waves of specified deep water length at various depths.

B. Wave velocity and length for deep water waves of different periods.

C. Increase in height of waves of specified deep water length and height in forming breakers on beaches of slopes less than 1 in 10 feet.

D. Depth in feet at which waves of specified deep water length and height will break.

FIGURE III - 4. *Waves.*
Characteristics of Deep Water Waves and the Changes they Undergo as they Approach the Shore.

The data for sea and swell for this area are very few except for Japanese data of amounts of sea. The data on file at the Hydrographic Office for the area north of latitude 35° N and west of longitude 132° E are too few to be statistically significant. The regions for which the data apply are shown on the figures (FIGURES III - 5 to III - 7).

A. Amounts of sea.

There is a seasonal variation in the amounts of sea in each of the regions (FIGURE III - 6) and in the southern part of the area (FIGURE III - 5). In general, the percentage of seas less than two feet in height is greater during the summer monsoon (May through August), whereas the percentage of seas greater than nine feet in height is greater during the winter monsoon (October through March).

* Breakers and Surf; Principles in Forecasting. HO 234. 52 pp. 1944. (Confidential).

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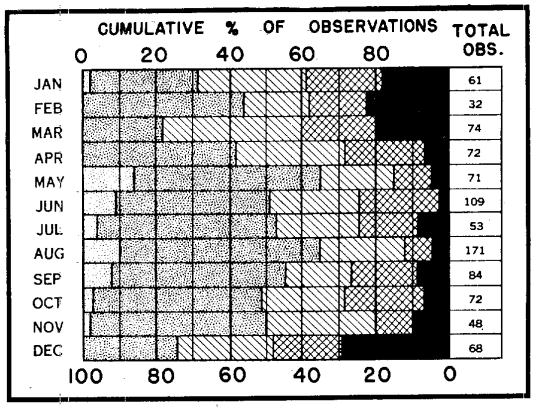
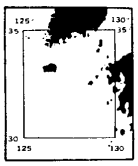




Amounts	Description	Approximate Height (ft.)
0	Calm	0
1-2	Smooth-Slight	0-2
3	Moderate	2-5
4	Rough	5-9
5-8	Very Rough-Mountainous	>9

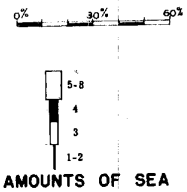
ROSES

THE NUMBER OF OBSERVATIONS APPEAR BELOW THE ROSE.

THE NUMBER WITHIN THE CIRCLE INDICATES THE PER CENT OF CALM.

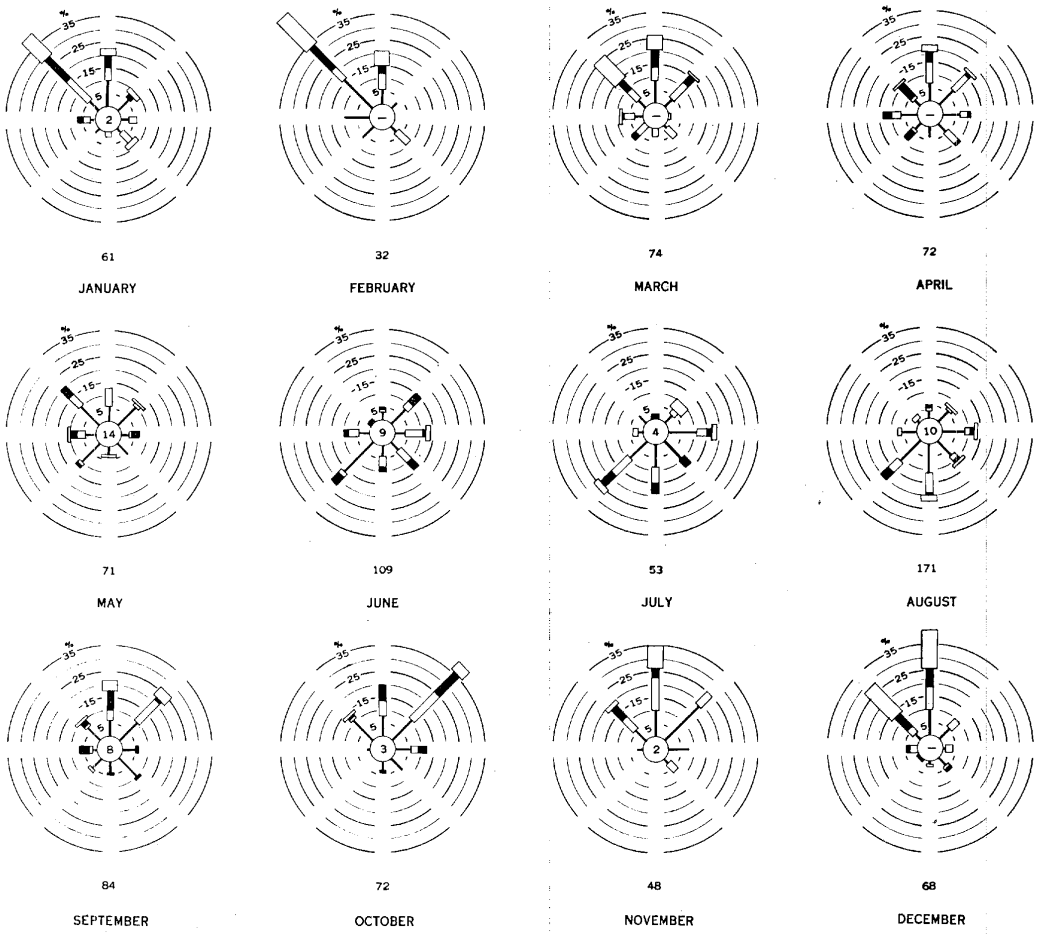
THE SCALE IS READ FROM THE INNER CIRCLE.

THE DIRECTION IS TOWARD THE CENTER OF THE ROSE.



FREQUENCY DISTRIBUTION OF AMOUNTS OF SEA

AMOUNTS OF SEA



FREQUENCY DISTRIBUTION OF AMOUNTS OF SEA BY DIRECTION

Data from ships' observations, 1932-1942, in the files of the Hydrographic Office, U.S.N.

FIGURE III - 5. *Sea.*

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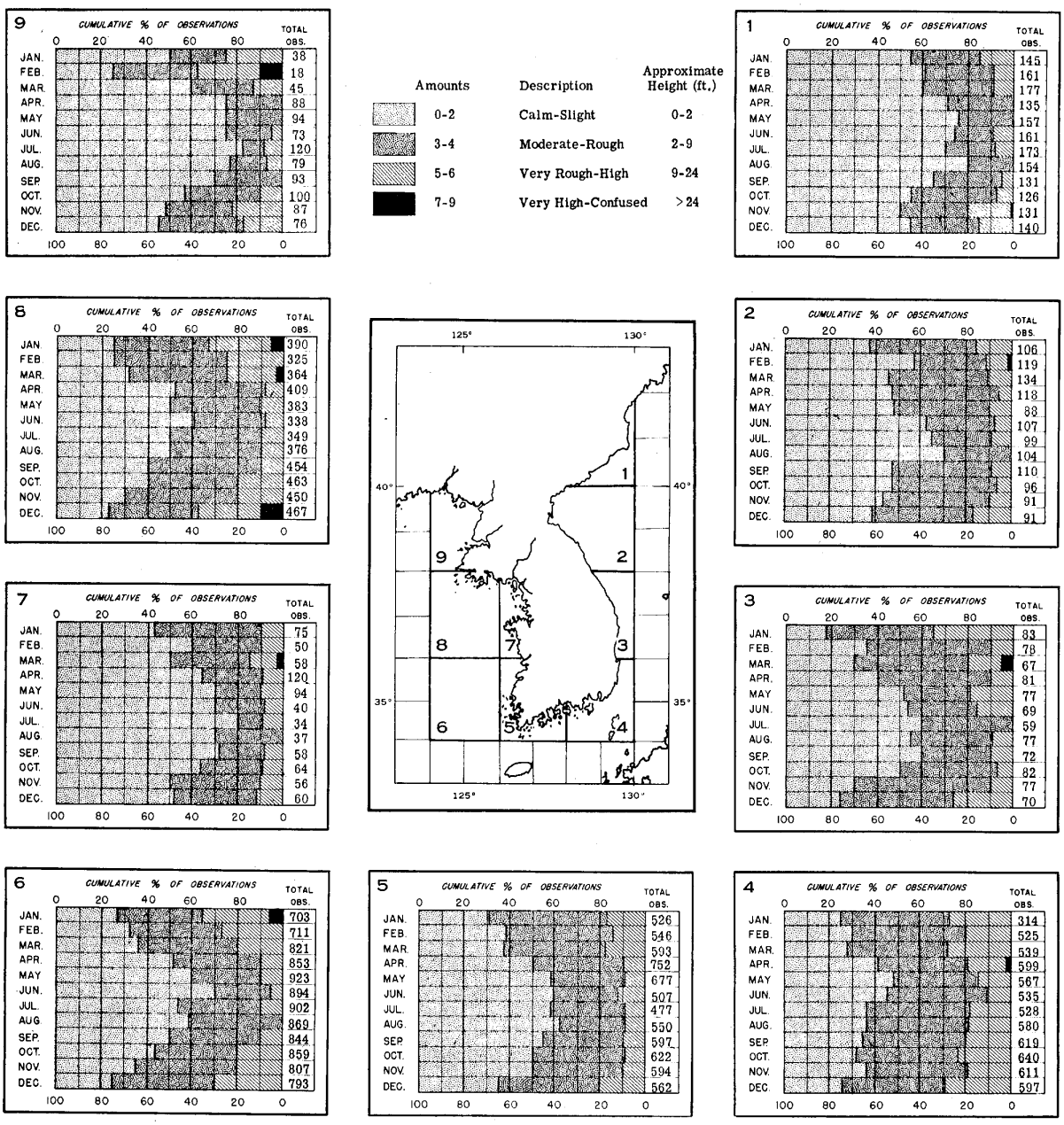

FIGURE III - 6. *Sea.*
Frequency Distribution of Amounts of Sea, Data from Japanese Charts, Ships' Reports, 1924-1938.

B. Direction of sea.

Except for the southern portion of this area there are no specific data for direction of sea (FIGURE III - 5), but it may be assumed that the directions of seas are the same as those of the local winds. During the winter monsoon northerly or northwesterly winds prevail except during October when northeasterly winds prevail. During the transition months of April and September winds are variable although there may be a slight preponderance of westerly or northwesterly winds in April and northerly or northeasterly in September. During the summer monsoon southwesterly or southerly winds prevail.

C. Amounts of swell.

In the southern portion of the area swell less than amount 3 has been reported, on the average, 70% of the time throughout the year, but the percentage frequency is slightly greater during the summer monsoon (FIGURE III - 7). Swell greater than six feet in height has been reported in every month; the percentage frequency is greater in December, March, and April than during the rest of the year and is least in July.

In the Yellow Sea swell estimates on the basis of wind data indicate that swell greater than 6 feet in height or longer

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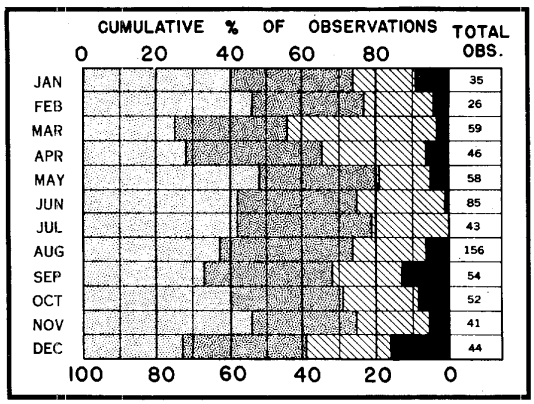
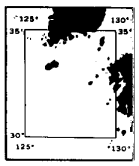


FREQUENCY DISTRIBUTION OF AMOUNTS OF SWELL



Amounts	Description	Approximate Height (ft.)
0	No Swell	0-1
1-2	Low	1-6
3-5	Moderate	6-12
6-8	High	>12

ROSES

THE NUMBER OF OBSERVATIONS APPEAR BELOW THE ROSE.

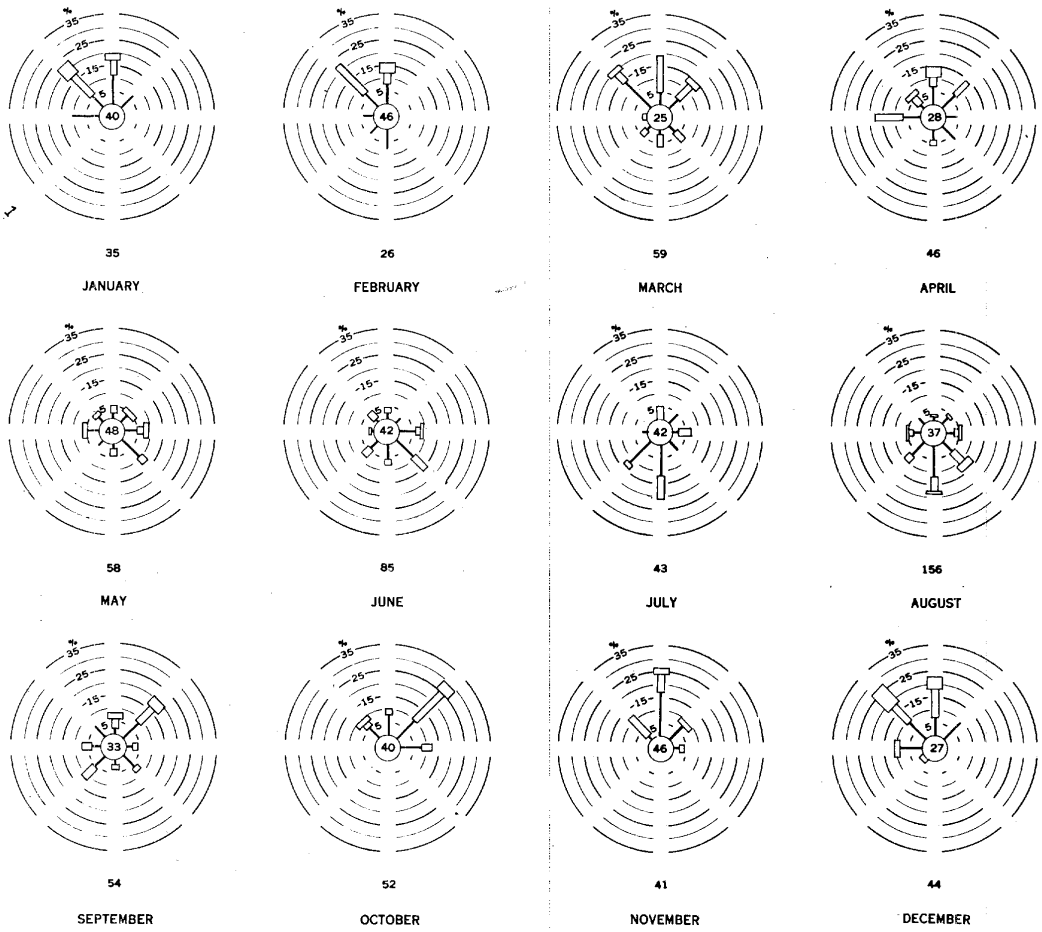
THE NUMBER WITHIN THE CIRCLE INDICATES THE PER CENT OF NO SWELL.

THE SCALE IS READ FROM THE INNER CIRCLE.

THE DIRECTION IS TOWARD THE CENTER OF THE ROSE.

0% 30% 60%

6-8
3-5
1-2
AMOUNTS OF SWELL



FREQUENCY DISTRIBUTION OF AMOUNTS OF SWELL BY DIRECTION

Data from ships' observations, 1932-1942, in the files of the Hydrographic Office, U.S.N.

FIGURE III - 7. *Swell.*

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than 300 feet would seldom be experienced, because during the winter monsoon the prevailing wind direction is north or northwest and as a result there is a limited fetch. During the summer monsoon, when the prevailing wind direction in adjacent regions is south or southeast, the winds are seldom strong enough to build up swell greater than this height or length.

Conditions in the southern part of the Sea of Japan are more favorable for developing higher and longer swell. The prevailing wind directions are north and northwest, but there are occasional northeasterly winds which would have a fetch of 900 miles or more, so that with strong winds considerably higher and longer swell could be developed. On the basis of wind data, swell 8 to 10 feet high and 400 to 500 feet long may be expected in this area 2 to 4 days per month from September through February. During the rest of the year swell of this type would not be expected, especially during the summer monsoon when this part of the Sea of Japan is in the lee of Kyūshū and southern Honshū.

D. Direction of swell.

The frequency distribution of the amounts of swell by direction for the southern part of the area is shown in FIGURE III - 7. The prevailing directions of swell are north or northwesterly during the winter monsoon and south or southeasterly during the summer monsoon. On the basis of wind data the prevailing directions of swell would be the same for the rest of the Korea (Chōsen) area except in the southern part of the Sea of Japan where northeasterly swell may occur occasionally in winter.

33. *Sea Water Characteristics*

A. Seasonal variation of surface temperature.

The annual variation of surface-water temperature, when combined with synoptic meteorological data, is useful in forecasting fog and other weather conditions. Extremes of water temperature, which affect the performance of personnel and equipment, must be taken into account in planning amphibious operations.

(1) Horizontal distribution.

In winter the mean sea surface temperature varies from about 36° F. in the northern part of the area to about 60° F. in the southern part; in midsummer the variation is from 70° to 81° F. (FIGURES III - 8 to III - 10).

(2) Temperature range.

The extreme recorded temperature range of the surface waters within the area is 30.8° F. to 86° F.

(3) Ice.

In this area ice is rarely of sufficient thickness to be an obstruction to navigation. Thin ice occurs in some of the ports on the east coast of Korea (Chōsen). At Sinp'o-hang (32,

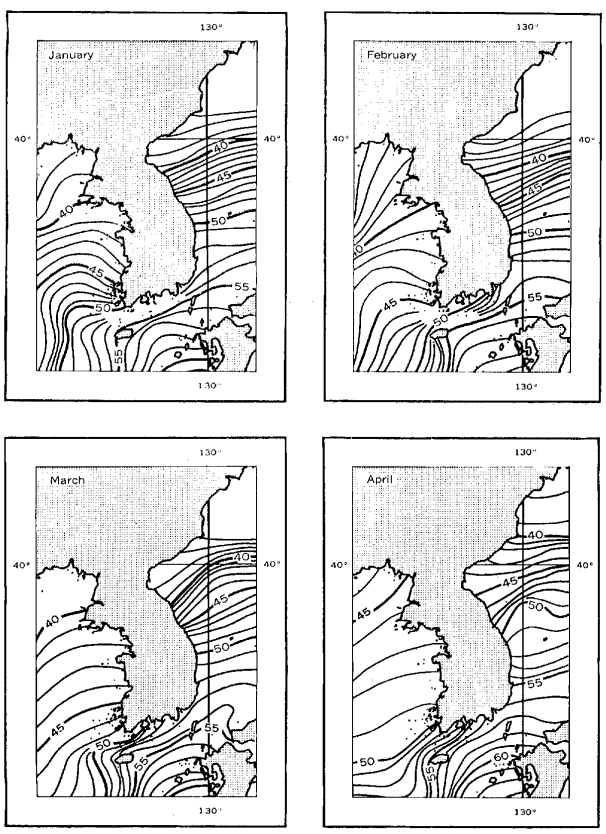

FIGURE III - 8.
Mean Sea Surface Temperature (°F.), January through April.

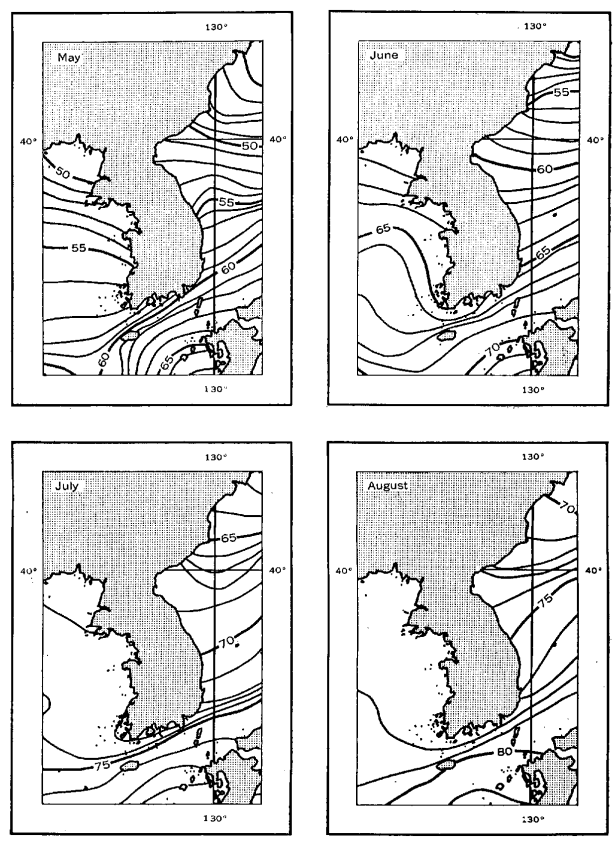

FIGURE III - 9.
Mean Sea Surface Temperature (°F.), May through August.

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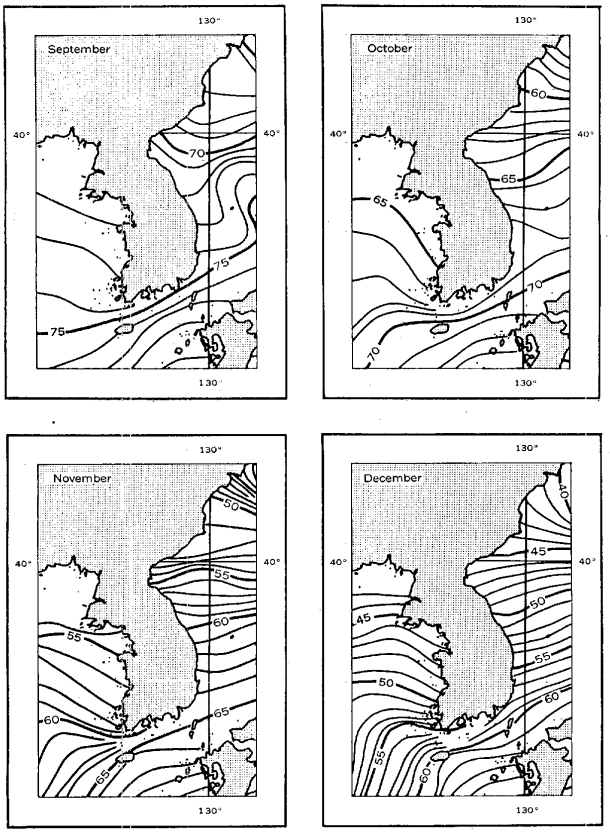

FIGURE III - 10.
Mean Sea Surface Temperature (°F.), September through December.

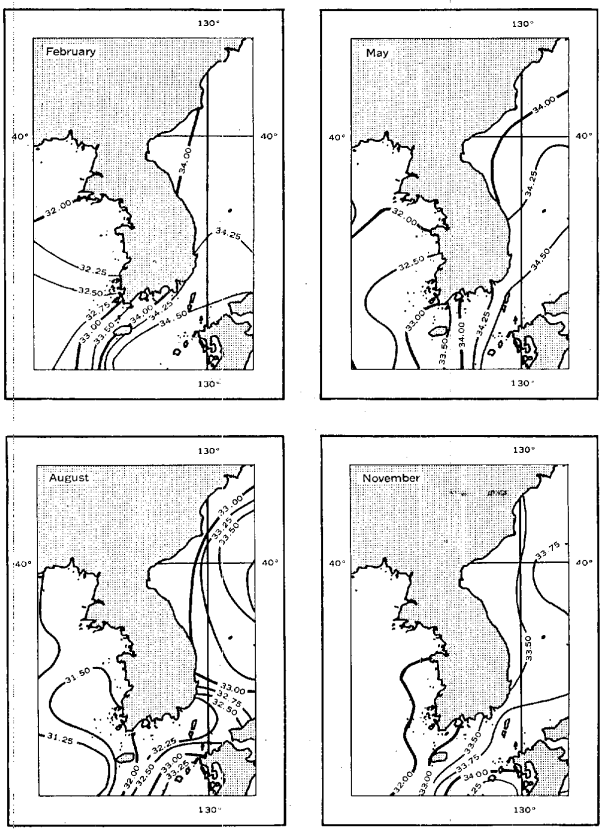

FIGURE III - 11.
Mean Sea Surface Salinity (Parts per Thousand).

Shinho-kō) the strait never freezes, but thin ice forms in the small bays on Mayang-do (34, Bayō-tō) during December and January; the shallow bay west of Mayang-do (34, Bayō-tō) is generally covered with ice about 2 feet thick for about 4 months. For about 2 months during the winter Songjon-man (39, Shōden-wan) may be covered with thin ice that is easily broken up by strong winds; northerly winds drive it into Won-san-hang (40, Genzan-kō) where it collects at the head of the bay.

Slush and thin ice occur occasionally along the west coast of Korea (Chōsen). In the last part of January and the first of February ice carried from the gulfs and bays in the north-west part of the Yellow Sea may be an obstruction to navigation.

(4) Relationship between sea and air temperature.

The mean temperature of the surface water is 1° to 9° F. higher than that of the air from September through May. During the rest of the year the mean sea surface temperature is 1° to 5° F. lower than the mean air temperature.

B. Seasonal variation of surface salinity.

Salinity changes in surface water near shore may affect water circulatory systems and electrical systems which utilize the conductivity of sea water.

(1) Horizontal distribution.

The distribution of mean sea surface salinity varies slightly from season to season; the mean salinity in a given area usually does not vary more than one part per thousand (FIGURE III - 11).

(2) Salinity range.

Extreme surface salinity values of 27.30 and 35.87 parts per thousand have been recorded, but salinities below 32.00 or above 34.50 are uncommon. Lower salinity values may be encountered near the entry of the larger rivers into this ocean area.

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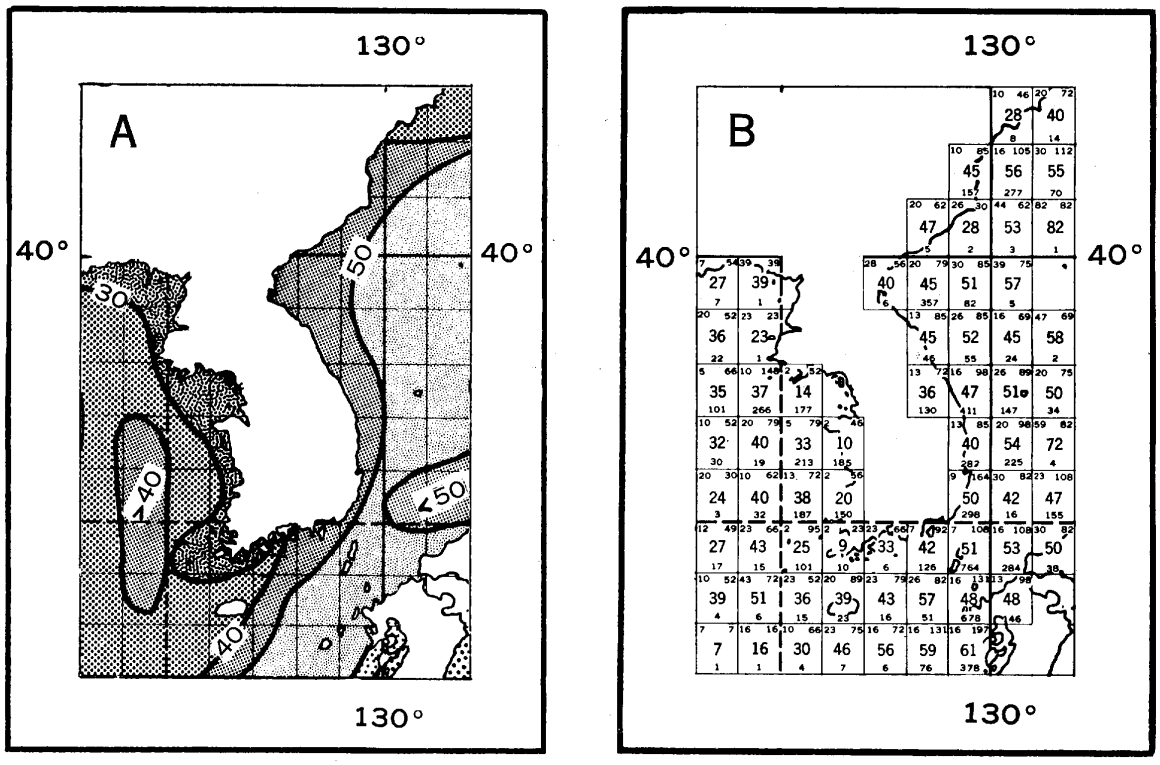

FIGURE III - 12. *Transparency.*
A. Mean transparency indicated by lines of equal Secchi disc readings in feet. B. The mean transparency in feet for each 1° square is shown in large type. The lowest and highest recorded Secchi disc readings are given in the upper left and upper right corners, respectively, and the number of observations appears at bottom center of each square.

C. Electrical conductivity of surface water.

The electrical conductivity of the sea water at the surface ranges from 0.023 to 0.062 reciprocal ohms.

D. Transparency and color of water.

The degree of transparency determines the distance below the surface at which submarines and mines, as well as reefs and shoals, are visible from airplanes and surface craft. It also delimits the effectiveness of diving operations and the use of underwater cameras and telescopes for photographing and viewing wrecks, mines, submarine nets, etc. The color of the water may determine the most favorable type of paint to be used on vessels and mines.

(1) Transparency.

The degree of transparency is governed by the amount of suspended material in the water. The commonest method of measuring transparency is to record the average of the depths at which a white "Secchi disc" disappears and reappears when lowered and raised from a ship.

The mean transparency of the ocean water within this area is about 40 feet; the extreme range is from 2 feet off the west coast of Korea (Chōsen) to 197 feet off Kyūshū (FIGURE III - 12).

(2) Color.

The color of sea water is measured by comparing the color of the water, as seen against a white background, with a colorimetric scale known as Forel's Scale. This scale consists of a copper sulfate solution to which are added varying amounts of a solution of chrome yellow; pure copper sulfate solution is designated as Forel 0. On the spectrum, Forel 2 approximates Fraunhofer line F, and Forel 20 is near Fraunhofer line E.

The mean color of the water within this area is about Forel 4, but the color varies from Forel 0 in Korea Strait to Forel 11 near shore. In other words, the water in the open sea is of fairly uniform blue-green color throughout this area (FIGURE III - 13).

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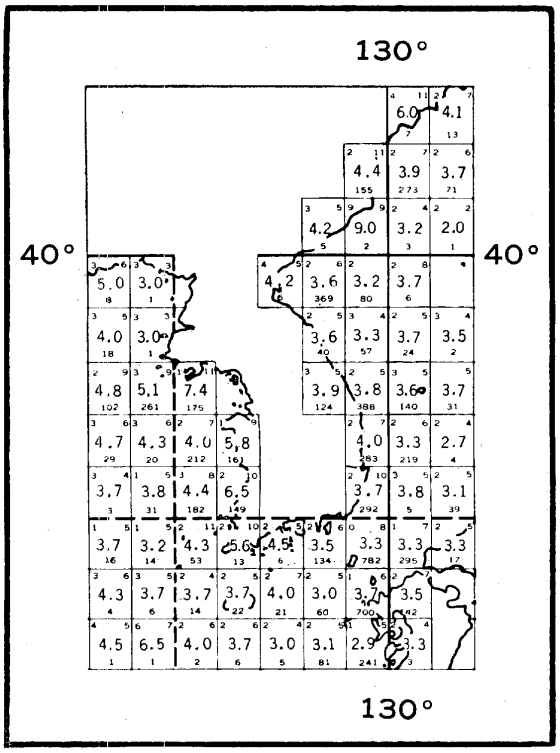

FIGURE III - 13. *Color.*
The mean color for each 1° square is shown in large type. The lowest and highest recorded color observations (Forel Scale) are given in the upper left and upper right corners, respectively, and the number of observations appears at bottom center of each square.

34. *Sonar and Diving Conditions*

An increase or decrease in either the temperature or salinity of the water from the surface downward causes a bending of the paths of sound waves in water, thereby altering the expected sound range. In addition, the state of the sea, the amount of background noise, and in shallow water, the probability of reflection of sound from the bottom also affect sonar operations and conditions. Therefore, a knowledge of all these factors is helpful in estimating distances and depths at which submarines can be located by surface craft. Bottom sediments are discussed in Topic 35.

The change in ballast required in diving to the best depth for evasion, and the possibility that the submarine may be able to maintain trim without the use of the motors or to move away quietly also depend upon the subsurface temperature and salinity gradients. Knowledge of the amount of ballast change will enable a submarine to anticipate such requirements and reach a good trim in the shortest possible time.

A. Sonar conditions.

(1) Seasonal variation.

Average echo ranges for a surface vessel ranging on a submarine at periscope depth vary from about 500 yards in summer to about 2,750 yards in winter; in spring and fall average ranges are usually less than 1,000 yards (FIGURE III - 14).

Sonar ranges will be shortened when the background-noise level is high or when the prevailing wind force is greater than Beaufort 5 (ranges from 1,700 yards with force 6 to 800 yards with force 8). Where the depth of water is less than 100 fathoms, sonar ranges may be shortened or lengthened depending on the nature of the bottom (TABLE III - 1). Ranges on a submarine at periscope depth may be shorter in the afternoon than in the morning during calm sunny periods in summer, due to heating of the surface water of the sea.

Listening ranges will usually be much greater than echo ranges, but they depend so much upon the type of noise and the speed of the vessel that no specific limits can be given.

(2) Variation with depth.

In this area the best depth for evasion is at periscope depth in spring, summer, and fall, and at depths greater than 300 feet in the winter. In winter ranges will be approximately the same at all depths, but during the remainder of the year the range will increase from 200 to 800 yards with each 100 feet in depth.

(3) Background noise.

The popping or crackling noise produced by snapping shrimps may be noticeable off Cheju-do (196, Saishū-tō), Tsushima, and the south coast of Korea (Chōsen) near *rock, stony, coral,* or *shell* bottoms in less than 30 fathoms. North of latitude 35° N shrimp crackle is encountered only at isolated localities, and the background-noise level is not as high near land as it is in the tropics. In the northern area sound operators will be troubled only by occasional fish noises or water noises due to storms or strong winds.

B. Diving conditions.

In winter and spring a submarine of 2,400 tons submerged displacement and a compressibility of 2,000 pounds per 100 feet will have to pump out from 2,000 to 6,000 pounds of ballast on diving from periscope depth to 400 feet. In summer and fall a submarine will have to flood in 1,000 to 12,000 pounds of ballast on diving from periscope depth to 400 feet. Balancing, or maintaining trim without the use of the motors, will be improbable at any depth in winter and spring but will be probable in summer at depths of 75 to 100 feet, and in fall in area A at a depth of about 165 feet (FIGURE III - 14).

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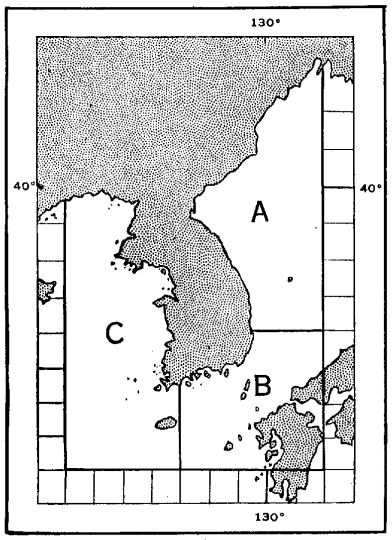

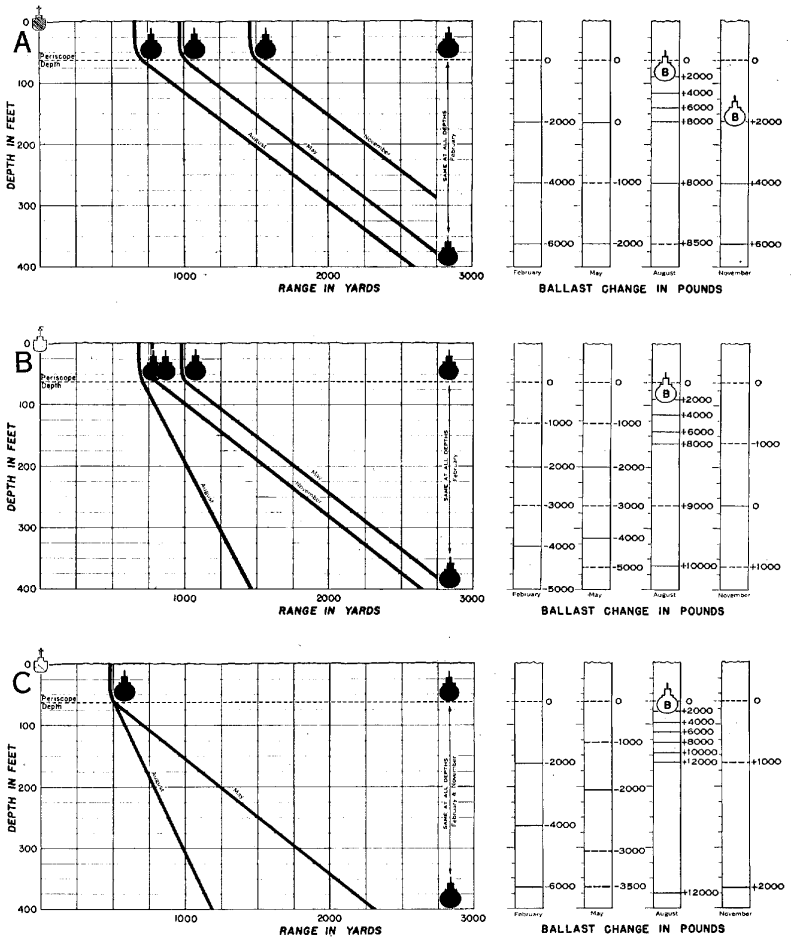

Mean Echo Range

Mean Evasion Depth

Mean Balancing Depth

In each area for all seasons the Minimum Echo Range is about 500 yards, and the Maximum Echo Range is about 3500 yards. Ballast change is based on mean conditions and applies to a submarine of 2400 tons submerged displacement with a compressibility of 2000 pounds per 100 feet. Ballast change is cumulative. When no balancing symbol (B) is shown, balancing is improbable.

Example: Area B

Under average conditions a submarine at periscope depth will be beyond the echo range of an A/S vessel at distances of 750-1000 yards in May, August, and November, and at 2750 yards in February. The average best depth varies from periscope depth to more than 400 feet (February); the average echo range on a submarine at the best depth for evasion ranges from 750 yards to 2750 yards.

In diving to 400 feet a submarine will have to pump out 5000 pounds of ballast in February and May, but will have to flood in 10,000 pounds in August, and 1000 pounds in November. Balancing is possible in August at depths of 75-150 feet. In November, a submarine in trim at periscope depth can dive on the planes alone and still be in trim on reaching a keel depth of 265 feet.

FIGURE III - 14. *Echo Ranging and Buoyancy.*

35. *Bottom Sediments*

Knowledge of the distribution of bottom sediments in water shallower than 100 fathoms is important in predicting underwater sound conditions, in mine warfare, and in planning landing operations.

A. Characteristics of sediment types.

The characteristics of the types of bottom sediments found off Korea (Chōsen) in depths less than 100 fathoms are shown in TABLE III - 1.

TABLE III - 1

CHARACTERISTICS OF TYPES OF BOTTOM SEDIMENTS

TYPE OF BOTTOM	DESCRIPTION OF BOTTOM	PROBABLE ACOUSTIC EFFECTS OF BOTTOM
Sand (including shells and washed gravel)	Firm, relatively smooth bottom	Maximum echo ranges usually exceed 2,000 yards, regardless of temperature conditions. Over "sand and shells" the noise level may be high.*
Sand and mud) including firm clay)	Relatively firm, smooth bottom	Echo ranges are variable; skip distances are likely. Reverberation may be high.

* The noise is caused by certain bottom-living animals and is characterized by a crackling sound with high frequency components.

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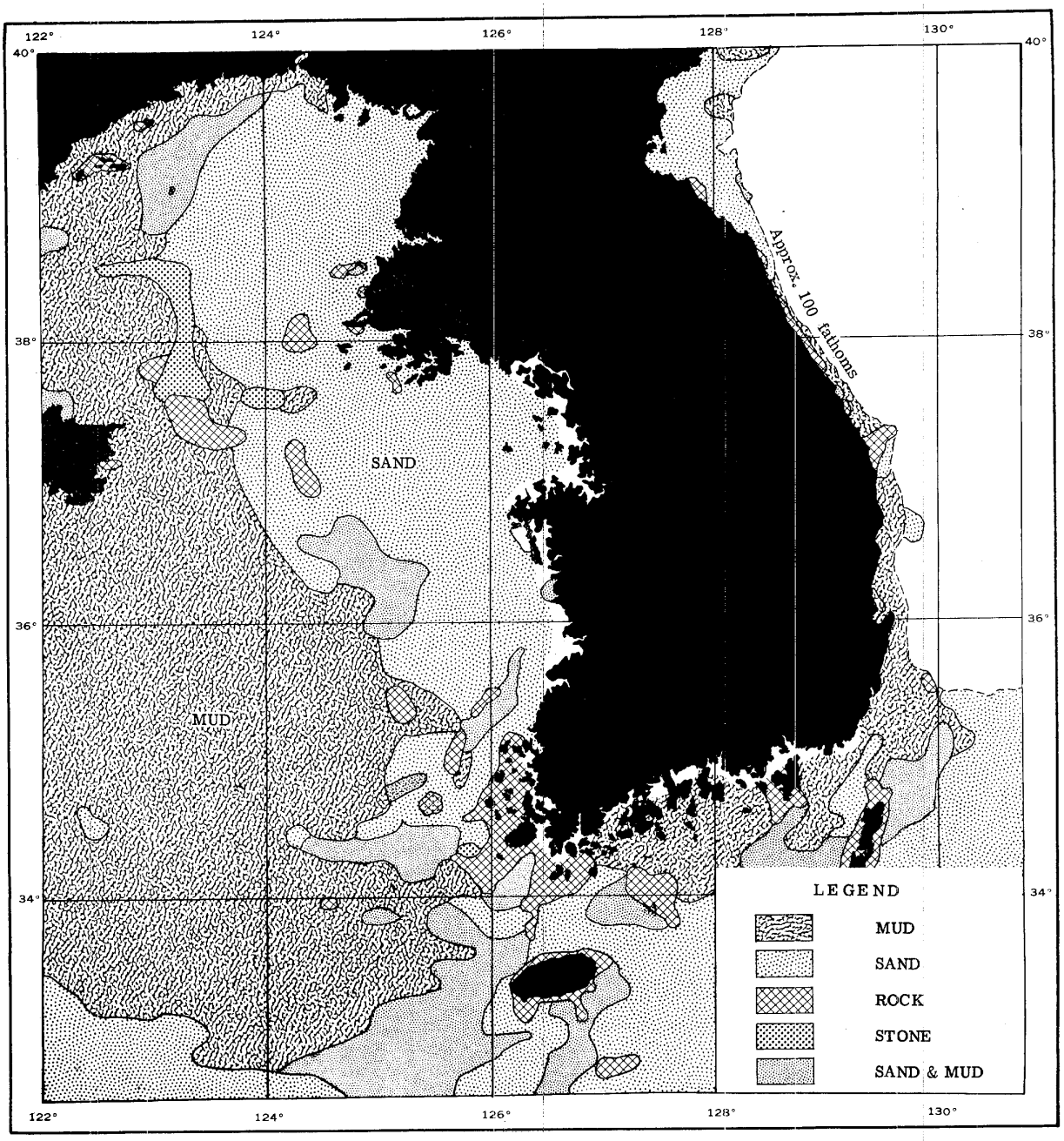

FIGURE III - 15. *Bottom Sediments.*
For inshore detail see TABLES III - 2 and III - 3.

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TABLE III - 1 *Continued*

TYPE OF BOTTOM	DESCRIPTION OF BOTTOM	PROBABLE ACOUSTIC EFFECTS OF BOTTOM
Mud	Soft, smooth bottom	Echo ranges are rarely longer and frequently shorter than those for deep water under the same temperature conditions. Reverberation may be high.
Stone (predominantly cobbles and pebbles with varying amounts of mud and sand)	Hard bottom, commonly rough	Maximum echo ranges are frequently less than 7 times the depth because of high reverberation. Noise level is high in depths less than 30 fathoms.*
Rock (including bedrock outcrops and areas covered by boulders)	Rough broken bottom	Because of high reverberation, maximum echo ranges are usually less than 7 times the depth, but when the water is isothermal to the bottom they may exceed 2,000 yards. Noise level is high in depths of less than 30 fathoms.*

* The noise is caused by certain bottom-living animals and is characterized by a crackling sound with high frequency components.

B. Horizontal distribution.

(FIGURE III - 15)

The shelf bordering the east coast of Korea (Chōsen) is 3 to 10 miles in width, except in Tongjoson-man (33, Higashi-Chōsen-wan) where it widens to about 30 miles. In general, *sand* and *sand and mud* are found in the bays and coves with *rock* in the inshore area between the bays and off headlands. The shelf seaward is usually *mud*. Off the southern part of the east coast *mud* and *sand and mud* extend for more than 20 miles before grading into the *sand* in the middle of Korea Strait.

Along the south coast the bottom is *mud* and *sand and mud* with the *sand and mud* grading seaward into the *sand* of the northern part of the East China Sea. *Rock* predominates in the southern part of the west coast and is gradually replaced northward by *sand* and *sand and mud*. The broad offshore zone of level *sand*, gradually widening toward the north, extends many miles into the Yellow Sea before being replaced by the *mud*.

Detailed information on the bottom sediments along the coasts of Korea (Chōsen), Cheju-do (196, Saishū-tō), and Tsushima is given in TABLES III - 2 and III - 3.

TABLE III - 2

BOTTOM SEDIMENTS, KOREA (CHŌSEN)

LOCALITY	DESCRIPTION
Tuman-gang (1, Tōman-kō)	*Sand* immediately offshore with *mud* on most of shelf and *sand and mud* near 100-fathom curve.
Chosan-man (2, Zōzan-wan)	*Mud* in central portion with *sand* off beaches and *rock* off most headlands.
Sosura-hang (3, Seisuira-kō)	*Sand and mud.*
East Bay (4)	*Sand and mud.*
Taejin-man (5, Daishin-wan)	*Sand and mud.*
Unggi-hang (6, Yūki-kō)	*Sand and mud.*
Ch'angjin-man (7, Sōshin-wan)	*Sand and mud.*
Najin-hang (8, Rashin-kō)	*Sand and mud* in central and inner parts of bay with *sand* near shore and *sand* approaches.
Yujin-p'o (9, Yushin-ho)	Similar to Najin-hang (8, Rashin-kō).

TABLE III - 2 *Continued*

LOCALITY	DESCRIPTION
Naksan-man (10, Rakusan-wan)	*Sand* with *sand* approaches.
Ijin-man (11, Rishin-wan)	*Sand and mud* in central portion with *sand* along the shore and scattered *rock* patches around headlands and small islands; *sand* approaches.
Sajin-man (12, Sashin-wan)	*Sand* with *sand* approaches.
Yongjo-man (13, Ryūsho-wan)	Similar to Ijin-man (11, Rishin-wan).
Ssangp'o-man (14, Sōho-wan)	Similar to Ijin-man (11, Rishin-wan).
Kidong-man (15, Kidō-wan)	*Mud* or *sand and mud* with *sand* immediately off beach.
Ch'ongjin-hang (16, Seishin-kō)	Similar to Kidong-man (15, Kidō-wan).
Odaejin-hang (17, Gyotaishin-kō)	Similar to Kidong-man (15, Kidō-wan).
Iam-man (18, Rigan-wan)	Similar to Kidong-man (15, Kidō-wan).
Tajin-man (19, Tashin-wan)	*Sand* in central portion and at the head with *rock* in shallow water off headlands and along the shore on both sides.
Taeryanghwa-man (20, Dairyōka-wan)	Similar to Tajin-man (19, Tashin-wan).
Whangjin-man (21, Kōshin-wan)	Similar to Tajin-man (19, Tashin-wan).
P'ohang-man (22, Hokō-wan)	Similar to Tajin-man (19, Tashin-wan).
Kalma-p'o (23, Katsuma-ho)	*Mud* in central part with *sand* at head and *rock* patches along the shore.
Whanggaldong (24, Kōgandō-byōchi)	*Mud* with *sand* and *sand and mud* immediately offshore and *rock* patches off headlands.
Immyong-hae (25, Rimmei-kai)	*Mud* generally replaced by *sand and mud* toward beach; *sand* just off beach.
Yongdae (27, Ryūdai-byōchi)	*Sand* strip, 3 mi. in width, bordering shore; *mud* on shelf.
Iwon (28, Rigen-hakuchi)	Mostly *sand* with some *sand and mud* in central portion and *rock* patches in shallow water off headlands.
Ch'aho-hang (29, Shako-kō)	*Mud* with *sand* at entrance and on both sides of entrance; *rock* patches off headlands.
Sinch'ang-hang (30, Shinshō-kō)	*Sand and mud* in central portion with *sand* toward beach and *mud* offshore.
Yanghwa-man (31, Yōka-wan)	*Sand and mud* in central portion with *sand* across entrance and near shore.
Sinp'o-hang (32, Shinho-kō)	*Sand and mud* with *sand* along the shore.
Tongjoson-man (33, Higashi-Chōsen-wan)	*Sand* with *sand and mud* and *mud* restricted to outer part of shelf (FIGURE III - 15).
Mayang-do (34, Bayō-tō)	*Sand and mud* in inshore passage with *sand* along the shore.
Mayang-do (34, Bayō-tō) to Hamhung-man (35, Kankō-wan)	*Sand* or *sand and mud* with *sand* close inshore in bays; *rock* patches off headlands.
Hamhung-man (35, Kankō-wan)	*Sand* with *stony* area outside Hyongjeam (37, Keitei-gan).
Sohojin-hang (36, Seikoshin-kō)	*Mud* extending into Hamhung-man (35, Kankō-wan); *sand* in narrow strip close to beach.
Hamhung-man (35, Kankō-wan) to Yonghung-man (38, Eikō-wan)	*Sand* extending 18 mi. offshore with occasional patches of *sand and mud* near shore.
Yonghung-man (38, Eikō-wan)	*Mud* at entrance and in central portion with *sand and mud* grading into *sand* approaching shore and *rock* patches in shoal water, especially off promontories.
Songjon-man (39, Shōden-wan)	Similar to Yonghung-man (38, Eikō-wan).

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TABLE III - 2 *Continued*

LOCALITY	DESCRIPTION
Wonsan-hang (40, Genzan-kō)	Similar to Yonghung-man (38, Eikō-wan).
Kojo-p'o (41, Kotei-ho)	*Sand* throughout.
Changjon-hang (42, Chōsen-kō)	*Sand* with extensive *rock* patches around shoals at both sides of entrance and off promontories; some sand and mud E of Changadae-dan (43, Chōgadai-tan).
Suwon-dan (44, Suigen-tan) to Yongch'u-gap (51, Ryūshū-zaki)	Shelf 4 - 5 mi. in width. *Sand and mud* broken by numerous *rock* areas off headlands, around islands, and offshore.
Pongsu-hang (45, Hosui-kō)	*Sand* with scattered *rock* patches off approaches.
Kojin (46, Kyoshin-hakuchi)	Similar to Pongsu-hang (45, Hosui-kō).
Sokch'o-hang (47, Sokusō-kō)	Similar to Pongsu-hang (45, Hosui-kō).
Taep'o-hang (48, Daiho-kō)	Similar to Pongsu-hang (45, Hosui-kō).
Chumunjin-hang (49, Chūmonshin-kō)	Similar to Pongsu-hang (45, Hosui-kō).
Mukho-hang (50, Bokuko-kō)	Similar to Pongsu-hang (45, Hosui-kō).
Chukpyon-man (52, Chikuhen-wan) to Yongil-man (54, Geijitsu-wan)	Shelf 8 mi. in width. *Mud* and *sand and mud* except close inshore.
Chukpyon-man (52, Chikuhen-wan)	*Sand* with numerous *rock* patches, especially off headlands, and some *sand and mud* about 1 mi. from beach.
Ch'uksan-p'o (53, Chūsan-ho)	Similar to Chukpyon-man (52, Chikuhen-wan).
Other open bights	Probably similar to Chukpyon-man (52, Chikuhen-wan).
Yongil-man (54, Geijitsu-wan)	*Sand and mud* in central part with *sand* and *stony* patches at head and *rock* off headlands.
Yongil-man (54, Geijitsu-wan) to Pusan-hang (58, Fusan-kō)	FIGURE III - 15.
Ulsan-man (55, Urusan-wan)	*Mud* extending to head with *sand* and numerous *rock* patches close inshore.
Oehwang-kang (56, Gaikō-kō)	Similar to Ulsan-man (55, Urusan-wan) but with considerable *sand and mud* at entrance.
Suyong-man (57, Suiei-wan)	*Sand* with scattered *rock* patches off approaches.
Pusan-hang (58, Fusan-kō)	*Sand and mud* with *rock* along the shore except in small coves which have *sand* at heads; *mud* in N and S entrances.
Mok-to (59, Makino-tō)	Extensive *rock* area off SE tip.
Pusang-hang (58, Fusan-kō) to Kohung-pando (101, Kōkō-hantō)	FIGURE III - 15.
Kamnae-p'o (60, Kanrai-ho)	*Sand and mud* grading into *mud* offshore.
Naktong-p'o (61, Rakutō-ho)	Similar to Kamnae-p'o (60, Kanrai-ho).
Kadok-sudo (62, Katoku-suidō)	*Mud* in entrance.
Pudo-sudo (64, Futō-suidō), including coves, e.g. Haengam-man (65, Kōgan-wan), Masan-hang (66, Masan-kō), and Namp'o-man (67, Rampo-wan)	*Mud* generally with *sand* close inshore and with numerous *rock* patches off promontories.
Chinhae-man (68, Chinkai-wan), including coves	Similar to Pudo-sudo (64, Futō-suidō).
E and S coasts of Koje-do (70, Kyosai-tō)	*Rock* close inshore except at heads of bays listed below.
Ok-p'o (72, Gyoku-ho)	*Mud* probably with *sand* close inshore at head.
Chise-p'o (73, Chise-po)	*Sand and mud* probably with *sand* close inshore at head.

TABLE III - 2 *Continued*

LOCALITY	DESCRIPTION
Tojang-p'o (74, Tōzō-ho)	*Mud* in central part probably with *sand* close inshore at head.
Tadae-p'o (75, Tadai-ho)	*Sand and mud* with *sand* close inshore at head.
Between Koje-do (70, Kyosai-tō) and Namhae-do (84, Nankai-tō)	*Sand* or possibly *rock* in constricted passages and *mud* or occasionally *sand* in broader passages. *Rock* close inshore except for heads of small coves and bays off main inlets which are probably *sand*.
Changgang-sudo (77, Chōkō-suidō)	*Sand*.
Yokchi-do (82, Yokuchi-tō) and other islands in vicinity	*Sand and mud* with *sand* and *stony* patches.
Yokchi-sudo (83, Yokuchi-suidō)	Similar to Yokchi-do (82, Yokuchi-tō).
Namhae-do (84, Nankai-tō)	
Bays on landward side	Generally *mud*.
Bays on seaward side, e.g. Aenggang-man (85, Ōkō-wan)	*Sand and mud* with *sand* close inshore at heads.
So-sudo (87, Nishi-suidō) and other passages between Namhae-do (84, Nankai-tō) and mainland	Probably *rock, sand,* and *stony*.
Yosu-haeman (92, Reisui-kaiwan)	*Mud* in outer and central parts with *sand* and *sand and mud* off W coast of Namhae-do (84, Nankai-tō).
Bays around Yosu-pando (93, Reisui-hantō), e.g. Kwangyang-man (94, Kōyō-wan), Kamagyang (96, Gabaku-yō), and Yoja-man (98, Joji-wan)	*Mud*.
Passages between Yosu-pando (93, Reisui-hantō) and islands to S, e.g. Yoja-man (98, Joji-wan) and approaches to Kumo-yolto (99, Kingō-rettō)	*Rock, sand,* and *stony*.
Passages between Yosu-pando (93, Reisui-hantō) and Kohung-pando (101, Kōkō-hantō)	*Rock, sand* and *stony*.
Kohung-pando (101, Kōkō-hantō)	Probably mostly *rock* close inshore as well as off headlands and *sand* or *sand and mud* at heads of bays and coves.
Small bays on landward side	*Mud*.
Bays on E and S coasts	*Sand and mud*.
Kogum-sudo (102, Kyokin-suidō)	*Mud* with *sand* in narrowest parts.
Tungnyang-man (103, Tokuryō-wan)	*Mud*.
Ch'odo-kundo (104, Sōtō-guntō)	*Mud* in passages; *rock* and *stony* with *sand* patches near islands.
Komun-do (106, Kyobun-tō)	Similar to Ch'odo-kundo (104, Sōtō-guntō)
Kohung-pando (101, Kōkō-hantō) to Chin-do (120, Chin-tō)	FIGURE III - 15.
Kohung-pando (101, Kōkō-hantō) to Soan-kundo (111, Shoan-guntō)	*Sand* and *sand and mud* in passages between outer islands and seaward of islands. *Mud* or *sand and mud* in inner passages and protected bays and inlets, e.g. Hwado-sudo (108, Katō-suidō).
Soan-kundo (111, Shoan-guntō) and Hoenggan-sudo (112, Kō-kan-suidō)	*Sand* and *stony* with *rock* patches.
Ch'uja-kundo (114, Shūshi-guntō)	Similar to Soan-kundo (111, Shoan-guntō).

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TABLE III - 2 *Continued*

LOCALITY	DESCRIPTION
Soan-kundo (111, Shoan-guntō) to Chin-do (120, Chin-tō)	*Sand* surrounding numerous island groups with *stony* patches near Soan-kundo (111, Shoan-guntō) and *sand and mud* approaching Chin-do (120, Chin-tō).
Maenggol-sudo (116, Mōkotsu-suidō)	*Rock* extending offshore.
Tokko-kundo (118, Dokukyo-guntō)	*Sand and mud* with numerous *rock* areas around small islands.
Changjuk-sudo (119, Chōchiku-suidō) and small passages between outlying islands	*Rock* with *sand* patches.
W and S coasts of Chin-do (120, Chin-tō) and islands and mainland in vicinity	Probably *rock* close inshore and off headlands with *mud* and *sand and mud* and occasional *sand* strips at heads of shallow coves.
Maro-hae (121, Baro-kai)	*Sand and mud.*
Myongyangdo (124, Meiyōto)	*Rock* and *stony* with some *sand.*
Chin-do (120, Chin-tō) to Hamp'yong-man (138, Kampei-wan)	*Sand* and *sand and mud* with many *sand* shoals seaward.
Chin-do (120, Chin-tō) to approaches of Hamp'yong-man (138, Kampei-wan)	*Rock, stony,* and *sand* with little *mud* or *sand and mud* in passages between islands, e.g. Chongdunghae (125, Teitō-kai) and Sia-hae (127, Jiga-kai).
Maemul-sudo (132, Maikotsu-suidō)	*Mud* with some *sand and mud.*
Taehuksan-kundo (133, Dai-Kokusan-guntō)	*Rock, sand,* and *stone* immediately surrounding islands.
Inlets of mainland	*Rock.*
Imja-do (137, Jinshi-tō)	*Sand* close inshore off N coast.
Hamp'yong-man (138, Kampei-wan)	*Sand* and *sand and mud.*
Hamp'yong-man (138, Kampei-wan) to Tong-sudo (149, Higashi-suidō)	Largely *sand* and *sand and mud* near shore and in inlets, e.g. Kunsan-hang (Gunzan-kō) (Kunsan Po) (141). *Sand* immediately off shore line, particularly near river mouths, and *rock* off promontories and in vicinity of small outlying island groups.
Ch'onsu-man (147, Sensui-wan)	Patchy bottom of *rock, sand,* and some *sand and mud* in central part; principally *sand* at head and close inshore. *Sand* and *sand and mud* in approaches and *rock* at entrance.
Ch'onsu-man (147, Sensui-wan) to Tong-sudo (149, Higashi-suidō)	*Sand* and *rock* patches with *sand and mud* in inshore areas between island groups. *Rock* in immediate vicinity of small islands.
Tong-sudo (149, Higashi-suidō)	Considerable *sand and mud* in middle of channel with *rock* at entrance, around islands on both sides of entrance, and off the S shore. *Sand and mud* close inshore with *rock* areas off headlands.
Asan (152, Gazan-byōchi)	Predominantly *rock* with some *sand* patches.
Approaches to Inchon-hang (156, Jinsen-kō)	*Sand* and *sand and mud* in broad channels and *rock* in narrow channels, e.g. So-sudo (153, Nishi-suidō) with *rock* patches off headlands and around small islands.
Inchon-hang (156, Jinsen-kō)	*Sand* and *sand and mud* with *rock* and *stone* and patches of *sand and mud* off town.
Inch'on-hang (156, Jinsen-kō) to Changsan-got (172, Chōzan-kan)	*Sand* and *sand and mud* in channels between shoals and close inshore with *rock* around small islands and in restricted channels, e.g. Ch'odo-sudo (158, Shōtō-suidō).
Taech'ong-kundo (167, Taisei-guntō)	*Rock* with *sand* offshore and *sand, rock,* and *stony* patches in passages between islands.

TABLE III - 2 *Continued*

LOCALITY	DESCRIPTION
Taedong-man (170, Daitō-wan) and similar bays	*Sand* and *sand and mud* usually extending to shore line.
S shore of Changsan-got (172, Chōzan-kan)	*Stone* and *rock* inshore and *sand* offshore.
Changsan-got (172, Chōzan-kan) to Ch'o-do (176, Shiku-tō)	*Sand and mud* becoming *sand* offshore with *rock* and *stony patches* which are more numerous toward Ch'o-do (176, Shiku-tō).
Ch'odo-sudo (175, Shōtō-suidō)	*Sand* or *sand and mud* with considerable area of *rock.*
Approaches to Taedong-gang (177, Daidō-kō)	Largely *sand* in outer part with some *sand and mud* and numerous outlying, long *sand* bars.
Taedong-gang (177, Daidō-kō)	*Sand, sand and mud,* and *rock* patches in channels with greater proportion of *sand and mud* in inland parts and *rock* more frequent off headlands, around islands, and in restricted parts, e.g. P'ido-sudo (179, Hitō-suidō).
Taedong-gang (177, Daidō-kō) to Yalu R. (195)	*Sand* extending offshore with *sand* and *sand and mud* close inshore.
Channels between offshore sand bars	*Sand* in outer parts and some *sand and mud* in inner and more protected parts.
Ch'olsan-pando (190, Tetsuzan-hantō)	Occasional *rock* patches close to small islands.

TABLE III - 3

BOTTOM SEDIMENTS, CHEJU-DO (SAISHŪ-TŌ) AND TSUSHIMA

LOCALITY	DESCRIPTION
Cheju-do (196, *Saishū-tō*)	
East coast	*Rock* with *sand* patches offshore.
Small coves, e.g. Chongdalli-p'o (200, Shūdatsuri-ho) and Pangdu-p'o (204, Bōtō-ho)	*Sand* to heads.
U-do (201, Gyū-tō)	Surrounded by *rock.*
Udo-sudo (202, Gyūtō-suidō)	*Rock* with some *sand* off approaches.
Songsanp'o-hang (203, Jōsanho-kō)	*Sand* with *rock* close inshore and *sand and mud* offshore.
S, W, and N coasts	Probably *rock* but detailed information is lacking.
Tsushima	
N end	*Rock* extending considerable distances seaward off headlands; *rock* zone extensive and well-developed around outlying islands.
E of Mitsu-shima (205)	*Sand* in deeper channels between *rock* areas leading into small inlets. *Sand and mud* at heads of inlets.
E coast of N island	*Rock* inshore with narrow zone of *sand* grading into *sand and mud* farther offshore.
Izumi-ura (206)	*Sand* in central part with *sand and mud* in inner parts extending to head and *rock* flanking approaches.
Miuda-ura (207)	*Sand* in central part with numerous *rock* patches in inner part extending to head and *rock* flanking approaches.
Nishitomari-wan (208)	Similar to Izumi-ura (206).
Shūshi-wan (209)	*Sand and mud* with *sand* patches in outer parts, *rock* across approaches and *mud* with restricted *sand* patches in inner and more protected parts and close inshore.
Kin-wan (210)	*Sand* continuing to head in central part flanked by *rock; sand* approaches.

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TABLE III - 3 *Continued*

LOCALITY	DESCRIPTION
Oshika-wan (211)	Similar to Kin-wan (210).
Saga-wan (212)	*Sand* in central part with *sand and mud* at head and *rock* close inshore on both sides; *sand* in E approaches and *rock* in SE approaches.
E coast of S island	*Rock* inshore with *sand* offshore.
Kechi-wan (214)	*Sand* with numerous *rock* patches inshore, especially off S shore.
Azu-kō (216)	*Sand* in central part with *sand* and *sand and mud* close inshore in small coves at head and *rock* on both sides of entrance and off headlands; *sand* approaches.
Izuhara-minato (217)	Similar to Azu-kō (216).
Shita Ana (218)	*Sand* in central part with *rock* predominating inshore.
Bay between Ō-saki (219) and Wa-jima (220)	Similar to Shita Ana (218).
S coast	*Rock* inshore with *sand* and occasional *rock* and *stony* patches offshore.
Agami-wan (221)	*Sand* in central part with *sand* at head and *rock* inshore on both sides and off headlands.
Kuwa-wan (222)	Similar to Agami-wan (221).
Bay W of Naiin-shima (223)	Similar to Agami-wan (221).
Tsutsu-wan (224)	Similar to Agami-wan (221).
W coast	Wide *sand* zone offshore.
Tsutsu-saki (225) to Aso-wan (226)	Probably *rock* with *sand* in central part of inlets.
Azo-wan (226)	Probably *sand* or *sand and mud* in central parts of inlets and *mud* in protected parts with *rock* close inshore except at heads of small coves; probably *rock* in approaches.
Azo-wan (226) to Ōkawachi-wan (235)	*Rock* zone inshore broken only by inlets with *sand* offshore.
Mine-wan (231)	*Mud* in central part with *rock* close inshore except for *sand* in many of the coves; *sand* approaches with scattered, outlying *rock* patches.
Nita-wan (232)	*Mud* in central part continuing to head with *rock* close inshore except for *sand* in some of the coves; *sand* approaches with outlying *rock* patches.
Sago-wan (233)	*Sand* in central part continuing to head with *rock* areas close inshore on both sides of entrance and extending some distance into bay.
Sasuna-kō (234)	*Mud* in central part with *rock* close inshore on both sides of entrance and inside the bay except for *sand* in small coves; *sand* approaches.
Ōkawachi-wan (235)	Similar to Sasuna-kō (234).

36. *Biological Factors*

A. Algae (seaweeds).

Large seaweeds which may interfere with landing operations do not occur in this area. Dense offshore beds of kelp similar to those in Alaskan waters are not found along the coasts of Korea (Chōsen). There is an abundant growth of smaller rockweeds and seaweeds along the rocky shores. In a few restricted localities these may attain considerable length, but compact beds do not develop. These forms are seasonal in growth and are most abundant in summer; during this time large masses may drift ashore. This growth would add to the difficulties of landing in rocky areas because the wet weeds are very slippery to cross on foot.

B. Bioluminescence ("phosphorescence").

Night detection or concealment of PT boats, submarines, and other craft is seriously affected by the luminescence of their wakes and bow waves, owing to small light-producing organisms in the sea. Although there are few direct observations on the occurrence of bioluminescence in this area, a comparison with other areas where similar light-producing organisms are found indicates that bioluminescence probably occurs throughout the area during each month of the year, with the maximum frequency in August. Brilliant bioluminescence usually occurs after periods of unusually fine weather. Elsewhere, luminescence under similar conditions has been reported by fliers to interfere with dark adaptation.

37. *List of Place Names*

The approved spellings of Korean and Japanese place names for Korea (Chōsen) differ in many instances from those appearing on the charts and in the Sailing Directions of the U. S. Hydrographic Office. To facilitate the use of this chapter with these publications, the following list of variant spellings is appended. The approved names are capitalized in the left-hand column; the numbers refer to encircled numbers on Location Maps, FIGURES III - 56a and III - 56b. The variants are given in upper and lower case in the left-hand column with the approved names opposite them in the right-hand column.

Aengan Hei	Aenggang-man (85, Ōkō-wan)
AENGGANG-MAN (85, ŌKŌ-WAN)	
AGAMI-WAN (221)	
Ajiro Bay	Nishitomari-wan (208)
Amma To	Anma-do (139, Amba-tō)
Anguk Bay	Haengam-man (65, Kōgan-wan)
ANMA-DO (139, AMBA-TŌ)	
Ansan Po	Ssangp'o-man (14, Sōho-wan)
ASAN (152, GAZAN-BYŌCHI)	
Asan Anchorage	Asan (152, Gazan-byōchi)
Ashby Inlet	Naktong-p'o (61, Rakutō-ho)
ASO-WAN (226)	
AZU-KŌ (216)	
Baro Kai	Maro-hae (121, Baro-kai)
Barren Group	Hosa-kundo (136, Kyosa-gun-tō)
Bate Group	Ch'uja-kundo (114, Shūshi-gun-tō)
Bayo To	Mayang-do (34, Bayō-tō)
Bazan Po	Masan-hang (66, Masan-kō)
Beaufort Island	U-do (201, Gyū-tō)
Bokori	Mohang-ni (148, Bōkō-ri)
Boku Ko	Mukho-hang (50, Bokuko-kō)
Bokuko-ko	Mukho-hang (50, Bokuko-kō)
Bōtō-ho	Pangdu-p'o (204, Bōtō-ho)
Cargodo Island	Koje-do (70, Kyosai-tō)
Carpenter Bay	Aenggang-man (85, Ōkō-wan)
Center Harbor	Chise-p'o (73, Chise-po)
Chaaon Do	Chaun-do (135, Jion-tō)

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CH'AGWI-DO (198, SHAKI-TŌ)	
Chaho Bay	Ch'aho-hang (29, Shako-kō)
CH'AHO-HANG (29, SHA-KO-KŌ)	
Chaki To	Ch'agwi-do (198, Shaki-tō)
CHANGADAE-DAN (43, CHŌGADAI-TAN)	
CH'ANGAM-DONG (171, SŌGAN-DŌ)	
CHANGBONG-SUDO (158, CHŌHŌ-SUIDO)	
CHANGGANG-SUDO (77, CHŌKŌ-SUIDŌ)	
Changjin-ko	Ch'angjin-man (7, Sōshin-wan)
CH'ANGJIN-MAN (7, SŌSHIN-WAN)	
CHANGJON-HANG (42, CHŌSEN-KŌ)	
CHANGJUK-SUDO (119, CHŌCHIKU-SUIDŌ)	
CHANGSAN-GOT (172, CHŌZAN-KAN)	
Chanjiku Suido	Changjuk-sudo (119, Chōchiku-suidō)
Chanjin Wan	Ch'angjin-man (7, Sōshin-wan)
Chankōtō Suido	Hwado-sudo (108, Katō-suidō)
Chansan Kotsu	Changsan-got (172, Chōzan-kan)
CHAUN-DO (135, JION-TŌ)	
Chegumi Bay	Chokuri-man (76, Chokyūri-wan)
Chegutsugu Pata	Chongdung-hae (125, Teitō-kai)
CHEJU-DO (196, SAISHŪ-TŌ)	
Cheknimu Po	Koje-man (78, Kyosai-wan)
Chekutmu Po	Koje-man (78, Kyosai-wan)
Chemulpo Anchorage	Inch'on-hang (156, Jinsen-kō)
Chiku To	Chuk-to (143, Chiku-tō)
Chikuhen Wan	Chukpyon-man (52, Chikuhen-wan)
CHIN-DO (120, CHIN-TŌ)	
CHINHAE-MAN (68, CHINKAI-WAN)	
Chinju Wan	Kangjin-hae (89, Kōshin-kai)
Chinkai Bay	Chinhae-man (68, Chinkai-wan)
CHINPO KI (174)	
Chin To	Chin-do (120, Chin-tō)
CHINNAMP'O-HANG (180, CHINNAMPO-KŌ)	
CHISE-P'O (73, CHISE-PO)	
Chiseppo	Chise-p'o (73, Chise-po)
Cho Da	Ch'o-do (176, Shiku-tō)
CHOBAL-TO (97, SŌHAT-SU-TŌ)	
Chochiku Suido	Changjuk-sudo (119, Chōchiku-suidō)
Choda Channel	Ch'odo-sudo (175, Shōtō-suidō)
CH'O-DO (176, SHIKU-TŌ)	
CH'ODO-KUNDO (104, SŌTŌ-GUNTŌ)	
CH'ODO-SUDO (175, SHŌ-TŌ-SUIDŌ)	
Chogadai Tan	Changadae-dan (43, Chōgadai-tan)
Choho Suido	Changbong-sudo (158 Chōhō-suidō)
Choko Suido	Changgang-sudo (77, Chōkō-suidō)
Chōkōtō Suidō	Hwado-sudo (108, Katō-suidō)
CHOKURI-MAN (76, CHO-KYŪRI-WAN)	
Chokyūmi Wan	Chokuri-man (76, Chokyūri-wan)
CH'OL-DO (181, TETSU-TŌ)	
CH'OLSAN-PANDO (190, TETSUZAN-HANTŌ)	
CHONGDALLI-P'O (200, SHŪDATSURI-HO)	
CHONGDUNG-HAE (125, TEITŌ-KAI)	
CH'ONGJIN-HANG (16, SEISHIN-KŌ)	
Chonjin Wan	Ch'ongjin-hang (16, Seishin-kō)
CH'ONSONG-MAN (63, TENJŌ-WAN)	
CH'ONSU-MAN (147, SEN-SUI-WAN)	
Chopari To	Chobal-to (97, Sōhatsu-tō)
Choppeki Pt.	Changsan-got (172, Chōzan-kan)
Choru To	Ch'ol-do (181, Tetsu-tō)
Chorusan Peninsula	Ch'olsan-pando (190, Tetsuzan-hantō)
CHOSAN-MAN (2, ZŌZAN-WAN)	
Chōsen-kaiwan	Tongjoson-man (33, Higashi-Chōsen-wan)
Chosen Ko	Changjon-hang (42, Chōsen-kō)
Chosendo Byochi	Changjon-hang (42, Chōsen-kō)
Chubun To	Chumun-do (160, Chūmon-to)
CH'UJA-KUNDO (114, SHŪSHI-GUNTŌ)	
CHUKPYON-MAN (52, CHIKUHEN-WAN)	
CH'UKSAN-P'O (53, CHŪ-SAN-HO)	
CHUK-TO (143, CHIKU-TŌ)	
Chukupen Bay	Chukpyon-man (52, Chikuhen-wan)
Chukusan Bay	Ch'uksan-p'o (53, Chūsan-ho)
Chumonshin Ko	Chumunjin-hang (49, Chūmon-shin-kō)
CHUMUN-DO (160, CHŪ-MON-TŌ)	
CHUMUNJIN-HANG (49, CHŪMONSHIN-KŌ)	
Chusan Po	Ch'uksan-p'o (53, Chūsan-ho)
Craig Harriet	Maenggol-sudo (116, Mōkotsu-suidō)
Crichton Group	Soan-kundo (111, Shoan-guntō)
Crichton Harbor	Soan-hang (113, Shoan-kō)
Daibui To	Taemuui-do (155, Daibui-tō)
Daido Ko	Taedong-gang (177, Daidō-kō)
Daikokusan Gunto	Taehuksan-kundo (133, Dai-Kokusan-guntō)
Daikokuzan To	Taehuksan-do (134, Dai-Koku-san-tō)
Daisei Group	Taech'ong-kundo (167, Taisei-guntō)
Daisei To	Taech'ong-do (168, Taisei-tō)
Daishin Wan	Taejin-man (5, Daishin-wan)
Douglas Inlet	Kadok-sudo (62, Katoku-suidō)
EAST BAY (4)	
Eiko Wan	Yonghung-man (38, Eikō-wan)
Eizan-kō	Yongsan-gang (130, Eizan-kō)
Fanjin Bay	Whangjin-man (21, Kōshin-wan)
Fankochi	Tungsan-got (164, Tōsan-kan)

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Fengan Suido	Hoenggan-sudo (112, Kōkan-suidō)
Flying Fish Channel	So-sudo (153, Nishi-suidō)
Foul Bay	Songsanp'o-hang (203, Jōsanho-kō)
Funyan Hanto	Kohung-pando (101, Kōkō-hantō)
Fusan Ko	Pusan-hang (58, Fusan-kō)
Futo Suido	Pudo-sudo (64, Futō-suidō)
Gabaku Yō	Kamag-yang (96, Gabaku-yō)
Gabaro To	Samma-do (123, Samba-tō)
Gaien To	Oeyon-do (145, Gaien-tō)
Gaiko Ko	Oehwang-kang (56, Gaikō-kō)
Gamaku Patan	Kamag-yang (96, Gabaku-yō)
Gazan Anchorage	Asan (152, Gazan-byōchi)
Geijitsu Wan	Yongil-man (54, Geijitsu-wan)
Gensan Ko	Wonsan-hang (40, Genzan-kō)
Gobaro Retto	Samma-do (123, Samba-tō)
Gontcharof Island	Mayang-do (34, Bayō-tō)
Granchin	Oran-ni (122, Oran-ri)
Green Islands	Samma-do (123, Samba-tō)
Gyoku Ho	Ok-p'o (72, Gyoku-ho)
Gyotaishin Ko	Odaejin-hang (17, Gyotaishin-kō)
Gyū Tō	U-do (201, Gyū-tō)
Gyubu To	Umu-do (150, Gyūbu-tō)
Gyuto Suido	Udo-sudo (202, Gyūtō-suidō)
Hacho To	Hajo-do (117, Kachō-tō)
HAEJU (162, KAISHŪ)	
HAENGAM-MAN (65, KŌ-GAN-WAN)	
Hagamu Anchorage	Whanggaldong (24, Kōgandō-byōchi)
Haijuube	Haeju (162, Kaishū)
HAJO-DO (117, KACHŌ-TŌ)	
Ham Heung Bay	Hamhung-man (35, Kankō-wan)
HAMHUNG-MAN (35, KANKŌ-WAN)	
Hampyon Bay	Hamp'yong-man (138, Kampei-wan)
HAMP'YONG-MAN (138, KAMPEI-WAN)	
HANJIN-NI (151, KAN-SHIN-RI)	
HAT'AE-DO (126, KADAI-TŌ)	
Hato Suido	Hwado-sudo (108, Katō-suidō)
Hautei To	Hat'ae-do (126, Kadai-tō)
Heijo	P'yongyang (185, Heijō)
Heizyo	P'yongyang (185, Heijō)
Henamu Wan	Haengam-man (65, Kōgan-wan)
Hi To	P'i-do (178, Hi-tō)
Higashi Suido	Tong-sudo (149, Higashi-suidō)
HOENGGAN-SUDO (112, KŌKAN-SUIDŌ)	
Hoko Wan	P'ohang-man (22, Hokō-wan)
Hooper Island Anchorage	Sogwi-ri (197, Seiki-ri)
HOSA-KUNDO (136, KYOSA-GUNTŌ)	
Hosui Ko	Pongsu-hang (45, Hosui-kō)
HUKSAN-CHEDO (140, KOKUSAN-SHOTŌ)	
Hūtō Suidō	Pudo-sudo (64, Futō-suidō)
Huwapuku Ri	Hwabuk-ni (199, Kahoku-ri)
HWABUK-NI (199, KAHOKU-RI)	
HWADO-SUDO (108, KATŌ-SUIDŌ)	
Hyongan Suido	Hoenggan-sudo (112, Kōkan-suidō)
HYONGJE-AM (37, KEITEI-GAN)	
Hyonjei Somu	Hyongje-am (37, Keitei-gan)
HYONNAERYANG-HAEHYOP (71, KEN-NAIRYŌ-KAIKYŌ)	
IAM-MAN (18, RIGAN-WAN)	
Iiho Anchorage	Yongdae (27, Ryūdai-byōchi)
Iion Road	Iwon (28, Rigen-hakuchi)
IJIN-MAN (11, RISHIN-WAN)	
Ilon Road	Iwon (28, Rigen-hakuchi)
IMJA-DO (137, JINSHI-TŌ)	
IMMYONG-HAE (25, RIMMEI-KAI)	
INCH'ON-HANG (156, JINSEN-KŌ)	
IWON (28, RIGEN-HAKUCHI)	
IZUHARA-MINATO (217)	
IZUMI-URA (206)	
Jiiaa Pata	Sia-hae (127, Jiga-kai)
Jiihaa To	Siha-do (128, Shika-tō)
Jiga Kai	Sia-hee (127, Jiga-kai)
Jinsen-kō	Inch'on-hang (156, Jinsen-kō)
Jinshi-tō	Imja-do (137, Jinshi-tō)
Jō Tō	Sang-do (81, Jō-tō)
Joji Wan	Yoja-man (98, Joji-wan)
Jōsan Hō	Songsanp'o-hang (203, Jōsanho-kō)
Joshin Ko	Songjin-hang (26, Jōshin-kō)
Joshushi To	Sangch'uja-do (115, Jōshūshi-tō)
Junito Anch.	Sunwido (165, Junitō-byōchi)
Kaa To	Ka-do (189, Ka-tō)
Kaamakku Pataan	Kamag-yang (96, Gabaku-yō)
KADOK-SUDO (62, KATOKU-SUIDŌ)	
Kahoku Ri	Hwabuk-ni (199, Kahoku-ri)
Kaishu	Haeju (162, Kaishū)
KALMA-P'O (23, KATSUMA-HO)	
KAMAG-YANG (96, GABAKU-YŌ)	
Kammunei Pō	Kamnae-p'o (60, Kanrai-ho)
KAMNAE-P'O (60, KAN-RAI-HO)	
Kan Tō	Wan-do (110, Kan-tō)
KANGJIN-HAE (89, KŌSHIN-KAI)	
Kanhei Wan	Hamp'yong-man (138, Kampei-wan)
Kanko Wan	Hamhung-man (35, Kankō-wan)
Kanrai Ho	Kamnae-p'o (60, Kanrai-ho)
Kanshin	Hanjin-ni (151, Kanshin-ri)
Karuma Ho	Kalma-p'o (23, Katsuma-ho)
Katoku Suido	Kadok-sudo (62, Katoku-suidō)
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Keitei Gan	Hyongje-am (37, Keitei-gan)
Kenjiho	Kyomip'o (183, Kenjiho)
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Kerrin To	Kirin-do (166, Kirin-tō)
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Kingo Retto	Kumo-yolto (99, Kingō-rettō)
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Kiton Wan	Kidong-man (15, Kidō-wan)

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Kogando Byochi	Whanggaldong (24, Kōgandō-byōchi)
KOGUM-SUDO (102, KYOKIN-SUIDŌ)	
Kogunsan Gunto	Huksan-chedo (140, Kokusan-shotō)
KOHUNG-PANDO (101, KŌKŌ-HANTŌ)	
KOJE-DO (70, KYOSAI-TŌ)	
KOJE-MAN (78, KYOSAI-WAN)	
KOJIN (46, KYOSHIN-HAKUCHI)	
Kojo Wan	Kosong-man (80, Kojō-wan)
KOJO-P'O (41, KOTEI-HO)	
Kōkō Hanto	Kohung-pando (101, Kōkō-hantō)
Kokumu Suido	Kogum-sudo (102, Kyokin-suidō)
Kokunsan Islands	Huksan-chedo (140, Kokusan-shotō)
Kommo Reto	Kumo-yolto (99, Kingō-rettō)
KOMUN-DO (106, KYOBUN-TŌ)	
Korean Gulf	Tongjoson-man (33, Higashi-Chōsen-wan)
Kornilov Gulf	Najin-hang (8, Rashin-kō)
KOSONG-MAN (80, KOJŌ-WAN)	
Kotathai Harbor	Tadae-p'o (75, Tadai-ho)
Kotei Ho	Kojo-p'o (41, Kotei-ho)
Koze Po	Kojo-p'o (41, Kotei-ho)
KUMO-YOLTO (99, KINGŌ-RETTŌ)	
Kumuo Retto	Kumo-yolto (99, Kingō-rettō)
Kunchin Wan	Taejin-man (5, Daishin-wan)
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KWANGYANG-MAN (94, KŌYŌ-WAN)	
Kyobun To	Komun-do (106, Kyobun-tō)
Kyokin Suidō	Kokum-sudo (102, Kyokin-suidō)
KYOMIP'O (183, KENJIHO)	
Kyosai Tō	Koje-do (70, Kyosai-tō)
Kyoshin Hakuchi	Kojin (46, Kyoshin-hakuchi)
Kyosa Gunto	Hosa-kundo (136, Kyosa-guntō)
Mackau Group	Taehuksan-kundo (133, Dai-Kokusan-guntō)
Mackau Island	Taehuksan-do (134, Dai-Kokusan-tō)
Mado Suido	Mato-sudo (109, Mato-suidō)
MAEMUL-SUDO (132, MAIKOTSU-SUIDŌ)	
MAENGGOL-SUDO (116, MŌKOTSU-SUIDŌ)	
Maibutsu Suido	Maemul-sudo (132, Maikotsu-suidō)
Maikotsu Suido	Maemul-sudo (132, Maikotsu-suidō)
Makino Shima	Mok-to (59, Makino-tō)
Makau Group	Taehuksan-kundo (133, Dai-Kokusan-guntō)
Makau Island	Taehuksan-do (134, Dai-Kokusan-tō)
MARO-HAE (121, BARO-KAI)	
Masam Po	Masan-hang (66, Masan-kō)
MASAN-HANG (66, MASAN-KŌ)	
MATO-SUDO (109, MATŌ-SUIDŌ)	
Matsu Shima	Ullung-do (51, Utsuryō-tō)
Māyan Tō	Mayang-do (34, Bayō-tō)
MAYANG-DO (34, BAYŌ-TŌ)	
Megunyaguto	Myongyangdo (124, Meiyōto)
Meiyōto	Myongyangdo (124, Meiyōto)
Menkoru Guntō	Maenggol-sudo (116, Mōkotsu-suidō)
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Mijo Wan	Mijo-man (86, Mijo-wan)
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Moakin	Monggum-do (173, Mukin-tō)
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Mōkotsu Suidō	Maenggol-sudo (116, Mōkotsu-suidō)
MOKP'O (129, MOPPO)	
MOK-TO (59, MAKINO-TŌ)	
Mokuho	Mokp'o (129, Moppo)
MONGGUM-DO (173, MUKIN-TŌ)	
Monomakh Bay	Yanghwa-man (31, Yōka-wan)
Moppo	Mokp'o (129, Moppo)
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Myangoru Suidō	Maenggol-sudo (116, Mōkotsu-suidō)
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Nakusan Wan	Naksan-man (10, Rakusan-wan)
Nakutogu Po	Naktong-p'o (61, Rakutō-ho)
NAMHAE-DO (84, NANKAI-TŌ)	
NAMP'O-MAN (67, RAMPO-WAN)	
Namuhei To	Namhae-do (84, Nankai-tō)
Nan Hal To	Namhae-do (84, Nankai-tō)
Nan How Group	Komun-do (106, Kyobun-tō)
Napu Somu	Yop-do (187, Rō-tō)
Nattogu Po	Naktong-p'o (61, Rakutō-ho)
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Odechin Bay	Odaejin-hang (17, Gyotaishin-kō)
OEHWANG-KANG (56, GAIKŌ-KŌ)	
OEYON-DO (145, GAIEN-TŌ)	
Oiyonu To	Oeyon-do (145, Gaien-tō)
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Orura To	Wollae-do (169, Getsudai-tō)
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Peel Group	Ch'odo-kundo (104, Sōtō-guntō)
Peiamu Wan	Haengam-man (65, Kōgan-wan)
Peijin Bay	Iam-man (18, Rigan-wan)
PI-DO (178, HI-TŌ)	
Pi To	Pi-do (178, Hi-tō)
P'IDO-SUDO (179, HITŌ SUIDŌ)	
PIGUM-SUDO (131, HIKIN-SUIDŌ)	
Pigumu Suido	Pigum-sudo (131, Hikin-suidō)
Pingyang Inlet	Taedong-gang (177, Daidō-kō)
Pirie Island	Soya-do (154, Soya-tō)
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P'OHANG-MAN (22, HOKŌ-WAN)	
PONGSU-HANG (45, HOSUI-KŌ)	
Port Hamilton	Tonae-hae (107, Tōnai-kai)
Port Lazaref	Songjon-man (39, Shōden-wan)
Poyan Anchorage	Sosura-hang (3, Seisuira-kō)
PUDO-SUDO (64, FUTŌ-SUIDŌ)	
PUSAN-HANG (58, FUSAN-KŌ)	
Puto Suido	Pudo-sudo (64, Futō suidō)
Pyo Somu	P'i-do (178, Hi-tō)
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Pyonsannii	P'yongsan-ni (91, Heizan-ri)
Quelpart Island	Cheju-do (196, Saishū-tō)
Rakusan Wan	Naksan-man (10, Rakusan-wan)
Rakuto Ho	Naktong-p'o (61, Rakutō-ho)
Ranpo Wan	Namp'o-man (67, Rampo-wan)
Rashin Ho	Najin-hang (8, Rashin-kō)
Rasinpo Bay	Najin-hang (8, Rashin-kō)
Reisu Gulf	Yosu-haeman (92, Reisui-kaiwan)
Reisu Hanto	Yosu-pando (93, Reisui-hantō)
Reisu Kō	Yosu-hang (95, Reisui-kō)
Rigan Wan	Iam-man (18, Rigan-wan)
Rigen Hakuchi	Iwon (28, Rigen-hakuchi)
Rin Jima	Wa-jima (220)
Rinmei Kai	Immyong-hae (25, Rimmei-kai)
Rishin Wan	Ijin-man (11, Rishin-wan)
Rooper Harbor	Sunwido (165, Junitō-byōchi)
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Sajan Kaye	Ch'onsu-man (147, Sensui-wan)
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Saka Wan	Saga-wan (212)
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Samma To	Samma-do (123, Samba-tō)
Samuchompo	Samch'onp'o (88, Sanzenho)
San Somu	Sang-do (81, Jō-tō)
SANGCH'UJA-DO (115, JŌSHŪSHI-TŌ)	
SANG-DO (81, JŌ-TŌ)	
SAMMA-DO (123, SAMBA-TŌ)	
Santo Group	Komun-do (106, Kyobun-tō)
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Sashin Wan	Sajin-man (12, Sashin-wan)
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Sayan To	Sayang-do (100, Shiyō-tō)
SAYANG-DO (100, SHIYŌ-TŌ)	
Seen Islands	Kumo-yolto (99, Kingō-rettō)
Sei Suido	So-sudo (87, Nishi-suidō)
Seiki Ho	Sogwi-ri (197, Seiki-ri)
Seikoshin Ko	Sohojin-hang (36, Seikoshin-kō)
Seisen Ko	Ch'ongjin-hang (16, Seishin-kō)
Seisō Tō	Taehuksan-do (134, Dai-Kokusan-tō)
Seisuira Ko	Sosura-hang (3, Seisuira-kō)
Sekhocheng	Sokho-chong (184, Sekikotei)
Selby Island	Wan-do (110, Kan-tō)
Sensui Wan	Ch'onsu-man (147, Sensui-wan)
Shaki-tō	Ch'agwi-do (198, Shaki-tō)
Shako Ko	Ch'aho-hang (29, Shako-kō)
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Shinchan Bay	Sinch'ang-hang (30, Shinshō-kō)
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Shoden Wan	Songjon-man (39, Shōden-wan)
Shūdatsuri Ho	Chongdalli-p'o (200, Shūdatsuri-ho)
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Waiyan Do	Oeyon-do (145, Gaien-tō)
WA-JIMA (220)	
WAN-DO (110, KAN-TŌ)	
Wan To	Wan-do (110, Kan-tō)
Washington Gulf	Maro-hae (121, Baro-kai)
Washington Strait	Myongyangdo (124, Meiyōto)
WHANGGALDONG (24, KŌGANDŌ-BYŌCHI)	
WHANGJIN-MAN (21, KŌSHIN-WAN)	
Willes Gulf	Yosu-haeman (92, Reisui-kaiwan)
WOLLAE-DO (169, GETSUDAI-TŌ)	
WONSAN-HANG (40, GENZAN-KŌ)	
YALU RIVER (195)	
YANGHWA-MAN (31, YŌKA-WAN)	
Yeichaa To	Imja-do (137, Jinshi-tō)
Yeisan	Yongsang-gan (130, Eizan-kō)
Yeiso To	Yongjong-do (157, Eisō-tō)
Yenkagu Wan	Aenggang-man (85, Ōkō-wan)
YOJA-MAN (98, JOGI-WAN)	
Yoji Bay	Yoja-man (98, Joji-wan)
YOKCHI-DO (82, YOKUCHI-TŌ)	
YOKCHI-SUDO (83, YOKUCHI-SUIDŌ)	
Yokuchii Somu	Yokchi-do (82, Yokuchi-tō)
Yokuchii Suido	Yokchi-sudo (83, Yokuchi-suidō)
Yokwa Wan	Yanghwa-man (31, Yōka-wan)
Yon Iru Bay	Yongil-man (54, Geijitsu-wan)
YONGAMP'O (193, RYŪGAMPO)	
YONGDAE (27, RYŪDAI-BYŌCHI)	
YONGHUNG-MAN (38, EIKŌ-WAN)	
YONGIL-MAN (54, GEIJITSU-WAN)	
YONGJO-MAN (13, RYŪSHO-WAN)	
YONGJONG-DO (157, EISŌ-TŌ)	
YONGSAN-GANG (130, EIZAN-KŌ)	
Yonsan Kan	Yongsan-gang (130, Eizan-kō)
Yonsho Wan	Yongjo-man (13, Ryūsho-wan)
YOP-DO (187, RŌ-TŌ)	
YOSU-HAEMAN (92, REISUI-KAIWAN)	
YOSU-HANG (95, REISUI-KŌ)	
YOSU-PANDO (93, REISUI-HANTŌ)	
Yujin Po	Yujin-p'o (9, Yushin-ho)
Yujin-p'o (9, Yushin-ho)	
Yuki Ko	Unggi-hang (6, Yūki-kō)
Yung Hing Bay	Yonghung-man (38, Eikō-wan)
Zetuei Tō	Mok-to (59, Makino-tō)
Zinsen Ko	Inch'on-hang (156, Jinsen-kō)
Zozan Wan	Chosan-man (2, Zōzan-wan)
Zyōsan Hō	Songsanp'o-hang (203, Jōsanho-kō)

38. *Principal Sources*

1. Great Britain, Hydrographic Department.
   1937. THE ADMIRALTY TIDE TABLES 1938, Pt. II. 232 pp.
2. ———.
   1937. CHINA SEA PILOT, VOL. 3. 644 pp.
3. ———.
   1937. SOUTH AND EAST COASTS OF KOREA, EAST COAST OF SIBERIA, AND SEA OF OKHOTSK PILOT. Ed. 3. 650 pp.
4. ———.
   1944. THE ADMIRALTY TIDE TABLES 1945, Pt. I, Section B. 303 pp.
5. International Hydrographic Bureau, Monaco.
   1939. TIDES, HARMONIC CONSTANTS. Spec. Pub. 26.
6. Japan, Hydrographic Department.
   1938. KYUSHU AND TSUSHIMA PILOT NO. 4. Tokyo.
7. ———.
   1940. TIDE TABLES, Pt. I. 1941. 349 pp. Tokyo.
8. ———.
   1943. TIDE TABLES, Pt. I. 1944. 351 pp. Tokyo.
9. ———.
   COASTS OF CHOSEN PILOTS NO. 6A-B. In Japanese.
10. Japan, Imperial Fisheries Institute.
    1930-1940. SEMI-ANNUAL REPORT OF THE OCEANOGRAPHICAL INVESTIGATION, JAN. 1930 TO JUNE 1939. Nos. 46-64. Tokyo.
11. Nishida, Keizo.
    1927. ON THE CURRENTS, WATER TEMPERATURES AND SALINITY OF THE ADJACENT SEAS OF TYOSEN. Fishery Exper. Sta. Rept. of Oceanographical Investigation No. 2. Chosen.
12. Ogura, Sinkiti.
    1933. THE TIDES IN THE SEAS ADJACENT TO JAPAN. Bull. Hydrog. Dept. Vol. 7, pp. 1-189. Tokyo.
13. ———.
    1936. TIDES IN THE NORTHERN PART OF THE HWANG HAI. In Japanese. Jap. Jour. Astr. and Geophys. Vol. 14, pp. 27-55.
14. Schott, Gerhard.
    1935. GEOGRAPHIE DES INDISCHEN UND STILLEN OZEANS. 413 pp. Hamburg, C. Boysen.
15. Scripps Institution of Oceanography, La Jolla.
    TEMPERATURE-GRADIENT CARDS.
16. Stetson, H. C.
    1944. SHALLOW-WATER BOTTOM SEDIMENTS FOR THE COASTS OF KOREA AND OUTLYING ISLANDS. Manuscript.

Approved For Release 2006/09/25 : CIA-RDP79-01144A000900010003-9

Approved For Release 2006/09/25 : CIA-RDP79-01144A000900010003-9

17. U. S. Department of Commerce, Coast and Geodetic Survey.
UNPUBLISHED DATA FROM SURVEY FILES.

18. ———.
1942. TIDAL HARMONIC CONSTANTS, PACIFIC AND INDIAN OCEANS. TH-2. 133 pp.

19. ———.
1944. TIDE AND CURRENT TABLES, JAPAN AND CHINA, 1945. 165 pp. (Restricted).

20. ———.
1944. TIDE TABLES, PACIFIC OCEAN AND INDIAN OCEAN, 1945. 386 pp.

21. ———.
1944. TIDES AND TIDAL CURRENTS, JAPAN. Rep. 48. Unpublished. (Confidential).

22. U. S. Navy Department, Bureau of Ships.
Aug. 1943. SUBMARINE LISTENING RANGES. Prelim. Ed. Navships 943-G. (Confidential).

23. ———.
Aug. 1943. USE OF SUBMARINE BATHYTHERMOGRAPH OBSERVATIONS CONTAINING A SUMMARY OF RULES. Navships. 943-F. 68 pp. (Confidential).

24. ———.
Feb. 1944. USE OF SUBMARINE BATHYTHERMOGRAPH OBSERVATIONS. REVISION OF RULES FOR PREDICTING MAXIMUM SOUND RANGES. Navships 943-F. 27 pp. (Confidential).

25. ———.
Mar. 1944. PREDICTION OF SOUND RANGES FROM BATHYTHERMOGRAPH OBSERVATIONS. RULES FOR PREPARING SONAR MESSAGES. Navships 943-C2. 30 pp. (Confidential).

26. U. S. Navy Department, Hydrographic Office.
1932. SAILING DIRECTIONS FOR SIBERIA AND CHOSEN, FROM CAPE SYEVERNI AND WRANGELL ISLAND TO THE ORYOKU KO (YALU RIVER) INCLUDING SAKHALIN ISLAND. Ed. 3. HO 122. 578 pp.

27. ———.
1943. GAZETTEER OF THE JAPANESE EMPIRE. HO Misc. 10,947. 378 pp.

28. ———.
1943. SAILING DIRECTIONS COAST OF CHINA. HO 124. 696 pp.

29. ———.
1943. SAILING DIRECTIONS FOR JAPAN, VOL. 2 (SOUTHERN PART). HO 123B. 704 pp.

30. ———.
1943-1945. BATHYTHERMOGRAPH CARDS. (Confidential).

31. ———.
1944. BREAKERS AND SURF; PRINCIPLES IN FORECASTING. HO 234. 52 pp. (Confidential).

32. ———.
1944. WIND WAVES AND SWELL; PRINCIPLES IN FORECASTING. HO Misc. 11,275. 61 pp. (Confidential).

33. ———.
SEA AND SWELL DATA SHEETS. Manuscripts.

34. U. S. Navy Department, Hydrographic Office, Oceanographic Unit.
Mar. 1944. TRANSPARENCY OF THE WATER OFF JAPAN. Study 27. Unpublished. (Confidential).

35. U. S. Navy Department, Intelligence Division.
1943-1944. VARIOUS INTELLIGENCE REPORTS. (Confidential).

36. Woods Hole Oceanographic Institution.
1943. THE TRANSPARENCY OF JAPANESE WATERS AND ADJACENT AREAS BASED ON SECCHI DISC MEASUREMENTS TAKEN FROM JAPANESE PUBLICATIONS. First Report on Transparency Under Contract No. N111s-38137 with the Bureau of Ships. 88 pp. Unpublished. (Confidential).

MAPS AND CHARTS

25X1

38. Japan, Hydrographic Department.
1913. METEOROLOGICAL CHARTS OF THE ADJACENT SEAS OF JAPAN. In Japanese. 15 charts.

39. ———.
VARIOUS CHARTS.

40. Netherlands, Meteorologisch Instituut.
1935-1936. OCEANOGRAPHISCHE EN METEOROLOGISCHE WAARNEMINGEN IN DE CHINEESCHE ZEEON EN IN HET WESTELIJK DEEL VAN DER NOORD STILLEN OCEAAN I-II, JAN.-DEC., 1910-1930. No. 115. The Hague.

41. Scripps Institution of Oceanography, La Jolla.
MONTHLY CURRENT CHARTS IN 1° SQUARES FOR THE NORTHWESTERN PACIFIC OCEAN, 0°-60°N, 113°-180°E. Unpublished.

42. U. S. Department of Commerce, Weather Bureau.
1938. ATLAS OF CLIMATIC CHARTS OF THE OCEANS. WB 1247. (Restricted).

43. U. S. Navy Department, Hydrographic Office.
1945. BOTTOM SEDIMENT CHART, YANGTZE RIVER ENTRANCE TO SHIMONOSEKI KAIKYO INCLUDING THE COAST OF CHINA TO TSINGTAO, SOUTHERN PART OF CHOSEN AND WEST COAST OF KYUSHU. HO 5494-BS. In Press. (Confidential).

44. ———.
Nov. 1944. STREAMLINE CURRENT CHART, WESTERN PACIFIC OCEAN. MAY-SEPTEMBER, NOVEMBER-MARCH. HO Misc. 11,576. (Restricted).

45. ———.
VARIOUS CHARTS.

46. ———.
1944. WAVES IN THE NORTH PACIFIC. Japan, Hydrographic Dept. 2745 A-L. HO Misc. 11,117-1 to 12. (Restricted).

Approved For Release 2006/09/25 : CIA-RDP79-01144A000900010003-9

Approved For Release 2006/09/25 : CIA-RDP79-01144A000900010003-9

TABLE III - 4

TIDAL DIFFERENCES AND CONSTANTS, KOREA (CHŌSEN) AND VICINITY

PLACE	LAT. ° ′ N	LONG. ° ′ E	*Tidal Differences* *Times* TIME OF HW & LW H. M.	*Heights* RATIO FOR HW & LW	CORRECTION FOR DATUM FT.	TROPIC FT.	*Ranges* MEAN FT.	MSL FT.
			Time Meridian 135°E					
East Coast								
Unggi-hang (6, Yūki-kō)	42 20	130 25	*	*	*	0.9	0.5	0.7
Sajin-man (12, Sashin-wan)	41 59	130 00	*	*	*	0.9	0.5	0.7
Taeryanghwa-man (20, Dairyōka-wan)	41 12	129 44	*	*	*	0.9	0.5	0.7
Songjin-hang (26, Jōshin-kō)	40 40	129 13	*	*	*	1.1	0.6	0.8
Ch'aho-hang (29, Shako-kō)	40 12	128 39	*	*	*	1.0	0.5	0.7
Sinp'o-hang (32, Shinho-kō)	40 01	128 12	*	*	*	1.1	0.6	0.7
Sohojin-hang (36, Seikoshin-kō)	39 49	127 38	*	*	*	1.0	0.6	0.7
Wonsan-hang (40, Genzan-kō)	39 10	127 26	*	*	*	1.1	0.6	0.7
Changjon-hang (42, Chōsen-kō)	38 44	128 12	*	*	*	0.9	0.5	0.7
Chumunjin-hang (49, Chūmonshin-kō)	37 54	128 50	*	*	*	0.9	0.5	0.6
Ullung-do (51, Utsuryō-tō)	37 29	130 54	*	*	*	0.7	0.3	0.4
Chukpyon-man (52, Chikuhen-wan)	37 04	129 26	*	*	*	0.7	0.4	0.5
Ch'uksan-p'o (53, Chūsan-ho)	36 30	129 27	*	*	*	0.7	0.3	0.4
Yongil-man (54, Geijitsu-wan)	36 03	129 23	*	*	*	0.6	0.3	0.4
			on PUSAN (FUSAN)			SPRING	MEAN	
Ulsan-man (55, Urusan-wan)	35 28	129 25	-0 55	0.4	+0.3	1.7	1.2	1.1
South Coast								
Pusan-hang (58, FUSAN-KŌ)	35 06	129 02	(see Table III - 5a)			4.0	2.8	2.1
Mok-to (59, Makino-tō)	35 05	129 03	-0 05	1.0	0.0	3.9	2.9	2.1
Ch'onsong-man (63, Tenjō-wan)	35 01	128 49	+0 10	1.5	0.0	5.6	4.1	3.2
Masan-hang (66, Masan-kō)	35 10	128 34	+0 15	1.6	0.0	6.1	4.4	3.4
Unbong (69, Unhō)	35 06	128 29	+0 10	1.7	+0.1	6.6	4.8	3.7
Hyonnaeryang-haehyop (71, Kennairyō-kaikyō)	34 53	128 28	+0 25	1.8	0.0	6.8	5.0	3.8
Chise-p'o (73, Chise-po)	34 50	128 43	+0 05	1.5	+0.1	5.7	4.3	3.3
			on CH'ANG-CHIANG K'OU					
Chokuri-man (76, Chokyūri-wan)	34 43	128 36	-1 15	0.6	-1.4	7.3	5.4	4.4
Koje-man (78, Kyosai-wan)	34 50	128 35	-1 15	0.7	-2.0	7.8	5.8	4.7
T'ongyong-hang (79, Tōei-kō)	34 51	128 25	-1 00	0.7	-2.0	8.1	5.8	4.7
Kosong-man (80, Kojō-wan)	34 55	128 21	-1 00	0.8	-2.5	8.8	6.6	5.2
Sang-do (81, Jō-tō)	34 51	128 14	-1 05	0.7	-1.5	8.7	6.4	5.2
Yokchi-do (82, Yokuchi-tō)	34 39	128 16	-1 05	0.7	-1.8	8.2	6.1	4.9
Mijo-man (86, Mijo-wan)	34 43	128 03	-1 10	0.7	-1.4	8.8	6.4	5.3
Samch'onp'o (88, Sanzenho)	34 56	128 04	-1 05	0.8	-2.4	8.9	6.6	5.3
Kangjin-hae (89, Kōshin-kai)	35 03	128 03	-0 35	0.9	-2.4	10.4	7.6	6.2
Noryangjin (90, Roryōshin)	34 57	127 53	-0 50	0.9	-2.4	10.4	7.6	6.2
P'yongsan-ni (91, Heizan-ri)	34 46	127 51	-1 05	0.8	-1.8	10.0	7.2	5.9
Kwangyang-man (94, Kōyō-wan)	34 51	127 45	-0 45	0.9	-2.3	10.7	7.8	6.3
Yosu-hang (95, Reisui-kō)	34 44	127 45	-1 00	0.8	-1.7	10.0	7.3	6.0
Chobal-to (97, Sōhatsu-tō)	34 38	127 34	-0 25	0.9	-2.0	11.0	8.0	6.6
Sayang-do (100, Shiyō-tō)	34 28	127 27	-0 40	0.9	-2.2	10.2	7.6	6.4
Kogum-sudo (102, Kyokin-suidō)	34 30	127 09	-0 10	0.9	-1.7	10.9	8.0	6.9
Sonjuk-to (105, Sonchiku-tō)	34 17	127 22	-0 05	0.8	-1.7	9.4	6.8	6.0
Tonae-hae (107, Tonai-kai)	34 01	127 19	-0 30	0.8	-1.9	9.0	6.6	5.8
Mato-sudo (109, Matō-suidō)	34 26	126 51	+0 15	1.0	-2.5	11.5	8.3	7.1
Wan-do (110, Kan-tō)	34 19	126 45	+0 15	0.9	-1.9	10.4	7.8	6.7
Soan-hang (113, Shoan-kō)	34 09	126 38	+0 40	0.8	-1.3	9.8	7.3	6.4
Sangch'uja-do (115, Jōshūshi-tō)	33 57	126 17	+1 20	0.7	-1.3	7.9	6.0	5.4
Hajo-do (117, Kachō-tō)	34 18	126 03	+2 20	0.8	-1.7	8.9	6.9	6.0
Chin-do (120, Chin-tō)	34 30	126 12	+3 55	0.9	-1.8	10.3	8.0	6.8
Oran-ni (122, Oran-ri)	34 21	126 29	+1 15	0.9	-2.0	9.9	7.5	6.6
Sangma-do (123, Jōba-tō)	34 27	126 25	+1 20	1.0	-2.6	10.8	8.2	7.0
West Coast								
Hat'ae-do (126, Kadai-tō)	34 32	126 03	+3 00	0.9	-2.0	9.9	7.7	6.6
Siha-do (128, Shika-tō)	34 42	126 15	+4 00	1.0	-2.5	10.6	8.6	7.1
Mokp'o (129, Moppo)	34 47	126 23	+5 45H +4 30L	1.0	-2.8	10.4	8.3	6.8

* The periodic tide is small, and variations in water level depend largely upon the wind.
H Difference for high waters only.
L Difference for low waters only.

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TABLE III - 4 *Continued*

PLACE	LAT. ° ′ N	LONG. ° ′ E	*Tidal Differences* *Times* TIME OF HW & LW H. M.	*Heights* RATIO FOR HW & LW	CORRECTION FOR DATUM FT.	*Ranges* SPRING FT.	MEAN FT.	MSL FT.
West Coast			*Time Meridian* 135°E					
Yongsan-gang (130, Eizan-kō)	34 53	126 32	+5 55	1.0	−1.9	11.2	9.0	7.7
Pigum, sudo (131, Hikin-suidō)	34 43	125 56	+3 35	1.0	−2.4	11.2	8.7	7.2
Taehuksan-do (134, Dai-Kokusan-tō)	34 41	125 26	+3 55	0.8	−1.8	9.2	7.2	5.9
Chaun-do (135, Jion-tō)	34 53	126 06	+4 00	1.2	−3.4	12.8	10.0	8.1
Imja-do (137, Jinshi-tō)	35 03	126 05	+4 25	1.2	−3.5	13.5	10.1	8.0
			on INCH'ON-HANG (JINSEN-KŌ)					
Hamp'yong-man (138, Kampei-wan)	35 09	126 21	−2 30	0.7	−0.5	16.6	13.1	10.3
Anma-do (139, Amba-tō)	35 21	126 01	−2 25	0.6	0.0	15.1	11.8	9.2
Huksan-chedo (140, Kokusan-shotō)	35 49	126 24	−1 55	0.7	+0.2	18.4	14.3	11.0
Kunsan (142, Gunzan)	35 59	126 43	−1 15	0.8	−1.6	19.0	15.1	10.7
Chuk-to (143, Chiku-tō)	36 02	126 32	−1 50	0.7	+0.8	19.6	15.0	11.6
Och'ong-do (144, Osei-tō)	36 07	125 59	−1 40	0.6	+0.6	16.2	12.6	9.8
Oeyon-do (145, Gaien-tō)	36 13	126 04	−1 35	0.6	+1.0	16.7	12.5	10.2
So-to (146, So-tō)	36 24	126 26	−1 10	0.8	0.0	20.8	15.9	12.3
Mohang-ni (148, Bōkō-ri)	36 47	126 08	−0 55	0.8	−0.4	20.0	15.4	11.9
Umu-do (150, Gyūbu-tō)	37 02	126 27	−0 25	0.9	0.0	23.7	18.4	13.9
Hanjin-ni (151, Kanshin-ri)	36 58	126 47	−0 05	1.1	−1.1	27.5	21.3	15.8
Soya-do (154, Soya-tō)	37 14	126 10	−0 10	0.9	−0.4	22.9	17.6	13.5
Taemuui-do (155, Daibui-tō)	37 23	126 27	−0 05	1.0	−0.5	25.6	19.6	14.9
Inch'on-hang (156, JINSEN-KŌ)	37 29	126 37	(see Table 5c)			26.5	20.1	15.4
Yongjong-do (157, Eisō-tō)	37 30	126 34	+0 05	1.0	+0.2	27.2	20.7	15.6
Sinan-ni (159, Shingan-ri)	37 40	126 32	+0 55H	1.0H	+1.3H	—	—	—
Chumun-do (160, Chūmon-tō)	37 39	126 15	+0 20	0.9	+0.5	24.8	19.0	14.4
Taeyonp'yong-do (161, Tai-Empei-tō)	37 40	125 43	+0 15	0.8	−0.2	20.3	15.7	12.1
Haeju (162, Kaishū)	38 00	125 42	+0 45	0.8	+0.7	22.0	16.9	13.0
Mu-do (163, Mo-tō)	37 44	125 35	+0 20	0.7	+1.0	19.7	15.0	11.8
Tungsan-got (164, Tōsan-kan)	37 41	125 22	+0 25	0.6	+1.3	16.8	12.8	10.5
Sunwido (165, Junitō-byōchi)	37 45	125 20	+0 35	0.5	+1.5	14.3	10.9	9.2
			on DAIREN KŌ					
Kirin-do (166, Kirin-tō)	37 50	125 03	−5 25	1.4	+0.1	12.4	9.4	8.1
Taech'ong-do (168, Taisei-tō)	37 50	124 43	−5 05	1.1	+0.5	9.7	7.5	6.8
Wollae-do (169, Getsudai-tō)	38 03	124 49	−5 00	1.1	+0.4	9.5	7.5	6.7
Ch'angam-dong (171, Sōgan-dō)	38 07	124 43	−4 25	1.1	+0.6	10.0	7.7	6.9
Monggum-do (173, Mukin-tō)	38 11	124 47	−3 30	1.2	+0.2	10.1	8.0	7.0
Chinpo Ki (174)	38 27	124 56	−3 15	1.4	0.0	12.3	9.6	8.0
			on CHINNAMP'O-HANG (CHINNAMPO-KŌ)					
Taedong-gang (177, Daidō-kō)	38 38	125 00	−0 40	0.9	−0.1	14.0	11.0	8.9
P'i-do (178, Hi-tō)	38 40	125 10	−0 25	1.1	−0.5	16.8	13.6	10.5
Chinnamp'o-hang (180, CHINNAMPO-KŌ)	38 43	125 24	(see Table 5e)			15.6	12.7	10.0
Ch'ol-do (181, Tetsu-tō)	38 39	125 37	+0 20	1.1	−0.1	17.9	14.2	10.9
Sokuheidon (182)	38 31	125 40	+0 15	1.3	−0.3	20.5	16.6	12.7
Kyomip'o (183, Kenjiho)	38 44	125 38	+0 30	1.2	−0.2	19.3	15.4	11.8
Sokho-chong (184, Sekikotei)	38 57	125 38	+1 40	1.1	0.0	16.9	13.9	11.0
P'yongyang (185, Heijō)	39 01	125 45	+3 00H +4 50L	0.2	+0.4	3.0	2.3	2.4
Unmu-do (186, Ummu-tō)	39 25	125 07	+0 10	1.2	+0.3	20.0	15.6	12.3
Yop-do (187, Rō-tō)	39 16	124 43	−0 05	1.1	−0.2	17.6	13.5	10.8
Taehwa-do (188, Daiwa-tō)	39 27	124 37	+0 10	1.1	0.0	17.6	13.8	11.0
Ka-do (189, Ka-tō)	39 31	124 40	+0 10	1.1	+0.3	18.5	14.6	11.3
Suun-do (191, Suiun-tō)	39 42	124 25	+0 15	1.1	+0.1	18.2	14.4	11.1
Taedasa-do (192, Daitasa-tō)	39 48	124 25	+0 30	1.2	−0.4	19.3	15.1	11.6
Yongamp'o (193, Ryūgampo)	39 56	124 21	+1 40	0.9	0.0	14.0	11.2	9.0
Sindo-yolto (194, Shintō-rettō)	39 48	124 16	+0 30	1.2	−0.5	19.2	14.9	11.5

H Difference for high waters only.
L Difference for low waters only.

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TABLE III - 4 *Continued*

PLACE	LAT. ° ′ N	LONG. ° ′ E	*Tidal Differences* *Times* TIME OF HW & LW H. M.	*Heights* RATIO FOR HW & LW	CORRECTION FOR DATUM FT.	*Ranges* SPRING FT.	MEAN FT.	MSL FT.
West Coast			*Time Meridian* 135°E					
			on CH'ANG-CHIANG K'OU					
Cheju-do (Saishū-tō)								
Sogwi-ri (197, Seiki-ri)	33 14	126 33	−0 15	0.7	−1.7	7.5	5.6	5.0
Ch'agwi-do (198, Shaki-tō)	33 18	126 09	+0 55	0.6	−0.8	7.1	5.4	5.0
Hwabuk-ni (199, Kahoku-ri)	33 31	126 35	+0 50	0.6	−1.2	6.4	4.8	4.6
Udo-sudo (202, Gyūtō-suidō)	33 30	126 55	−0 10	0.6	−1.3	6.5	4.8	4.5
			on SHIMONOSEKI					
Ajiro (208)	34 39	129 29	−0 20	0.5	−0.5	3.5	2.5	1.9
Oshika (211)	34 31	129 26	−0 20	0.5	−0.2	4.0	2.9	2.2
Miura-wan (213)	34 18	129 23	−0 20	0.6	0.0	4.8	3.5	2.8
Takahama-kō (215)	34 16	129 19	−0 10	0.6	+0.1	4.7	3.3	2.9
Izuhara-minato (217)	34 12	129 17	−0 20	0.7	−0.3	5.4	3.9	3.0
			on SASEBO					
Tsushima								
Osaki (227)	34 19	129 13	+0 30	0.8	−0.4	6.3	4.6	3.9
Mikata (228)	34 18	129 16	+0 30	0.8	−0.4	6.5	4.8	3.9
Takeshiki-kō (229)	34 18	129 18	+0 40	0.8	−0.4	6.5	4.8	3.9
Tsuna-shima (230)	34 25	129 16	+0 30	0.7	−0.3	6.0	4.4	3.5
Sasuna-kō (234)	34 39	129 23	+0 15	0.5	0.0	4.5	3.3	2.7
Ōkawachi-wan (235)	34 41	129 25	+0 25	0.5	−0.1	4.5	3.3	2.6

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FUSAN, CHOSEN, 1945

MAY						JUNE						JULY						AUGUST					
Day	High		Low			Day	High		Low			Day	High		Low			Day	High		Low		
	Time	Ht.	Time	Ht.			Time	Ht.	Time	Ht.			Time	Ht.	Time	Ht.			Time	Ht.	Time	Ht.	
	h. m.	ft.	h. m.	ft.			h. m.	ft.	h. m.	ft.			h. m.	ft.	h. m.	ft.			h. m.	ft.	h. m.	ft.	
1	10 31	3.3	3 57	0.4		1	11 45	3.1	5 16	0.9		1	. . .	. .	6 06	1.1		1	1 02	3.8	7 37	1.5	
Tu	22 49	3.5	15 57	0.2		F	. . .	. .	17 11	0.9		Su	12 21	3.6	18 04	1.2		W	13 44	3.7	19 59	1.8	
2	11 07	3.1	4 31	0.6		2	0 04	3.4	6 21	1.1		2	0 36	3.7	7 10	1.2		2	2 03	3.5	8 00	1.6	
W	23 26	3.3	16 31	0.5		Sa	12 38	3.0	18 15	1.1		M	13 17	3.5	19 17	1.4		Th	15 00	3.5	21 35	1.9	
3	11 52	2.8	5 13	0.8		3	1 06	3.2	7 50	1.2		3	1 34	3.5	8 27	1.3		3	3 30	3.3	10 16	1.8	
Th	. . .	. .	17 15	0.7		Su	13 45	2.9	19 54	1.3		Tu	14 24	3.4	20 47	1.5		F	16 37	3.6	22 57	1.8	
4	0 12	3.0	6 18	1.0		4	2 10	3.1	8 18	1.1		4	2 46	3.4	9 42	1.3		4	5 20	3.3	11 25	1.5	
F	12 49	2.6	18 17	1.0		M	15 09	2.9	21 32	1.3		W	15 43	3.4	22 07	1.5		Sa	17 56	3.8	. . .	. .	
5	1 17	2.8	8 18	1.2		5	3 36	3.1	10 23	0.9		5	4 10	3.3	10 48	1.2		5	6 30	3.6	0 03	1.6	
Sa	14 09	2.6	20 24	1.2		Tu	16 30	3.2	22 42	1.1		Th	17 05	3.6	23 14	1.4		Su	18 50	4.1	12 22	1.3	
6	2 47	2.7	10 00	1.0		6	5 00	3.3	11 17	0.7		6	5 34	3.5	11 41	1.0		6	7 20	3.9	1 00	1.4	
Su	15 52	2.6	22 11	1.1		W	17 40	3.5	23 38	0.8		F	18 09	3.9	. . .	. .		M	19 37	4.4	13 12	1.2	
7	4 32	2.5	11 03	0.7		7	6 01	3.6	. . .	. .		7	6 35	3.7	0 10	1.2		7	8 03	4.2	1 45	1.2	
M	17 18	2.9	23 15	0.8		Th	18 32	3.9	12 05	0.5		Sa	19 00	4.2	12 32	0.8		Tu	20 16	4.7	10 54	1.0	
8	5 43	3.2	11 51	0.4		8	6 52	3.8	0 28	0.6		8	7 25	4.0	1 00	1.0		8	8 39	4.4	2 23	1.0	
Tu	18 13	3.4	. . .	. .		F	19 17	4.2	12 50	0.3		Su	19 46	4.5	13 17	0.7		W	20 53	4.8	14 33	0.9	
9	6 33	3.6	0 05	0.5		9	7 36	4.0	1 13	0.5		9	8 11	4.1	1 49	0.9		9	9 16	4.4	3 00	0.9	
W	18 58	3.6	12 34	0.1		Sa	19 59	4.5	13 32	0.2		M	20 29	4.7	14 00	0.7		Th	21 29	4.9	15 08	0.9	
10	7 17	3.9	0 51	0.2		10	8 19	4.2	1 56	0.4		10	8 52	4.2	2 31	0.8		10	9 50	4.4	3 31	0.9	
Th	19 40	4.2	13 15	-0.3		Su	20 41	4.6	14 13	0.2		Tu	21 07	4.8	14 42	0.7		F	22 04	4.8	15 43	0.9	
11	7 57	4.1	1 33	0.0		11	9 01	4.2	2 38	0.4		11	9 31	4.3	3 12	0.8		11	10 25	4.3	4 01	1.0	
F	20 20	4.5	13 54	-0.3		M	21 22	4.6	14 53	0.3		W	21 45	4.7	15 21	0.7		Sa	22 35	4.6	16 13	1.0	
12	8 41	4.2	2 14	-0.1		12	9 43	4.0	3 20	0.5		12	10 09	4.2	3 51	0.6		12	10 55	4.2	4 23	1.1	
Sa	20 59	4.6	14 32	-0.3		Tu	22 02	4.5	15 32	0.4		Th	22 34	4.6	15 00	0.9		Su	23 08	4.1	16 42	1.2	
13	9 17	4.2	2 52	0.0		13	10 24	3.8	4 02	0.6		13	10 46	4.0	4 28	1.0		13	11 26	4.0	4 55	1.2	
Su	21 38	4.5	15 10	-0.1		W	22 41	4.3	16 14	0.7		F	23 01	4.4	16 36	1.1		M	23 40	4.0	17 09	1.4	
14	9 56	4.0	3 32	0.1		14	11 05	3.6	4 44	0.8		14	11 24	3.8	5 05	1.1		14	. . .	. .	5 22	1.4	
M	22 16	4.3	15 47	0.1		Th	23 24	4.0	16 56	0.9		Sa	23 38	4.1	17 14	1.3		Tu	12 00	3.7	17 40	1.6	
15	10 37	3.7	4 15	0.3		15	11 52	3.3	5 32	1.1		15	. . .	. .	5 42	1.3		15	0 16	3.7	5 55	1.5	
Tu	22 59	4.0	16 24	0.4		F	. . .	. .	17 42	1.2		Su	12 02	3.6	17 55	1.5		W	12 35	3.5	18 23	1.9	
16	11 20	3.3	5 55	0.6		16	0 11	3.6	6 20	1.3		16	0 17	3.8	6 24	1.5		16	0 52	3.4	6 39	1.7	
W	23 41	3.6	17 06	0.8		Sa	12 37	3.0	18 47	1.5		M	12 44	3.3	18 49	1.7		Th	13 28	3.3	19 49	2.1	
17	. . .	. .	5 46	1.0		17	0 59	3.3	7 45	1.4		17	0 58	3.5	7 20	1.7		17	1 43	3.1	8 00	1.9	
Th	12 06	2.9	18 01	1.1		Su	13 34	2.8	20 21	1.7		Tu	13 32	3.1	20 05	1.9		F	14 37	3.1	21 54	2.1	
18	0 28	3.2	7 07	1.3		18	1 55	3.0	9 07	1.5		18	1 46	3.2	8 26	1.8		18	3 14	3.0	9 54	2.0	
F	13 52	2.6	19 46	1.4		M	14 55	2.7	21 39	1.7		W	14 37	3.0	21 36	2.0		Sa	16 52	3.2	23 16	1.9	
19	1 29	2.9	8 58	1.4		19	3 04	2.9	10 10	1.5		19	2 56	3.0	9 18	1.8		19	5 17	3.1	11 00	1.8	
Sa	14 34	2.3	21 39	1.5		Tu	16 37	2.7	22 43	1.6		Th	16 22	3.0	22 47	1.9		Su	18 11	3.5	. . .	. .	
20	2 52	2.7	10 20	1.3		20	4 28	2.6	10 59	1.3		20	4 28	3.0	10 46	1.7		20	6 23	3.4	0 11	1.7	
Su	16 48	2.4	22 44	1.4		W	17 39	2.9	23 35	1.5		F	17 48	3.2	23 45	1.7		M	18 55	3.9	12 07	1.5	
21	4 33	2.7	11 14	1.1		21	5 34	3.0	11 38	1.1		21	5 48	3.1	11 37	1.5		21	7 10	3.8	0 56	1.4	
M	17 53	2.7	23 37	1.2		Th	18 23	3.2	. . .	. .		Sa	18 37	3.5	. . .	. .		Tu	19 35	4.3	12 53	1.2	
22	5 42	2.9	11 55	0.9		22	6 21	3.2	0 16	1.3		22	6 43	3.4	0 30	1.5		22	7 50	4.2	1 37	1.1	
Tu	18 28	2.9	. . .	. .		F	19 01	3.5	12 15	1.0		Su	19 17	3.9	12 23	1.3		W	20 11	4.6	13 35	1.0	
23	6 22	3.1	0 17	1.0		23	7 03	3.4	0 54	1.1		23	7 25	3.7	1 19	1.3		23	8 28	4.5	4 13	0.8	
W	18 59	3.2	12 24	0.8		Sa	19 30	3.8	12 46	0.9		M	19 53	4.2	13 06	1.1		Th	20 50	4.9	14 14	0.7	
24	6 58	3.2	0 50	0.8		24	7 40	3.6	1 28	1.0		24	8 05	4.0	1 51	1.1		24	9 05	4.7	2 49	0.6	
Th	19 31	3.5	12 51	0.6		Su	20 10	4.0	13 18	0.8		Tu	20 30	4.5	13 45	0.9		F	21 24	5.0	14 51	0.6	
25	7 30	3.4	1 20	0.7		25	8 19	3.8	2 02	0.8		25	8 44	4.2	2 29	0.9		25	9 43	4.8	3 26	0.5	
F	19 57	3.7	13 16	0.5		M	20 44	4.2	13 53	0.7		W	21 07	4.6	14 24	0.8		Sa	22 00	5.0	15 28	0.6	
26	8 03	3.6	1 50	0.6		26	8 57	3.9	2 39	0.7		26	9 22	4.4	3 05	0.8		26	10 19	4.8	4 00	0.6	
Sa	20 27	3.8	13 42	0.4		Tu	21 19	4.3	14 29	0.6		Th	21 42	4.7	15 02	0.7		Su	22 35	4.8	16 06	0.7	
27	8 35	3.6	2 17	0.5		27	9 30	3.9	3 14	0.7		27	10 00	4.4	3 42	0.7		27	10 58	4.7	4 36	0.7	
Su	20 59	3.8	14 12	0.3		W	21 56	4.3	15 05	0.6		F	22 18	4.7	15 40	0.7		M	23 13	4.6	16 42	0.9	
28	9 00	3.7	2 46	0.5		28	10 10	3.9	3 51	0.7		28	10 38	4.4	4 20	0.8		28	11 41	4.5	5 13	0.9	
M	21 30	4.0	14 40	0.3		Th	22 28	4.2	15 44	0.7		Sa	22 56	4.6	16 19	0.8		Tu	23 53	4.2	17 22	1.2	
29	9 44	3.6	3 19	0.5		29	10 51	3.8	4 30	0.8		29	11 18	4.3	5 00	0.9		29	. . .	. .	5 55	1.2	
Tu	22 02	3.9	15 12	0.3		F	23 11	4.1	16 24	0.8		Su	23 36	4.4	16 39	1.0		W	12 25	4.1	18 10	1.5	
30	10 19	3.5	3 51	0.6		30	11 35	3.7	5 13	0.9		30	. . .	. .	5 41	1.1		30	0 33	3.8	6 51	1.6	
W	22 37	3.8	15 45	0.4		Sa	23 53	3.9	17 10	1.0		M	12 00	4.1	17 14	1.2		Th	13 13	3.8	19 22	1.9	
31	10 50	3.3	4 30	0.7								31	0 15	4.1	6 31	1.3		31	1 31	3.4	8 18	1.8	
Th	23 17	3.6	16 24	0.6								Tu	12 49	3.9	18 10	1.5		F	14 22	3.5	21 16	2.0	

SEPTEMBER						OCTOBER						NOVEMBER						DECEMBER					
	h. m.	ft.	h. m.	ft.			h. m.	ft.	h. m.	ft.			h. m.	ft.	h. m.	ft.			h. m.	ft.	h. m.	ft.	
1	3 05	3.1	10 01	1.9		1	5 27	2.9	11 14	1.7		1	6 37	3.2	0 10	1.0		1	6 39	3.0	0 00	0.7	
Sa	16 12	3.4	22 57	2.0		M	17 30	3.3	23 59	1.5		Th	18 33	3.4	12 27	1.0		Sa	18 37	3.0	12 30	0.8	
2	5 28	3.2	11 21	1.8		2	6 25	3.2	. . .	. .		2	7 09	3.4	0 42	0.8		2	7 12	3.2	0 30	0.6	
Su	17 46	3.6	. . .	. .		Tu	18 24	3.6	12 12	1.4		F	19 09	3.6	13 02	0.8		Su	19 12	3.1	13 05	0.7	
3	6 32	3.5	0 08	1.7		3	7 03	3.6	0 42	1.2		3	7 36	3.5	1 09	0.5		3	7 42	3.4	0 59	0.4	
M	18 42	3.9	12 21	1.5		W	19 04	3.9	12 54	1.2		Sa	19 40	3.7	13 34	0.7		M	19 47	3.2	13 35	0.5	
4	7 16	3.8	0 54	1.4		4	7 34	3.8	1 15	1.0		4	8 08	3.8	1 33	0.5		4	8 13	3.5	1 26	0.3	
Tu	19 24	4.3	13 07	1.3		Th	19 38	4.1	13 28	0.9		Su	20 11	3.7	14 01	0.6		Tu	20 20	3.3	14 07	0.5	
5	7 53	4.1	1 35	1.2		5	8 05	4.0	1 42	0.8		5	8 36	3.9	1 58	0.4		5	8 46	3.6	1 55	0.3	
W	20 01	4.5	13 46	1.1		F	20 10	4.3	14 00	0.8		M	20 43	3.8	14 26	0.5		W	20 56	3.3	14 34	0.4	
6	8 25	4.3	2 08	1.0		6	8 34	4.2	2 08	0.7		6	9 04	3.9	2 20	0.3		6	9 18	3.7	2 26	0.2	
Th	20 34	4.7	14 19	0.9		Sa	20 40	4.3	14 26	0.7		Tu	21 14	3.7	14 53	0.5		Th	21 30	3.3	15 06	0.4	
7	8 57	4.5	2 37	0.8		7	9 02	4.3	2 30	0.6		7	9 33	3.9	2 45	0.3		7	9 52	3.6	2 58	0.2	
F	21 06	4.8	14 50	0.8		Su	21 10	4.3	14 51	0.7		W	21 45	3.6	15 17	0.5		F	22 09	3.2	15 40	0.4	
8	9 27	4.5	3 04	0.8		8	9 29	4.2	2 52	0.6		8	10 03	3.8	3 13	0.4		8	10 27	3.6	3 32	0.3	
Sa	21 38	4.7	15 19	0.9		M	21 38	4.2	15 16	0.7		Th	22 16	3.4	15 46	0.6		Sa	22 46	3.1	16 17	0.5	
9	9 56	4.4	3 28	0.8		9	9 56	4.2	3 15	0.6		9	10 34	3.6	4 05	0.6		9	11 05	3.4	4 10	0.4	
Su	22 06	4.5	15 44	0.9		Tu	22 07	4.0	15 40	0.8		F	22 52	3.2	16 18	0.7		Su	23 29	3.0	16 58	0.6	
10	10 23	4.3	3 51	0.8		10	10 24	4.0	3 38	0.6		10	11 09	3.4	4 16	0.6		10	11 45	3.3	4 54	0.5	
M	22 37	4.3	16 10	1.0		W	22 37	3.7	16 05	0.9		Sa	23 37	3.0	16 58	0.9		M	. . .	. .	17 54	0.7	
11	10 52	4.1	4 14	0.9		11	10 55	3.8	4 05	0.7		11	11 55	3.2	4 57	0.8		11	0 18	2.8	5 46	0.7	
Tu	23 04	4.0	16 33	1.2		Th	23 10	3.4	16 33	1.1		Su	. . .	. .	17 56	1.1		Tu	12 34	3.1	19 06	0.8	
12	11 23	3.9	4 38	1.1		12	11 27	3.6	4 35	0.9		12	0 30	2.8	5 53	1.1		12	1 14	2.7	7 05	0.9	
W	23 37	3.7	17 01	1.4		F	23 46	3.2	17 07	1.3		M	12 50	3.0	19 36	1.2		W	13 33	2.9	20 28	0.6	
13	11 56	3.7	5 06	1.3		13	. . .	. .	5 12	1.2		13	1 38	2.6	7 32	1.3		13	2 25	2.7	8 39	1.0	
Th	. . .	. .	17 33	1.6		Sa	12 09	3.3	17 59	1.5		Tu	14 05	2.8	21 21	1.1		Th	14 48	2.8	21 40	0.7	
14	0 13	3.4	5 42	1.5		14	0 39	2.9	6 06	1.4		14	3 04	2.6	9 26	1.2		14	3 41	2.8	10 00	0.8	
F	12 33	3.4	18 28	1.9		Su	13 08	3.0	20 11	1.7		W	15 34	2.9	22 28	0.8		F	16 03	2.9	22 41	0.5	
15	1 00	3.1	6 42	1.8		15	1 56	2.7	8 09	1.7		15	4 35	2.9	10 39	0.9		15	4 55	3.1	11 01	0.6	
Sa	13 35	3.1	20 51	2.1		M	14 44	2.9	22 07	1.5		Th	17 03	3.1	23 20	0.5		Sa	17 20	3.1	23 33	0.3	
16	2 22	2.8	8 56	1.9		16	3 53	2.7	10 12	1.5		16	5 39	3.3	11 34	0.6		16	5 57	3.4	11 56	0.4	
Su	15 38	3.0	22 42	1.9		Tu	16 43	3.1	23 11	1.2		F	17 58	3.5	. . .	. .		Su	18 19	3.3	. . .	. .	
17	4 34	2.9	10 45	1.7		17	5 24	3.1	11 18	1.2		17	6 28	3.7	0 05	0.2		17	6 49	3.7	0 22	0.1	
M	17 35	3.3	23 46	1.6		W	17 52	3.4	. . .	. .		Sa	18 50	3.8	12 22	0.3		M	19 12	3.8	12 46	0.2	
18	5 58	3.3	11 47	1.4		18	6 14	3.5	0 00	0.8		18	7 15	4.1	0 48	0.0		18	7 36	4.0	1 07	0.0	
Tu	18 23	3.7	. . .	. .		Th	18 37	3.8	12 08	0.6		Su	19 33	4.0	13 07	0.1		Tu	19 59	3.7	13 34	0.1	
19	6 48	3.7	0 21	1.2		19	7 00	4.0	0 40	0.4		19	7 55	4.3	1 30	-0.2		19	8 24	4.2	1 52	-0.1	
W	19 10	4.2	12 35	1.1		F	19 19	4.2	12 30	0.5		M	20 16	4.1	13 51	0.0		W	20 44	3.8	14 19	0.0	
20	7 28	4.2	1 11	0.8		20	7 39	4.4	1 19	0.2		20	8 35	4.5	2 10	-0.2		20	9 05	4.2	2 35	-0.1	
Th	19 48	4.5	13 16	0.7		Sa	19 55	4.4	13 31	0.2		Tu	20 56	4.1	14 32	0.0		Th	21 27	3.7	15 05	0.1	
21	8 05	4.6	1 48	0.5		21	8 18	4.7	1 58	0.0		21	9 19	4.5	2 50	-0.2		21	9 47	4.2	3 18	0.0	
F	20 25	4.8	13 56	0.5		Su	20 37	4.5	14 11	0.1		W	21 39	3.8	15 13	0.1		F	22 10	3.6	15 50	0.1	
22	8 44	4.8	2 25	0.3		22	8 57	4.8	2 33	0.1		22	10 00	4.3	3 28	0.0		22	10 29	4.0	4 00	0.2	
Sa	21 02	4.9	14 33	0.4		M	21 16	4.5	14 49	0.1		Th	22 21	3.7	15 56	0.2		Sa	22 52	3.4	16 35	0.3	
23	9 21	4.9	3 00	0.2		23	9 37	4.7	3 09	0.0		23	10 41	4.1	4 10	0.3		23	11 10	3.8	4 45	0.4	
Su	21 37	4.9	15 09	0.3		Tu	21 55	4.3	15 28	0.2		F	23 05	3.4	16 42	0.5		Su	23 36	3.2	17 22	0.5	
24	9 58	4.9	3 34	0.3		24	10 17	4.5	3 47	0.2		24	11 25	3.7	4 54	0.6		24	11 52	3.5	5 32	0.6	
M	22 16	4.7	15 46	0.4		W	22 32	4.0	15 08	0.4		Sa	23 51	3.1	17 34	0.8		M	. . .	. .	18 13	0.7	
25	10 35	4.7	4 10	0.4		25	10 57	4.2	4 23	0.5		25	. . .	. .	5 49	0.9		25	0 25	2.9	6 30	0.9	
Tu	22 53	4.4	16 24	0.7		Th	23 16	3.6	16 50	0.7		Su	12 13	3.4	18 45	1.0		Tu	12 38	3.1	19 16	0.9	
26	11 16	4.4	4 46	0.7		26	11 41	3.9	5 04	0.8		26	0 46	2.7	7 10	1.2		26	1 12	2.6	7 44	1.1	
W	23 32	4.0	17 02	1.0		F	. . .	. .	17 37	1.1		M	13 03	3.0	20 17	1.4		W	13 29	2.8	20 25	1.0	
27	11 59	4.1	5 25	1.0		27	0 00	3.2	5 57	1.2		27	2 00	2.5	8 48	1.3		27	2 13	2.4	9 03	1.2	
Th	. . .	. .	17 47	1.3		Sa	12 29	3.5	18 53	1.4		Tu	14 17	2.8	21 37	1.1		Th	14 28	2.6	21 31	1.0	
28	0 15	3.6	6 17	1.4		28	0 58	2.8	7 35	1.5		28	3 33	2.4	10 05	1.3		28	3 35	2.3	10 11	1.2	
F	12 49	3.7	19 00	1.5		Su	13 31	3.1	20 57	1.5		W	15 38	2.6	22 37	1.0		F	15 40	2.4	22 24	1.0	
29	1 11	3.1	7 51	1.8		29	2 30	2.5	9 28	1.6		29	5 10	2.5	11 05	1.1		29	5 09	2.1	11 09	1.1	
Sa	13 57	3.3	21 16	1.9		M	15 04	2.9	22 26	1.4		Th	17 00	2.7	23 24	0.8		Sa	16 57	2.4	23 14	0.9	
30	2 52	2.8	9 53	1.9		30	4 51	2.6	10 47	1.4		30	6 03	2.8	11 51	1.0		30	6 06	2.6	11 59	1.0	
Su	15 46	3.1	22 55	1.6		Tu	16 44	2.9	23 32	1.2		F	17 55	2.8	. . .	. .		Su	18 04	2.6	23 55	0.7	
						31	6 01	2.9	11 41	1.2								31	6 47	2.9	. . .	. .	
						W	17 54	3.2	. . .	. .								W	18 49	2.7	12 41	0.8	

Time meridian 135° E. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 00 p. m.). 12h is noon. All hours greater than 12 are in the afternoon (p. m.).
Heights are reckoned from the datum of soundings on the largest scale charts of the locality which is approximately mean low water springs.

TABLE III - 5a. *Daily Tide Predictions.*

Approved For Release 2006/09/25 : CIA-RDP79-01144A000900010003-9

Approved For Release 2006/09/25 : CIA-RDP79-01144A000900010003-9

YANGTZE KIANG APPROACH (Side Saddle), CHINA, 1945

MAY					JUNE					JULY					AUGUST				
Day	High		Low		Day	High		Low		Day	High		Low		Day	High		Low	
	Time	Ht.	Time	Ht.		Time	Ht.	Time	Ht.		Time	Ht.	Time	Ht.		Time	Ht.	Time	Ht.
	h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.
1 Tu	11 45	13.4	6 17	5.2	1 F	0 53	15.3	7 30	6.3	1 Su	1 28	15.4	8 06	6.0	1 W	2 38	14.1	9 17	5.9
	. . .	. . .	18 07	4.2		12 50	12.4	19 12	5.2		13 40	12.9	19 58	5.6		15 24	13.4	21 45	7.3
2 W	0 22	15.0	5 52	5.8	2 Sa	1 39	14.7	8 23	5.7	2 M	2 18	14.8	8 56	6.1	2 Th	3 39	13.1	10 20	8.1
	12 18	12.8	18 38	4.5		13 48	12.0	20 04	5.9		14 41	12.7	20 58	6.4		16 45	13.3	23 10	7.0
3 Th	0 58	14.6	7 34	6.5	3 Su	2 36	14.1	9 25	6.9	3 Tu	3 15	14.0	9 57	6.2	3 F	4 57	12.4	11 33	6.2
	12 53	12.2	19 16	5.3		14 59	11.7	21 15	6.5		15 58	12.6	22 11	7.0		18 14	13.6	. . .	. .
4 F	1 45	14.0	8 26	7.1	4 M	3 49	13.6	10 34	6.8	4 W	4 24	13.4	11 01	6.0	4 Sa	6 20	12.1	0 43	7.9
	13 54	11.5	20 09	6.0		16 29	11.8	22 37	6.9		17 19	13.0	23 35	7.2		19 32	14.1	12 50	5.8
5 Sa	2 49	13.3	9 41	7.5	5 Tu	5 06	13.4	11 46	6.2	5 Th	5 35	13.1	. . .	. .	5 Su	7 35	12.4	2 10	7.2
	15 05	10.9	21 28	6.7		17 55	12.5	. . .	. .		18 36	13.7	12 09	5.6		20 32	15.2	13 58	5.4
6 Su	4 19	13.0	11 10	7.3	6 W	6 18	13.6	0 04	5.6	6 F	6 40	13.0	0 59	7.0	6 M	8 34	12.9	3 08	5.4
	15 55	11.0	23 04	5.8		19 05	13.6	12 49	5.4		19 42	14.6	13 12	5.1		21 20	16.0	14 54	4.8
7 M	5 51	13.2	. . .	. .	7 Th	7 15	13.9	1 19	6.1	7 Sa	7 44	13.1	2 10	6.5	7 Tu	9 23	13.4	3 56	5.8
	18 21	12.0	12 29	6.5		20 00	14.7	13 45	4.5		20 16	15.5	14 11	4.5		22 02	16.4	15 42	4.4
8 Tu	7 01	13.9	0 35	6.3	8 F	8 09	14.1	2 22	5.4	8 Su	8 39	13.4	3 10	5.9	8 W	10 06	13.9	4 37	5.3
	19 32	13.3	13 30	5.4		20 51	15.7	14 35	3.8		21 26	16.1	15 03	4.0		22 39	16.6	16 25	4.1
9 W	7 54	14.5	1 46	5.4	9 Sa	8 55	14.2	3 18	4.9	9 M	9 28	13.5	4 03	5.4	9 Th	10 45	14.1	5 13	5.0
	20 24	14.6	14 19	4.4		21 35	16.4	15 21	3.2		22 12	16.5	15 50	3.7		23 11	16.5	17 04	4.1
10 Th	8 39	15.0	2 42	4.4	10 Su	9 40	14.3	4 09	4.6	10 Tu	10 14	13.6	4 48	5.1	10 F	11 20	14.2	5 49	5.0
	21 08	15.8	15 05	3.4		22 21	16.7	16 05	3.0		22 54	16.6	16 35	3.6		23 45	16.4	17 38	4.5
11 F	9 20	15.2	3 31	3.8	11 M	10 24	14.0	4 55	4.5	11 W	10 56	13.6	5 28	5.0	11 Sa	11 54	14.2	6 16	5.1
	21 52	16.4	15 45	2.7		23 05	16.8	16 45	3.0		23 33	16.5	17 18	3.9		. . .	. .	18 10	4.0
12 Sa	10 02	15.1	4 19	3.5	12 Tu	11 06	13.6	5 39	4.7	12 Th	11 36	13.5	6 08	5.1	12 Su	0 14	15.0	6 44	5.4
	22 34	16.8	16 28	2.4		23 46	16.5	17 28	3.4		. . .	. .	17 55	4.3		12 27	14.1	18 40	5.5
13 Su	10 41	14.8	5 04	3.5	13 W	11 48	13.2	6 23	5.1	13 F	0 10	16.2	6 44	5.4	13 M	0 43	15.4	7 10	5.6
	23 16	16.8	17 06	2.4		. . .	. .	18 08	4.0		12 16	13.4	18 30	4.9		12 59	13.0	19 11	6.2
14 M	11 30	14.1	5 46	4.0	14 Th	0 28	15.0	7 05	5.6	14 Sa	0 45	15.7	7 18	5.8	14 Tu	1 10	14.7	7 38	6.0
	23 57	15.4	17 44	2.9		12 31	12.8	18 44	4.8		12 56	13.1	19 05	5.6		13 34	13.5	19 44	7.0
15 Tu	11 59	13.4	6 30	4.5	15 F	1 08	15.4	7 45	6.1	15 M	1 19	15.1	7 54	6.1	15 W	1 39	13.9	8 08	6.4
	. . .	. . .	18 23	3.6		13 15	12.2	19 25	5.7		13 35	12.8	19 42	6.4		14 14	13.1	20 22	7.7
16 W	0 38	15.8	7 14	5.5	16 Sa	1 50	14.6	8 30	6.7	16 Tu	1 54	14.4	8 27	6.5	16 Th	2 15	13.1	8 45	6.9
	12 42	12.4	19 01	4.5		14 07	11.8	20 10	6.6		14 20	12.5	20 21	7.2		15 08	12.6	21 18	8.5
17 Th	1 24	14.9	8 02	6.4	17 Su	2 36	13.9	9 20	7.0	17 W	2 30	13.6	9 08	6.8	17 F	3 02	12.4	9 38	7.2
	13 27	11.8	19 44	5.6		15 07	11.5	21 04	7.5		15 15	12.2	21 12	7.9		16 25	12.5	22 38	8.0
18 F	2 13	14.0	9 01	7.1	18 M	3 30	13.2	10 11	7.2	18 Th	3 20	13.0	9 55	7.0	18 Sa	4 19	11.7	10 50	7.3
	14 25	11.1	20 35	6.7		16 23	11.5	22 10	8.0		16 22	12.1	22 17	8.4		17 50	12.0	. . .	. .
19 Sa	3 15	13.2	10 06	7.5	19 Tu	4 33	12.8	11 15	7.1	19 F	4 20	12.4	10 54	7.0	19 Su	5 54	11.6	0 25	9.0
	15 50	10.6	21 45	7.5		17 35	11.9	23 29	8.2		17 35	12.4	23 39	8.6		19 15	13.6	12 12	7.1
20 Su	4 30	12.7	11 27	7.4	20 W	5 36	12.6	. . .	. .	20 Sa	5 30	12.1	11 55	6.9	20 M	7 13	12.1	1 51	8.1
	17 27	10.9	23 15	7.9		18 41	12.5	12 11	6.7		18 46	13.0	. . .	. .		20 10	14.7	13 27	6.5
21 M	5 45	12.6	. . .	. .	21 Th	6 35	12.6	0 44	7.9	21 Su	6 38	12.2	1 04	6.0	21 Tu	8 10	12.8	2 47	7.1
	18 44	11.7	12 36	6.0		19 32	13.4	13 04	6.2		19 44	13.9	12 58	6.4		20 58	15.7	14 25	5.6
22 Tu	6 45	12.9	0 40	7.6	22 F	7 25	12.9	1 46	7.5	22 M	7 37	12.5	2 13	7.5	22 W	8 58	13.6	3 20	6.2
	19 33	12.4	13 28	6.2		20 15	14.1	13 51	5.7		20 31	14.8	13 55	5.3		21 36	16.5	15 15	4.8
23 W	7 33	13.2	1 11	7.0	23 Sa	8 10	13.1	2 39	6.9	23 Tu	8 27	12.9	3 06	7.0	23 Th	9 40	14.4	4 09	5.4
	20 16	13.5	14 06	5.8		20 56	14.9	14 31	5.1		21 15	15.6	14 45	5.2		22 15	17.1	16 00	4.0
24 Th	8 11	13.5	2 29	6.4	24 Su	8 51	13.3	3 24	6.4	24 W	9 13	13.4	3 50	6.3	24 F	10 20	15.1	4 46	4.7
	20 50	14.2	14 40	5.0		21 35	15.5	15 11	4.7		21 56	16.2	15 30	4.6		22 53	17.3	16 41	3.5
25 F	8 49	13.8	3 11	5.9	25 M	9 29	13.4	4 05	5.9	25 Th	9 55	13.8	4 30	5.7	25 Sa	11 00	15.6	5 20	4.2
	21 24	14.9	15 14	4.5		22 12	16.0	15 50	4.4		22 35	16.8	16 15	4.1		23 28	17.3	17 24	3.4
26 Sa	9 22	13.9	3 46	5.5	26 Tu	10 08	13.5	4 44	5.6	26 F	10 35	14.1	5 08	5.2	26 M	11 30	15.8	5 56	4.0
	21 56	15.4	15 44	4.2		22 49	16.3	16 27	4.1		23 13	16.9	16 55	3.9		. . .	. .	18 04	3.6
27 Su	9 55	13.9	4 23	5.3	27 W	10 44	13.5	5 24	5.5	27 Sa	11 14	14.4	5 45	5.0	27 Tu	0 09	16.8	6 35	4.1
	22 29	15.7	16 16	4.0		23 27	16.4	17 05	4.0		23 50	17.0	17 38	3.8		12 29	15.7	18 45	3.4
28 M	10 27	13.7	4 58	5.2	28 Th	11 34	13.5	6 01	5.4	28 Su	11 55	14.5	6 23	4.9	28 W	0 42	16.0	7 12	4.5
	23 04	15.9	16 46	3.9		. . .	. .	17 43	4.1		. . .	. .	18 16	4.0		13 04	15.3	19 28	5.3
29 Tu	10 58	13.5	5 34	5.3	29 F	0 05	16.3	6 40	5.5	29 M	0 28	16.6	7 01	4.0	29 Th	1 20	15.0	7 54	5.0
	23 35	15.9	17 18	4.0		12 06	13.4	18 24	4.4		12 38	14.1	18 59	4.5		13 54	14.6	20 19	6.5
30 W	11 31	13.2	6 00	5.5	30 Sa	0 45	15.0	7 21	5.7	30 Tu	1 08	15.0	7 40	5.2	30 F	2 04	13.6	8 40	5.8
	. . .	. .	17 51	4.2		12 49	13.2	19 08	4.9		13 24	14.1	19 46	5.3		14 54	13.9	21 24	7.7
31 Th	0 11	15.6	6 48	5.9						31 W	1 50	15.1	8 26	5.5	31 Sa	3 00	12.5	9 41	6.5
	12 08	12.9	18 28	4.6							14 18	13.8	20 40	6.3		16 17	13.4	22 57	8.4

SEPTEMBER					OCTOBER					NOVEMBER					DECEMBER				
	h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.
1 Sa	4 25	11.7	11 02	6.9	1 M	6 14	11.0	0 54	8.2	1 Th	8 00	12.9	2 06	6.0	1 Sa	8 01	13.2	1 56	5.4
	18 00	13.4	. . .	. .		19 12	13.9	12 33	7.4		20 08	14.3	14 06	6.4		20 00	13.2	14 15	6.4
2 Su	5 11	11.5	0 53	8.2	2 Tu	7 38	12.0	2 02	7.1	2 F	8 35	13.9	2 41	5.2	2 Su	8 36	14.0	2 30	4.7
	19 25	14.2	12 34	6.7		20 06	14.0	13 40	6.5		20 40	14.6	14 50	5.7		20 35	13.5	15 00	5.8
3 M	7 16	12.1	2 10	7.4	3 W	8 25	13.0	2 43	6.2	3 Sa	9 06	14.8	3 12	4.6	3 M	9 10	14.5	3 03	4.3
	20 24	15.0	13 50	6.1		20 44	15.2	14 33	5.9		21 11	14.9	15 25	5.3		21 08	13.6	15 35	5.4
4 Tu	8 39	12.9	3 02	6.5	4 Th	9 02	14.0	3 18	5.4	4 Su	9 36	15.2	3 39	4.2	4 Tu	9 43	15.1	3 31	3.9
	21 07	15.8	14 46	5.4		21 16	15.7	15 15	5.2		21 40	14.9	15 59	5.0		21 41	13.6	16 12	5.1
5 W	9 16	13.7	3 41	5.7	5 F	9 33	14.8	3 48	4.8	5 M	10 06	15.6	4 06	3.9	5 W	10 15	15.4	4 03	3.6
	21 44	16.2	15 31	4.9		21 46	15.3	15 51	4.9		22 08	14.7	16 30	4.9		22 11	13.4	16 45	5.1
6 Th	9 54	14.4	4 16	5.1	6 Sa	10 04	15.3	4 16	4.4	6 Tu	10 35	15.7	4 31	3.9	6 Th	10 46	15.6	4 32	3.6
	22 16	16.1	16 10	4.5		22 15	15.9	16 24	4.7		22 34	14.4	17 02	5.0		22 43	13.2	17 20	5.1
7 F	10 27	14.8	4 48	4.8	7 Su	10 32	15.6	4 42	4.2	7 W	11 03	15.7	4 56	3.9	7 F	11 17	15.5	5 02	3.5
	22 46	16.1	16 46	4.5		22 39	15.7	16 55	4.7		23 00	14.0	17 31	5.3		23 16	13.0	17 54	5.3
8 Sa	10 59	15.1	5 16	4.6	8 M	11 00	15.7	5 06	4.2	8 Th	11 31	15.6	5 21	4.1	8 Sa	11 52	15.4	5 33	3.8
	23 14	16.2	17 18	4.6		23 06	15.3	17 23	5.0		23 28	13.6	18 03	5.7		23 49	12.8	18 23	5.5
9 Su	11 27	15.2	5 42	4.7	9 Tu	11 27	15.6	5 28	4.4	9 F	12 01	15.3	5 46	4.4	9 M	. . .	. .	6 07	4.1
	23 40	15.9	17 47	4.9		23 28	14.8	17 50	5.4		23 55	13.0	18 35	6.3		12 26	15.0	19 07	6.0
10 M	11 55	15.1	6 06	4.9	10 W	11 53	15.4	5 50	4.5	10 Sa	. . .	. .	6 16	4.9	10 Tu	0 25	12.2	8 43	4.6
	. . .	. .	18 15	5.4		23 53	14.2	18 18	5.9		12 35	14.8	19 15	5.9		13 00	14.5	19 54	6.4
11 Tu	0 05	15.3	6 28	5.1	11 Th	. . .	. .	6 13	4.9	11 Su	0 28	12.4	5 51	5.4	11 W	1 10	11.8	7 32	5.3
	12 24	14.9	18 42	6.0		12 20	15.0	18 48	6.6		13 16	14.1	20 05	7.5		13 59	13.8	20 49	6.6
12 W	0 27	14.6	6 53	5.5	12 F	0 16	13.6	6 39	5.4	12 M	1 10	11.6	7 39	6.2	12 Th	2 10	11.4	8 34	6.0
	12 52	14.4	19 12	6.8		12 54	14.5	19 34	7.3		14 15	13.5	21 13	7.9		15 04	13.2	21 55	6.8
13 Th	0 51	13.9	7 18	6.0	13 Sa	0 45	12.7	7 11	6.0	13 Tu	2 17	11.0	8 49	6.9	13 F	3 26	11.2	9 51	6.5
	13 26	13.9	19 46	7.6		13 34	13.9	20 10	8.1		15 40	13.0	22 40	7.8		16 21	12.8	23 08	6.3
14 F	1 21	13.1	7 50	6.5	14 M	1 22	11.9	7 56	6.8	14 W	4 10	10.9	10 25	7.1	14 Sa	5 09	11.6	11 19	6.6
	14 10	13.3	20 37	8.4		14 35	13.1	21 10	8.7		17 15	13.1	. . .	. .		17 40	12.8	. . .	. .
15 Sa	2 00	12.2	8 39	7.1	15 Tu	2 27	11.1	9 11	7.4	15 Th	5 59	11.6	0 02	7.1	15 Su	6 27	12.6	0 15	5.5
	15 20	12.8	21 58	9.0		16 21	12.0	22 20	8.6		18 28	13.5	11 58	6.7		18 48	13.1	12 43	6.1
16 Su	3 10	11.4	9 54	7.6	16 W	4 42	10.8	10 57	7.6	16 F	7 02	12.9	1 04	5.9	16 M	7 30	13.7	1 15	4.6
	17 09	12.8	23 54	9.0		18 05	13.4	. . .	. .		19 25	14.3	13 13	5.9		19 43	13.4	13 54	5.4
17 M	5 15	11.1	11 33	7.6	17 Th	5 26	11.6	0 52	7.7	17 Sa	7 55	14.2	1 55	4.8	17 Tu	8 24	14.8	2 09	3.6
	18 44	13.5	. . .	. .		19 13	14.3	12 31	6.9		20 12	14.9	14 12	4.9		20 33	13.6	14 53	4.7
18 Tu	6 51	11.3	1 27	8.1	18 F	7 31	12.0	1 47	6.5	18 Su	8 40	15.4	2 28	3.6	18 W	9 13	15.6	2 58	2.9
	19 46	14.6	13 02	6.9		20 01	15.3	13 40	5.9		20 55	15.1	15 05	4.1		21 18	13.7	15 45	4.2
19 W	7 54	13.0	2 21	7.0	19 Sa	8 19	14.4	2 30	5.3	19 M	9 24	16.3	3 20	2.9	19 Th	9 59	16.2	3 44	2.4
	20 33	15.7	14 07	5.8		20 43	16.0	14 25	4.7		21 35	15.2	15 54	3.6		22 06	13.6	16 34	3.9
20 Th	8 60	14.1	3 04	5.8	20 Su	9 02	15.6	3 10	4.1	20 Tu	10 06	18.8	4 02	2.4	20 F	10 42	16.4	4 27	2.1
	21 12	16.5	14 57	4.7		21 22	15.4	15 23	3.9		22 15	14.9	16 39	3.6		22 43	13.5	17 20	4.0
21 F	9 23	15.2	3 42	4.8	21 M	9 42	16.5	3 49	3.3	21 W	10 50	16.9	4 41	2.2	21 Sa	11 26	16.3	5 09	2.4
	21 50	17.1	15 42	3.9		21 59	16.5	16 08	3.4		22 55	14.4	17 24	3.9		23 28	13.1	18 04	4.2
22 Sa	10 03	16.1	4 18	3.9	22 Tu	10 21	17.0	4 25	2.7	22 Th	11 31	16.6	5 20	2.4	22 Su	. . .	. .	5 50	2.8
	22 27	17.2	16 25	3.3		22 36	15.2	16 49	3.3		23 35	13.6	18 09	4.4		12 07	15.8	18 45	4.6
23 Su	10 46	16.6	4 56	3.4	23 W	11 02	17.1	5 04	2.6	23 F	. . .	. .	6 00	3.0	23 M	0 19	12.6	6 30	3.5
	23 04	17.1	17 07	3.1		23 14	15.6	17 33	3.6		12 15	16.1	18 55	5.2		12 49	15.2	19 27	5.2
24 M	11 20	16.8	5 30	3.2	24 Th	11 42	16.8	5 39	2.8	24 Sa	0 16	12.9	6 40	3.9	24 Tu	0 53	12.1	7 10	4.4
	23 39	16.5	17 47	3.5		23 50	14.7	18 15	4.4		13 02	15.2	19 41	6.1		13 30	14.4	20 11	5.8
25 Tu	. . .	. .	6 08	3.4	25 F	. . .	. .	6 15	3.4	25 Su	1 01	12.0	7 24	5.0	25 W	1 40	11.8	7 53	5.4
	12 00	16.6	18 36	4.3		12 25	16.2	18 02	5.5		13 50	14.2	20 41	6.9		14 13	13.5	20 59	6.3
26 W	0 15	15.6	6 43	3.9	26 Sa	0 29	13.6	5 56	4.4	26 M	1 58	11.1	8 15	6.2	26 Th	2 36	11.1	8 41	6.4
	12 13	16.0	19 14	5.4		13 12	15.2	19 50	6.6		14 52	13.4	21 50	7.3		15 04	12.5	21 51	6.8
27 Th	0 54	14.4	7 23	4.6	27 Su	1 10	12.4	7 40	5.5	27 Tu	3 17	10.6	9 25	7.1	27 F	3 46	10.9	9 45	7.3
	13 36	15.1	20 04	5.6		14 07	14.2	20 58	7.7		16 05	12.6	23 10	7.3		16 05	12.0	22 53	6.8
28 F	1 34	13.1	8 06	5.3	28 M	2 07	11.3	8 28	6.5	28 W	4 58	10.8	10 55	7.6	28 Sa	5 07	11.0	11 04	7.6
	14 38	14.1	21 10	7.0		15 24	13.3	22 32	8.2		17 25	12.5	. . .	. .		17 13	11.6	23 57	6.4
29 Sa	2 27	11.9	9 06	5.7	29 Tu	3 16	10.5	10 05	7.5	29 Th	6 22	11.4	0 23	6.8	29 Su	6 20	11.5	. . .	. .
	15 48	13.4	22 48	8.6		17 04	13.0	. . .	. .		18 30	12.6	12 23	7.4		18 17	11.6	12 29	7.5
30 Su	4 02	11.0	10 35	7.4	30 W	5 54	10.8	0 16	7.8	30 F	7 19	12.3	1 15	6.1	30 M	7 13	12.2	0 58	5.9
	17 40	13.3	. . .	. .	Tu	18 31	13.2	11 50	7.6		19 19	13.0	13 30	6.9	Su	19 14	11.8	13 40	7.1
					31 W	7 13	11.8	1 34	8.0						31 Tu	8 05	12.1	1 43	5.9
						19 26	13.8	13 12	7.1							20 00	12.1	14 34	6.4

Time meridian 120° E. The hours of the day are numbered consecutively from 0° (midnight) to 23° (11 00 p. m.). 12° is noon. All hours greater than 12 are in the afternoon (p. m.).
Heights are reckoned from the datum of soundings on the largest scale charts of the locality which is about 4 feet below mean low water springs.

TABLE III - 5b. *Daily Tide Predictions.*

Approved For Release 2006/09/25 : CIA-RDP79-01144A000900010003-9

Approved For Release 2006/09/25 : CIA-RDP79-01144A000900010003-9

JINSEN KO, CHOSEN, 1945

MAY					JUNE					JULY					AUGUST				
Day	High		Low		Day	High		Low		Day	High		Low		Day	High		Low	
	Time	Ht.	Time	Ht.		Time	Ht.	Time	Ht.		Time	Ht.	Time	Ht.		Time	Ht.	Time	Ht.
	h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.
1 Tu	7 20	27.5	1 11	1.7	1 F	8 34	26.9	2 14	-0.8	1 Su	9 15	27.3	2 48	4.6	1 W	10 31	25.8	4 15	6.7
	19 23	24.6	13 41	4.2		20 44	22.8	14 56	6.2		21 35	24.1	15 31	6.1		23 10	23.0	16 45	6.2
2 W	7 59	27.0	1 49	2.7	2 Sa	9 30	25.5	3 01	4.9	2 M	10 11	26.5	3 41	5.9	2 Th	11 29	24.1	5 16	8.1
	20 01	23.5	14 21	5.4		21 45	23.0	15 50	7.0		22 40	24.0	16 25	6.9		. . .	. . .	17 46	7.0
3 Th	8 42	26.0	2 30	3.9	3 Su	10 32	25.0	3 59	5.1	3 Tu	11 06	25.7	4 41	7.0	3 F	0 12	24.9	6 29	9.2
	20 50	22.3	15 06	5.8		22 59	21.9	16 51	7.8		23 44	24.1	17 25	7.0		12 31	23.1	18 54	7.1
4 F	9 26	24.9	3 15	5.1	4 M	11 39	24.4	5 06	7.0	4 W	. . .	. . .	5 50	7.9	4 Sa	1 30	24.9	7 45	9.8
	21 50	21.1	16 04	8.0		. . .	. . .	18 00	7.6		12 00	24.9	18 29	6.9		13 40	22.9	20 05	6.9
5 Sa	10 48	24.0	4 12	5.8	5 Tu	0 11	22.1	6 21	7.3	5 Th	0 50	24.7	7 00	8.1	5 Su	2 40	25.9	8 55	9.0
	23 10	20.5	17 11	8.8		12 45	24.2	19 06	6.9		13 06	24.3	19 30	6.1		14 50	22.9	21 08	6.0
6 Su	. . .	. . .	5 29	7.8	6 W	1 21	23.6	7 35	7.0	6 F	1 54	25.4	8 10	8.1	6 M	3 45	26.3	9 54	8.0
	12 05	23.8	18 34	8.5		13 43	24.3	20 09	5.7		14 05	24.1	20 30	5.4		15 51	23.3	22 00	4.9
7 M	0 36	21.0	6 51	7.5	7 Th	2 24	25.0	8 39	6.1	7 Sa	2 55	26.4	9 10	7.5	7 Tu	4 40	27.2	10 41	7.0
	13 19	24.0	19 46	7.1		14 40	25.0	21 01	4.0		15 04	24.1	21 23	4.4		16 46	24.1	22 49	3.9
8 Tu	1 50	22.3	8 06	6.5	8 F	3 20	26.7	9 34	5.0	8 Su	3 54	27.3	10 04	5.8	8 W	5 32	28.1	11 26	6.0
	14 24	24.9	20 45	5.2		15 31	25.4	21 50	2.9		15 59	24.6	22 15	3.7		17 31	25.0	23 31	3.1
9 W	2 56	24.5	9 06	4.8	9 Sa	4 10	28.0	10 21	4.1	9 M	4 46	28.1	10 54	6.0	9 Th	6 08	28.7	. . .	. . .
	15 18	25.9	21 35	3.4		16 19	25.8	22 35	1.8		16 50	24.9	23 00	2.9		18 14	25.7	12 05	5.1
10 Th	3 46	26.3	9 58	3.1	10 Su	4 58	28.9	11 06	3.9	10 Tu	5 35	28.7	11 39	5.4	10 F	6 45	28.9	0 11	3.0
	16 05	26.8	22 19	1.9		17 04	25.9	23 17	1.0		17 38	25.0	23 45	2.7		19 01	25.0	12 43	4.9
11 F	4 34	28.1	10 45	2.0	11 M	5 44	29.2	11 51	3.8	11 W	6 20	29.0	. . .	. . .	11 Sa	7 19	28.7	0 50	3.2
	16 49	27.1	23 00	0.8		17 49	25.5	. . .	. . .		18 24	25.0	12 21	5.1		19 29	26.0	13 19	4.7
12 Sa	5 18	29.2	11 29	1.7	12 Tu	6 30	29.2	0 00	1.0	12 Th	7 01	29.0	0 26	2.8	12 Su	7 51	27.9	1 29	3.9
	17 30	27.1	23 40	-0.1		18 31	25.0	12 35	4.0		19 06	25.0	13 01	3.1		20 04	26.9	13 55	4.9
13 Su	6 00	30.0	. . .	. . .	13 W	7 15	28.9	0 41	1.4	13 F	7 42	28.5	1 09	3.0	13 M	8 21	27.0	2 05	4.7
	18 09	26.7	12 10	1.8		19 15	24.3	13 19	4.7		19 50	24.9	13 44	5.4		20 40	25.4	14 31	5.1
14 M	6 41	29.5	0 30	-0.1	14 Th	7 59	28.0	1 25	2.4	14 Sa	8 21	27.7	1 50	4.0	14 Tu	8 53	24.0	2 44	5.9
	19 50	25.0	12 51	2.1		20 04	23.7	14 03	5.4		20 34	24.4	14 25	6.0		21 20	24.0	15 06	6.0
15 Tu	7 26	29.1	1 00	0.4	15 F	8 45	25.0	2 09	3.9	15 Su	9 01	25.8	2 31	5.3	15 W	9 30	25.0	3 25	7.1
	19 31	25.0	13 35	3.4		20 55	22.9	14 50	5.3		21 20	23.9	15 04	5.7		22 06	24.1	15 50	6.9
16 W	8 11	28.0	1 42	1.9	16 Sa	9 35	26.0	2 56	5.5	16 M	9 44	25.9	3 16	6.7	16 Th	10 14	23.9	4 10	8.8
	20 16	23.7	14 20	5.0		21 54	22.1	15 39	7.2		22 10	23.3	15 51	7.1		22 56	23.3	16 36	7.7
17 Th	9 01	26.2	2 26	3.4	17 Su	10 26	24.9	3 46	7.1	17 Tu	10 36	24.9	4 04	8.0	17 F	11 06	22.7	5 06	10.0
	21 09	22.1	15 08	6.8		22 56	21.9	16 34	8.1		23 01	23.0	16 40	7.9		. . .	. . .	17 35	8.2
18 F	9 59	24.9	3 15	5.3	18 M	11 21	24.0	4 44	8.7	18 W	11 15	23.0	4 56	9.1	18 Sa	0 00	23.0	5 18	10.9
	22 15	20.9	16 04	8.1		23 59	21.9	17 34	8.7		23 59	23.0	17 34	8.1		12 06	21.9	18 44	8.7
19 Sa	11 01	23.7	4 11	7.1	19 Tu	. . .	. . .	5 50	10.2	19 Th	. . .	. . .	6 00	10.1	19 Su	1 11	23.2	7 37	10.9
	23 30	20.1	17 09	8.9		12 16	21.5	18 35	8.2		12 06	23.1	18 31	8.1		13 20	21.7	19 55	8.0
20 Su	. . .	. . .	5 21	8.8	20 W	0 59	22.1	6 59	10.8	20 F	0 55	23.1	7 00	10.4	20 M	2 21	24.1	8 47	9.9
	12 10	24.0	18 25	9.0		13 10	23.1	19 31	7.9		13 01	22.9	19 35	7.9		14 30	22.9	20 58	6.8
21 M	0 49	20.4	6 45	9.0	21 Th	1 56	23.0	8 00	10.2	21 Sa	1 56	24.0	8 14	10.0	21 Tu	3 25	25.8	9 44	8.0
	13 15	22.9	19 31	8.2		14 01	23.1	20 28	6.9		13 59	22.8	20 31	7.0		15 34	23.1	21 52	5.0
22 Tu	1 53	21.2	7 51	8.8	22 F	2 45	24.0	8 55	8.7	22 Su	2 54	25.0	9 14	9.1	22 W	4 18	27.1	10 31	5.1
	14 11	23.0	20 26	7.0		14 45	23.4	21 10	5.9		14 55	23.0	21 24	5.0		16 23	24.8	22 40	3.3
23 W	2 50	22.7	8 50	7.8	23 Sa	3 29	25.1	9 41	7.8	23 M	3 45	26.1	10 04	8.0	23 Th	5 04	28.8	11 45	4.8
	15 00	23.4	21 11	5.9		15 30	23.9	21 54	4.7		15 49	23.5	22 11	4.7		17 14	25.0	23 24	2.0
24 Th	3 34	24.0	9 34	6.8	24 Su	4 11	26.1	10 26	6.9	24 Tu	4 35	27.3	10 50	6.8	24 F	5 45	29.8	11 55	3.7
	15 40	24.0	21 50	4.7		16 11	24.0	22 36	3.8		16 36	24.3	22 58	3.4		17 55	27.3	. . .	. . .
25 F	4 10	25.1	10 15	5.9	25 M	4 54	27.1	11 09	6.0	25 W	5 20	28.5	11 35	5.7	25 Sa	6 26	30.1	0 05	1.0
	16 15	24.3	22 29	3.6		16 54	24.4	23 14	3.0		17 24	25.1	23 40	2.7		18 38	28.1	12 35	2.7
26 Sa	4 45	26.1	10 52	5.0	26 Tu	5 34	28.2	11 50	5.7	26 Th	6 01	29.3	. . .	. . .	26 Su	7 05	30.1	0 47	0.9
	16 46	24.9	23 04	2.9		17 34	24.7	23 55	2.8		18 08	25.9	12 15	4.9		19 19	28.6	13 14	2.0
27 Su	5 19	27.1	11 30	4.7	27 W	6 14	28.9	. . .	. . .	27 F	6 45	29.9	0 21	2.0	27 M	7 44	29.6	1 23	1.1
	17 19	25.0	23 39	2.1		18 15	25.0	12 30	5.1		18 51	26.2	12 56	4.1		20 00	28.2	13 54	2.1
28 M	5 51	27.9	. . .	. . .	28 Th	6 55	29.0	0 36	2.7	28 Sa	7 26	29.8	1 05	2.0	28 Tu	8 24	28.1	2 12	2.1
	17 54	25.0	12 09	4.1		18 59	25.0	13 11	5.1		19 38	26.8	13 30	4.0		20 47	27.8	14 05	3.0
29 Tu	6 26	28.0	0 14	2.0	29 F	7 39	28.9	1 18	2.9	29 Su	8 09	29.1	1 49	2.4	29 W	9 05	26.9	2 57	4.0
	18 29	24.8	12 46	4.3		19 46	24.9	13 56	5.2		20 24	26.5	14 20	4.1		21 39	26.6	15 19	4.1
30 W	7 04	28.0	0 51	2.0	30 Sa	8 25	28.1	2 01	3.6	30 M	8 54	28.1	2 34	3.4	30 Th	9 54	24.9	3 45	6.1
	19 05	24.1	13 26	4.9		20 39	24.5	14 41	5.9		21 14	25.0	15 05	4.9		22 38	25.1	16 08	5.9
31 Th	7 45	27.6	1 30	2.9						31 Tu	9 40	27.0	3 21	4.9	31 F	10 52	23.0	4 45	8.1
	19 50	23.4	14 09	5.7							22 09	25.7	15 52	5.8		23 48	24.1	17 08	7.0

SEPTEMBER					OCTOBER					NOVEMBER					DECEMBER				
	h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.
1 Sa	. . .	. . .	5 50	10.0	1 M	0 55	22.6	7 10	10.3	1 Th	2 49	23.1	8 55	6.8	1 Sa	2 47	22.3	8 56	5.0
	12 05	21.7	18 24	8.0		13 24	19.8	19 27	8.4		15 10	22.4	21 10	6.1		15 25	23.1	21 20	6.1
2 Su	1 10	23.9	7 26	10.6	2 Tu	2 19	23.1	8 30	9.1	2 F	3 35	24.0	9 36	5.0	2 M	3 30	23.0	9 36	3.6
	13 28	21.1	19 45	8.0		13 45	20.9	20 40	7.1		15 00	24.0	21 54	5.0		16 04	24.3	22 01	5.2
3 M	2 31	24.2	8 45	9.8	3 W	3 24	24.2	9 26	7.4	3 Sa	4 14	24.0	10 14	3.5	3 Tu	4 05	23.3	10 13	2.7
	14 47	21.8	20 55	7.0		15 45	22.7	21 35	5.9		16 38	25.2	22 31	4.0		16 40	25.4	22 40	4.5
4 Tu	3 40	25.3	9 42	8.1	4 Th	4 10	25.4	10 07	5.8	4 Su	4 45	25.1	10 45	2.4	4 W	4 37	23.6	10 18	1.9
	15 51	23.0	21 50	5.8		16 30	24.1	22 19	4.4		17 08	26.1	23 05	3.3		17 10	25.1	23 15	4.0
5 W	4 30	26.3	10 28	6.3	5 F	4 49	26.1	10 44	4.1	5 M	5 13	25.4	11 16	1.7	5 Th	5 07	23.7	11 22	1.3
	16 41	24.1	22 36	4.2		17 05	25.5	22 57	3.3		17 36	25.7	23 37	3.0		17 42	26.8	23 51	3.7
6 Th	5 12	27.0	11 07	5.0	6 Sa	5 21	26.8	11 16	2.9	6 Tu	5 39	26.1	11 48	1.0	6 F	5 40	23.8	11 57	1.0
	17 24	25.0	23 16	3.0		17 37	26.1	23 30	2.5		18 04	27.0	. . .	. . .		18 14	27.0	. . .	. . .
7 F	5 49	27.7	11 44	4.0	7 Su	5 50	26.7	11 47	2.0	7 W	6 04	25.0	0 10	2.9	7 Sa	6 12	23.6	0 30	3.5
	17 59	26.0	23 54	2.7		18 05	26.9	. . .	. . .		18 30	27.1	12 20	1.0		18 44	27.0	12 31	1.0
8 Sa	6 20	27.3	. . .	. . .	8 M	5 14	26.5	0 01	2.2	8 Th	6 30	24.4	0 45	3.1	8 Su	6 47	23.1	1 07	3.9
	18 30	26.4	12 15	3.1		18 31	27.1	12 16	1.8		19 00	26.9	12 52	1.4		19 26	26.5	13 10	1.5
9 Su	6 47	27.7	0 29	2.7	9 Tu	5 37	26.1	0 36	2.6	9 F	7 01	23.9	1 22	4.0	9 M	7 28	22.5	1 47	4.3
	19 00	26.8	12 49	3.0		18 57	27.1	12 49	1.8		19 36	26.3	13 27	3.1		20 08	25.0	13 50	2.3
10 M	7 14	27.1	1 01	2.9	10 W	7 01	25.6	1 09	3.1	10 Sa	7 38	22.9	2 00	5.0	10 Tu	8 15	21.9	2 31	5.0
	19 29	26.6	13 20	3.0		19 25	26.9	12 40	2.1		20 18	25.4	14 05	3.1		20 57	25.1	14 35	3.5
11 Tu	7 40	25.4	1 37	3.7	11 Th	7 30	24.8	1 44	4.0	11 Su	8 22	21.6	2 45	5.1	11 W	9 12	21.1	3 20	5.9
	19 59	26.1	13 55	3.7		19 59	26.0	13 54	3.0		21 10	24.3	14 50	4.8		21 55	24.1	15 38	4.9
12 W	8 07	25.6	2 10	4.9	12 F	8 04	23.7	2 20	5.4	12 M	9 20	20.3	3 36	7.5	12 Th	10 30	20.8	4 15	6.5
	20 34	25.5	14 28	4.1		20 40	25.1	14 30	4.1		22 14	23.1	15 45	6.1		23 03	23.1	16 30	6.0
13 Th	8 41	24.4	2 50	6.5	13 Sa	8 45	22.1	3 01	7.0	13 Tu	10 39	19.6	4 41	8.4	13 F	11 35	21.0	5 23	5.8
	21 15	24.7	15 05	5.1		21 30	24.0	15 13	5.7		23 32	22.7	16 55	7.4		. . .	. . .	17 44	7.9
14 F	9 24	23.0	3 31	7.9	14 Su	9 40	20.8	3 55	8.6	14 W	. . .	. . .	6 00	8.4	14 Sa	0 06	23.0	6 31	8.1
	22 06	23.8	15 50	6.8		22 38	22.9	16 07	7.1		12 08	19.9	18 20	7.5		12 49	21.9	18 59	6.7
15 Sa	10 16	21.8	4 25	9.2	15 M	10 56	19.7	5 05	9.9	15 Th	0 50	23.0	7 19	7.1	15 Su	1 12	23.0	7 37	5.0
	23 14	22.9	16 45	8.0		. . .	. . .	17 21	8.2		13 38	21.2	19 39	6.5		13 55	23.1	20 08	5.9
16 Su	11 27	20.2	5 39	10.2	16 Tu	0 01	22.1	6 35	9.7	16 F	1 55	23.7	8 20	5.1	16 M	2 11	23.4	8 35	3.8
	. . .	. . .	17 59	8.6		12 34	19.4	18 52	8.0		14 30	23.1	20 41	4.7		14 54	24.0	21 08	4.8
17 M	0 35	22.4	7 05	10.2	17 W	1 25	23.0	7 55	8.1	17 Sa	2 52	24.8	9 08	3.0	17 Tu	3 05	23.3	9 25	2.1
	12 55	20.0	19 24	8.0		13 56	20.9	20 10	6.5		15 24	25.3	21 34	3.0		15 48	26.4	21 59	3.7
18 Tu	1 55	23.1	8 24	9.0	18 Th	2 34	24.4	8 58	6.0	18 Su	3 40	25.7	9 55	1.1	18 W	3 56	24.2	10 11	0.8
	14 15	21.1	20 35	6.7		15 00	23.1	21 10	4.4		16 10	27.3	22 30	1.7		16 38	27.7	22 18	1.9
19 W	3 00	24.0	9 21	7.0	19 F	3 28	25.0	9 41	3.8	19 M	4 24	26.3	10 35	-0.1	19 Th	4 44	24.6	10 56	-0.1
	15 19	23.0	21 34	4.7		15 50	25.4	21 59	2.4		16 54	28.8	23 05	0.9		17 25	28.4	23 33	2.4
20 Th	3 55	26.6	10 09	4.9	20 Sa	4 12	27.1	10 24	1.7	20 Tu	5 05	26.5	11 15	-1.1	20 F	5 29	24.7	11 39	-0.7
	16 10	25.0	22 21	2.7		16 35	27.5	22 45	0.9		17 36	29.5	23 47	0.8		18 10	28.7	. . .	. . .
21 F	4 41	28.0	10 51	3.0	21 Su	4 55	28.1	11 02	0.0	21 W	5 45	26.2	11 55	-1.3	21 Sa	6 14	24.1	0 16	2.4
	16 56	26.9	23 05	1.0		17 15	29.1	23 25	-0.1		18 19	29.5	. . .	. . .		18 55	28.4	12 21	0.4
22 Sa	5 22	29.1	11 30	1.2	22 M	5 32	28.6	11 40	-1.0	22 Th	6 25	28.6	0 30	1.1	22 Su	6 59	24.0	0 59	2.9
	17 37	28.4	23 48	-0.1		17 55	30.0	. . .	. . .		19 01	29.0	12 37	-1.0		19 39	27.7	13 04	0.1
23 Su	6 00	29.8	. . .	. . .	23 Tu	6 10	28.1	0 05	-0.2	23 F	7 06	24.5	1 11	2.1	23 M	7 45	23.1	1 43	3.4
	18 17	29.3	12 08	0.3		18 25	30.1	12 20	-1.1		19 47	27.9	13 19	0.1		20 24	26.5	13 49	1.5
24 M	6 38	29.5	0 27	-0.2	24 W	6 47	27.3	0 47	0.3	24 Sa	7 54	23.1	1 56	3.6	24 Tu	8 35	22.3	2 28	4.3
	18 55	29.9	12 46	-0.0		19 16	29.6	12 59	-0.8		20 36	28.1	14 02	1.9		21 10	25.1	14 35	3.0
25 Tu	7 15	28.8	1 08	0.1	25 Th	7 25	26.0	1 30	1.6	25 M	8 46	21.6	2 45	5.1	25 W	9 29	21.5	3 15	5.3
	19 37	29.2	13 25	0.3		20 00	28.1	13 39	0.5		21 34	24.6	14 50	3.9		22 00	24.0	15 24	4.9
26 W	7 53	27.1	1 50	1.5	26 F	8 09	24.0	2 11	3.7	26 Tu	9 48	26.1	3 37	6.9	26 Th	10 29	21.0	4 06	6.1
	20 20	28.1	14 05	1.3		20 50	26.2	14 21	2.1		22 35	23.0	15 45	5.9		22 55	22.9	16 19	5.7
27 Th	8 35	25.1	2 34	3.5	27 Sa	8 58	22.1	3 00	5.8	27 W	11 05	19.5	4 41	8.0	27 F	11 34	20.5	5 04	7.0
	21 10	26.5	14 49	3.0		21 50	24.3	15 10	4.4		23 45	22.1	16 55	7.5		23 51	22.0	17 21	8.0
28 F	9 21	23.2	3 21	5.9	28 Su	10 05	20.1	3 57	7.9	28 Th	. . .	. . .	5 57	8.1	28 Sa	. . .	. . .	6 07	7.1
	22 10	24.3	15 37	5.0		23 04	22.9	16 09	6.7		12 27	19.8	18 15	8.3		12 39	20.8	18 34	8.7
29 Sa	10 24	21.2	4 20	8.1	29 M	11 31	19.1	5 11	9.3	29 F	0 56	21.9	7 10	7.6	29 Su	0 49	21.2	7 09	6.9
	23 25	23.1	16 36	7.0		. . .	. . .	17 26	8.2		13 39	20.5	19 31	8.0		13 40	21.2	19 41	8.6
30 Su	11 47	20.0	5 35	10.0	30 Tu	0 28	22.1	6 44	9.5	30 Sa	1 53	22.0	8 09	6.4	30 M	1 45	21.1	8 06	6.0
	. . .	. . .	17 55	8.2		13 05	19.4	18 50	8.5		14 38	21.9	20 32	7.1		14 36	22.1	20 40	8.0
					31 W	1 47	22.4	8 00	8.3						31 Tu	2 36	21.1	8 56	5.0
						14 22	20.8	20 15	7.5							15 26	23.3	21 31	7.1

Time meridian 135° E. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 00 p. m.). 12h is noon. All hours greater than 12 are in the afternoon (p. m.).
Heights are reckoned from the datum of soundings on the largest scale charts of the locality which is about 2 feet below mean low water springs.

TABLE III - 5c. *Daily Tide Predictions.*

Approved For Release 2006/09/25 : CIA-RDP79-01144A000900010003-9

Approved For Release 2006/09/25 : CIA-RDP79-01144A000900010003-9

DAIREN KO, CHINA, 1945

MAY						JUNE						JULY						AUGUST					
Day	High		Low		Day	High		Low		Day	High		Low		Day	High		Low		Day	High		Low	
	Time	Ht.	Time	Ht.		Time	Ht.	Time	Ht.		Time	Ht.	Time	Ht.		Time	Ht.	Time	Ht.		Time	Ht.	Time	Ht.
	h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.
1	1 05	8.2	6 51	1.6	1	1 57	7.8	7 45	2.3	1	2 31	8.7	8 30	2.7	1	3 59	10.1	10 23	3.4	1	4 36	10.4	11 17	3.8
Tu	13 27	10.5	19 55	3.4	F	14 30	11.0	21 21	3.1	Su	14 59	11.9	21 45	2.9	W	16 11	10.1	22 51	2.6	F	16 40	9.5	23 15	2.8
2	1 38	7.9	7 26	1.9	2	2 45	7.7	8 42	2.6	2	3 23	8.9	9 31	3.0	2	5 02	10.2	11 33	3.9					
W	14 06	10.5	20 43	2.7	Sa	15 19	10.7	22 17	3.1	M	15 48	10.8	22 37	2.8	Th	17 09	9.2	23 47	2.7					
3	2 15	7.6	8 08	2.2	3	3 40	7.7	9 49	3.0	3	4 24	9.1	10 44	3.3	3	6 19	10.2	. . .	. .					
Th	14 46	10.2	21 39	3.0	Su	16 15	10.2	23 15	3.0	Tu	16 41	10.2	23 30	2.7	F	18 21	8.5	12 48	4.2					
4	3 00	7.3	9 02	2.5	4	4 49	7.8	11 05	3.2	4	5 34	9.3	11 54	3.6	4	7 41	10.5	0 47	2.8					
F	15 40	9.3	22 43	3.2	M	17 19	9.8	. . .	. .	W	17 16	9.5	. . .	. .	Sa	19 46	8.1	14 03	4.3					
5	3 56	6.9	10 10	2.9	5	6 09	8.2	0 13	2.8	5	6 52	9.8	0 25	2.6	5	8 55	10.9	1 47	2.8					
Sa	16 41	9.5	23 49	3.2	Tu	18 30	9.4	12 25	3.2	Th	18 58	9.0	13 07	3.7	Su	21 03	8.1	15 16	4.2					
6	5 14	6.5	11 30	3.1	6	7 27	8.9	1 05	2.5	6	8 04	10.4	1 19	2.4	6	9 56	11.3	2 48	2.7					
Su	17 57	9.2	. . .	. .	W	19 41	9.2	13 31	3.1	F	20 10	8.7	14 17	3.7	M	22 05	8.3	16 22	3.8					
7	6 45	7.1	0 53	3.0	7	8 33	9.8	1 58	2.1	7	9 09	11.1	2 13	2.2	7	10 45	11.8	3 45	2.6					
M	19 17	9.2	12 46	2.9	Th	20 46	9.3	14 38	2.8	Sa	21 18	8.6	15 23	3.6	Tu	22 55	8.7	17 16	3.6					
8	8 04	7.9	1 50	2.5	8	9 29	10.8	2 49	1.6	8	10 04	11.8	3 05	2.0	8	11 23	13.0	4 38	2.4					
Tu	20 26	9.4	13 55	2.6	F	21 41	9.2	15 36	2.5	Su	22 11	8.7	16 25	3.3	W	23 37	9.0	18 01	3.3					
9	9 03	9.0	2 38	2.0	9	10 19	11.5	3 32	1.3	9	10 53	12.2	3 57	1.9	9	. . .	. .	5 27	2.5					
W	21 23	9.6	14 57	2.1	Sa	22 29	9.2	16 33	2.4	M	23 01	8.8	17 21	3.2	Th	12 08	13.0	18 39	3.1					
10	9 54	10.0	3 23	1.5	10	11 05	12.1	4 18	1.1	10	11 39	13.4	4 46	1.8	10	0 18	9.3	6 12	2.5					
Th	22 09	9.7	15 53	1.7	Su	23 15	9.1	17 27	2.2	Tu	23 47	8.9	18 12	3.0	F	12 44	11.8	19 13	2.9					
11	10 38	10.9	4 05	1.0	11	11 50	12.5	5 02	1.1	11	. . .	. .	5 34	1.9	11	0 55	9.6	6 55	2.4					
F	22 53	9.7	16 45	1.4	M	23 59	9.0	18 19	2.2	W	12 21	12.4	18 57	2.9	Sa	13 20	11.6	19 46	2.9					
12	11 21	11.7	4 46	0.7	12	. . .	. .	5 48	1.2	12	0 31	9.0	6 23	2.0	12	1 32	9.8	7 38	2.6					
Sa	23 35	9.6	17 35	1.3	Tu	12 34	13.5	19 06	2.3	Th	13 02	12.2	19 40	2.9	Su	13 54	11.2	20 21	2.9					
13	. . .	. .	5 27	0.5	13	0 43	8.8	6 34	1.5	13	1 14	9.0	7 10	2.3	13	2 11	9.8	8 20	3.0					
Su	12 05	12.0	18 25	1.4	W	13 17	12.2	19 57	2.5	F	13 42	11.9	20 32	2.9	W	14 29	10.7	20 58	3.0					
14	0 18	9.3	6 09	0.6	14	1 28	8.6	7 23	1.9	14	1 57	9.1	7 56	2.7	14	2 50	9.8	9 08	3.4					
M	12 47	12.1	19 15	1.6	Th	14 01	11.7	20 48	2.7	Sa	14 23	11.1	21 05	3.0	Tu	15 04	10.1	21 27	3.3					
15	0 59	8.9	6 53	0.9	15	2 14	8.3	8 16	2.4	15	2 42	9.1	8 48	3.1	15	3 33	9.7	9 59	3.6					
Tu	13 31	11.9	20 08	2.0	F	14 46	11.1	21 39	3.0	Su	15 02	10.8	21 48	3.1	W	15 44	9.4	22 20	3.4					
16	1 44	8.4	7 40	1.3	16	3 06	8.1	9 15	3.0	16	3 29	9.0	9 44	3.6	16	4 22	9.4	10 56	4.1					
W	14 17	11.4	21 04	2.4	Sa	15 35	10.4	22 32	3.1	M	15 45	10.1	22 33	3.3	Th	16 29	8.7	23 10	3.7					
17	2 31	7.9	8 32	2.0	17	4 05	7.9	10 18	3.5	17	4 22	8.9	10 41	4.1	17	5 25	9.2	. . .	. .					
Th	15 07	10.7	22 03	2.8	Su	16 29	9.7	23 28	3.3	Tu	16 32	9.4	23 30	3.5	F	17 28	7.9	12 03	4.7					
18	3 22	7.4	9 35	2.7	18	5 18	7.8	11 25	4.0	18	5 25	8.8	11 44	4.5	18	6 43	8.2	0 04	3.9					
F	16 04	9.9	23 06	3.1	W	17 31	9.0	. . .	. .	W	17 20	8.8	. . .	. .	Sa	18 52	7.4	13 15	4.3					
19	4 33	7.0	10 46	3.3	19	6 33	8.1	0 17	3.3	19	6 34	8.9	0 10	3.6	19	8 04	9.4	1 01	4.0					
Sa	17 10	9.2	. . .	. .	Tu	18 38	8.6	12 33	4.2	Th	18 38	8.2	12 50	4.7	Su	20 22	7.2	14 27	4.7					
20	6 01	7.0	0 11	3.2	20	7 45	8.5	1 09	3.4	20	7 48	9.2	1 00	3.7	20	9 06	9.9	1 57	4.0					
Su	18 31	8.7	12 02	3.6	W	19 47	8.3	13 37	4.3	F	19 51	7.8	13 56	4.8	M	21 27	7.4	15 31	4.5					
21	7 23	7.4	1 11	3.2	21	8 43	9.0	1 55	3.3	21	8 48	9.6	1 48	3.8	21	9 55	10.5	2 49	3.7					
M	19 45	8.5	13 16	3.7	Th	20 46	8.2	14 37	4.2	Sa	20 56	7.7	15 00	4.7	Tu	22 12	7.8	16 23	4.1					
22	8 39	8.0	2 02	3.1	22	9 39	9.6	2 38	3.3	22	9 38	10.1	2 33	3.7	22	10 35	11.1	3 37	3.3					
Tu	20 47	8.5	14 20	3.8	F	21 34	8.1	15 32	4.1	Su	21 47	7.7	15 57	4.5	W	22 48	8.2	17 03	3.7					
23	9 25	8.7	2 48	2.9	23	10 07	10.0	3 15	3.2	23	10 13	10.7	3 15	3.6	23	11 13	11.5	4 22	2.8					
W	21 32	8.5	15 15	3.4	Sa	22 14	8.0	16 20	3.9	M	22 30	7.8	16 48	4.2	Th	23 25	8.9	17 37	3.2					
24	10 01	9.2	3 28	2.8	24	10 41	10.5	3 49	3.1	24	10.56	11.2	3 55	3.3	24	11 49	11.8	5 06	2.4					
Th	22 09	8.4	16 03	3.3	Su	22 49	8.0	17 03	3.7	Tu	23 06	8.0	17 38	3.9	F	. . .	. .	18 10	2.9					
25	10 36	9.7	3 56	2.7	25	11 14	10.9	4 19	3.0	25	11 33	11.6	4 35	3.0	25	0 00	9.5	5 51	2.0					
F	22 14	8.3	16 43	3.1	M	23 23	8.0	17 43	3.6	W	23 41	8.3	18 04	3.6	Sa	12 28	11.9	18 42	2.5					
26	11 04	10.1	4 28	2.6	26	11 47	11.3	4 51	2.8	26	. . .	. .	5 15	2.7	26	0 37	10.1	6 34	1.8					
Sa	23 14	8.3	17 19	3.0	Tu	23 54	8.0	18 18	3.4	Th	12 07	11.9	18 36	3.3	Su	13 00	11.9	19 17	2.1					
27	11 33	10.5	4 52	2.4	27	. . .	. .	5 26	2.6	27	0 15	8.7	5 56	2.4	27	1 18	10.6	7 21	1.8					
Su	23 42	8.2	17 53	2.9	W	12 22	11.6	19 54	3.3	F	12 42	12.2	19 12	3.1	M	13 37	11.6	19 55	2.0					
28	. . .	. .	5 19	2.3	28	0 28	8.2	6 04	2.4	28	0 52	9.2	6 40	2.2	28	1 57	10.9	8 10	2.1					
W	12 04	10.8	18 25	2.8	Th	12 55	11.8	19 33	3.2	Sa	13 20	12.3	19 48	2.8	Tu	14 16	11.0	20 36	2.0					
29	0 12	8.1	5 47	2.2	29	1 04	8.3	6 46	2.3	29	1 32	9.5	7 23	2.2	29	2 44	11.0	9 06	2.6					
Tu	12 35	11.1	19 02	2.8	F	13 33	11.8	20 13	3.1	Su	13 57	11.9	20 28	2.6	W	14 57	10.3	21 23	2.1					
30	0 43	8.0	6 20	2.1	30	1 45	8.5	7 35	2.4	30	2 16	9.9	8 21	2.5	30	3 36	10.8	10 07	3.2					
W	13 08	11.2	19 44	2.9	Sa	14 15	11.7	20 57	3.0	M	14 38	11.5	21 12	2.6	Th	15 45	9.4	22 14	2.4					
31	1 19	7.9	7 00	2.2						31	3 04	10.1	9 19	2.8	31	4 36	10.4	11 17	3.8					
Th	13 48	11.2	20 28	3.0						Tu	15 21	10.9	22 00	2.6	F	16 40	8.5	23 15	2.8					

SEPTEMBER					OCTOBER					NOVEMBER					DECEMBER				
	h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.
1	5 51	10.2	. . .	. .	1	7 03	9.3	0 06	3.1	1	0 01	8.5	2 22	2.8	1	9 10	7.4	2 54	2.7
Sa	17 56	7.7	12 38	4.2	M	19 41	6.8	13 16	3.7	Th	13 01	7.9	15 08	3.4	Sa	21 45	8.4	15 04	1.9
2	7 24	10.0	0 22	3.0	2	8 29	9.4	1 26	3.2	2	9 47	8.5	3 23	2.6	2	9 52	7.3	3 47	2.5
Su	19 41	7.4	13 57	4.3	Tu	21 00	7.4	14 53	3.4	F	22 12	8.5	15 48	3.2	Su	22 21	8.8	15 40	1.8
3	8 45	10.3	1 33	3.2	3	9 31	9.6	2 36	3.0	3	10 36	8.4	4 11	2.3	3	10 28	7.2	4 31	2.4
M	21 04	7.6	15 12	4.1	W	21 53	8.0	15 48	3.1	Sa	22 43	9.0	16 21	2.0	M	22 53	9.2	16 11	1.7
4	9 46	10.7	2 42	3.1	4	10 17	9.8	3 38	2.8	4	10 57	8.3	4 51	2.2	4	11 00	7.1	5 10	2.2
Tu	22 01	8.1	16 13	3.7	Th	22 34	8.6	16 20	2.8	Su	23 16	9.1	16 50	1.8	Tu	23 23	9.5	16 38	1.6
5	10 34	11.0	3 43	2.9	5	10 54	9.8	4 27	2.5	5	11 27	8.2	5 25	2.0	5	11 34	7.0	5 45	2.2
W	22 47	8.7	16 59	3.3	F	23 07	8.2	17 02	2.5	M	23 44	9.7	17 16	1.7	W	23 52	9.8	17 06	1.5
6	11 16	11.1	4 35	2.6	6	11 26	9.7	5 06	2.2	6	11 54	8.1	5 59	1.8	6	. . .	. .	8 19	2.1
Th	23 28	9.2	17 36	3.0	Sa	23 36	8.6	17 30	2.3	Tu	. . .	. .	17 40	1.6	Th	12 01	6.9	17 35	1.4
7	11 50	11.0	5 21	2.4	7	11 54	9.6	5 45	2.1	7	0 13	10.0	6 31	1.9	7	0 23	10.0	6 54	2.0
F	. . .	. .	18 08	2.8	Su	. . .	. .	17 55	2.1	W	12 23	7.9	18 07	1.5	F	12 32	6.9	18 07	1.3
8	0 06	9.6	6 00	2.3	8	0 08	9.9	6 18	2.0	8	0 42	10.1	7 06	2.0	8	0 57	10.1	7 32	2.0
Sa	12 22	10.9	18 36	2.5	M	12 22	9.4	18 21	2.0	Th	12 53	7.7	18 36	1.5	Sa	13 05	6.8	18 44	1.3
9	0 32	9.3	6 37	2.2	9	0 36	10.2	6 50	2.0	9	1 15	10.2	7 44	2.1	9	1 34	10.1	8 15	2.0
Su	12 52	10.7	19 04	2.5	Tu	12 50	9.2	18 48	1.9	F	13 26	7.4	19 10	1.6	Su	13 44	6.7	19 27	1.4
10	1 06	10.2	7 14	2.3	10	1 08	10.3	7 28	2.1	10	1 51	10.1	8 29	2.3	10	2 14	10.0	9 01	2.0
M	13 22	10.4	19 34	2.5	W	13 21	8.9	19 18	2.0	Sa	14 02	7.1	19 50	1.8	M	14 27	6.7	20 19	1.6
11	1 38	10.3	7 52	2.6	11	1 40	10.3	8 04	2.4	11	2 32	9.8	9 22	2.5	11	2 58	9.7	9 52	2.0
Tu	13 53	10.0	20 05	2.6	Th	13 52	8.4	19 50	2.1	Su	14 45	6.7	20 40	2.1	Tu	15 18	6.7	21 23	1.9
12	2 12	10.3	8 33	2.9	12	2 16	10.1	8 50	2.8	12	3 30	9.5	10 23	2.7	12	3 48	9.3	10 46	1.9
W	14 25	9.5	20 41	2.7	F	14 28	7.9	20 28	2.4	M	15 38	6.4	21 43	2.5	W	16 19	6.8	22 34	2.1
13	2 51	10.1	9 20	3.3	13	2 57	9.8	9 45	3.1	13	4 17	9.1	11 25	2.7	13	4 45	8.8	11 40	2.7
Th	15 03	8.9	21 22	3.0	Sa	15 10	7.3	21 17	2.8	Tu	16 44	6.3	23 00	2.7	Th	17 30	7.6	23 47	2.2
14	3 34	9.8	10 15	3.8	14	3 47	9.4	10 50	3.5	14	5 21	8.7	. . .	. .	14	5 50	8.4	. . .	. .
F	15 43	8.1	22 10	3.4	Su	16 01	6.8	22 18	3.2	W	18 11	6.5	12 26	2.5	F	18 48	7.7	12 34	1.5
15	4 27	9.4	11 22	4.2	15	4 50	9.0	12 02	3.5	15	6 41	8.5	0 17	2.6	15	7 00	8.0	0 57	2.2
Sa	16 36	7.4	23 08	3.7	M	17 14	6.3	23 35	3.3	Th	19 33	7.2	13 22	2.1	Sa	20 02	8.4	13 28	1.1
16	5 36	9.1	. . .	. .	16	6 10	8.8	. . .	. .	16	7 55	8.5	1 27	2.3	16	8 08	7.8	2 05	2.0
Su	17 54	6.5	12 36	4.4	Tu	18 57	6.4	13 11	3.4	F	20 38	8.1	14 11	1.6	Su	21 00	9.3	14 15	0.7
17	7 06	9.1	0 16	3.8	17	7 26	8.9	0 50	3.2	17	8 51	8.7	2 30	1.9	17	9 07	7.8	3 07	1.7
M	19 43	5.7	13 51	4.3	W	20 16	7.0	14 10	3.0	Sa	21 39	9.1	14 66	1.1	M	21 53	10.2	15 03	0.3
18	8 24	9.4	1 26	3.7	18	8 42	9.2	1 37	2.8	18	9 43	8.8	3 26	1.4	18	10 02	7.8	4 06	1.5
Tu	20 55	7.1	14 54	3.9	Th	21 12	7.8	14 58	2.5	Su	22 15	10.1	15 38	0.6	Tu	22 42	10.8	15 50	0.1
19	9 22	10.0	2 23	3.4	19	9 33	9.6	2 55	2.2	19	10 28	8.8	4 20	1.1	19	10 50	7.8	5 01	1.3
W	21 45	7.8	15 44	3.4	F	21 58	8.9	15 11	2.0	W	22 58	10.9	16 20	0.2	W	23 28	11.3	16 37	-0.1
20	10 08	10.5	3 19	2.9	20	10 16	9.9	3 48	1.7	20	11 11	8.8	5 06	0.8	20	11 37	7.8	5 55	1.1
Th	22 28	8.6	16 34	2.9	Sa	22 39	9.8	16 18	1.4	Tu	23 41	11.4	17 01	-0.1	Th	. . .	. .	17 24	-0.1
21	10 57	10.9	4 08	2.3	21	10 57	10.0	4 36	1.2	21	11 52	8.6	6 02	0.8	21	0 13	11.4	6 46	1.1
F	23 03	9.4	16 59	2.4	Su	23 18	10.7	16 55	0.9	W	. . .	. .	17 44	-0.2	F	12 23	7.7	18 12	0.0
22	11 25	11.1	4 55	1.7	22	11 35	10.0	5 25	0.9	22	0 25	11.6	6 52	0.9	22	0 59	11.3	7 36	1.2
Sa	23 40	10.2	17 33	1.9	M	23 59	11.3	17 32	0.5	Th	12 36	8.3	18 29	0.0	Sa	13 08	7.6	19 03	0.4
23	. . .	. .	5 39	1.3	23	. . .	. .	6 12	0.8	23	1 09	11.5	7 45	1.1	23	1 41	10.9	8 26	1.3
Su	12 01	11.2	18 07	1.5	Tu	12 14	9.8	18 11	0.3	F	13 20	7.9	19 15	0.3	Su	13 52	7.4	19 57	0.8
24	0 18	10.9	6 24	1.2	24	0 39	11.6	7 01	0.9	24	1 56	11.1	8 40	1.5	24	2 27	10.3	9 16	1.4
M	12 37	11.0	18 44	1.2	W	12 53	9.4	18 51	0.3	Sa	14 08	7.4	20 08	0.9	M	14 45	7.2	20 53	1.3
25	0 57	11.3	7 10	1.2	25	1 23	11.6	7 51	1.3	25	2 44	10.4	9 37	1.8	25	3 15	9.6	10 07	1.6
Tu	13 17	10.6	19 22	1.1	Th	13 35	8.8	19 38	0.6	Su	15 00	6.9	21 11	1.5	Tu	15 41	7.1	21 54	1.9
26	1 40	11.5	8 00	1.6	26	2 09	11.2	8 49	1.8	26	3 27	9.6	10 37	2.0	26	4 06	8.8	10 58	1.8
W	13 55	10.0	20 03	1.2	F	14 28	8.1	20 24	1.1	M	16 02	6.6	22 17	2.2	W	16 46	7.0	23 00	2.1
27	2 25	11.3	8 55	2.2	27	2 58	10.6	9 19	2.3	27	4 39	8.8	11 39	2.2	27	5 02	8.1	11 59	1.9
Th	14 37	9.2	20 51	1.6	Sa	15 10	7.4	21 23	1.8	Tu	17 24	6.4	23 32	2.6	Th	17 57	7.1	. . .	. .
28	3 15	10.9	9 57	2.8	28	3 56	9.9	10 57	2.7	28	5 51	8.2	. . .	. .	28	6 26	7.4	0 08	2.8
F	15 24	8.3	21 45	2.1	Su	16 13	6.7	22 31	2.4	W	18 53	6.7	12 39	2.2	F	19 14	7.3	12 40	2.0
29	4 14	10.2	11 07	3.4	29	5 07	9.1	12 10	2.9	29	7 09	7.8	0 45	2.8	29	7 16	7.0	1 13	3.0
Sa	16 21	7.5	22 50	2.6	W	17 43	6.3	23 53	2.9	Th	20 07	7.2	13 33	2.1	Sa	20 20	7.7	13 30	2.6
30	5 30	9.6	. . .	. .	30	6 31	8.6	. . .	. .	30	8 16	7.5	1 53	2.8	30	8 24	6.7	2 17	3.0
Su	17 49	6.8	12 28	3.7	Th	19 30	6.6	13 18	2.9	F	21 02	7.8	14 22	2.0	Su	21 12	8.2	14 16	2.0
					31	7 58	8.5	1 12	3.0						31	9 16	6.6	3 17	2.9
					W	20 44	7.3	14 19	2.7						M	21 56	8.7	14 59	2.0

Time meridian 135° E. The hours of the day are numbered consecutively from 0° (midnight) to 23° (11 00 p. m.). 12° is noon. All hours greater than 12 are in the afternoon (p. m.).
Heights are reckoned from the datum of soundings on the largest scale charts of the locality which is about 2 feet below mean low water springs.

TABLE III - 5d. *Daily Tide Predictions.*

Approved For Release 2006/09/25 : CIA-RDP79-01144A000900010003-9

Approved For Release 2006/09/25 : CIA-RDP79-01144A000900010003-9

CHINNANPO KO, CHOSEN, 1945

MAY					JUNE					JULY					AUGUST				
Day	High		Low		Day	High		Low		Day	High		Low		Day	High		Low	
	Time	Ht.	Time	Ht.		Time	Ht.	Time	Ht.		Time	Ht.	Time	Ht.		Time	Ht.	Time	Ht.
	h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.
1	11 26	18.1	5 02	2.6	1	0 00	14.3	5 53	3.5	1	0 35	15.2	6 32	3.8	1	2 03	16.8	8 20	5.1
Tu	23 39	14.7	17 47	3.4	F	12 26	18.5	19 00	4.3	Su	13 00	18.8	19 33	4.0	W	14 19	18.9	20 55	4.3
2	. . .	. .	5 36	2.9	2	0 49	14.1	6 45	4.1	2	1 28	15.3	7 31	4.5	2	3 05	16.5	9 34	5.9
W	12 01	18.0	18 27	3.9	Sa	13 14	18.0	19 56	4.5	M	13 50	18.0	20 29	4.2	Th	15 20	15.5	22 00	4.7
3	0 16	14.3	6 13	3.4	3	1 41	13.9	7 47	4.8	3	2 27	15.4	8 41	5.2	3	4 23	15.4	10 56	6.4
Th	12 43	17.7	19 16	4.5	Su	14 10	17.3	21 02	4.7	Tu	14 47	17.0	21 33	4.3	F	16 38	14.4	23 11	4.8
4	1 00	13.6	7 01	4.1	4	2 50	13.0	9 05	5.3	4	3 35	15.5	10 00	5.6	4	5 54	16.8	. . .	. .
F	13 32	17.2	20 19	5.0	M	15 13	16.6	22 10	4.5	W	15 53	16.0	22 38	4.2	Sa	18 10	14.0	12 17	6.2
5	1 57	13.1	8 08	5.0	5	4 10	14.3	10 29	5.4	5	4 56	16.0	11 20	5.6	5	7 08	17.7	0 20	4.5
Sa	14 33	16.5	21 33	5.2	Tu	16 32	15.1	23 16	3.8	Th	17 11	15.3	23 40	3.8	Su	19 28	14.2	13 29	5.7
6	3 09	12.8	9 31	5.5	6	5 33	15.3	11 43	4.9	6	6 14	16.9	. . .	. .	6	8 13	18.7	1 18	4.2
Su	15 46	15.9	22 48	4.8	W	17 51	16.0	. . .	. .	F	18 28	15.0	12 30	5.1	M	20 34	14.8	14 25	5.0
7	4 41	13.1	10 58	5.2	7	6 42	16.7	0 15	3.2	7	7 21	18.1	0 40	3.3	7	9 03	19.5	2 13	3.7
M	17 12	15.9	23 55	4.0	Th	19 58	15.1	12 51	4.0	Sa	19 38	15.2	13 35	4.6	Tu	21 21	15.4	15 14	4.4
8	6 05	14.3	. . .	. .	8	7 43	18.1	1 08	2.4	8	8 21	19.1	1 34	3.0	8	9 46	20.0	3 02	3.3
Tu	18 29	16.3	12 11	4.3	F	19 57	15.3	13 53	3.4	Su	20 36	15.3	14 34	4.1	W	22 02	15.9	15 57	4.0
9	7 12	15.9	0 51	2.9	9	8 34	19.3	1 57	1.9	9	9 11	19.9	2 23	2.6	9	10 24	20.0	3 43	3.1
W	19 32	16.9	13 15	3.2	Sa	20 51	15.4	14 42	2.8	M	21 27	15.5	15 24	3.8	Th	22 38	16.2	16 34	3.8
10	8 03	17.5	1 39	2.0	10	9 22	20.1	2 45	1.5	10	9 56	20.3	3 10	2.4	10	10 57	19.7	4 23	3.1
Th	20 26	17.4	14 07	2.2	Su	21 40	15.2	15 32	2.5	Tu	22 11	15.5	16 11	3.6	F	23 11	16.5	17 07	3.7
11	8 53	18.0	2 25	1.2	11	10 07	20.5	3 25	1.5	11	10 36	20.3	3 54	2.5	11	11 28	19.3	5 00	3.2
F	21 12	17.5	14 58	1.5	M	22 23	15.9	16 20	2.7	W	22 51	15.5	16 52	3.6	Sa	23 44	16.6	17 39	3.8
12	9 38	18.3	3 06	0.8	12	10 40	20.4	4 08	1.8	12	11 15	20.0	4 34	2.8	12	11 58	18.7	5 36	3.6
Sa	21 50	17.3	15 44	1.3	Tu	23 03	15.4	17 05	3.0	Th	23 28	15.5	17 32	3.8	Su	. . .	. .	18 10	3.9
13	10 19	20.2	3 47	0.7	13	11 30	19.9	4 48	2.2	13	11 52	19.4	5 16	3.2	13	0 16	15.7	6 13	4.1
Su	22 36	16.7	16 29	1.6	W	23 44	14.9	17 50	3.5	F	. . .	. .	18 09	4.0	M	12 31	18.0	18 45	4.1
14	11 00	20.2	4 26	1.1	14	. . .	. .	5 32	3.0	14	0 08	15.4	5 56	3.8	14	0 52	16.7	6 55	4.8
M	23 15	15.9	17 14	2.1	Th	12 11	19.2	18 33	4.1	Sa	12 27	18.7	18 47	4.3	Tu	13 02	17.3	19 23	4.4
15	11 42	19.7	5 06	1.6	15	0 28	14.4	6 15	3.8	15	0 46	15.3	6 41	4.6	15	1 31	16.5	7 41	5.6
Tu	23 52	15.0	18 00	3.0	F	12 50	18.3	19 21	4.6	Su	13 04	17.9	19 29	4.6	W	13 38	16.4	20 07	4.9
16	. . .	. .	5 50	2.5	16	1 12	14.0	7 06	4.8	16	1 30	15.2	7 29	5.4	16	2 16	16.2	8 38	6.4
W	12 25	18.8	18 50	3.9	Sa	13 35	17.3	20 13	5.1	M	13 42	17.1	20 16	4.8	Th	14 25	15.4	21 00	5.4
17	0 42	14.1	6 36	3.7	17	2 03	13.7	8 05	5.8	17	2 16	15.1	8 25	6.1	17	3 11	15.8	9 46	7.1
Th	13 12	17.8	19 44	4.8	Su	14 25	16.4	21 09	5.3	Tu	14 26	16.1	21 06	5.1	F	15 19	14.3	22 00	5.9
18	1 32	13.3	7 31	4.6	18	3 06	13.8	9 14	6.4	18	3 10	15.0	9 30	6.7	18	4 20	15.6	11 01	7.3
F	14 02	16.6	20 50	5.4	M	15 20	15.5	22 07	5.2	W	15 17	15.2	22 02	5.3	Sa	16 34	13.5	23 06	6.0
19	2 35	12.6	8 42	5.9	19	4 16	13.9	10 28	6.7	19	4 18	15.1	10 41	7.0	19	5 39	15.8	. . .	. .
Sa	15 04	15.6	22 00	5.6	Tu	16 24	14.9	23 03	5.0	Th	16 21	14.4	23 00	5.3	Su	18 02	13.2	12 14	6.9
20	3 54	12.5	10 00	6.4	20	5 32	14.5	11 35	6.5	20	5 30	15.4	11 48	6.9	20	6 55	16.8	0 10	5.8
Su	16 19	14.9	23 03	5.3	W	17 38	14.5	23 56	4.6	F	17 26	13.9	23 54	5.2	M	19 19	13.6	13 15	5.3
21	5 21	13.0	11 18	6.2	21	6 32	15.3	. . .	. .	21	6 36	16.1	. . .	. .	21	7 52	17.5	1 08	5.3
M	17 35	14.8	. . .	. .	Th	18 38	14.5	12 32	6.1	Sa	18 48	13.8	12 51	6.5	Tu	20 15	14.3	14 07	5.4
22	6 32	14.1	0 00	4.8	22	7 23	16.3	0 43	4.2	22	7 33	16.9	0 47	5.0	22	8 39	18.6	1 57	4.5
Tu	18 38	15.0	12 10	5.8	F	19 32	14.5	13 28	5.6	Su	19 47	14.0	13 46	5.9	W	21 00	15.2	14 51	4.5
23	7 24	15.2	0 48	4.2	23	8 10	17.2	1 27	4.0	23	8 19	17.8	1 34	4.5	23	9 22	19.4	2 42	3.7
W	19 28	15.2	13 12	5.2	Sa	20 19	14.6	14 13	5.1	M	20 39	14.3	14 32	5.3	Th	21 39	16.1	15 30	3.7
24	8 06	15.3	1 30	3.6	24	8 49	17.9	2 05	3.8	24	9 00	18.6	2 16	4.2	24	9 57	19.9	3 24	2.9
Th	20 13	15.4	14 00	4.6	Su	20 57	14.6	14 56	4.7	Tu	21 19	14.6	15 15	4.7	F	22 14	16.9	16 06	3.1
25	8 43	17.1	2 06	3.2	25	9 24	18.5	2 41	3.6	25	9 39	19.3	2 56	3.7	25	10 34	20.2	4 04	2.4
F	20 50	15.6	14 40	4.1	M	21 34	14.5	15 32	4.3	W	21 53	15.1	15 53	4.2	Sa	22 50	17.7	16 43	2.7
26	9 17	17.7	2 39	3.0	26	9 56	18.9	3 14	3.4	26	10 13	19.7	3 36	3.3	26	11 08	20.1	4 44	2.1
Sa	21 24	15.3	15 16	3.8	Tu	22 05	14.6	16 09	4.2	Th	22 20	15.5	16 28	3.8	Su	23 25	18.2	17 19	2.4
27	9 45	18.2	3 08	2.8	27	10 27	19.3	3 48	3.3	27	10 49	20.0	4 14	3.0	27	11 48	19.6	5 26	2.2
Su	21 54	15.1	15 49	3.6	W	22 38	14.7	15 42	4.0	F	23 03	16.1	17 05	3.4	W	. . .	. .	17 58	2.5
28	10 12	18.5	3 40	2.8	28	11 00	19.5	4 24	3.2	28	11 24	20.0	4 53	2.8	28	0 06	18.4	6 11	2.8
M	22 20	14.9	16 22	3.6	Th	23 13	14.8	17 20	3.8	Sa	23 40	16.5	17 42	3.2	Tu	12 25	18.8	18 39	2.9
29	10 40	18.8	4 07	2.9	29	11 35	19.5	5 01	3.2	29	. . .	. .	5 36	2.8	29	0 50	18.3	7 02	3.7
Tu	22 51	14.6	16 57	3.6	F	23 50	15.0	18 00	3.8	Su	12 00	19.7	18 22	3.3	W	13 07	17.6	19 25	3.5
30	11 09	18.6	4 38	2.9	30	. . .	. .	5 43	3.4	30	0 23	16.9	6 22	3.3	30	1 42	17.9	8 00	5.0
W	23 21	14.4	17 31	3.7	Sa	12 14	19.3	18 43	3.9	M	12 42	19.1	19 06	3.4	Th	13 55	16.2	20 20	4.4
31	11 45	18.8	5 13	3.1						31	1 10	17.0	7 15	4.0	31	2 43	17.1	9 14	6.2
Th	. . .	. .	18 12	4.0						Tu	13 29	18.1	19 57	3.6	F	14 51	14.6	21 28	5.2

SEPTEMBER					OCTOBER					NOVEMBER					DECEMBER				
	h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.
1	3 55	15.4	10 41	5.8	1	5 08	15.7	11 50	6.3	1	7 04	15.5	0 31	5.3	1	7 00	14.2	0 53	4.3
Sa	16 17	13.4	22 45	5.7	M	17 55	12.6	23 48	5.0	Th	19 36	14.8	13 10	4.2	Sa	19 47	15.5	13 09	3.2
2	5 33	16.3	. . .	. .	2	6 35	16.1	. . .	. .	2	7 53	15.8	1 27	4.6	2	7 55	14.3	1 42	4.2
Su	18 05	13.1	12 05	6.7	Tu	19 14	13.6	12 58	5.6	F	20 23	16.0	13 52	3.5	Su	20 29	16.3	13 47	2.7
3	6 55	17.0	0 00	5.5	3	7 38	16.9	0 55	5.3	3	8 35	16.0	2 14	3.9	3	8 37	14.3	2 28	3.7
M	19 28	12.7	13 17	5.1	W	20 09	14.9	13 48	4.8	Sa	21 00	16.8	14 30	3.0	M	21 04	17.0	14 23	2.4
4	7 59	18.0	1 10	5.0	4	8 28	17.5	1 50	4.5	4	9 09	16.0	2 51	3.4	4	9 12	14.2	3 05	3.4
Tu	20 25	14.8	14 13	5.2	Th	20 49	16.0	14 30	4.1	Su	21 30	17.4	14 59	2.6	Tu	21 36	17.3	14 55	2.3
5	8 40	18.7	2 04	4.3	5	9 05	17.7	2 35	3.8	5	9 40	15.8	3 28	3.1	5	9 44	14.0	3 40	3.2
W	21 05	13.8	14 55	4.4	F	21 28	16.9	15 03	3.5	M	21 59	17.7	15 27	2.4	W	22 03	17.6	15 28	2.2
6	9 20	19.1	2 49	3.7	6	9 39	17.7	3 14	3.4	6	10 07	15.5	3 59	3.0	6	10 13	13.8	4 13	3.1
Th	21 46	16.5	15 34	4.0	Sa	21 55	17.4	15 34	3.1	Tu	22 25	18.0	15 58	2.4	Th	22 32	17.8	15 53	2.3
7	10 04	19.1	3 31	3.3	7	10 09	17.5	3 48	3.2	7	10 33	15.2	4 29	3.1	7	10 42	13.6	4 46	3.1
F	22 18	17.0	16 08	3.6	Su	22 24	17.8	16 02	2.9	W	22 52	18.0	16 22	2.5	F	23 00	17.9	16 25	2.3
8	10 35	18.9	4 08	3.1	8	10 35	17.2	4 19	3.1	8	11 00	14.8	5 02	3.2	8	11 12	13.4	5 21	3.0
Sa	22 49	17.4	16 35	3.4	M	22 50	18.0	16 28	2.8	Th	23 19	18.0	16 51	2.6	Sa	23 32	17.9	17 00	2.4
9	11 02	18.5	4 40	3.2	9	10 58	16.8	4 50	3.2	9	11 27	14.4	5 35	3.4	9	11 46	13.3	5 58	3.1
Su	23 16	17.6	17 04	3.3	Tu	23 15	18.1	16 54	2.8	F	23 49	17.9	17 21	2.8	Su	. . .	. .	17 37	2.6
10	11 28	18.1	5 13	3.3	10	11 26	16.3	5 21	3.3	10	. . .	. .	6 13	3.7	10	0 10	17.7	6 41	3.2
W	23 45	17.7	17 31	3.3	W	23 43	18.1	17 22	2.9	Sa	12 02	13.9	17 56	3.2	M	12 28	13.2	18 21	3.1
11	11 56	17.5	5 45	3.7	11	11 53	15.7	5 55	3.7	11	0 27	17.6	6 39	4.2	11	0 52	17.3	7 30	3.4
Th	. . .	. .	18 00	3.6	Th	. . .	. .	17 52	3.3	Su	12 45	13.4	18 41	3.3	Tu	13 20	13.2	19 18	3.7
12	0 15	17.7	6 22	4.2	12	0 15	17.9	6 35	4.3	12	1 12	17.1	7 56	4.6	12	1 41	16.7	8 27	3.6
W	12 27	16.9	18 34	3.8	F	12 27	15.1	18 28	3.8	M	13 39	13.0	19 41	4.6	W	14 18	13.2	20 27	4.2
13	0 51	17.4	7 04	4.9	13	0 54	17.4	7 21	5.0	13	2 05	16.4	9 02	4.9	13	2 45	16.0	9 33	3.5
Th	13 00	15.0	19 14	4.4	Sa	13 12	14.3	19 14	4.5	Tu	14 40	12.6	20 58	5.2	Th	15 27	13.5	21 48	4.5
14	1 29	17.1	7 54	5.8	14	1 40	16.9	8 22	5.7	14	3 12	15.8	10 15	4.7	14	3 48	15.2	10 38	3.1
F	13 41	15.0	20 01	5.2	Su	13 58	13.4	20 13	5.5	W	16 02	12.8	22 22	5.2	F	16 45	14.1	23 06	4.2
15	2 18	16.5	9 00	5.6	15	2 37	15.2	9 37	5.1	15	4 30	15.4	11 22	4.0	15	5 03	14.7	11 39	2.4
Sa	14 31	14.0	21 03	6.0	M	15 06	12.7	21 33	6.0	Th	17 29	13.7	23 38	4.6	Sa	18 00	15.2	. . .	. .
16	3 20	15.0	10 17	7.0	16	3 49	15.7	10 57	5.8	16	5 48	15.6	. . .	. .	16	6 18	14.8	0 17	3.6
Su	15 41	13.0	22 17	5.3	Tu	16 37	12.6	22 58	5.9	F	18 37	15.1	12 18	3.0	Su	19 09	16.6	12 35	1.7
17	4 40	15.6	11 36	6.7	17	5 18	15.7	. . .	. .	17	6 56	16.0	0 42	3.5	17	7 26	14.8	1 20	2.8
M	17 20	12.8	23 34	6.1	W	18 09	13.4	12 04	5.1	Sa	19 35	16.7	13 10	2.0	M	20 06	17.9	13 28	1.1
18	6 09	15.1	. . .	. .	18	6 34	16.4	0 09	5.0	18	7 53	16.4	1 30	2.5	18	8 22	15.0	2 15	2.1
Tu	18 45	13.4	12 42	5.9	Th	19 14	14.8	13 00	3.9	Su	20 28	18.1	13 57	1.2	Tu	20 56	18.9	14 16	0.7
19	7 15	17.1	0 39	5.4	19	7 33	17.2	1 10	3.0	19	8 43	16.7	2 31	1.6	19	9 13	15.0	3 08	1.6
W	19 48	14.6	13 35	4.9	F	20 08	16.5	13 48	2.8	M	21 12	19.2	14 49	0.6	W	21 43	19.5	15 02	0.4
20	8 09	18.1	1 35	4.3	20	8 26	17.9	2 02	2.7	20	9 29	16.6	3 20	1.2	20	10 00	14.9	3 57	1.5
Th	20 35	15.9	14 21	3.8	Sa	20 53	17.9	14 29	1.8	Tu	21 55	19.9	15 23	0.3	Th	22 28	19.6	15 46	0.5
21	8 55	19.0	2 33	3.3	21	9 09	18.3	2 49	1.8	21	10 12	16.2	4 06	1.1	21	10 45	14.6	4 44	1.6
F	21 15	17.2	15 02	2.6	Su	21 33	19.1	15 10	1.1	W	22 39	20.0	16 03	0.4	F	23 12	19.3	16 30	0.8
22	9 35	19.5	3 08	2.3	22	9 50	18.3	3 30	1.2	22	10 55	15.6	4 53	1.5	22	11 28	14.2	5 30	1.9
Sa	21 54	18.3	15 39	2.1	M	22 13	19.8	15 47	0.8	Th	23 21	19.6	16 44	0.8	Sa	23 52	18.6	17 13	1.3
23	10 12	19.8	3 50	1.7	23	10 31	18.0	4 19	1.1	23	11 37	14.8	5 40	2.1	23	. . .	. .	6 15	2.4
Su	22 31	19.1	16 16	1.7	Tu	22 53	20.1	16 27	0.8	F	. . .	. .	17 28	1.6	Su	12 10	13.7	18 00	2.2
24	10 49	19.3	4 33	1.4	24	11 10	17.2	5 02	1.4	24	0 05	18.9	6 23	2.9	24	0 37	17.8	7 02	3.0
M	23 09	19.5	16 52	1.5	W	23 35	19.8	17 05	1.2	Sa	12 23	14.0	18 13	2.6	M	12 55	13.4	18 48	3.1
25	11 27	18.7	5 15	1.6	25	11 50	16.2	5 49	2.2	25	0 52	17.0	7 23	3.7	25	1 21	16.7	7 50	3.4
Tu	23 49	19.5	17 30	1.7	Th	. . .	. .	17 45	1.9	Su	13 15	13.2	19 07	3.7	Tu	13 44	13.1	19 44	4.0
26	. . .	. .	6 00	2.3	26	0 20	19.2	6 39	3.3	26	1 40	16.8	8 23	4.4	26	2 05	15.7	8 43	3.8
W	12 07	17.7	18 10	2.3	F	12 34	15.0	18 32	3.0	M	14 09	12.5	20 12	4.8	W	14 41	12.9	20 49	4.9
27	0 33	19.0	6 50	3.5	27	1 05	18.1	7 36	4.4	27	2 39	15.6	9 30	4.7	27	2 57	14.6	9 40	3.9
Th	12 48	16.4	18 56	3.3	Sa	13 23	13.8	19 23	4.2	Tu	15 21	12.2	21 28	3.5	Th	15 47	12.9	22 00	5.3
28	1 21	18.2	7 47	4.8	28	2 00	16.9	8 47	5.3	28	3 46	14.6	10 36	4.6	28	3 57	13.7	10 37	3.8
F	13 36	15.0	19 49	4.4	Su	14 25	12.7	20 38	5.4	W	16 46	12.5	22 45	5.6	F	16 58	13.3	23 09	5.4
29	2 17	17.2	8 59	6.0	29	3 06	15.7	10 07	5.7	29	5 03	14.1	11 34	4.2	29	5 04	13.1	11 33	3.5
Sa	14 36	13.5	20 59	5.5	M	15 52	12.0	22 00	6.0	Th	18 00	13.3	23 54	5.3	Sa	18 10	14.0	. . .	. .
30	3 32	16.1	10 27	6.6	30	4 36	15.1	11 20	5.5	30	6 13	14.0	. . .	. .	30	6 13	12.9	0 12	5.1
Su	16 04	12.5	22 26	6.1	Tu	17 32	12.4	23 24	5.9	F	19 00	14.4	12 24	3.7	Su	19 07	14.8	12 23	3.3
					31	6 00	15.1	. . .	. .						31	7 11	12.9	1 09	4.7
					W	18 43	13.5	12 23	4.9						M	19 55	15.7	13 09	3.0

Time meridian 135° E. The hours of the day are numbered consecutively from 0° (midnight) to 23° (11 00 p. m.). 12° is noon. All hours greater than 12 are in the afternoon (p. m.).
Heights are reckoned from the datum of soundings on the largest scale charts of the locality which is about 2 feet below mean low water springs.

TABLE III - 5e. *Daily Tide Predictions.*

Approved For Release 2006/09/25 : CIA-RDP79-01144A000900010003-9

Approved For Release 2006/09/25 : CIA-RDP79-01144A000900010003-9

SASEBO, JAPAN, 1945

MAY					JUNE					JULY					AUGUST				
Day	High		Low		Day	High		Low		Day	High		Low		Day	High		Low	
	Time	Ht.	Time	Ht.		Time	Ht.	Time	Ht.		Time	Ht.	Time	Ht.		Time	Ht.	Time	Ht.
	h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.
1	10 14	8.5	4 18	3.1	1	11 23	8.0	5 40	4.4	1	0 32	9.0	6 32	4.2	1	1 32	8.9	8 12	3.6
Tu	23 18	8.4	16 34	1.0	F	. . .	. .	17 57	1.7	Su	12 17	8.3	18 45	2.4	W	14 17	8.0	20 32	4.5
2	10 47	8.0	4 52	3.7	2	0 53	8.1	6 50	4.7	2	1 23	8.7	7 19	4.2	2	2 28	8.4	9 32	3.5
W	. . .	. .	17 13	1.4	Sa	12 20	7.5	19 04	2.3	M	13 22	7.9	19 53	3.2	Th	16 53	7.7	22 00	5.1
3	9 05	7.8	5 36	4.3	3	1 57	7.8	8 18	4.7	3	2 18	8.3	8 59	4.0	3	3 40	8.1	10 47	3.1
Th	11 26	7.5	18 03	1.9	Su	13 35	7.2	20 25	2.8	Tu	14 40	7.6	21 10	3.8	F	17 44	8.0	23 21	5.2
4	1 05	7.4	6 43	4.8	4	3 06	7.8	9 43	4.3	4	3 21	8.2	10 11	3.4	4	5 03	8.1	11 52	2.8
F	12 22	7.0	19 16	2.6	M	15 10	7.1	21 50	3.1	W	16 19	7.6	22 27	4.1	Sa	18 56	8.7	. . .	. .
5	2 20	7.1	8 43	5.0	5	4 18	7.9	10 50	3.5	5	4 27	8.2	11 13	2.7	5	6 15	8.5	0 30	5.0
Sa	13 39	6.6	20 59	2.8	Tu	16 48	7.4	23 01	3.1	Th	17 49	8.1	23 36	4.2	Su	19 44	9.4	12 48	1.9
6	3 52	7.2	10 22	4.6	6	5 16	8.3	11 43	2.6	6	5 31	8.4	. . .	. .	6	7 09	9.0	1 23	4.5
Su	16 30	6.6	22 31	2.6	W	18 04	8.1	23 58	2.9	F	18 55	8.8	12 08	2.0	M	20 23	9.9	13 35	1.3
7	5 15	7.6	11 26	3.7	7	6 06	8.7	. . .	. .	7	6 36	8.8	0 35	4.1	7	7 52	9.4	2 15	4.2
M	17 14	7.2	23 33	2.2	Th	19 00	8.6	12 20	1.6	Sa	19 47	9.1	12 57	1.3	Tu	20 56	10.3	14 15	1.0
8	6 06	8.2	. . .	. .	8	6 52	9.1	0 50	2.8	8	7 14	9.2	1 24	4.0	8	8 33	9.8	2 42	3.7
Tu	18 18	8.1	12 14	2.7	F	19 48	9.5	13 13	0.8	Su	20 28	9.9	13 12	0.7	W	21 28	10.4	14 52	1.0
9	6 47	8.8	0 26	1.8	9	7 32	9.5	1 35	2.8	9	7 57	9.5	2 09	3.8	9	9 10	10.0	3 15	3.4
W	19 12	9.0	12 54	1.6	Sa	20 32	10.0	13 53	0.1	M	21 08	10.2	14 23	0.4	Th	21 56	10.5	15 26	1.1
10	7 23	9.3	1 12	1.5	10	8 19	9.7	2 16	2.8	10	8 37	9.7	2 49	3.7	10	9 44	9.9	3 47	3.3
Th	19 56	9.7	13 33	0.6	Su	21 13	10.2	14 32	-0.3	Tu	21 43	10.2	15 02	0.3	F	22 25	10.1	15 58	1.5
11	7 58	9.7	1 53	1.4	11	8 48	9.7	2 56	3.0	11	9 16	9.7	3 27	3.6	11	10 18	9.7	4 19	3.3
F	20 36	10.2	14 10	-0.1	M	21 52	10.1	15 11	-0.3	W	22 18	10.1	15 39	0.6	Sa	22 54	9.7	16 28	2.0
12	8 33	9.9	2 32	1.5	12	9 25	9.5	3 36	3.2	12	9 54	9.4	4 06	3.7	12	10 52	9.3	4 50	3.4
Sa	21 20	10.3	14 47	-0.5	Tu	22 34	9.7	15 50	0.1	Th	22 54	9.7	16 16	1.1	Su	23 23	9.3	16 57	2.7
13	9 07	9.8	3 11	1.9	13	10 04	9.1	4 18	3.6	13	10 32	9.1	4 44	3.8	13	11 26	8.7	5 34	3.6
Su	22 00	10.1	15 25	-0.6	W	23 16	9.3	16 30	0.6	F	23 30	9.3	16 53	1.7	M	23 52	9.0	17 27	3.3
14	9 43	9.5	3 49	2.5	14	10 46	8.6	5 02	4.0	14	11 14	8.6	5 35	4.0	14	. . .	. .	5 59	3.8
M	22 44	9.6	16 04	-0.3	Th	23 59	8.7	17 13	1.4	Sa	. . .	. .	17 29	2.4	Tu	12 04	8.2	17 56	4.0
15	10 21	8.9	4 29	3.2	15	11 32	7.9	5 53	4.4	15	0 05	8.9	6 19	4.3	15	0 23	8.6	6 40	4.1
Tu	23 39	8.9	16 45	0.4	F	. . .	. .	17 58	2.2	Su	11 55	8.1	18 08	3.2	W	12 47	7.7	18 33	4.7
16	11 00	8.3	5 14	3.8	16	0 45	8.2	6 56	4.6	16	0 40	8.5	6 58	4.4	16	0 55	8.2	7 35	4.3
W	. . .	. .	17 32	1.2	Sa	12 22	7.3	18 53	3.0	M	12 41	7.5	18 50	3.9	Th	13 44	7.3	19 27	5.4
17	0 20	8.2	6 11	4.5	17	1 27	7.8	8 14	4.7	17	1 19	8.2	8 01	4.5	17	1 36	7.9	8 57	4.3
Th	11 46	7.5	18 26	2.1	Su	13 25	6.8	20 03	3.7	Tu	13 36	7.1	19 44	4.6	F	15 15	7.0	21 15	5.9
18	1 22	7.6	7 36	4.9	18	2 33	7.6	9 30	4.5	18	2 03	7.9	9 12	4.5	18	2 45	7.6	10 23	4.0
F	12 44	6.8	19 40	2.9	M	14 47	6.5	21 14	4.2	W	14 48	6.8	20 59	5.1	Sa	17 30	7.3	22 58	5.9
19	2 34	7.3	9 19	4.9	19	3 38	7.5	10 31	4.2	19	2 57	7.7	10 18	4.2	19	4 23	7.5	11 32	3.4
Sa	14 09	6.3	21 06	3.4	Tu	16 24	6.5	22 22	4.4	Th	16 32	6.9	22 29	5.1	Su	18 39	8.0	. . .	. .
20	4 04	7.2	10 38	4.4	20	4 35	7.6	11 21	3.6	20	4 06	7.7	11 16	3.7	20	5 38	8.0	0 08	5.4
Su	15 07	6.2	22 24	3.5	W	17 44	6.8	23 20	4.3	F	18 02	7.3	23 29	5.2	W	19 32	8.9	12 25	2.6
21	5 11	7.4	11 32	3.8	21	5 29	7.8	. . .	. .	21	5 17	7.8	. . .	. .	21	6 45	8.7	0 59	4.7
M	17 35	6.6	23 24	3.5	Th	18 56	7.5	12 03	5.0	Sa	18 56	8.0	12 05	3.0	Tu	19 58	9.7	13 11	1.8
22	5 56	7.7	. . .	. .	22	6 13	8.1	0 29	4.2	22	5 14	8.3	0 25	4.0	22	7 31	9.5	1 41	4.0
Tu	18 27	7.1	12 11	3.2	F	19 15	8.1	12 39	2.4	Su	19 40	8.8	12 49	2.2	W	20 32	10.3	13 53	1.1
23	6 32	8.0	0 11	3.3	23	6 50	8.5	0 52	4.0	23	7 01	8.8	1 13	4.5	23	8 14	10.2	2 18	3.3
W	19 08	7.8	12 44	2.5	Sa	19 53	8.8	13 15	1.7	M	20 16	9.5	13 29	1.5	Th	21 05	10.7	14 32	0.5
24	7 03	8.4	0 51	3.1	24	7 26	8.9	1 31	3.8	24	7 43	9.4	1 53	4.1	24	9 55	10.7	2 55	2.8
Th	19 41	8.4	13 15	1.9	Su	20 29	9.3	13 49	1.1	Tu	20 52	10.1	14 08	0.9	F	21 34	10.9	15 19	0.5
25	7 31	8.7	1 26	2.9	25	8 01	9.2	2 08	3.6	25	8 23	9.8	2 33	3.7	25	9 35	10.9	3 31	2.4
F	20 13	8.8	13 42	1.3	M	21 04	9.7	14 23	0.6	W	21 27	10.4	14 47	0.5	Sa	22 15	10.8	15 49	0.7
26	7 57	9.0	1 57	2.8	26	8 36	9.4	2 43	3.5	26	9 03	10.1	3 11	3.4	26	10 17	10.8	4 09	2.3
Sa	20 43	9.2	14 11	0.8	Tu	21 40	9.9	14 58	0.4	Th	22 04	10.5	15 28	0.4	Su	22 50	10.6	16 29	1.2
27	8 25	9.2	2 27	2.8	27	9 13	9.5	3 22	3.5	27	9 45	10.2	3 50	3.3	27	11 01	10.3	4 50	2.0
Su	21 16	9.4	14 40	0.5	W	22 21	9.9	15 36	0.3	F	22 43	10.4	16 06	0.6	M	23 27	10.0	17 10	2.1
28	8 54	9.2	2 58	2.9	28	9 51	9.4	4 02	3.7	28	10 27	10.1	4 30	3.2	28	11 50	9.7	5 34	2.5
M	21 51	9.4	15 12	0.4	Th	23 02	9.6	16 15	0.6	Sa	23 20	10.1	16 47	1.1	Tu	. . .	. .	17 55	3.1
29	9 28	9.0	3 32	3.2	29	10 35	9.2	4 45	3.9	29	11 14	9.7	5 15	3.4	29	0 08	9.4	0 25	2.8
Tu	22 28	9.2	15 46	0.4	F	23 45	9.3	17 00	1.0	Su	. . .	. .	17 32	1.9	W	12 45	8.9	18 47	4.2
30	10 00	8.8	4 07	3.5	30	11 22	8.8	5 34	4.1	30	0 01	9.7	5 04	3.5	30	0 50	8.8	7 39	3.2
W	23 10	8.9	16 23	0.7	Sa	. . .	. .	17 49	1.7	M	12 04	9.1	19 21	2.7	Th	13 57	8.2	20 00	5.2
31	10 36	8.4	4 49	4.0						31	0 44	9.2	7 01	3.6	31	1 44	8.2	8 54	3.4
Th	23 58	8.5	17 06	1.1						Tu	13 03	8.5	19 18	3.7	F	15 40	7.7	21 44	5.7

SEPTEMBER					OCTOBER					NOVEMBER					DECEMBER				
	h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.		h. m.	ft.	h. m.	ft.
1	3 00	7.7	10 24	3.3	1	4 35	7.0	11 18	3.0	1	6 37	7.6	9 27	3.2	1	6 50	7.3	9 23	2.3
Sa	17 44	8.0	23 20	5.6	M	18 25	8.4	. . .	. .	Th	18 59	8.5	12 30	2.7	Sa	18 40	7.9	12 32	3.1
2	4 50	7.6	11 39	2.9	2	6 04	7.6	0 15	4.6	2	7 16	8.2	1 03	2.5	2	7 28	7.8	0 58	1.7
Su	19 59	8.7	. . .	. .	Tu	19 06	8.9	12 16	2.7	F	19 25	8.7	13 09	2.5	Su	19 12	8.1	13 09	2.8
3	6 13	8.1	0 29	5.2	3	6 56	8.3	0 58	3.9	3	7 51	8.7	1 33	1.9	3	8 03	8.2	1 31	1.1
M	19 54	9.3	12 37	2.4	W	19 35	9.3	13 03	3.3	Sa	19 53	9.0	13 42	2.4	M	19 43	8.3	13 42	2.8
4	7 07	9.7	1 17	4.5	4	7 36	8.9	1 33	3.2	4	8 22	9.0	2 00	1.5	4	8 23	8.6	2 00	0.7
Tu	20 07	9.8	13 23	1.9	Th	20 05	9.6	13 49	2.1	Su	20 18	9.1	14 10	2.4	Tu	20 11	8.5	14 16	2.8
5	7 50	9.3	1 55	3.8	5	8 19	9.4	2 01	2.5	5	8 50	9.2	2 25	1.1	5	9 06	8.7	2 28	0.4
W	20 35	10.1	14 03	1.6	F	20 28	9.7	14 11	1.9	M	20 42	9.1	14 39	2.4	W	20 39	8.5	14 47	2.8
6	8 26	9.8	2 26	3.3	6	8 40	9.7	2 28	2.1	6	9 19	9.2	2 51	0.9	6	9 39	8.8	3 09	0.2
Th	21 03	10.3	14 36	1.5	Sa	20 52	9.8	14 39	2.0	Tu	21 05	9.0	15 05	2.5	Th	21 11	8.4	15 18	3.0
7	9 00	10.0	2 56	2.8	7	9 10	9.8	2 53	1.8	7	9 52	9.1	3 18	0.8	7	10 15	8.7	3 31	0.2
F	21 39	10.3	15 01	1.6	Su	21 17	9.7	15 05	2.1	W	21 30	8.8	15 33	3.0	F	21 43	8.2	15 54	3.2
8	9 29	10.1	3 23	2.6	8	9 38	9.7	3 18	1.6	8	10 25	8.8	3 47	0.9	8	10 56	8.5	4 08	0.3
Sa	21 51	10.1	15 32	1.9	M	21 36	9.6	15 30	2.5	Th	21 58	8.5	16 03	3.4	Sa	22 21	7.9	16 35	3.5
9	9 58	9.9	3 50	2.5	9	10 06	9.5	3 43	1.6	9	11 02	8.4	4 18	1.3	9	11 40	8.1	4 48	0.7
Su	22 17	9.8	15 59	2.3	Tu	22 01	9.3	15 55	2.9	F	22 30	8.1	16 37	3.9	Su	23 05	7.6	17 22	3.8
10	10 28	9.5	4 16	2.6	10	10 37	9.1	4 10	1.8	10	11 46	8.0	4 53	1.5	10	12 29	7.8	5 36	1.1
M	22 40	9.5	16 34	2.8	W	22 26	8.9	16 22	3.4	Sa	23 08	7.6	17 20	4.4	M	23 57	7.2	18 10	4.0
11	11 00	9.1	4 42	2.8	11	11 12	8.6	4 38	2.1	11	. . .	. .	5 45	2.0	11	. . .	. .	6 32	1.7
Tu	23 05	9.1	16 50	3.4	Th	22 52	8.4	16 51	4.0	Su	12 40	7.6	18 32	4.8	Tu	13 23	7.6	19 35	4.0
12	11 34	8.6	5 12	3.0	12	11 55	8.0	5 12	2.4	12	0 00	7.1	6 45	2.4	12	1 00	6.8	7 42	2.2
W	23 33	8.7	17 17	4.0	F	23 24	8.0	17 25	4.5	M	13 49	7.3	20 04	5.0	W	14 23	7.4	20 58	3.7
13	. . .	. .	5 45	3.3	13	. . .	. .	5 55	2.9	13	1 11	6.7	8 13	2.8	13	2 25	6.6	9 02	2.5
Th	12 16	8.0	17 49	4.7	Sa	12 49	7.5	18 12	5.3	Tu	15 07	7.3	21 42	4.7	Th	15 27	7.4	22 08	3.1
14	0 03	8.3	6 29	3.7	14	0 09	7.5	6 57	3.3	14	2 45	6.8	9 46	2.8	14	3 52	6.7	10 15	2.7
F	13 08	7.5	18 22	5.4	Su	14 06	7.2	20 09	5.7	W	16 26	7.5	22 50	3.9	F	16 30	7.5	23 05	2.3
15	0 42	7.8	7 38	4.0	15	1 15	7.0	8 47	3.5	15	4 25	6.9	10 54	2.5	15	5 18	7.2	11 20	2.7
Sa	14 29	7.1	20 38	6.0	W	15 59	7.2	22 19	5.5	Th	17 29	8.0	23 42	3.9	Sa	17 28	7.8	23 58	1.1
16	1 46	7.4	9 31	4.0	16	3 05	6.8	10 22	3.2	16	5 46	7.7	11 53	2.2	16	6 28	7.8	. . .	. .
Su	16 51	7.2	22 35	5.9	Th	17 23	7.7	23 20	4.7	F	18 12	8.5	. . .	. .	Su	18 18	8.2	12 17	2.6
17	3 30	7.2	10 57	3.5	17	4 57	7.2	11 32	2.6	17	6 42	8.5	0 25	1.8	17	7 23	8.5	0 45	0.5
M	19 09	7.0	23 55	5.3	W	18 13	8.4	. . .	. .	Sa	18 54	9.0	12 41	1.8	M	19 05	8.5	13 07	2.5
18	5 22	7.6	. . .	. .	18	6 07	9.1	0 10	3.7	18	7 30	9.3	1 07	0.8	18	8 12	9.1	1 31	-0.2
Tu	18 54	8.8	12 00	2.7	Th	18 55	9.1	12 34	1.9	Su	19 31	9.4	13 26	1.7	Tu	19 47	8.8	13 54	2.4
19	6 29	8.5	0 39	4.4	19	7 02	9.1	0 55	2.6	19	8 15	9.8	1 46	0.9	19	8 55	9.4	2 12	-0.7
W	19 28	9.5	12 49	1.9	F	19 29	9.7	13 07	1.4	M	20 19	9.6	14 09	1.7	W	20 28	9.0	14 35	2.4
20	7 16	9.5	1 21	3.5	20	7 46	10.0	1 31	1.6	20	9 00	10.1	2 26	-0.5	20	9 37	9.5	2 53	-0.9
Th	20 03	10.2	13 32	1.2	Sa	20 05	10.2	13 50	1.1	Tu	20 46	9.7	14 52	1.9	Th	21 10	8.9	15 18	2.3
21	8 00	10.3	1 58	2.6	21	8 27	10.5	2 09	0.8	21	9 42	10.0	3 05	-0.7	21	10 17	9.3	3 35	-0.8
F	20 36	10.7	14 11	0.8	Su	20 38	10.4	14 28	1.1	W	21 23	9.4	15 29	2.3	F	21 50	8.7	16 03	2.8
22	8 40	10.9	2 35	1.8	22	9 08	10.8	2 45	0.2	22	10 37	9.7	3 45	-0.5	22	11 02	8.9	4 16	-0.4
Sa	21 09	10.8	14 59	0.7	W	21 13	10.4	15 07	1.3	Th	22 30	9.0	16 12	2.9	Sa	22 34	8.2	16 47	3.0
23	9 21	11.1	3 08	1.3	23	9 51	10.6	3 23	0.0	23	11 14	8.1	4 29	-0.1	23	11 45	8.5	5 01	-0.3
Su	21 42	10.8	15 28	0.9	Th	21 46	10.1	15 47	1.9	F	22 44	8.4	17 00	3.5	Su	23 22	7.6	17 40	3.3
24	10 03	11.0	3 45	1.0	24	10 36	10.1	4 02	0.1	24	12 05	8.4	5 17	0.6	24	. . .	. .	5 48	1.1
M	22 16	10.5	16 07	1.5	W	22 24	9.5	16 27	2.7	Sa	23 30	7.6	17 56	4.0	M	12 29	8.0	18 36	3.6
25	10 48	10.5	4 23	1.1	25	11 24	9.4	4 44	0.5	25	. . .	. .	6 10	1.4	25	0 11	7.0	6 39	1.9
Tu	22 53	10.0	16 47	2.4	Th	23 02	8.8	17 11	3.6	Su	12 07	7.9	19 19	4.3	Tu	13 39	7.5	19 42	3.6
26	11 35	9.7	5 05	1.4	26	12 17	8.6	5 33	1.2	26	0 30	6.9	7 17	2.2	26	1 12	6.5	7 38	2.6
W	23 30	9.3	17 30	3.4	F	23 47	8.0	18 09	4.4	M	14 08	7.5	20 41	4.3	W	14 08	7.2	20 52	3.5
27	. . .	. .	5 55	2.0	27	. . .	. .	6 31	2.0	27	1 44	6.4	8 36	2.8	27	2 20	6.1	8 42	3.2
Th	12 20	8.9	18 22	4.5	Sa	13 25	7.9	19 30	5.0	Tu	15 18	7.3	21 59	4.0	Th	15 04	6.9	21 57	3.2
28	0 12	8.5	6 55	2.6	28	0 46	7.2	7 50	2.7	28	2 25	6.2	9 51	3.1	28	3 44	5.9	9 51	3.6
F	13 40	8.1	19 39	5.4	Su	14 51	7.5	21 22	5.1	W	16 28	7.3	22 59	3.5	F	15 57	5.8	22 52	2.8
29	1 05	7.8	8 20	3.1	29	2 11	6.7	9 26	3.1	29	3 01	6.3	10 54	3.2	29	5 17	6.0	10 54	3.8
Sa	15 21	7.6	21 27	5.7	M	16 27	7.6	23 46	4.7	Th	17 23	7.4	23 45	2.8	Sa	17 09	6.8	23 41	2.4
30	2 39	7.2	10 00	3.3	30	4 12	6.5	10 43	3.1	30	5 05	6.8	11 46	3.1	30	6 20	6.5	11 59	3.7
Su	17 13	7.9	23 14	5.3	Th	17 32	7.9	23 47	4.0	F	18 05	7.5	. . .	. .	Su	17 59	7.0	. . .	. .
										31	5 42	7.0	11 43	2.9	31	7 07	7.0	0 22	1.8
										W	18 22	8.2	. . .	. .	M	18 33	7.3	12 36	3.6

Time meridian 135° E. The hours of the day are numbered consecutively from 0h (midnight) to 23h (11 00 p. m.). 12h is noon. All hours greater than 12 are in the afternoon (p. m.).

Heights are reckoned from the datum of soundings on the largest scale charts of the locality which is about 1 foot below mean low water springs.

TABLE III - 5f. *Daily Tide Predictions.*

Approved For Release 2006/09/25 : CIA-RDP79-01144A000900010003-9

Approved For Release 2006/09/25 : CIA-RDP79-01144A000900010003-9

SHIMONOSEKI, JAPAN, 1945

MAY						JUNE						JULY						AUGUST					
Day	High		Low			Day	High		Low			Day	High		Low			Day	High		Low		
	Time	Ht.	Time	Ht.			Time	Ht.	Time	Ht.			Time	Ht.	Time	Ht.			Time	Ht.	Time	Ht.	
	h. m.	ft.	h. m.	ft.			h. m.	ft.	h. m.	ft.			h. m.	ft.	h. m.	ft.			h. m.	ft.	h. m.	ft.	
1	10 34	7.5	5 12	2.6		1	0 30	7.2	6 27	3.5		1	1 03	7.6	7 05	3.1		1	1 48	7.6	8 40	2.7	
Tu	23 43	7.1	17 30	0.7		F	11 38	7.2	18 50	1.4		Su	12 35	7.4	19 29	1.9		W	14 39	7.1	21 05	3.6	
2	11 06	7.3	5 45	3.0		2	1 22	7.0	7 25	3.7		2	1 46	7.4	8 12	3.1		2	2 45	7.4	9 56	2.7	
W	. . .	. .	18 08	1.1		Sa	12 34	6.8	19 50	1.9		M	13 41	7.0	20 33	2.5		Th	16 13	6.8	22 28	4.1	
3	0 25	6.7	6 25	3.5		3	2 26	6.8	8 43	3.7		3	2 40	7.2	9 22	3.0		3	3 55	7.2	11 13	2.4	
Th	11 46	7.0	18 55	1.6		Su	13 50	6.5	21 09	2.3		Tu	15 03	6.7	21 47	3.0		F	17 53	6.9	23 42	4.1	
4	1 21	6.4	7 29	3.9		4	3 33	6.7	10 06	3.3		4	3 41	7.2	10 35	2.6		4	5 19	7.3	. . .	. .	
F	12 37	6.5	20 05	2.0		M	15 28	6.3	22 27	2.5		W	16 38	6.7	23 00	3.2		Sa	19 14	7.3	12 19	1.9	
5	2 43	6.2	9 11	4.1		5	4 38	6.8	11 13	2.7		5	4 47	7.2	11 40	2.1		5	6 36	7.5	0 45	3.9	
Sa	13 55	6.1	21 42	2.2		Tu	17 07	6.5	23 33	2.4		Th	18 06	6.9	. . .	. .		Su	20 15	7.8	13 15	1.4	
6	4 20	6.2	10 45	3.6		6	5 39	7.1	. . .	. .		6	5 50	7.4	0 04	3.2		6	7 42	7.9	1 39	3.6	
Su	15 47	5.9	23 04	2.1		W	18 25	7.0	12 10	1.8		F	19 18	7.3	12 27	1.4		M	21 01	8.2	14 05	1.0	
7	5 36	6.6	11 50	2.8		7	6 31	7.4	0 30	2.2		7	6 49	7.7	1 00	3.2		7	8 31	8.2	2 27	3.3	
M	17 36	5.3	. . .	. .		Th	19 27	7.4	13 00	1.1		Sa	20 18	7.7	13 29	0.9		Tu	21 40	8.4	14 50	0.8	
8	6 31	7.0	0 07	1.7		8	7 18	7.8	1 21	2.1		8	7 42	8.0	1 52	3.0		8	9 16	8.5	3 10	3.0	
Tu	18 47	6.9	12 41	1.9		F	20 22	7.8	13 47	0.4		Su	21 06	8.0	14 18	0.6		W	22 15	8.6	15 30	0.7	
9	7 15	7.4	0 59	1.3		9	8 01	8.0	2 08	2.1		9	8 31	8.2	2 38	2.9		9	9 54	8.6	3 49	2.7	
W	19 43	7.6	13 27	1.0		Sa	21 10	8.1	14 31	-0.1		M	21 52	8.2	15 02	0.2		Th	22 46	8.5	16 08	0.8	
10	7 53	7.8	1 47	1.0		10	8 40	8.2	2 51	2.1		10	9 18	8.3	3 21	2.9		10	10 29	8.5	4 26	2.6	
Th	20 34	7.9	14 09	0.2		Su	21 57	8.2	15 14	-0.3		Tu	22 32	8.3	15 46	0.2		F	23 16	8.4	16 44	1.1	
11	8 30	8.1	2 29	1.0		11	9 19	8.3	3 34	2.3		11	9 56	8.3	4 03	2.8		11	11 01	8.3	5 01	2.6	
F	21 19	8.2	14 50	-0.4		M	22 39	8.1	15 57	-0.2		W	23 09	8.2	16 25	0.4		Sa	23 41	8.2	17 19	1.5	
12	9 05	8.2	3 11	1.1		12	9 58	8.2	4 14	2.5		12	10 36	8.2	4 44	2.9		12	11 30	8.0	5 36	2.7	
Sa	22 00	8.3	15 30	-0.7		Tu	23 21	8.0	16 38	0.0		Th	23 44	8.1	17 04	0.8		Su	. . .	. .	17 51	2.1	
13	9 37	8.3	3 50	1.4		13	10 33	8.0	4 55	2.8		13	11 11	8.0	5 23	3.0		13	0 01	8.0	6 12	2.9	
Su	22 42	8.1	16 11	-0.6		W	. . .	. .	17 19	0.5		F	. . .	. .	17 43	1.3		M	11 55	7.8	18 23	2.7	
14	10 11	8.2	4 29	1.8		14	0 05	7.7	5 39	3.2		14	0 19	7.8	6 04	3.2		14	0 19	7.7	6 48	3.1	
M	23 27	7.8	16 51	-0.3		Th	11 12	7.7	18 02	1.1		Sa	11 45	7.6	18 21	1.8		Tu	12 26	7.3	18 56	3.3	
15	10 42	7.9	5 08	2.3		15	0 47	7.4	6 27	3.6		15	0 52	7.6	6 48	3.4		15	0 43	7.5	7 32	3.4	
Tu	. . .	. .	17 34	0.2		F	11 52	7.2	18 49	1.7		Su	12 22	7.2	19 02	2.5		W	13 10	6.9	19 34	4.0	
16	0 15	7.4	5 52	3.0		16	1 32	7.1	7 21	3.8		16	1 23	7.3	7 40	3.6		16	1 17	7.3	8 31	3.5	
W	11 19	7.5	18 20	0.8		Sa	12 46	6.7	19 41	2.3		M	13 05	6.8	19 48	3.1		Th	14 06	6.5	20 38	4.6	
17	1 03	7.0	6 38	3.5		17	2 25	6.9	8 29	4.0		17	1 58	7.1	8 37	3.8		17	2 01	7.1	9 52	3.7	
Th	11 58	7.0	19 12	1.6		Su	13 46	6.3	20 43	2.9		Tu	13 58	6.4	20 44	3.7		F	15 43	6.3	22 23	4.9	
18	2 00	6.6	7 46	4.0		18	3 20	6.7	9 43	3.9		18	2 38	7.0	9 48	3.7		18	3 06	6.9	11 10	3.3	
F	12 54	6.4	20 19	2.2		M	15 13	6.1	21 52	3.3		W	15 20	6.2	21 56	4.1		Sa	17 49	6.5	23 43	4.8	
19	3 14	6.4	9 15	4.2		19	4 19	6.7	10 48	3.5		19	3 28	6.8	10 54	3.5		19	4 33	6.8	. . .	. .	
Sa	14 18	5.9	21 27	2.7		Tu	16 44	6.0	22 59	3.4		Th	16 58	6.2	23 10	4.2		Su	19 02	7.0	12 13	2.8	
20	4 31	6.4	10 37	3.9		20	5 12	6.8	11 45	3.0		20	4 35	6.8	11 53	2.9		20	6 06	7.1	0 44	4.4	
Su	16 24	5.8	22 50	2.8		W	18 00	6.2	23 55	3.4		F	18 25	6.5	. . .	. .		M	19 54	7.6	13 06	2.1	
21	5 36	6.6	11 39	3.3		21	5 58	7.0	. . .	. .		21	5 39	7.0	0 12	4.1		21	7 12	7.5	1 34	3.8	
M	17 48	6.0	23 50	2.7		Th	18 59	6.6	12 32	2.4		Sa	19 27	7.0	12 44	2.4		Tu	20 34	8.1	13 52	1.4	
22	6 25	6.8	. . .	. .		22	6 43	7.2	0 45	3.2		22	6 38	7.2	1 06	3.9		22	8 04	8.0	2 18	3.2	
Tu	18 47	6.4	12 29	2.7		F	19 49	7.0	13 16	1.8		Su	20 15	7.5	13 30	1.7		W	21 11	8.5	14 36	0.9	
23	7 06	7.1	0 38	2.4		23	7 22	7.4	1 31	3.1		23	7 29	7.6	1 53	3.6		23	8 48	8.5	2 58	2.6	
W	19 38	6.8	13 10	2.0		Sa	20 33	7.4	13 56	1.3		M	20 55	7.9	14 13	1.2		Th	21 45	8.8	15 16	0.5	
24	7 40	7.3	1 21	2.3		24	7 58	7.6	2 15	3.9		24	8 15	7.9	2 36	3.2		24	9 31	8.9	3 36	2.0	
Th	20 19	7.1	13 49	1.4		Su	21 12	7.7	14 36	0.9		Tu	21 33	8.2	14 55	0.7		F	22 17	8.9	15 55	0.4	
25	8 08	7.5	2 02	2.2		25	8 29	7.8	2 54	2.9		25	8 55	8.2	3 16	2.9		25	10 12	9.1	4 13	1.6	
F	20 53	7.4	14 25	1.0		M	21 49	7.9	15 13	0.5		W	22 09	8.5	15 34	0.4		Sa	22 47	8.9	16 33	0.5	
26	8 34	7.6	2 39	2.1		26	9 03	8.0	3 32	2.8		26	9 26	8.5	3 55	2.7		26	10 48	9.0	4 51	1.4	
Sa	21 30	7.6	14 59	0.6		Tu	22 22	8.1	15 50	0.4		Th	22 43	8.6	16 13	0.3		Su	23 17	8.8	17 11	0.9	
27	8 57	7.7	3 15	2.2		27	9 36	8.1	4 10	2.8		27	10 16	8.6	4 34	2.4		27	11 31	8.8	5 30	1.4	
Su	21 59	7.7	15 32	0.4		W	23 02	8.1	16 28	0.3		F	23 17	8.5	16 52	0.4		M	23 49	8.6	17 51	1.5	
28	9 20	7.8	3 52	2.4		28	10 15	8.1	4 49	2.9		28	10 56	8.6	5 13	2.3		28	. . .	. .	6 13	1.6	
M	22 33	7.7	16 06	0.3		Th	23 39	8.0	17 07	0.5		Sa	23 51	8.4	17 32	0.8		Tu	12 17	8.3	18 33	2.4	
29	9 46	7.8	4 23	2.6		29	10 55	8.0	5 30	3.0		29	11 41	8.3	5 54	2.3		29	0 21	8.2	7 01	1.9	
Tu	23 07	7.6	16 41	0.3		F	. . .	. .	17 49	0.6		Su	. . .	. .	18 15	2.4		W	13 10	7.7	19 22	3.2	
30	10 16	7.7	5 01	2.9		30	0 18	7.8	6 13	3.0		30	0 27	8.2	6 40	2.4		30	1 03	7.9	8 03	2.4	
W	23 46	7.5	17 19	0.6		Sa	11 40	7.7	18 35	1.3		M	12 29	8.0	19 00	2.1		Th	14 21	7.2	20 25	4.1	
31	10 52	7.6	5 39	3.2								31	1 05	7.9	7 34	2.5		31	1 50	7.4	9 22	2.7	
Th	. . .	. .	18 00	0.9								Tu	13 26	7.5	19 55	2.6		F	15 59	6.8	21 59	4.7	

SEPTEMBER						OCTOBER						NOVEMBER						DECEMBER					
	h. m.	ft.	h. m.	ft.			h. m.	ft.	h. m.	ft.			h. m.	ft.	h. m.	ft.			h. m.	ft.	h. m.	ft.	
1	3 12	7.0	10 49	2.7		1	4 56	6.6	11 40	2.6		1	7 10	6.9	0 44	2.8		1	7 25	6.4	0 54	1.7	
Sa	17 49	6.9	23 27	4.7		M	18 47	7.2	. . .	. .		Th	19 35	7.5	12 57	2.0		Sa	19 23	7.0	13 06	2.1	
2	5 03	7.0	11 59	2.4		2	6 26	7.0	0 20	4.1		2	7 54	7.3	1 25	2.1		2	8 08	6.8	1 34	1.1	
Su	19 11	7.3	. . .	. .		Tu	19 38	7.7	12 39	2.2		F	20 07	7.8	13 39	1.8		Su	19 56	7.1	13 48	2.0	
3	6 34	7.3	0 35	4.3		3	7 30	7.8	1 10	3.3		3	8 32	7.8	2 03	1.5		3	8 45	7.0	2 12	0.6	
M	20 04	7.8	13 01	1.9		W	20 15	8.1	13 28	1.8		Sa	20 36	7.9	14 17	1.6		M	20 24	7.2	14 26	1.9	
4	7 39	7.8	1 28	3.7		4	8 15	8.0	1 53	2.6		4	9 06	7.8	2 38	1.0		4	9 20	7.2	2 47	0.3	
Tu	20 43	8.3	13 50	1.5		Th	20 45	8.3	14 00	1.5		Su	21 01	7.9	14 52	1.7		Tu	20 47	7.3	15 02	2.0	
5	8 27	8.2	2 13	3.1		5	8 53	8.2	2 30	2.0		5	9 38	7.8	3 11	0.7		5	9 53	7.3	3 20	0.0	
W	21 18	8.6	14 32	1.2		F	21 13	8.4	14 46	1.4		M	21 21	7.9	15 25	1.8		W	21 10	7.3	15 37	2.1	
6	9 07	8.5	2 52	2.6		6	9 26	8.4	3 05	1.6		6	10 05	7.8	3 42	0.5		6	10 23	7.3	3 53	0.0	
Th	21 47	8.7	15 11	1.0		Sa	21 39	8.4	15 20	1.4		Tu	21 37	7.8	15 58	2.1		Th	21 33	7.3	16 11	2.3	
7	9 43	8.6	3 29	2.2		7	9 57	8.4	3 38	1.3		7	10 32	7.7	4 13	0.5		7	10 55	7.2	4 27	0.0	
F	22 15	8.6	15 47	1.1		Su	21 59	8.1	15 52	1.6		W	21 51	7.7	16 27	2.4		F	22 01	7.3	16 44	2.5	
8	10 16	8.5	4 03	2.0		8	10 21	8.2	4 08	1.2		8	10 59	7.6	4 43	0.7		8	11 28	7.0	5 01	0.1	
Sa	22 37	8.5	16 19	1.4		M	22 14	8.2	16 21	2.0		Th	22 16	7.6	16 55	2.8		Sa	22 36	7.1	17 21	2.7	
9	10 42	8.4	4 34	1.9		9	10 45	8.0	4 37	1.2		9	11 28	7.2	5 14	0.9		9	12 08	6.8	5 39	0.4	
Su	22 55	8.3	16 50	1.8		Tu	22 25	8.1	16 50	2.4		F	22 43	7.4	17 28	3.2		Su	23 15	6.8	18 03	2.9	
10	11 05	8.2	5 06	2.0		10	11 10	7.8	5 06	1.4		10	12 06	6.9	5 50	1.2		10	. . .	. .	6 22	0.8	
M	23 10	8.1	17 19	2.2		W	22 42	8.0	17 17	2.9		Sa	23 20	7.1	18 05	3.7		M	12 51	6.5	18 52	3.1	
11	11 27	7.9	5 36	2.2		11	11 35	7.5	5 34	1.7		11	. . .	. .	6 31	1.7		11	0 06	6.5	7 13	1.3	
Tu	23 22	8.0	17 46	2.9		Th	23 08	7.8	17 43	3.5		Su	12 56	6.6	19 00	4.0		Tu	13 42	6.3	20 01	3.1	
12	11 54	7.6	6 07	2.5		12	12 13	7.1	6 06	2.1		12	0 09	6.7	7 33	2.1		12	1 12	6.1	8 23	1.7	
W	23 48	7.8	18 14	3.5		F	23 41	7.4	18 16	4.1		M	14 14	6.3	20 32	4.2		W	14 45	6.2	21 26	2.9	
13	. . .	. .	6 40	2.8		13	. . .	. .	6 46	2.5		13	1 17	6.2	9 00	2.4		13	2 26	5.7	9 46	2.1	
Th	12 30	7.2	18 45	4.1		Sa	13 04	6.7	19 04	4.6		Tu	15 45	6.2	22 13	3.8		Th	15 57	6.2	22 41	2.3	
14	0 20	7.5	7 22	3.1		14	0 27	7.0	7 54	2.9		14	2 57	5.9	10 30	2.4		14	4 21	5.8	11 00	2.1	
F	13 24	6.7	19 31	4.7		Su	14 30	6.4	21 04	5.0		W	17 06	6.4	23 25	3.1		F	17 03	6.4	23 43	1.6	
15	1 04	7.1	8 38	3.5		15	1 30	6.5	9 41	3.1		15	5 02	6.1	11 40	2.0		15	5 50	6.1	. . .	. .	
Sa	14 48	6.4	21 35	5.2		M	16 36	6.4	22 53	4.7		Th	18 02	6.8	. . .	. .		Sa	17 59	6.6	12 03	1.9	
16	2 07	6.8	10 26	3.4		16	3 14	6.2	11 10	2.7		16	6 19	6.6	0 17	2.2		16	7 01	6.5	0 36	0.7	
Su	17 13	6.5	23 22	5.0		Tu	17 55	6.8	. . .	. .		F	18 45	7.3	12 34	1.6		Su	18 50	7.0	12 57	1.7	
17	3 44	6.5	11 44	2.9		17	5 35	6.5	0 00	3.9		17	7 18	7.2	1 04	1.2		17	7 59	7.0	1 25	0.0	
M	18 35	7.0	. . .	. .		W	18 48	7.3	12 13	2.1		Sa	19 27	7.6	13 21	1.3		M	19 36	7.3	13 46	1.0	
18	5 53	6.6	0 25	4.3		18	6 44	7.1	0 49	2.9		18	8 06	7.7	1 45	0.3		18	8 48	7.3	2 10	-0.6	
Tu	19 27	7.5	12 41	2.2		Th	19 29	7.8	13 03	1.5		Su	20 04	8.0	14 06	1.1		Tu	20 18	7.5	14 31	1.5	
19	7 01	7.4	1 14	3.5		19	7 39	7.6	1 31	1.9		19	8 54	8.1	2 28	-0.4		19	9 35	7.6	2 54	-1.0	
W	20 06	8.0	13 29	1.5		F	20 04	8.2	13 48	1.1		M	20 39	8.2	14 48	1.1		W	21 00	7.7	15 13	1.5	
20	7 55	8.1	1 57	2.7		20	8 23	8.3	2 11	1.0		20	9 39	8.2	3 08	-0.8		20	10 18	7.8	3 37	-1.2	
Th	20 41	8.5	14 14	0.9		Sa	20 38	8.6	14 30	0.8		Tu	21 15	8.3	15 28	1.3		Th	21 42	7.7	16 55	1.6	
21	8 39	8.6	2 38	1.8		21	9 07	8.7	2 49	0.3		21	10 21	8.1	3 49	-0.9		21	11 00	7.5	4 19	-1.0	
F	21 12	8.8	14 54	0.6		Su	21 09	8.7	15 09	0.8		W	21 48	8.2	16 07	1.6		F	22 20	7.5	16 36	1.8	
22	9 20	9.0	3 13	1.2		22	9 46	8.9	3 28	-0.2		22	11 00	7.8	4 20	-0.7		22	11 40	7.2	5 00	-0.7	
Sa	21 43	9.0	15 32	0.5		M	21 40	8.8	15 48	1.0		Th	22 24	8.0	16 47	2.0		Sa	22 56	7.2	17 19	2.1	
23	9 59	9.2	3 50	0.8		23	10 28	8.7	4 05	-0.4		23	11 49	7.5	5 12	-0.3		23	12 23	6.9	5 43	-0.1	
Su	22 12	9.0	16 10	0.7		Tu	22 11	8.7	16 26	1.4		F	22 58	7.6	17 29	2.6		Su	23 40	6.8	18 03	2.4	
24	10 38	9.1	4 28	0.5		24	11 09	8.4	4 45	-0.2		24	12 40	7.0	6 57	0.3		24	. . .	. .	6 28	0.6	
M	22 41	8.9	16 48	1.2		W	22 42	8.4	17 04	2.0		Sa	23 40	7.1	18 17	3.1		M	13 06	6.6	18 53	2.6	
25	11 19	8.8	5 06	0.5		25	11 55	7.9	5 27	0.2		25	. . .	. .	6 48	1.0		26	0 26	6.3	7 18	1.2	
Tu	23 10	8.7	17 26	1.8		Th	23 15	8.0	17 43	2.8		Su	13 39	6.5	19 18	3.5		Tu	13 51	6.3	19 55	2.8	
26	12 03	8.3	5 47	0.8		26	12 48	7.3	6 13	0.8		26	0 32	6.5	7 52	1.7		26	1 23	5.8	8 15	1.9	
W	23 43	8.3	18 06	2.7		F	23 51	7.5	18 30	3.5		W	14 42	6.3	20 38	3.7		W	14 43	6.0	21 08	2.9	
27	. . .	. .	6 33	1.4		27	. . .	. .	7 07	1.0		27	1 58	5.9	9 06	2.3		27	2 43	5.4	9 23	2.5	
Th	12 57	7.7	18 52	3.6		Sa	13 56	6.8	19 36	4.2		Th	15 59	5.2	22 05	3.6		Th	15 43	5.9	22 21	2.7	
28	0 21	7.8	7 21	2.0		28	0 40	6.8	8 21	2.2		28	3 49	7.8	10 22	2.5		28	4 16	5.2	10 33	2.7	
F	14 05	7.0	19 55	4.4		Su	15 24	6.5	21 13	4.5		W	17 05	6.3	23 14	3.0		F	16 43	5.8	23 24	2.3	
29	1 08	7.2	8 50	2.6		29	2 13	6.3	9 51	2.6		29	6 23	5.7	11 27	2.5		29	5 45	5.3	11 36	2.7	
Sa	15 49	6.6	21 36	4.9		M	16 57	6.5	22 46	4.2		Th	18 02	6.6	. . .	. .		Sa	17 42	6.0	. . .	. .	
30	2 28	6.7	10 23	2.8		30	4 32	6.1	11 06	2.5		30	6 35	6.1	0 09	2.4		30	6 52	5.0	0 17	1.7	
Su	17 33	6.8	23 12	4.7		Tu	18 09	6.9	23 54	3.6		F	18 49	6.7	12 20	2.3		Su	18 33	5.1	12 32	2.6	
						31	6 08	6.4	. . .	. .								31	7 45	6.0	1 03	1.1	
						W	18 58	7.2	12 10	2.3								M	19 15	6.3	13 19	2.4	

Time meridian 135° E. The hours of the day are numbered consecutively from 0° (midnight) to 23° (11 00 p. m.). 12° is noon. All hours greater than 12 are in the afternoon (p. m.).
Heights are reckoned from the datum of soundings on the largest scale charts of the locality which is about 1 foot below mean low water springs.

TABLE III - 5g. *Daily Tide Predictions.*

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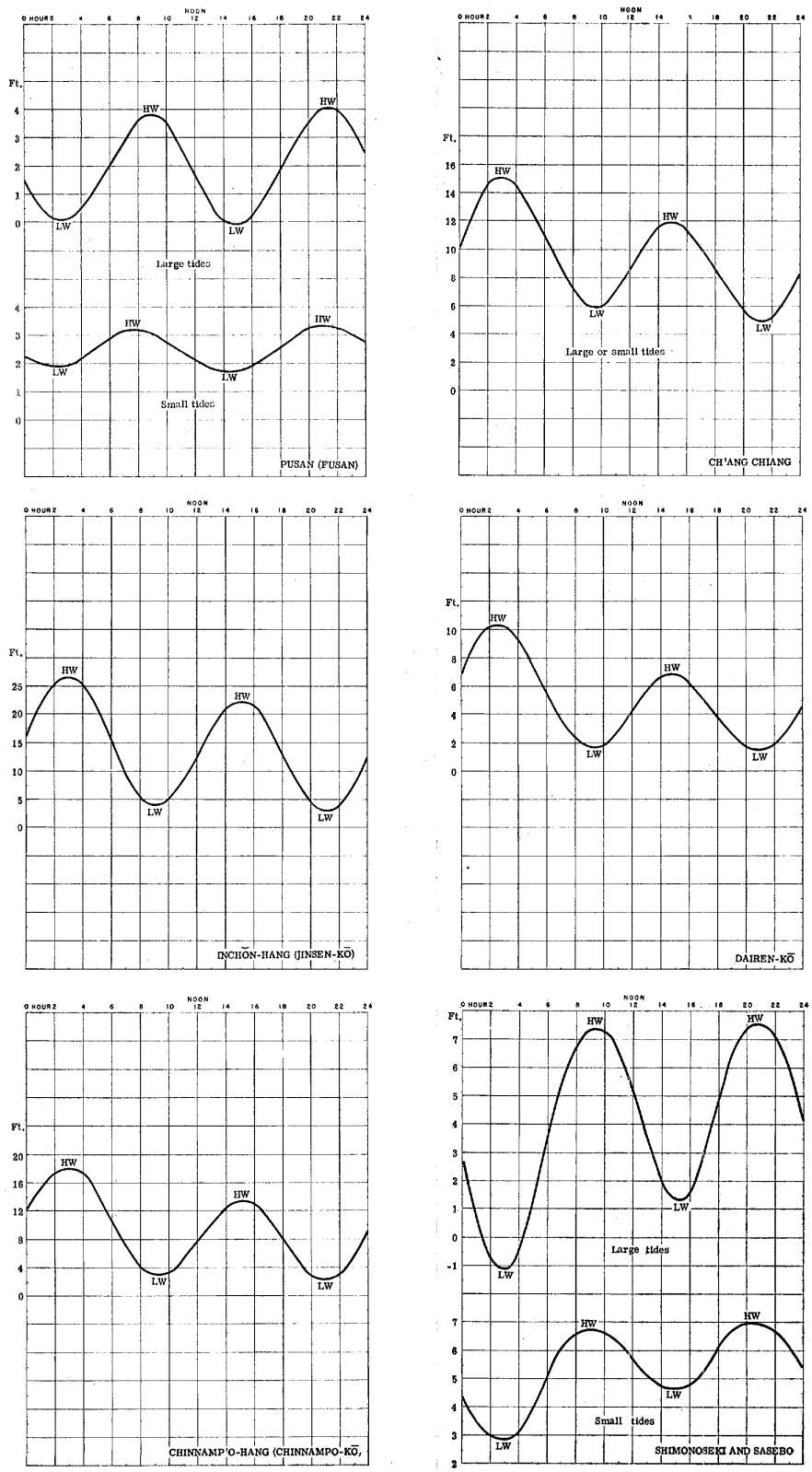

FIGURE III - 16. *Typical Tide Curves.*

Pusan (Fusan), Dairen-kō,
Ch'ang Chiang, Chinnamp'o-hang (Chinnampo-kō),
Inch'on-hang (Jinsen-kō), Shimonoseki and Sasebo.

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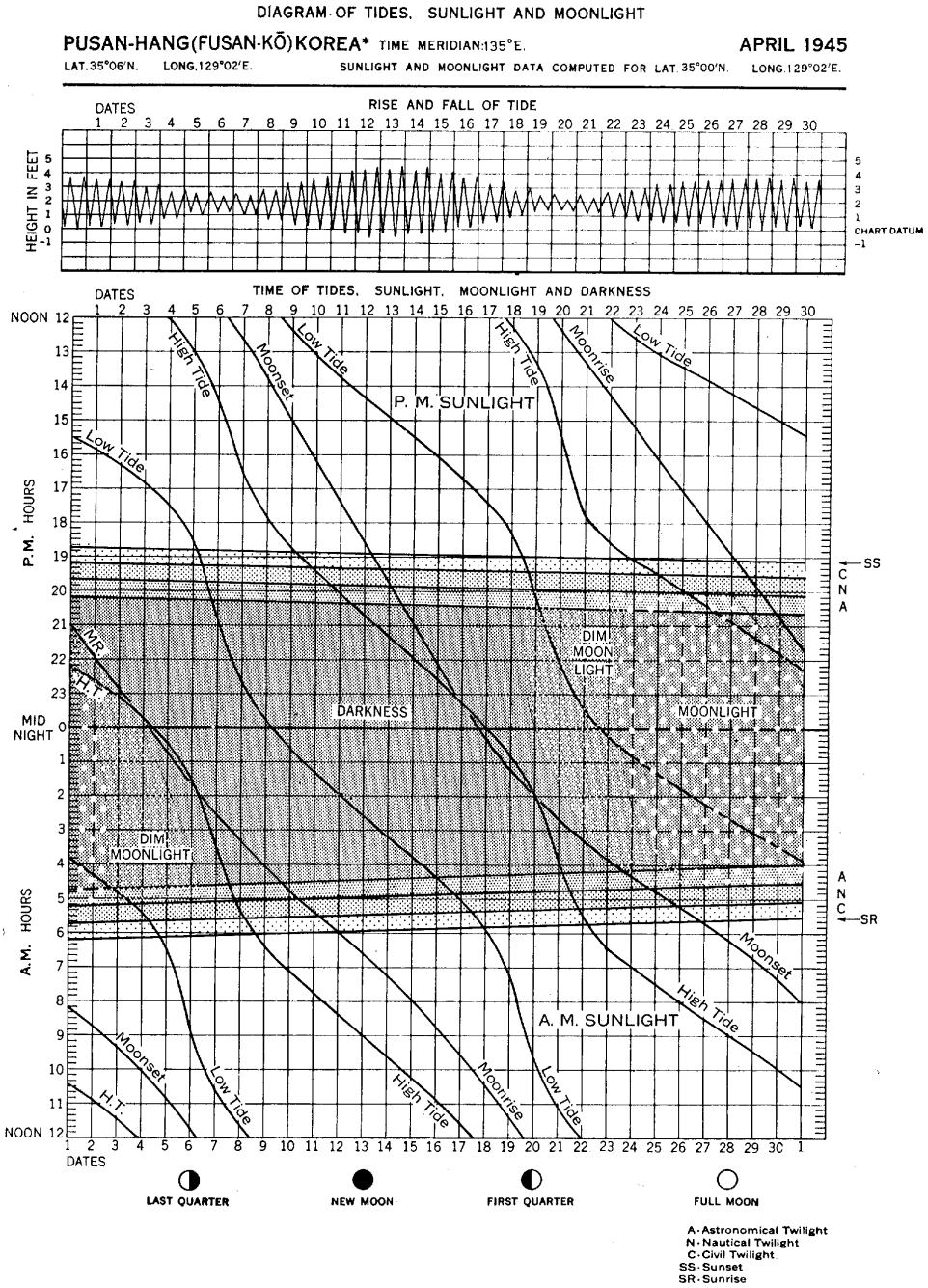

*This diagram, with the changes indicated, is also applicable to the following places:

ULSAN-MAN (URUSAN-WAN).–Subtract 55 minutes from times of high and low tides; multiply heights of high and low tides by 0.5.

CH'ŎNSŎNG-MAN (TENJŌ-WAN), KADŎK-TO (KATOKU-TŌ) and CHISE-P'O (CHISE-PO), KŎJE-DO (KYOSAI-TŌ).–Add 10 minutes to times of high and low tides; multiply heights of high and low tides by 1.5.

FIGURE III - 17. *Tides, Sunlight and Moonlight.*
Diagram for Pusan-hang (Fusan-kō) for April, 1945.

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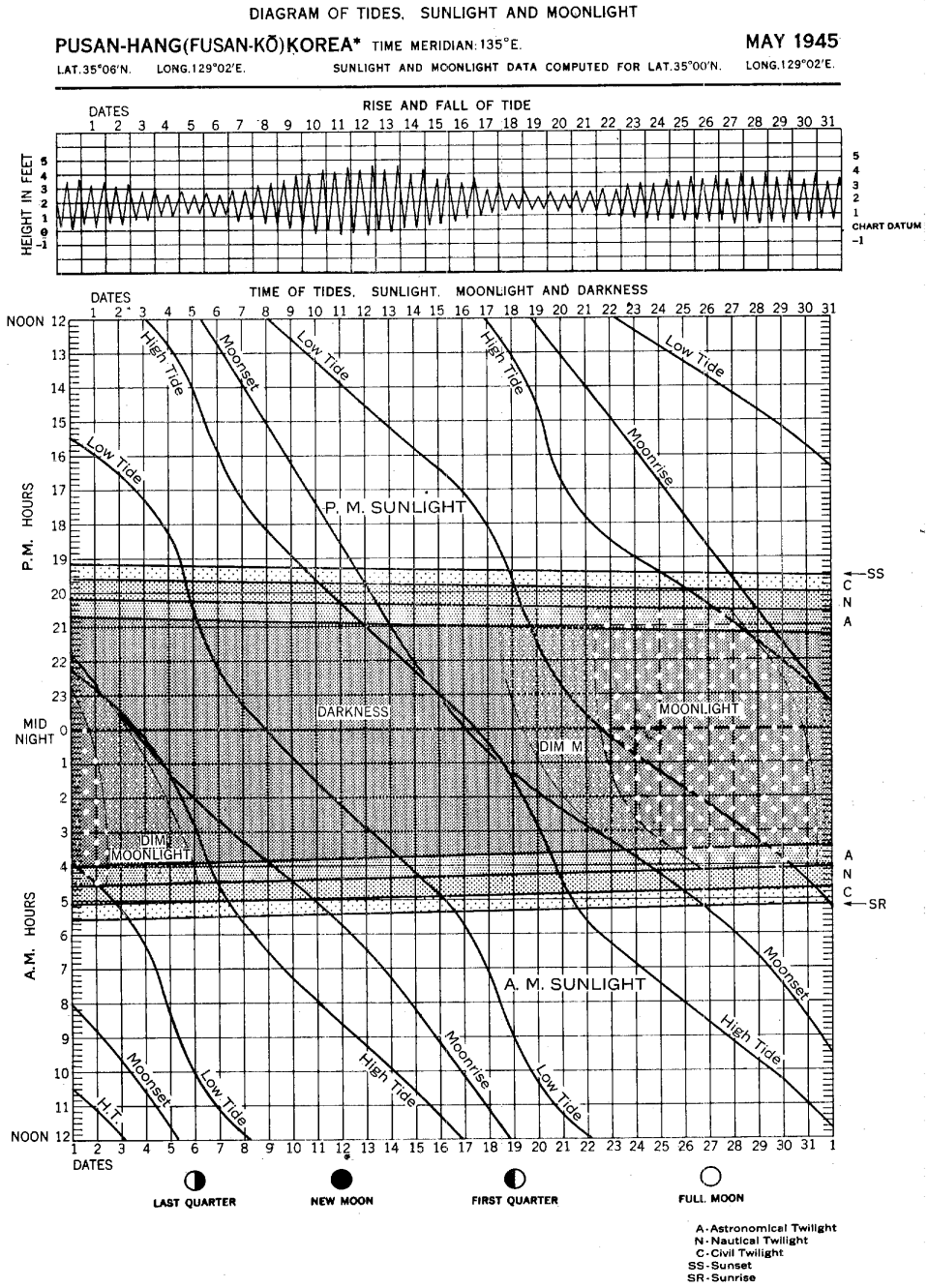

*This diagram, with the changes indicated, is also applicable to the following places:

ULSAN-MAN (URUSAN-WAN).—Subtract 55 minutes from times of high and low tides; multiply heights of high and low tides by 0.5.

CH'ŎNSŎNG-MAN (TENJŌ-WAN), KADŎK-TO (KATOKU-TŌ) and CHISE-P'O (CHISE-PO), KŎJE-DO (KYOSAI-TŌ).—Add 10 minutes to times of high and low tides; multiply heights of high and low tides by 1.5.

FIGURE III - 18. *Tides, Sunlight and Moonlight.*
Diagram for Pusan-hang (Fusan-kō) for May, 1945.

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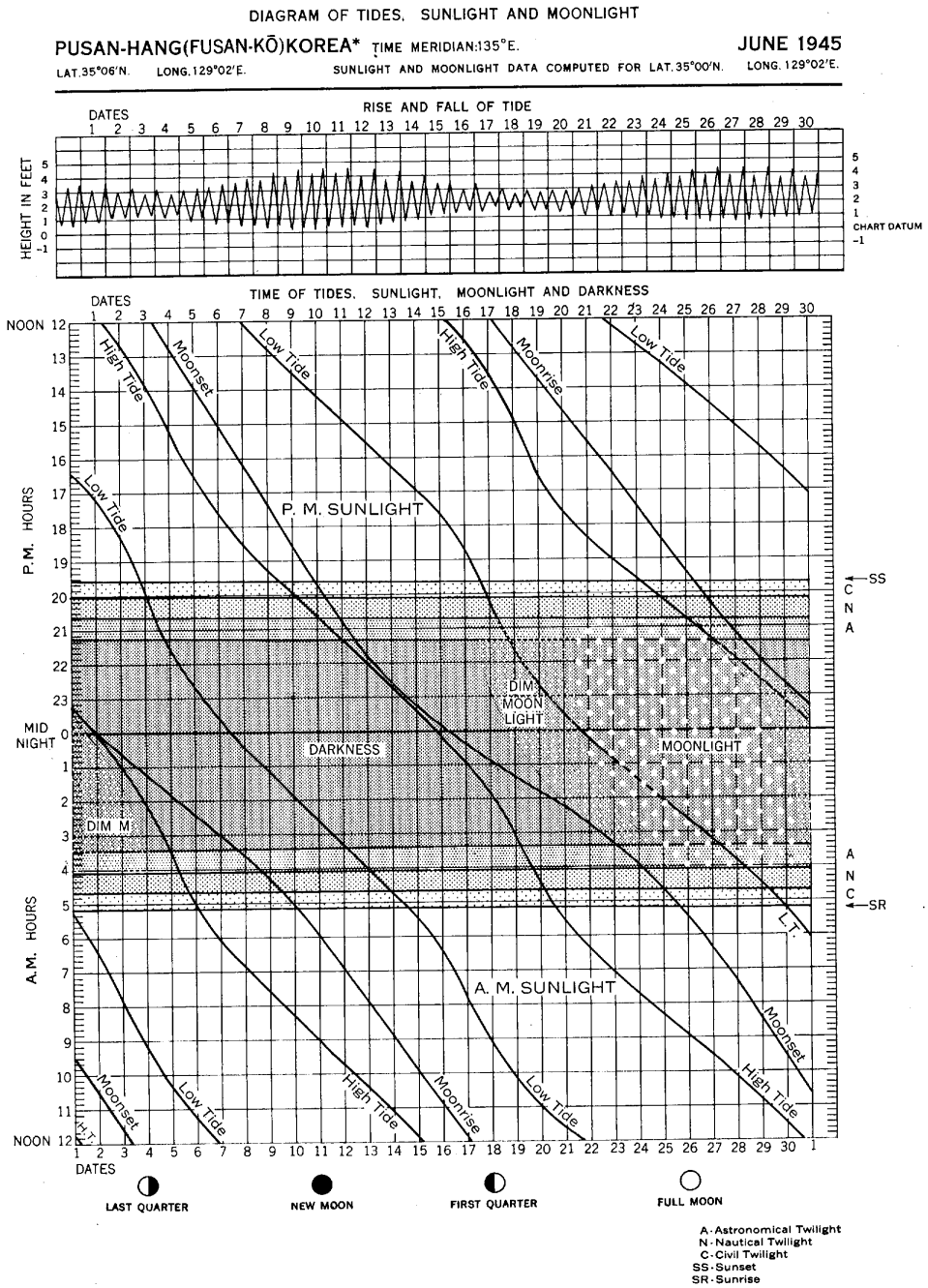

*This diagram, with the changes indicated, is also applicable to the following places:
ULSAN-MAN (URUSAN-WAN).–Subtract 55 minutes from times of high and low tides; multiply heights of high and low tides by 0.5.
CH'ŎNSŎNG-MAN (TENJŌ-WAN), KADŎK-TO (KATOKU-TŌ) and CHISE-P'O (CHISE-PO), KŎJE-DO (KYOSAI-TŌ).–Add 10 minutes to times of high and low tides; multiply heights of high and low tides by 1.5.

FIGURE III - 19. *Tides, Sunlight and Moonlight.*
Diagram for Pusan-hang (Fusan-kō) for June, 1945.

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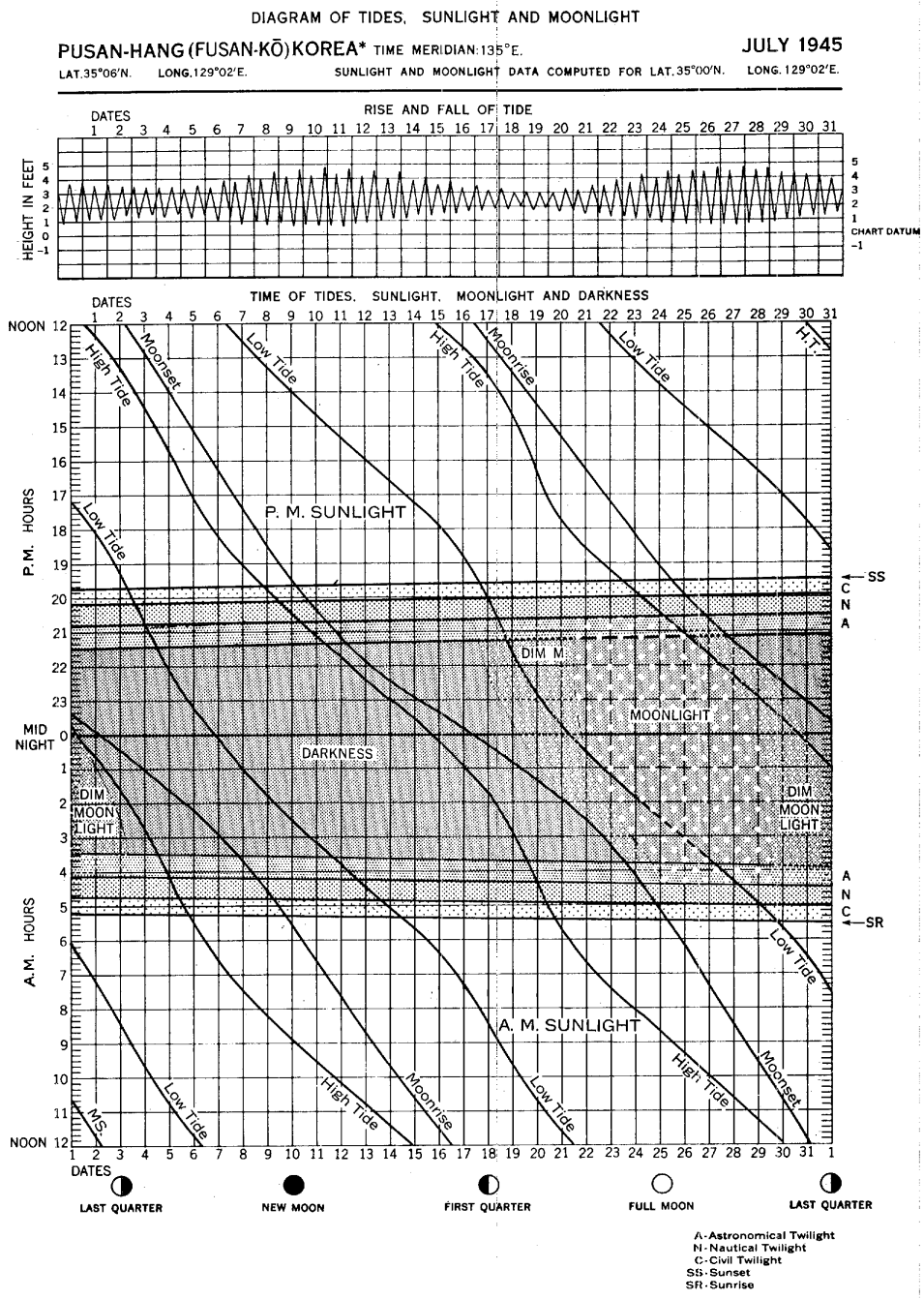

*This diagram, with the changes indicated, is also applicable to the following places:

ULSAN-MAN (URUSAN-WAN).–Subtract 55 minutes from times of high and low tides; multiply heights of high and low tides by 0.5.

CH'ŎNSŎNG-MAN (TENJŌ-WAN), KADŎK-TO (KATOKU-TŌ) and CHISE-P'O (CHISE-PO), KŎJE-DO (KYOSAI-TŌ).–Add 10 minutes to times of high and low tides; multiply heights of high and low tides by 1.5.

FIGURE III - 20. *Tides, Sunlight and Moonlight.*
Diagram for Pusan-hang (Fusan-kō) for July, 1945.

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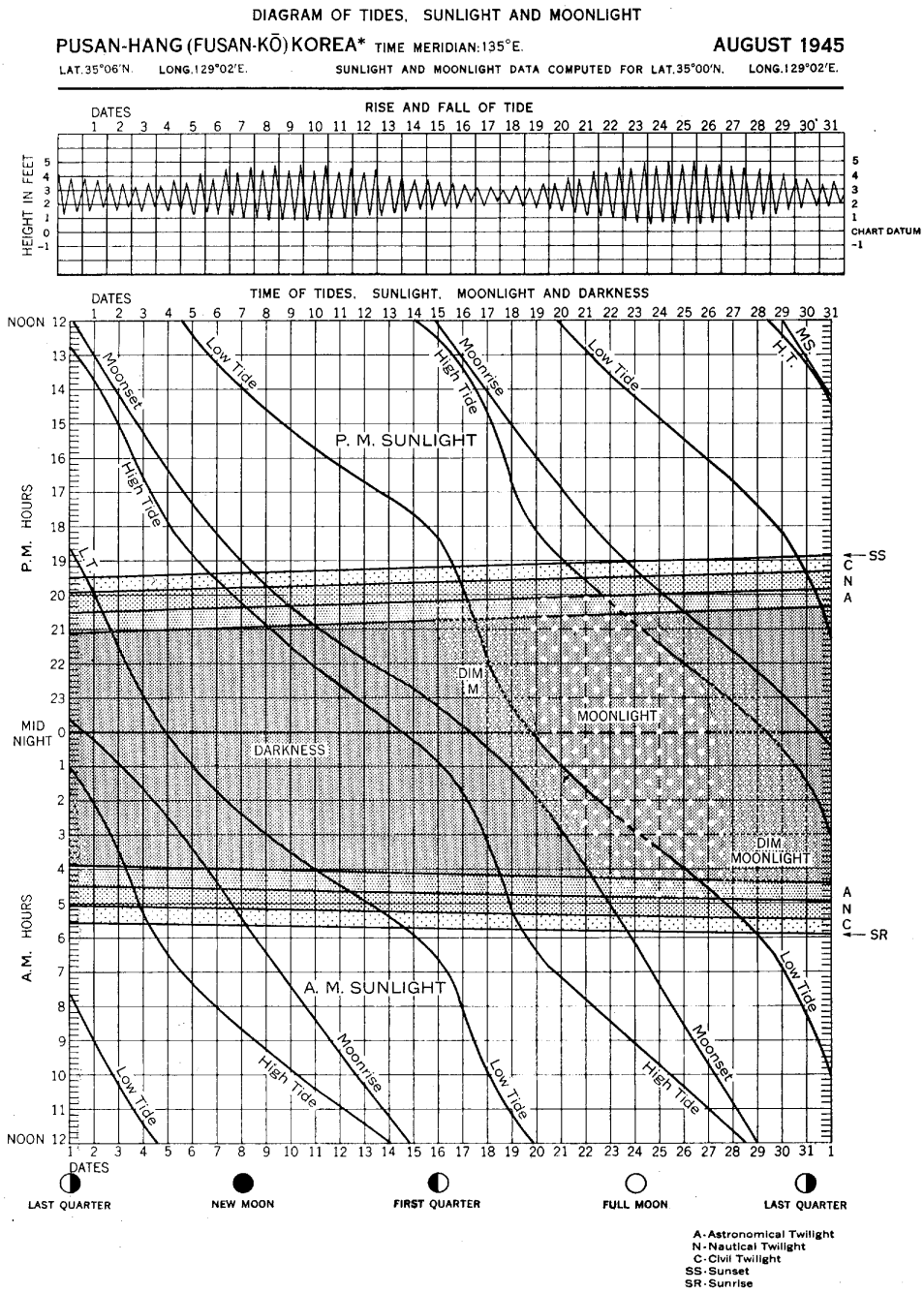

*This diagram, with the changes indicated, is also applicable to the following places:
ULSAN-MAN (URUSAN-WAN).–Subtract 55 minutes from times of high and low tides; multiply heights of high and low tides by 0.5.
CH'ŎNSŎNG-MAN (TENJŌ-WAN), KADŎK-TO (KATOKU-TŌ) and CHISE-P'O (CHISE-PO), KŎJE-DO (KYOSAI-TŌ).–Add 10 minutes to times of high and low tides; multiply heights of high and low tides by 1.5.

FIGURE III - 21. *Tides, Sunlight and Moonlight.*
Diagram for Pusan-hang (Fusan-kō) for August, 1945.

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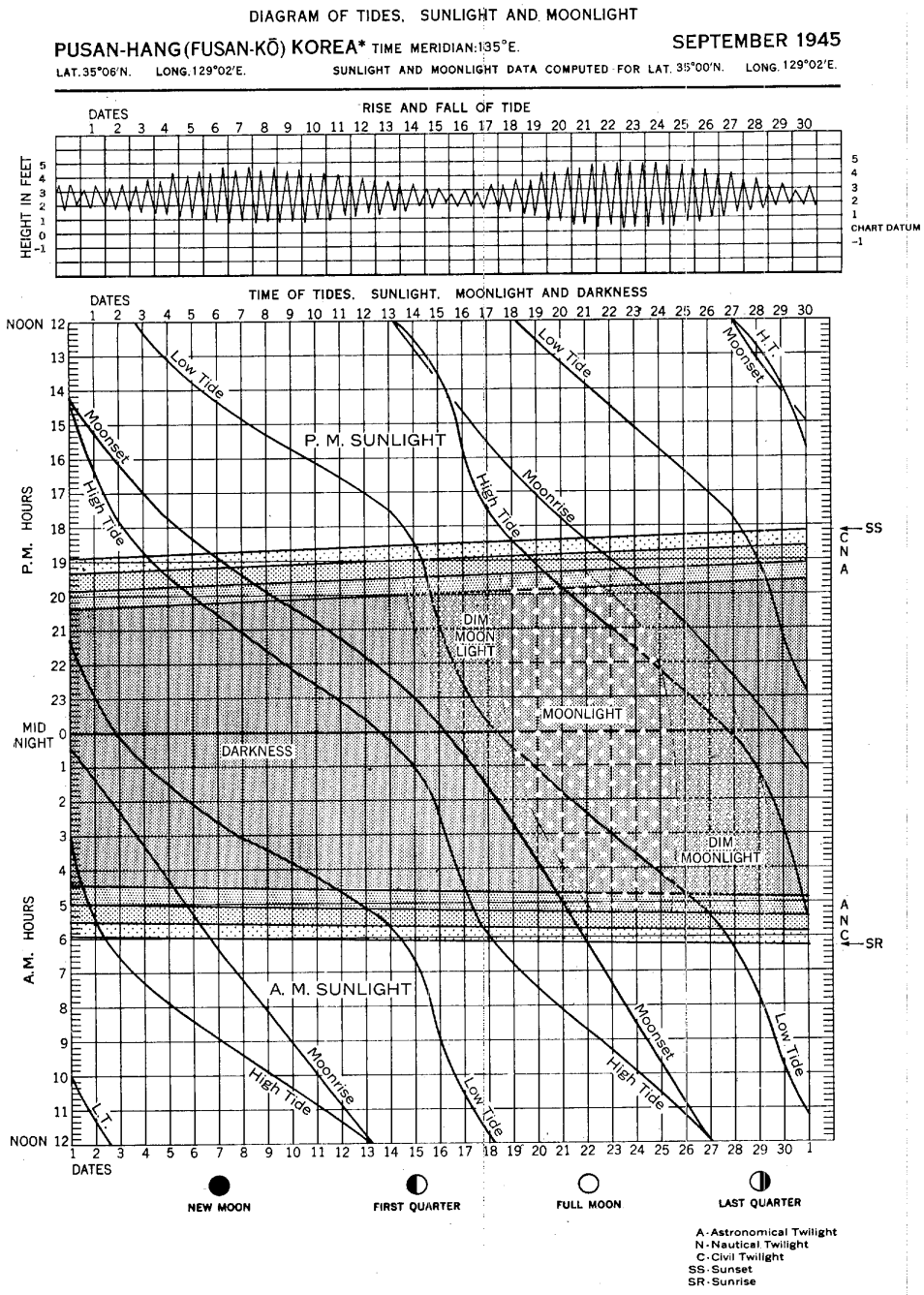

*This diagram, with the changes indicated, is also applicable to the following places:
ULSAN-MAN (URUSAN-WAN).–Subtract 55 minutes from times of high and low tides; multiply heights of high and low tides by 0.5.
CH'ŎNSŎNG-MAN (TENJŌ-WAN), KADŎK-TO (KATOKU-TŌ) and CHISE-P'O (CHISE-PO), KŎJE-DO (KYOSAI-TŌ).–Add 10 minutes to times of high and low tides; multiply heights of high and low tides by 1.5.

FIGURE III - 22. *Tides, Sunlight and Moonlight.*
Diagram for Pusan-hang (Fusan-kō) for September, 1945.

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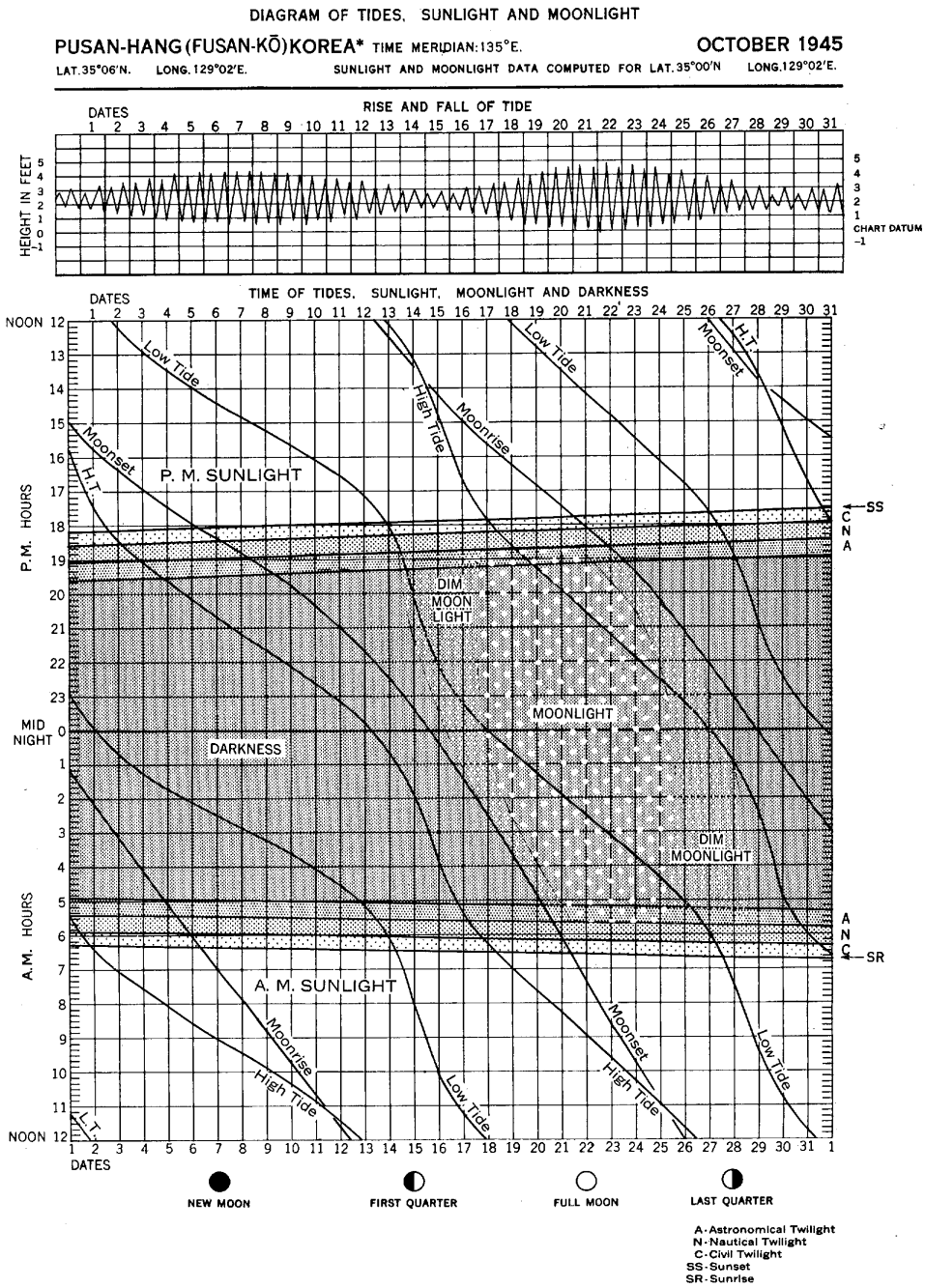

*This diagram, with the changes indicated, is also applicable to the following places:

ULSAN-MAN (URUSAN-WAN).–Subtract 55 minutes from times of high and low tides; multiply heights of high and low tides by 0.5.

CH'ŎNSŎNG-MAN (TENJŌ-WAN), KADŎK-TO (KATOKU-TŌ) and CHISE-P'O (CHISE-PO), KŎJE-DO (KYOSAI-TŌ).–Add 10 minutes to times of high and low tides; multiply heights of high and low tides by 1.5.

FIGURE III - 23. *Tides, Sunlight and Moonlight.*
Diagram for Pusan-hang (Fusan-kō) for October, 1945.

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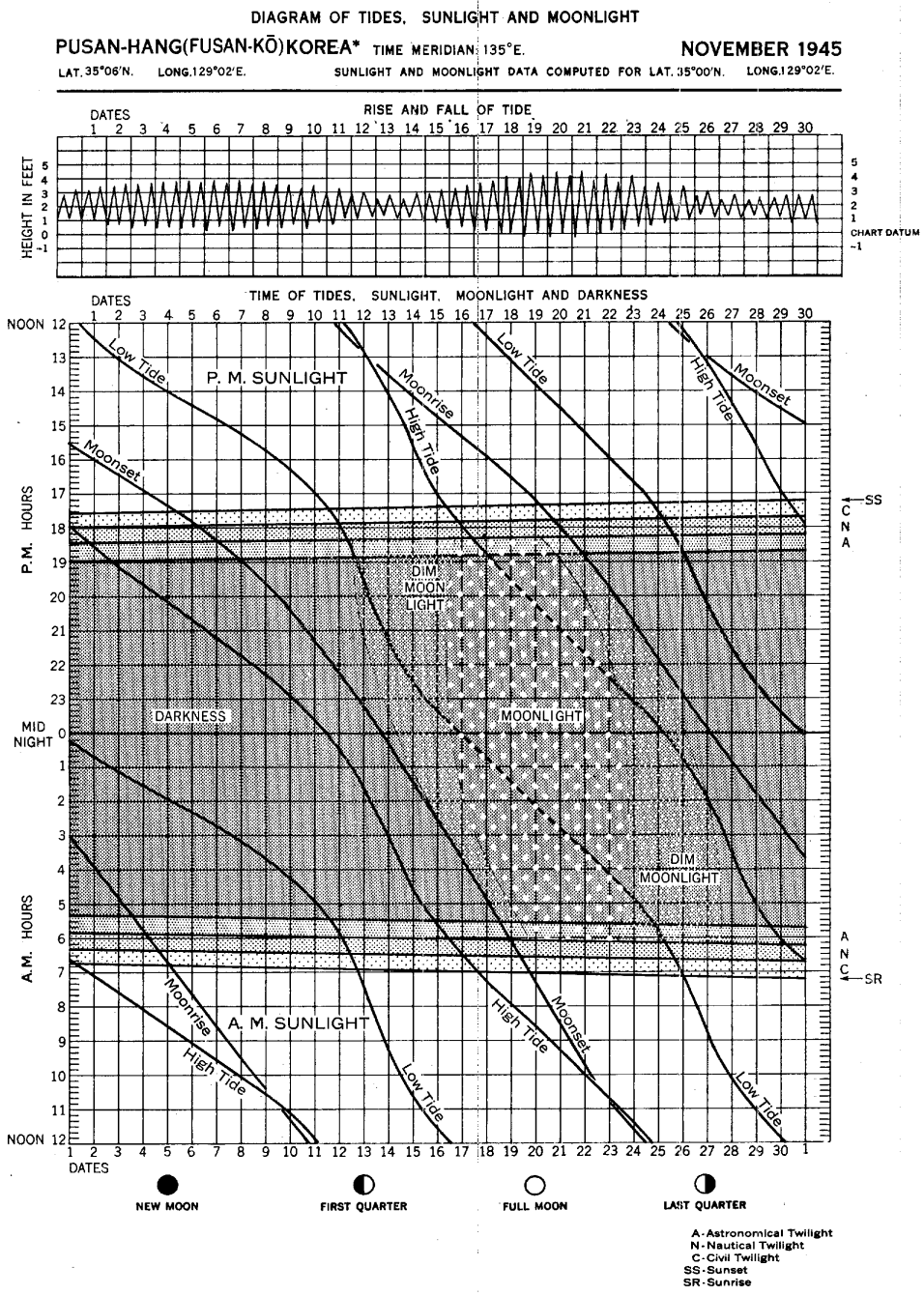

*This diagram, with the changes indicated, is also applicable to the following places:
ULSAN-MAN (URUSAN-WAN).–Subtract 55 minutes from times of high and low tides; multiply heights of high and low tides by 0.5.
CH'ŎNSŎNG-MAN (TENJŌ-WAN), KADŎK-TO (KATOKU-TŌ) and CHISE-P'O (CHISE-PO), KŎJE-DO (KYOSAI-TŌ).–Add 10 minutes to times of high and low tides; multiply heights of high and low tides by 1.5.

FIGURE III - 24. *Tides, Sunlight and Moonlight.*
Diagram for Pusan-hang (Fusan-kō) for November, 1945.

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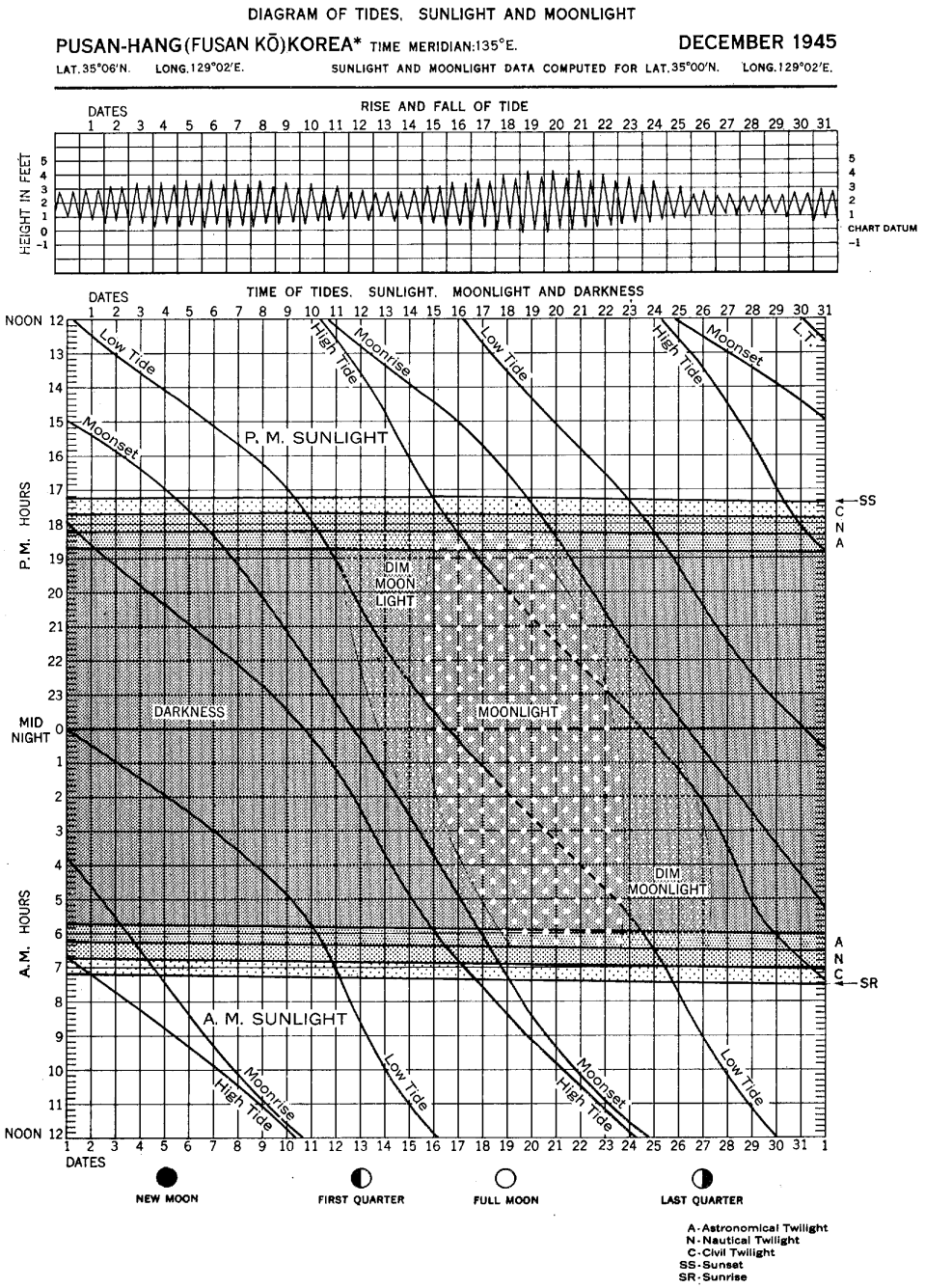

*This diagram, with the changes indicated, is also applicable to the following places:
ULSAN-MAN (URUSAN-WAN).–Subtract 55 minutes from times of high and low tides; multiply heights of high and low tides by 0.5.
CH'ŎNSŎNG-MAN (TENJŌ-WAN), KADŎK-TO (KATOKU-TŌ) and CHISE-P'O (CHISE-PO), KŎJE-DO (KYOSAI-TŌ).–Add 10 minutes to times of high and low tides; multiply heights of high and low tides by 1.5.

FIGURE III - 25. *Tides, Sunlight and Moonlight.*
Diagram for Pusan-hang (Fusan-kō) for December, 1945.

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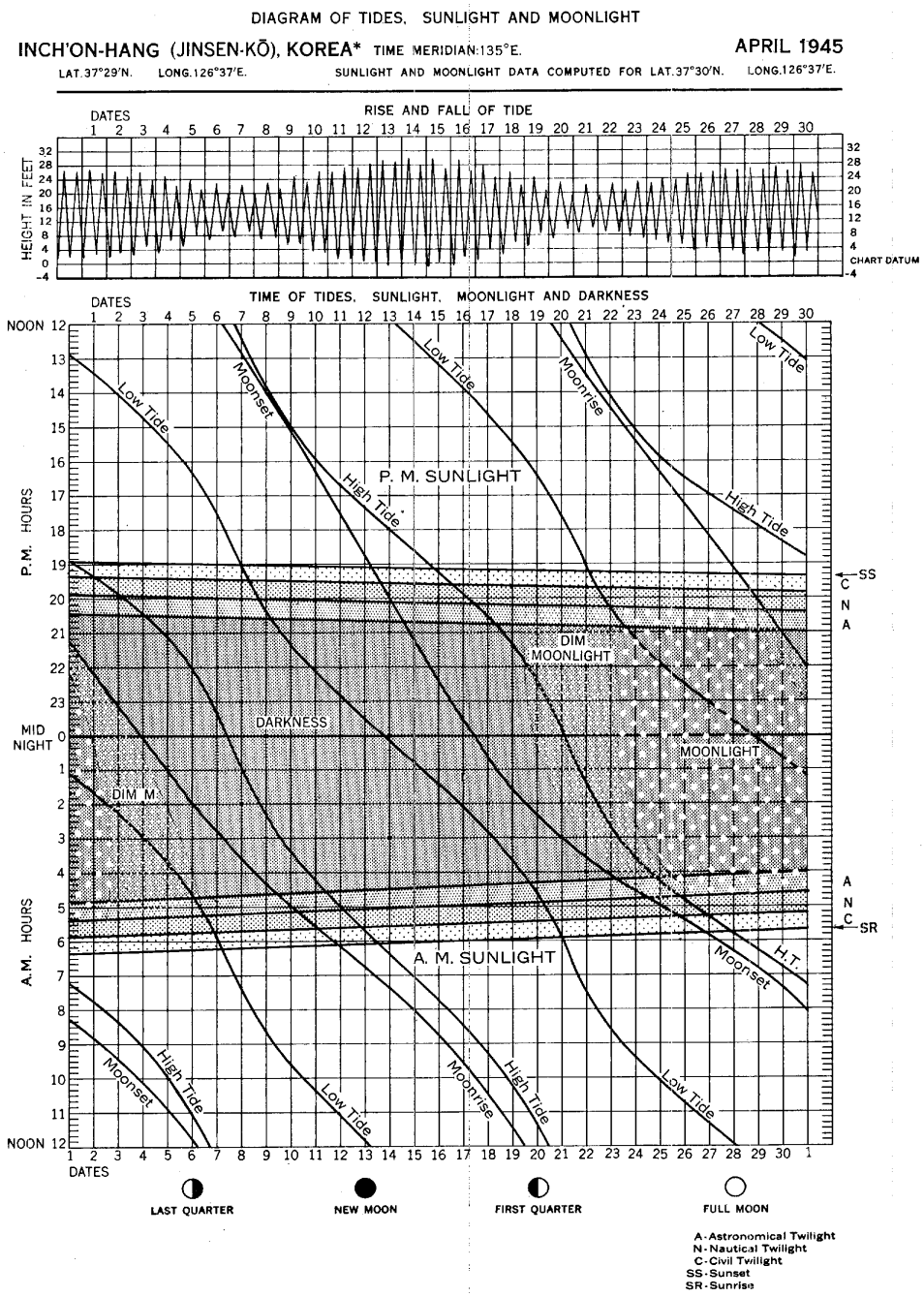

*This diagram, with the changes indicated, is also applicable to the following places:
SOYA-DO (SOYA-TŌ), SŌ-SUDO (NISHI-SUIDŌ).—Subtract 10 minutes from times of high and low tides; subtract 3 feet and ½ foot from heights of high and low tides, respectively.
TAEMUŬI-DO (DAIBUI-TŌ).—Subtract ½ foot from heights of high and low tides.

FIGURE III - 26. *Tides, Sunlight and Moonlight.*
Diagram for Inch'on-hang (Jinsen-kō), April, 1945.

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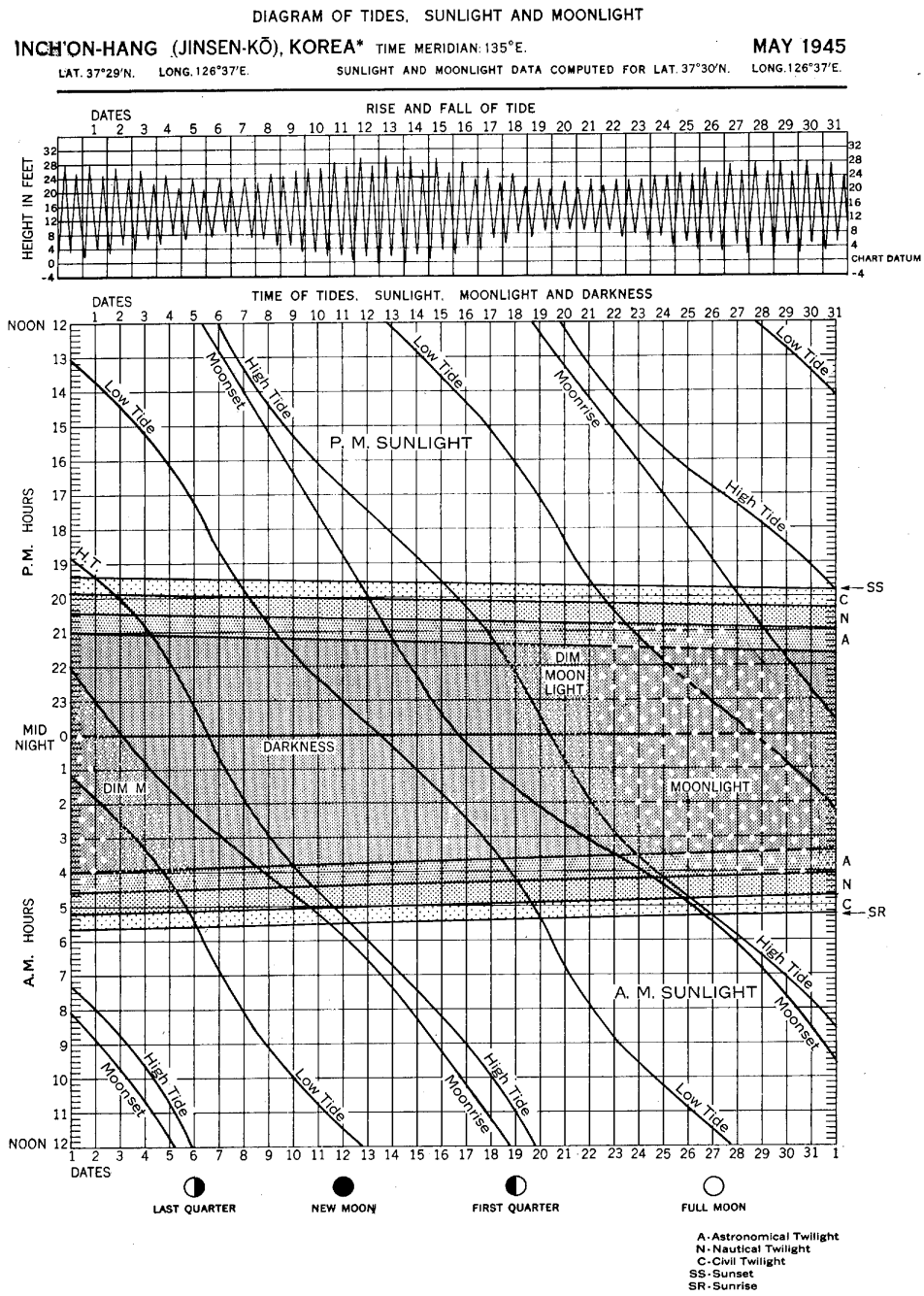

*This diagram, with the changes indicated, is also applicable to the following places:
SOYA-DO (SOYA-TŌ), SŌ-SUDO (NISHI-SUIDŌ).–Subtract 10 minutes from times of high and low tides; subtract 3 feet and ½ foot from heights of high and low tides, respectively.
TAEMUŬI-DO (DAIBUI-TŌ).–Subtract ½ foot from heights of high and low tides.

FIGURE III - 27. *Tides, Sunlight and Moonlight.*
Diagram for Inch'on-hang (Jinsen-kō), May, 1945.

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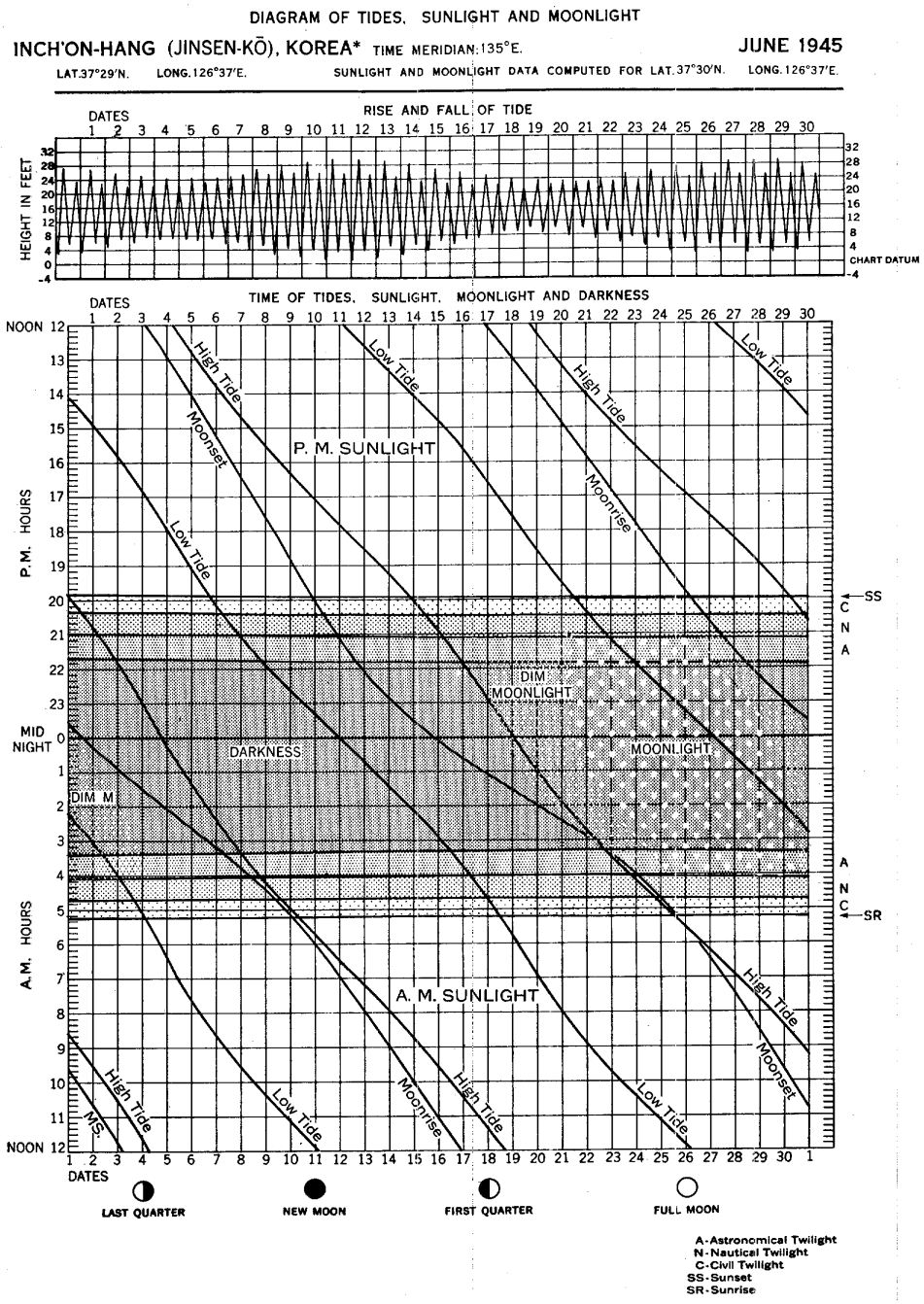

*This diagram, with the changes indicated, is also applicable to the following places:
SOYA-DO (SOYA-TŌ), SŌ-SUDO (NISHI-SUIDŌ).—Subtract 10 minutes from times of high and low tides; subtract 3 feet and ½ foot from heights of high and low tides, respectively.
TAEMUŬI-DO (DAIBUI-TŌ).—Subtract ½ foot from heights of high and low tides.

FIGURE III - 28. *Tides, Sunlight and Moonlight.*
Diagram for Inch'on-hang (Jinsen-kō), June, 1945.

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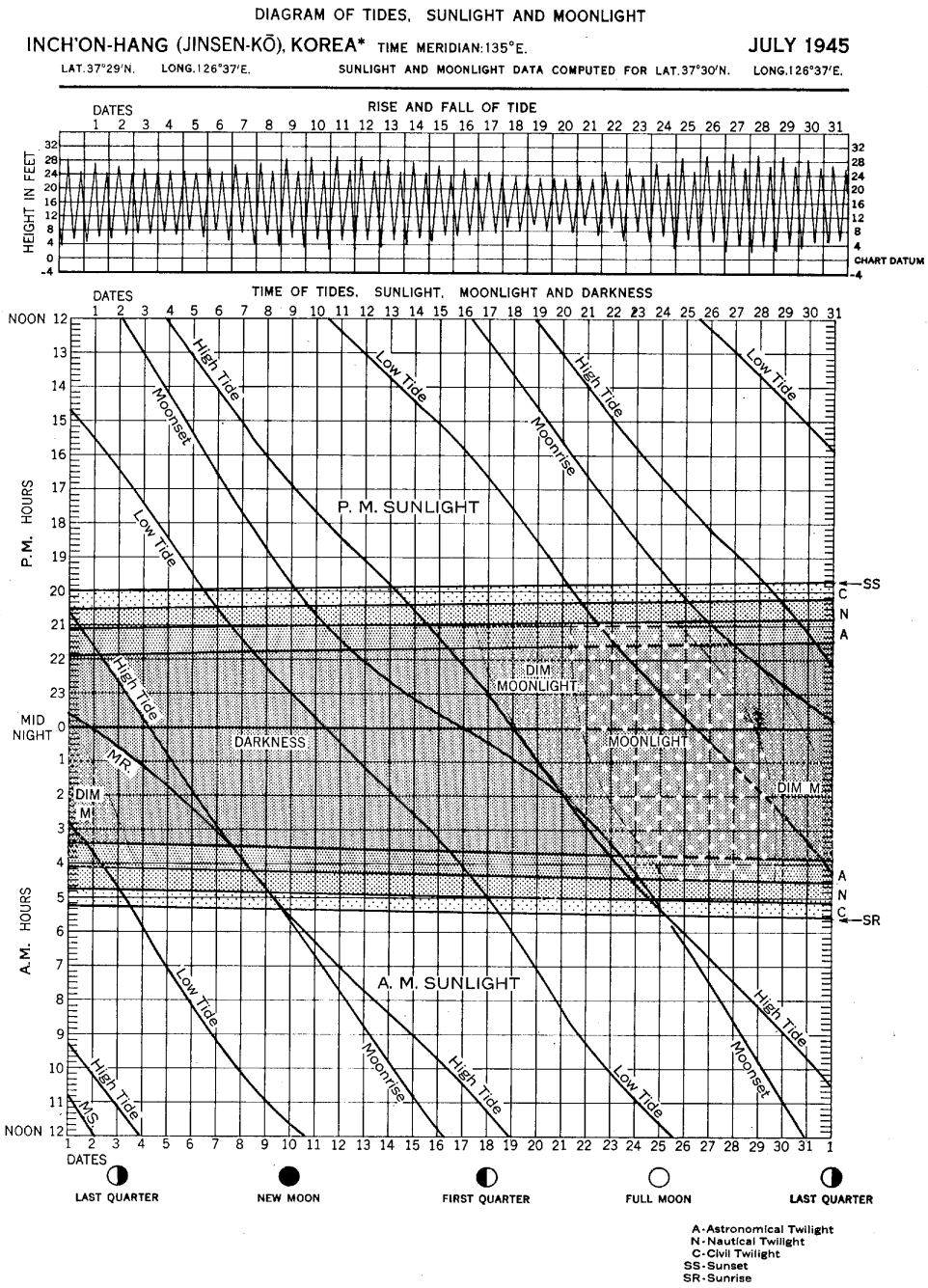

*This diagram, with the changes indicated, is also applicable to the following places:
SOYA-DO (SOYA-TŌ), SŌ-SUDO (NISHI-SUIDŌ).—Subtract 10 minutes from times of high and low tides; subtract 3 feet and ½ foot from heights of high and low tides, respectively.
TAEMUŬI-DO (DAIBUI-TŌ).—Subtract ½ foot from heights of high and low tides.

FIGURE III - 29. *Tides, Sunlight and Moonlight.*
Diagram for Inch'on-hang (Jinsen-kō), July, 1945.

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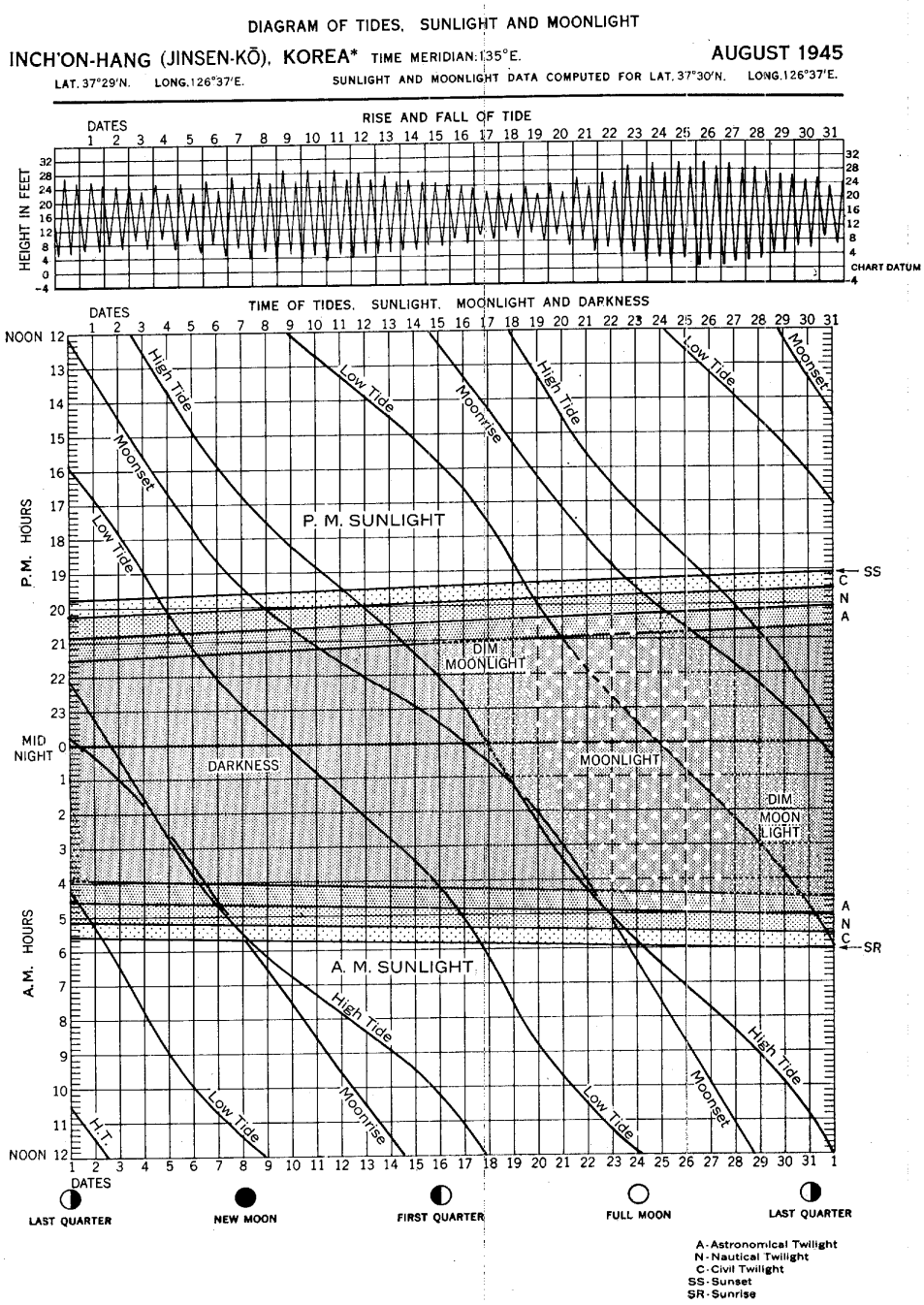

*This diagram, with the changes indicated, is also applicable to the following places:
SOYA-DO (SOYA-TŌ), SŎ-SUDO (NISHI-SUIDŌ).—Subtract 10 minutes from times of high and low tides; subtract 3 feet and ½ foot from heights of high and low tides, respectively.
TAEMUŬI-DO (DAIBUI-TŌ).—Subtract ½ foot from heights of high and low tides.

FIGURE III - 30. *Tides, Sunlight and Moonlight.*
Diagram for Inch'on-hang (Jinsen-kō), August, 1945.

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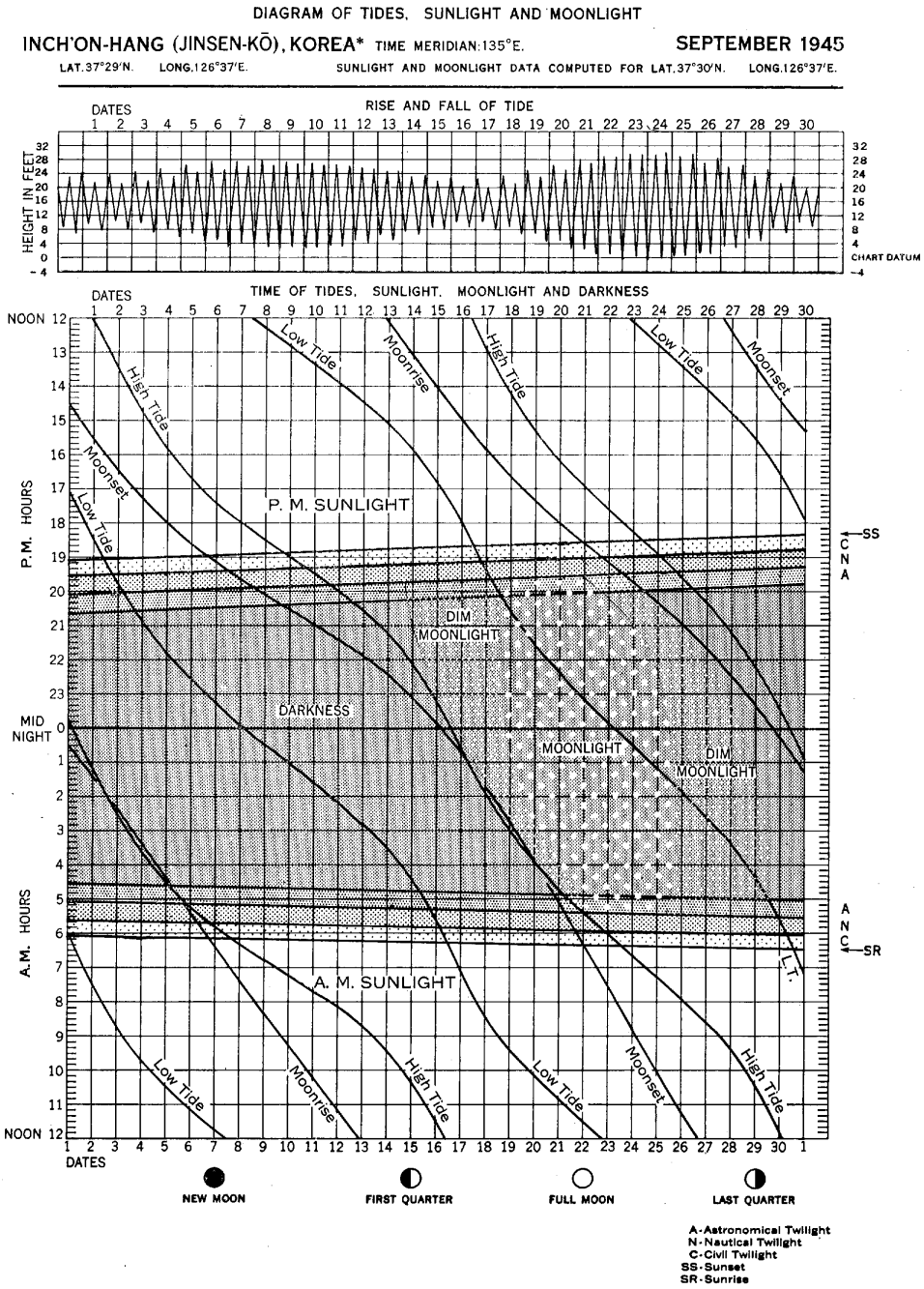

*This diagram, with the changes indicated, is also applicable to the following places:
SOYA-DO (SOYA-TŌ), SŎ-SUDO (NISHI-SUIDŌ).–Subtract 10 minutes from times of high and low tides; subtract 3 feet and ½ foot from heights of high and low tides, respectively.
TAEMUŬI-DO (DAIBUI-TŌ).–Subtract ½ foot from heights of high and low tides.

FIGURE III - 31. *Tides, Sunlight and Moonlight.*
Diagram for Inch'on-hang (Jinsen-kō), September, 1945.

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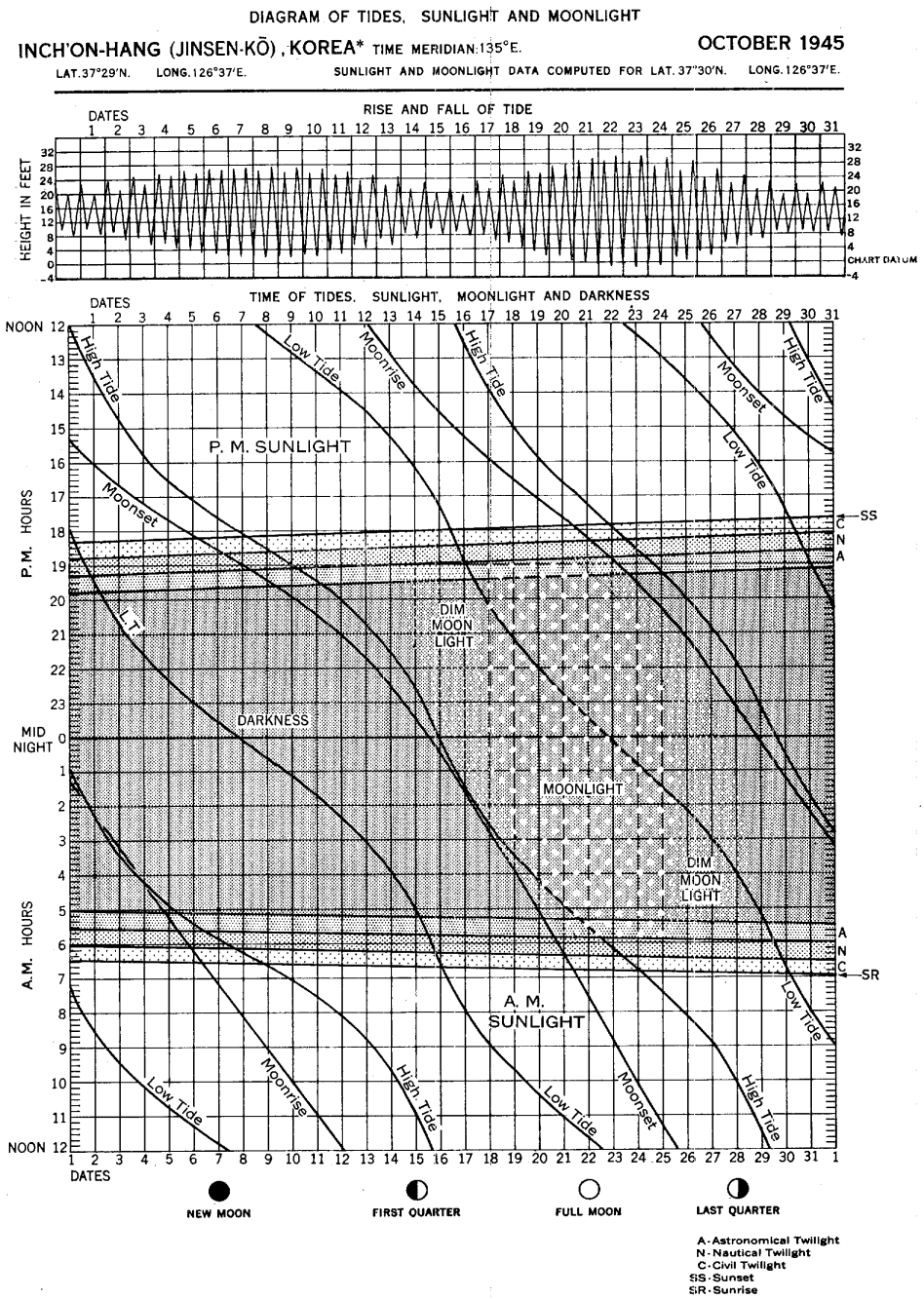

*This diagram, with the changes indicated, is also applicable to the following places:
SOYA-DO (SOYA-TŌ), SŌ-SUDO (NISHI-SUIDŌ).—Subtract 10 minutes from times of high and low tides; subtract 3 feet and ½ foot from heights of high and low tides, respectively.
TAEMUŬI-DO (DAIBUI-TŌ).—Subtract ½ foot from heights of high and low tides.

FIGURE III - 32. *Tides, Sunlight and Moonlight.*
Diagram for Inch'on-hang (Jinsen-kō), October, 1945.

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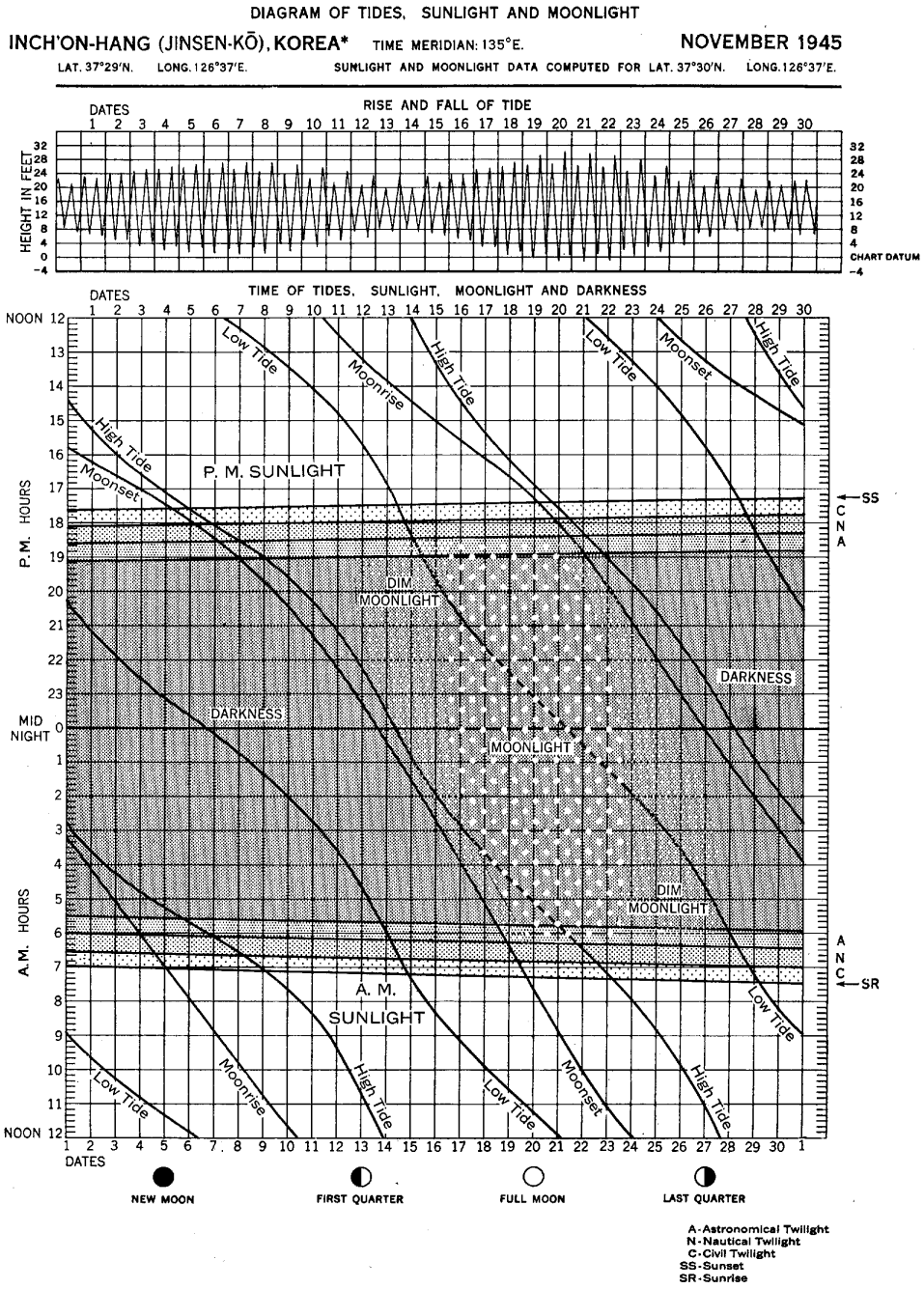

*This diagram, with the changes indicated, is also applicable to the following places:
SOYA-DO (SOYA-TŌ), SŌ-SUDO (NISHI-SUIDŌ).—Subtract 10 minutes from times of high and low tides; subtract 3 feet and ½ foot from heights of high and low tides, respectively.
TAEMUŬI-DO (DAIBUI-TŌ).—Subtract ½ foot from heights of high and low tides.

FIGURE III - 33. *Tides, Sunlight and Moonlight.*
Diagram for Inch'on-hang (Jinsen-kō), November, 1945.

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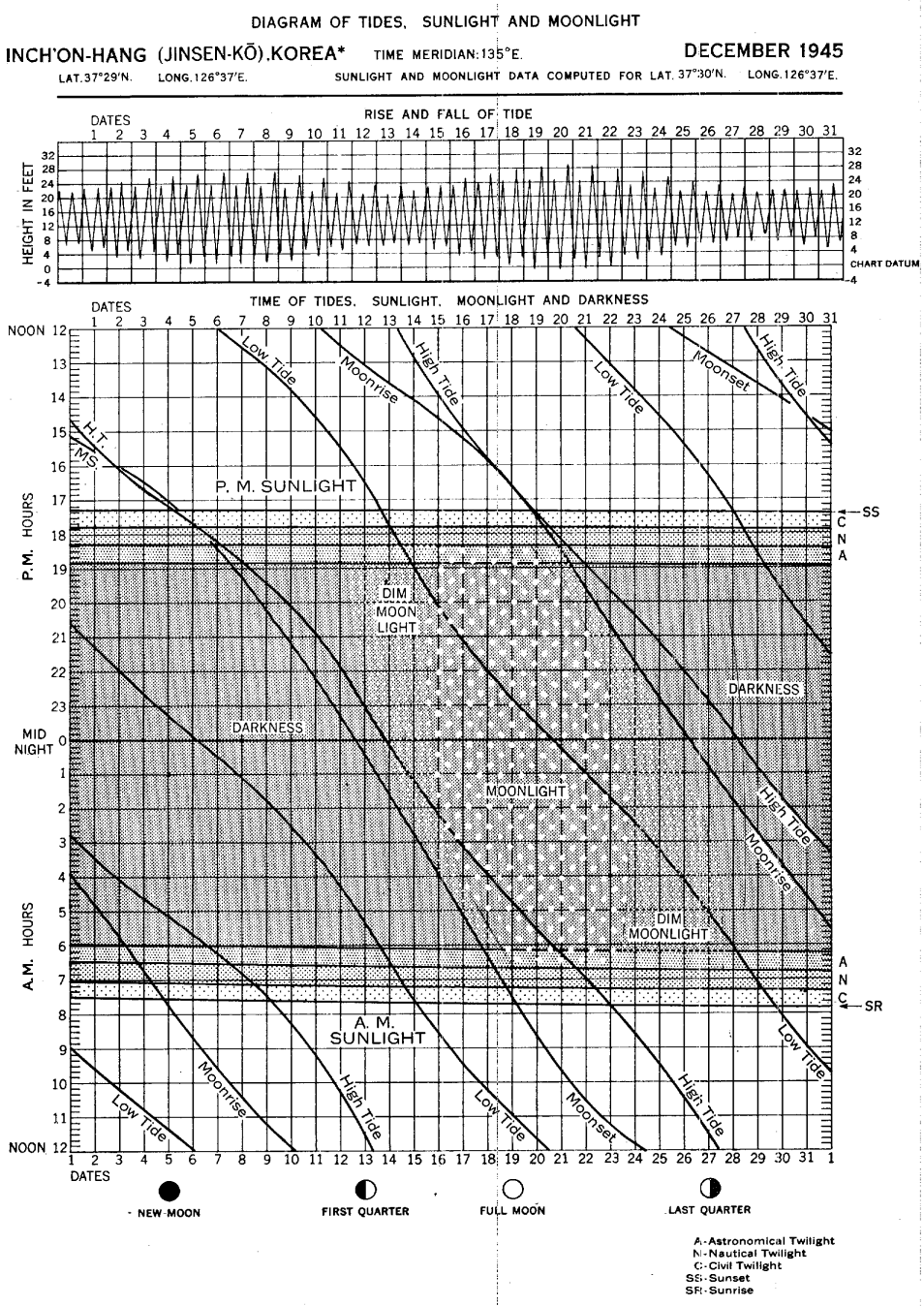

*This diagram, with the changes indicated, is also applicable to the following places:
SOYA-DO (SOYA-TŌ), SŎ-SUDO (NISHI-SUIDŌ).—Subtract 10 minutes from times of high and low tides; subtract 3 feet and ½ foot from heights of high and low tides, respectively.
TAEMUŬI-DO (DAIBUI-TŌ).—Subtract ½ foot from heights of high and low tides.

FIGURE III - 34. *Tides, Sunlight and Moonlight.*
Diagram for Inch'on-hang (Jinsen-kō), December, 1945.

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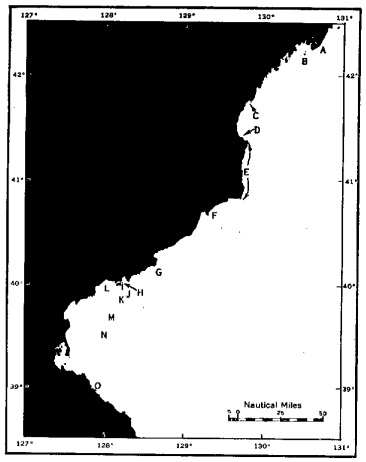
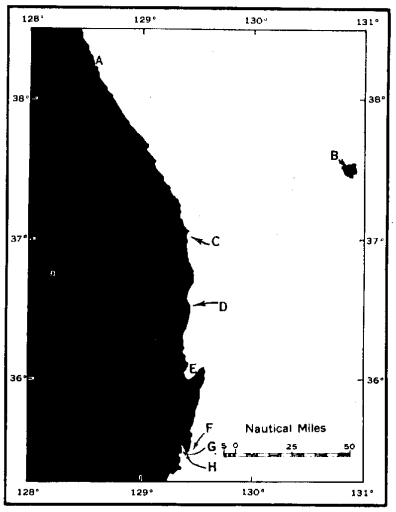


Location	Remarks
A. Off mouth of Tuman-gang (Tŏman-kŏ)	Weak and irregular current.
B. S of Nan-do (Ran-tŏ)	In May a SW nontidal current of 0.3 kn. was observed and in June a WNW flow of 0.3 kn.
C. Ch'ŏngjin-hang (Seishin-kŏ) vicinity	A W set, especially noticeable with E and S winds and in winter, has been reported. Five mi. offshore a S set of 0.25 to 1 kn. has been reported.
D. Ŏrang-ch'ŏn (Gyorŏ-sen) mouth	Rapids prevent boats from entering.
E. Between Ŏrang-dan (Gyorŏ-tan) and Musu-dan (Busui-tan)	Two to 10 mi. offshore a S nontidal current of about 1 kn. flows parallel to the coast. An eddy N of Musu-dan (Busui-tan) has been reported.
F. Yujin-dan (Yujin-tan) vicinity	Observations indicate an E drift of 1 kn. about 2 mi. seaward of Yujin-dan (Yujin-tan) and a W drift of 0.5 kn. about 7 mi. seaward.
G. SE of Hwangdan-tan (Kōtan-tan)	SW nontidal current of 1 kn.
H. Sinp'o-hang (Shinho-kŏ)	Weak and irregular current.
I. Mayang-do (Bayŏ-tŏ) vicinity	From June to August the nontidal current along the N and S sides of Mayang-do (Bayŏ-tŏ) flows E. The flow N of the island continues E for about 5 mi. and then gradually turns through S to SW.
J. SE of Mayang-do (Bayŏ-tŏ)	In November a W nontidal current of 0.2 kn. was observed.
K. S of Mayang-do (Bayŏ-tŏ)	In August an ENE nontidal flow of 0.1 kn. was observed.
L. Between Mayang-do (Bayŏ-tŏ) and Anŏŏng-kap (Anjŏ-misaki)	The current sets W at the beginning of the flood.
M. SE of Siam-tan (Shigan-tan)	In September an ESE nontidal current of 0.6 kn. was observed.
N. Tongjosŏn-man (Higashi-Chōsen-wan)	The current is weak and irregular and is largely dependent upon the velocity and direction of the ocean current.
O. NNE of Kojŏ-p'o (Kotei-ho)	NNW nontidal current of 0.5 kn.

FIGURE III - 35. *Tidal Currents.*
Northern Part of East Coast. Area location shown on Index, FIGURE III - 2.



Location	Remarks
A. SE of Chuk-to (Chiku-tŏ)	Tide rips.
B. Ullŭng-do (Utsuryŏ-tŏ)	An E nontidal current of about 0.75 kn. has been observed here. Direction and velocity depend upon the wind.
C. Chukpyŏn-man (Chikuhen-wan)	There is a prevailing N current except before and after violent storms when a prevailing S current may occur. N of this bay there is little nontidal current.
D. Ch'uksan-p'o (Chūsan-ho)	N nontidal current of 0.5 to 1 kn. It is strongest during the summer.
E. Yŏngil-man (Geijitsu-wan)	A N nontidal current of 0.5 kn. has been reported.
F. Wi-gi (Uru-saki)	A N nontidal current of 1 kn. has been reported.
G. Ulsan-man (Urusan-wan)	The flood current is usually weak and after heavy rains is neutralized by the S current from the river.
H. Off Ulsan-man (Urusan-wan)	Flood sets SW at 1.25 kn. and ebb sets NE at 2 kn.

FIGURE III - 36. *Tidal Currents.*
Southern Part of East Coast. Area location shown on Index, FIGURE III - 2.

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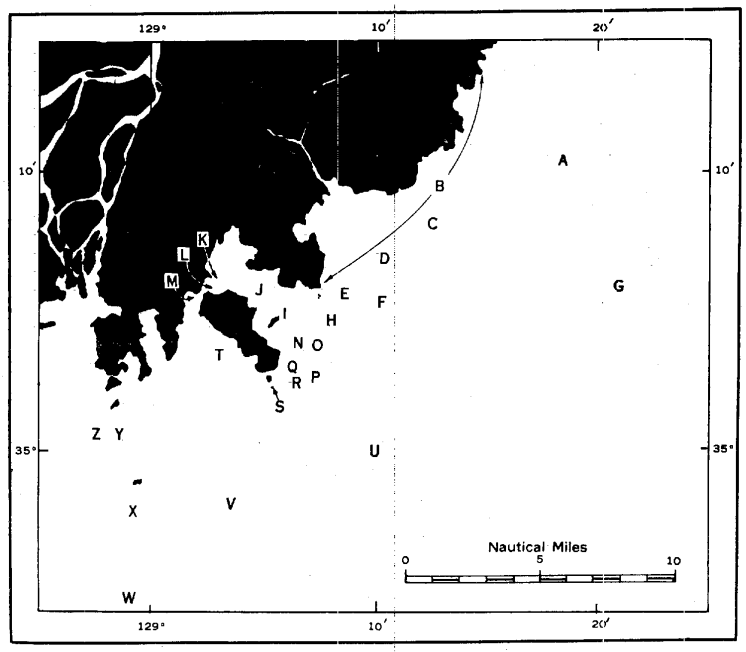

Location	Slack before flood*	Flood† Dir.	Flood† Vel.	Slack before ebb*	Ebb† Dir.	Ebb† Vel.	Remarks
A. E of Tongŏm-gak (Tōgan-kaku)	-	SW	1	-	NE	2	
B. Between Kwanggye-mal (Kōkei-matsu) and Pusan-hang (Fusan-kō)	-	SW	weak	-	NE	1.5-2	The velocity is affected by the season, and direction of wind. The NE nontidal current from Korea Strait affects the flow. The ebb usually flows for about 9 hours and the flood for 3 hours.
C. ESE of Kodu-mal (Kōtō-matsu)	-	SW	1.25	-	NE	2	
D. E of Nang-mal (Raku-matsu)	-	WSW	1	-	NE	1	
E. 1 mi. ESE of Sŭngdu-mal (Yōtō-matsu)	-	-	-	-	NE	1	
F. 2.5 mi. ESE of Sŭngdu-mal (Yōtō-matsu)	-	-	-	-	NE	1.75	
G. E of Pusan (Fusan)	L	SSW	0.75	H	NNE	0.75	Velocities are for semidiurnal currents only. Maximum spring velocities of 2 kn. have been reported. Observations taken in April show a NNE resultant drift of about 0.4 kn. The nontidal current is variable.
H. SSE of Oryuk-to (Goroku-tō)	L+1/2	SSW	1.5	H+1/4	NNE	1.5	
I. Between Oryuk-to (Goroku-tō) and Mok-to (Makino-tō)	-	SW	1.75	-	NE	1.75	Currents are strong and irregular, especially near high water.
J. NE of Kwangsŏm-mal (Kōsen-matsu)	-	WNW	0.5	-	SE	0.5	
K. Inner Harbor	-	SW	2	-	NE	2	
L. ENE of drawbridge, Inner Harbor	-	-	-	-	ENE	1.25	
M. W of drawbridge, Inner Harbor	-	WNW	2.25	-	ENE	1.75	Flood velocity may reach 3 kn. at times.
N. NE of Sangi-mal (Sōi-matsu)	-	SW	1.5	-	NNE	1.5	
O. ENE of Sangi-mal (Sōi-matsu)	-	SW	2	-	NNE	1.75	The maximum flood velocity is found E of Sangi-mal (Sōi-matsu).
P. ENE of Saeng-do (Sei-tō)	-	SW	2	-	NE	2.5	
Q. SE of Sangi-mal (Sōi-matsu)	-	SSW	1.25	-	ENE	1.75	Maximum ebb occurs between Mok-to (Makino-tō) and Saeng-do (Sei-tō).
R. SE of Kulsoi (Kutsushoi)	-	SSW	1.5	-	-	-	
S. Saeng-do (Sei-tō) vicinity	-	-	2.5	-	ENE	2.5	During the ebb rips and overfalls occur.
T. Haemangdung (Kaibōtō)	-	WNW	1	-	E	1	In the SW approach to Pusan-hang (Fusan-kō), the N flood flows around the NW point of Mok-to (Makino-tō) and meets the SW flood which comes from the NE entrance. Both streams then flow W and S along the mainland coast and out the SW approach. The N flood in the SW entrance is accompanied by an eddy which sets SE along the SW coast of Mok-to (Makino-tō).
U. SE of Mok-to (Makino-tō)	L	SW	0.75	H	NE	0.75	Velocities are for semidiurnal currents only.
V. ESE of Mok-to (Moku-tō)	-	-	-	-	NE	3.5	
W. SSE of Hyŏngje-do (Keitei-tō)	-	-	-	-	NE	2.25	
X. S of Mok-to (Moku-tō)	-	NNW	0.5	-	NE	2.75	
Y. S of So-do (So-tō)	-	W	0.75	-	ENE	2	
Z. SW of So-do (So-tō)	-	WSW	0.75	-	-	-	

* In hours before (-) or after (+) local high water (H) or low water (L) unless noted.
† Velocity at strength in knots.

FIGURE III - 37. *Tidal Currents.*
Pusang-hang (Fusan-kō) and Vicinity. Area location shown on Index, FIGURE III - 2.

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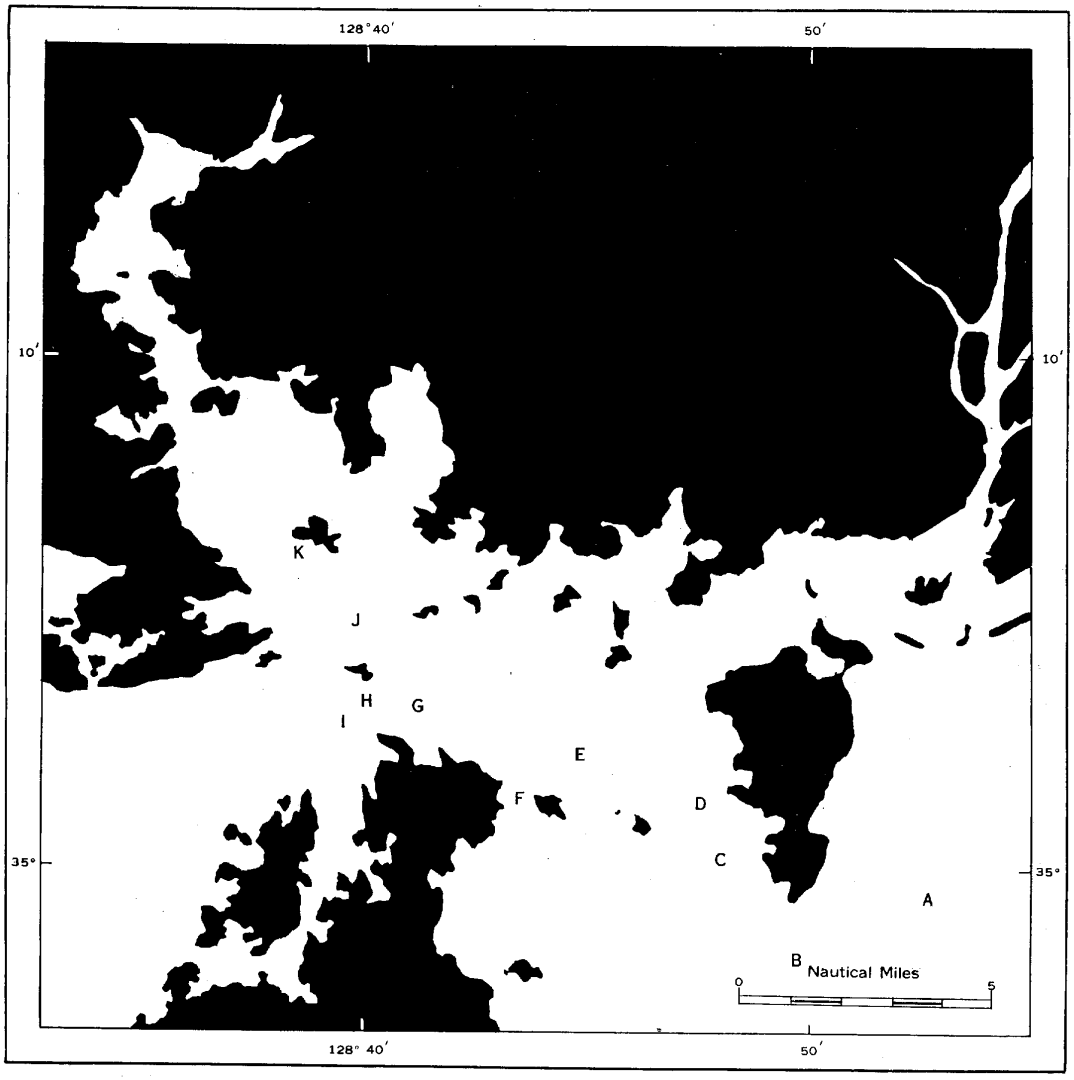

Location	Flood* Dir.	Flood* Vel.	Ebb* Dir.	Ebb* Vel.
A. E of Tongdu-mal (Tŏtŏ-matsu)	-	-	NE	1.5
B. S of Tongdu-mal (Tŏtŏ-matsu)†	-	-	E	1.5
C. 0.5 mi. NW of Tongdu-mal (Tŏtŏ-matsu)	NNW	2	SSE	2
D. 2.5 mi. NW of Tongdu-mal (Tŏtŏ-matsu)	NNW	1.25	SSE	1.5
E. Kadŏk-sudo (Katoku-suidŏ)	N	1.5-3.75	S	1.5-2.75
F. Between Kŏje-do (Kyosai-tŏ) and Che-do (Cho-tŏ)	NNW	1.75	SSE	2.5
G. SE of Ha-do (Ka-tŏ)	W	1.25	ESE	2.5
H. Off S coast of Ha-do (Ka-tŏ)‡	-	-	-	-
I. NNW of Kwangji (Kŏchi-matsu)	WSW	1.5	-	-
J. N of Ha-do (Ka-tŏ)	WNW	0.5	-	-
K. SW of Pu-do (Fu-tŏ)	-	-	ESE	0.5

* Velocity at strength in knots.
† Rips extend offshore approximately 0.5 mile.
‡ Rips and whirls.

FIGURE III - 38. *Tidal Currents.*
Kadok-sudo (Katoku-suidŏ). Area location shown on Index, FIGURE III - 2.

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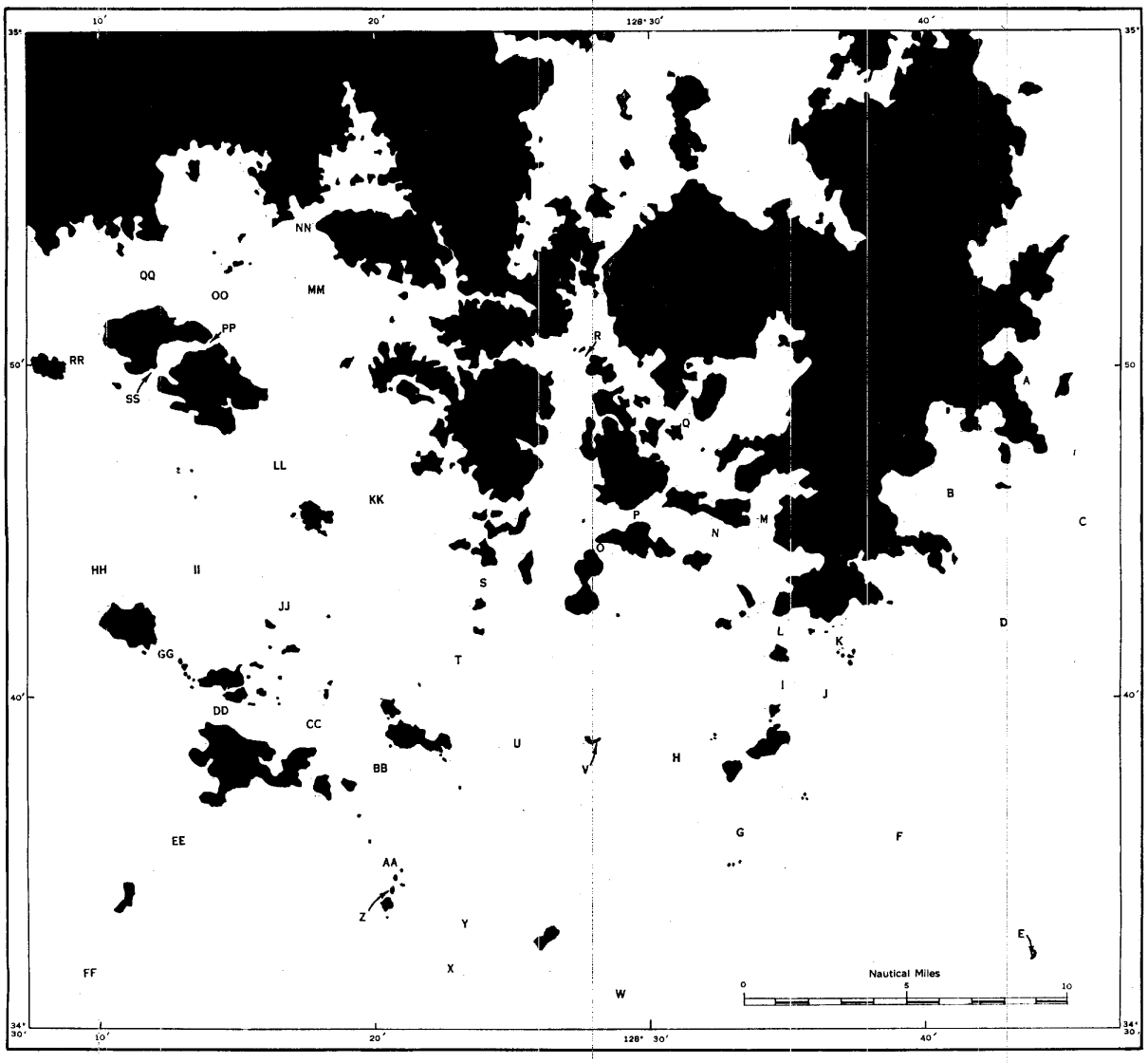

Locality	Slack before flood*	Flood† Dir.	Flood† Vel.	Slack before ebb*	Ebb† Dir.	Ebb† Vel.
A. W of Chisim-do (Shishin-tō)	-	S	1.25	-	-	-
B. Tojang-p'o (Tōzō-ho)‡	-	-	-	-	-	-
C. ESE of Oejora-do (Gaijora-tō)**	-	W	0.75	-	NE	1.75
D. SE of Kalgot-to (Katsukan-tō)**	-	WSW	1.75	-	NE	2
E. Hong-do (Kō-tō)	L+3/4	-	1.25	H+1/2	-	1.25
F. ESE of Tŭngga-do (Tōka-tō)	-	W	2	-	NE	1.5
G. S of Somaemul-to (Shō-maikotsu-tō)	-	-	-	-	ESE	1.75
H. WSW of Kalk-to (Kaeki-tō)	-	SW	1	-	E	1.5
I. S of Kao-do (Kago-tō)	-	NW	3	-	E	2
J. S of Kŏje-do (Kyosai-tō)	-	W	3.5	-	E	3
K. Channel between Sobyŏngdae-do (Shōheitai-tō) and Sojuk-yŏlto (Shōchiku-rettō)	-	-	3	-	-	3
L. S of Mangsan-kak (Bōsan-kaku)	-	WNW	1.25	-	SE	2.25
M. E of Pongam-do (Hōgan-tō)	-	N	1	-	S	1.25
N. E of Changgang-sudo (Chōkō-suidō)	-	NW	0.75	-	SE	1.5
O. Between Pijin-do (Hichin-tō) and Yongch'o-do (Ryōsō-tō)	-	WNW	1.5	-	ESE	2.5
P. Between Hansan-do (Kanzan-tō) and Yongch'o-do (Ryōsō-tō)	-	WSW	2.25	-	E	0.75
Q. SW of Sandal-to (Santatsu-tō)	-	NW	0.75	-	SE	0.5
R. SE of Panghwa-do (Hōka-tō)	-	SW	0.5	-	E	0.75
S. N of Naebuji-to (Naifushi-tō)	-	NW	1.5	-	E	2.5
T. SW of Oebuji-to (Gaifushi-tō)	-	W	1.5	-	ESE	2
U. E of Yŏnhwa-do (Renka-tō)	-	W	-	-	ESE	1.5
V. N and S of Soji-do (Shōchi-tō)	-	W	1.5	-	E	1.5
W. SE of Kuk-to (Koku-tō)	-	WSW	-	-	-	-
X. WSW of Kuk-to (Koku-tō)	-	-	-	-	NE	1.5
Y. WNW of Kuk-to (Koku-tō)	-	W	1.25	-	ESE	0.75
Z. N and E sides of Chwasari-do (Sasari-tō)	-	W	1.25	-	E	1

Locality	Slack before flood*	Flood† Dir.	Flood† Vel.	Slack before ebb*	Ebb† Dir.	Ebb† Vel.
AA. SE of Oejangdŏk-am (Gaichōtoku-gan)	-	W	1.25	-	ENE	1
BB. Yŏnhwa-sudo (Renka-suidō)	-	NW	1.25	-	SE	1.25
CC. N of T'onggotchi-bi (Tsūkanchi-bi)	-	NW	1.25	-	E	1.75
DD. W end of Yokchi-sudo (Yokuchi-suidō)	-	WNW	1.5	-	ESE	1.75
EE. SW of Yokchi-do (Yokuchi-tō)	-	W	1.5	-	E	0.5
FF. SSW of Kal-to (Katsu-tō)	-	WSW	1	-	ESE	1
GG. Between Tomi-do (Tōbi-tō) and Kŏch'illi-to (Kyoshichi-tō)	-	WSW	1	-	ENE	1.5
HH. NNW of Tomi-do (Tōbi-tō)	-	SW	1	-	E	1
II. NE of Tomi-do (Tōbi-tō)	-	W	-	-	SE	1
JJ. WNW of Kyobon-cho (Kyōhon-shō)	-	W	-	-	SE	1.25
KK. SW of Konni-do (Konri-tō)	-	N	0.5	-	SSE	1.25
LL. NW of Ch'u-do (Shū-tō)	-	WNW	1	-	SE	1
MM. SE of Tu-do (Tō-tō)	-	N	0.25	-	ESE	0.5
NN. Entrance of Kosŏng-man (Kojō-wan)	-	NE	0.5	-	SW	0.5
OO. NNE of Sang-do (Jō-tō)	-	N	0.75	-	SE	0.75
PP. E entrance of Saryang-haehyŏp (Daryō-kaikyō)	-	W	-	-	E	-
QQ. N of Sang-do (Jō-tō)	-	W	0.5	-	ESE	0.5
RR. E of Suu-do (Jugyū-tō)	-	NW	0.75	-	SSE	0.75
SS. W entrance of Saryang-haehyŏp (Daryō-kaikyō)	-	SW	0.5	-	ENE	0.5

* In hours before (-) or after (+) local high water (H) or low water (L) unless noted.
† Velocity at strength in knots.
‡ Heavy tide rips and swirls.
** Strong tide rips offshore.

FIGURE III - 39. *Tidal Currents.*
Koje-do (Kyosai-tō) and Vicinity. Area location shown on Index, FIGURE III - 2.

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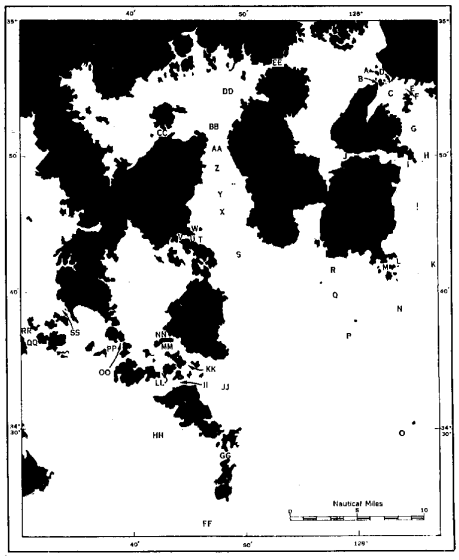

Locality	Slack before flood*	Flood† Dir.	Flood† Vel.	Slack before ebb*	Ebb† Dir.	Ebb† Vel.	Remarks
A. Near Ma-do (Ba-t5)	L	NW	4.5-4.75	H	SE	4.5	
B. Between Nŏk-to (Roku-t5) and Ch'angsŏn-do (Shōsen-t5)	L	-	5.5	H	-	5.5	
C. SSE of Nŏk-to (Roku-t5)	L	-	4.75	H	-	4.5	
D. Taebang-sudo (Daihō-suidō)	L	NW	4.25	H	SE	4.5	
E. Samch'ŏnp'o-sudo (Sanzempo-suidō)	L	NW	5.5	H	SE	5.5	At the outer part the flood velocity is about 2 kn. and the ebb 2.5 kn.
F. SE of Sa-do (Sa-t5)	L	NW	-	H	SE	-	Tidal currents are not felt here, but they are very strong off the town of Samch'onp'o (Sanzenho).
G. Sŏ-sudo (Nishi-suidō)	L	-	1.25	H	-	1.25	
H. W of Sun-do (Jugō-t5)	-	NW	0.75	-	SSE	0.75	
I. E entrance of Ch'angsŏn-haehyŏp (Shōsen-kaikyō)	L	W	1	H	E	1	
J. W entrance of Ch'angsŏn-haehyŏp (Shōsen-kaikyō)	L	NW	3	H	SE	3	Overfalls.
K. E of Cho-do (Chō-t5)	-	WSW	1	-	ENE	1	
L. E entrance of Mijo-sudo (Mijo-suidō)	L	SW	1	H	NE	1	
M. W entrance of Mijo-sudo (Mijo-suidō)	L	SW	2-2.5	H	NE	2-2.5	Tide rips.
N. S of Ho-do (Ko-t5)	-	WNW	0.75	-	NE	0.75	
O. WSW of Sejon-do (Seson-t5)	-	-	-	-	ENE	1.25	
P. SSW of Park-sŏ (Haku-sho)	-	WSW	1.25	-	SSE	0.75	
Q. SE of Tae-do (Dai-t5)	-	WNW	1	-	ESE	0.75	
R. SSE of Ojam-ki (Goshigan-saki)	-	W	0.75	-	E	1	
S. E of U-am (Gyū-gan)	L+3/4	NW	0.75	H+3/4	SSE	1.5	The flood sets W and then S. The ebb follows the reverse course. There are eddies on the N side of the strait leading to the inner harbor. W of Yŏsu-hang (Reisui-kō) the tidal currents are strong. The flood is weaker than the ebb. A velocity exceeding 6 kn. during spring tides has been reported. Times of slack refer to tide at Yŏsu-hang (Reisui-kō).
T. Yŏsu-haehyŏp (Reisui-kaikyō)	L	-	-	H	-	3.75	
U. E of Packtanggŭm-mal (Hakudōkin-maisu)	-	-	-	-	-	-	Velocities do not exceed 2 kn.
V. South Harbor	-	-	-	-	-	-	It is reported that at times of high and low water the tidal currents are felt here.
W. North Harbor	-	-	-	-	-	-	Moderate tidal currents.
X. NE of Odong-to (Godō-t5)	-	N	1	-	S	1	
Y. SW of To-roe (Watari-se)	-	N	1	-	S	2.5	
Z. NW of To-roe (Watari-se)	-	-	-	-	S	1.5	
AA. SE of Nakp'o-gak (Hakuho-kaku)	-	NNW	1	-	SSE	2.75	
BB. NE of Nakp'o-gak (Hakuho-kaku)	-	-	-	-	SE	-	
CC. Myodo-sudo (Byōtō-suidō)	-	-	-	-	-	-	Strong tidal currents.
DD. Tŭedo-kŭndo (Dōitō-gundō)	L+2 1/2	NNE	2	H+2 1/2	S	2	
EE. Noryang-sudo (Rōryō-suidō)	L+2	E	1.5	H+2	W	3.25	
FF. SW of Sori-do (Shori-t5)	-	W	1.5	-	E	1	
GG. Singing-sudo (Shinkō-suidō)	-	WSW	2.75	-	E	2.5	
HH. SW of Kŭmo-do (Kingō-t5)	-	WNW	1.25	-	SE	1.75	
II. Kŭmo-sudo (Kingō-suidō)	-	W	4.25	-	E	3.25	Tide rips off the N points of Kŭmo-do (Kingō-t5).
JJ. ESE of Sohoenggan-to (Shō-ekan-t5)	-	-	-	-	ESE	1.5	
KK. Hoenggŭn-sudo (Ekan-suidō)	-	NW	-	-	SE	-	
LL. Wŏrho-sudo (Getsuko-suidō)	-	N	-	-	S	-	
MM. S of Song-do (Shō-t5)	-	W	-	-	E	-	Close off the S side of Song-do (Shō-t5), the strength of the current increases considerably.
NN. N of Song-do (Shō-t5)	-	W	-	-	E	-	
OO. Between Paegya-do (Hakuya-t5) and Cheri-do (Shori-t5)	-	W	1	-	E	1.5	
PP. W of Cheri-do (Shori-t5)	-	NW	1	-	SE	1.5	
QQ. W of Mang-do (Bō-t5)	-	NNW	-	-	SSE	3	
RR. W of Chŏkdŏm-do (Sekiteki-t5)	-	NNW	-	-	-	-	
SS. NE of Chobal-to (Shōhatsu-t5)	-	WNW	3	-	SE	-	

* In hours before (-) or after (+) local high water (H) or low water (L) unless noted.
† Velocity at strength in knots.

FIGURE III - 40. *Tidal Currents.*
Yosu-haeman (Reisui-kaiwan). Area location shown on Index, FIGURE III - 2.

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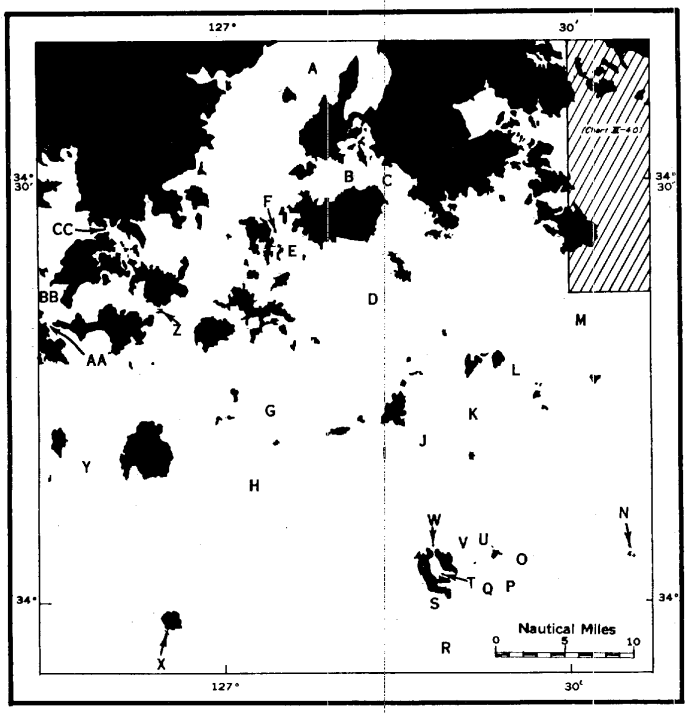

Location	Slack before flood*	Flood† Dir.	Flood† Vel.	Slack before ebb*	Ebb† Dir.	Ebb† Vel.	Remarks
A. Tŭngnyang-man (Tokuryō-wan)	-	-	-	-	-	-	Weak tidal currents.
B. E of Sanghwa-to (Jōka-tō)	-	-	-	-	-	-	Weak tidal currents.
C. NE of Kŏgŭm-do (Kyokin-tō)	-	WNW	2	H+1/2	ESE	2	
D. SW of Sisan-to (Shisan-tō)	-	WNW	2	-	ESE	-	
E. E of Pigyŏn-do (Hiken-tō)	-	NNW	-	-	SSE	3	
F. E of Kŭmdang-do (Kintō-tō)	-	NNW	3	H+3/4	SE	-	
G. NNW of Hwangje-do (Kōtei-tō)	-	-	-	-	E	-	
H. SSW of Hwangje-do (Kōtei-tō)	-	W	-	-	E	2	
I. S of Ch'o-do (Sō-tō)	-	WNW	1.75	-	ENE	1.5	The maximum velocity in the vicinity of the Ch'odo-kundo (Sōtō-guntō) is 2 kn.
J. SE of Ch'o-do (Sō-tō)	-	WNW	1.75	-	ENE	1.5	
K. S of Sonjuk-to (Sonchiku-tō)	-	WNW	1.75	-	ESE	1.75	In the vicinity of Sonjuk-yŏlto (Sonchiku-rettō) the velocity does not exceed 2 kn.
L. SE of Kŏmun-do (Kyobun-tō)	-	WNW	1.75	-	ESE	1.75	
M. SSE of T'anggonu (Tōkin-rei)	-	W	2	H+3	E	2	Times of slack refer to tide at Sayang-do (Shiyō-tō). There are strong tidal currents around T'anggonu (Tōkin-rei) and Hŭktŭng-yŏ (Kobutō-jo).
N. NW of Paek-to (Haku-tō)	L+3/4	-	1.25	H+3/4	-	1.25	
O. ESE of Taesambu-do (Dai-sampu-tō)	-	WSW	1	-	-	-	Along the E and W sides of the Kŏmun-do (Kyobun-tō) the flood sets NW and the ebb SE.
P. SSE of Taesambu-do (Dai-sampu-tō)	-	-	-	-	ENE	1.5	
Q. SSE of Sosambu-do (Shō-sampu-tō)	-	-	-	-	E	1	
R. 3 mi. S of Sŏ-do (Sei-tō)	L+1 1/2	-	1.25	H+1 1/2	-	1.25	
S. 1 mi. S of Sŏ-do (Sei-tō)	-	W	-	-	E	-	Strong tidal currents around the rock at the S end.
T. SW passage to Tonae-hae (Tōnai-kai)	-	NW	0.5	-	SE	0.5	Strong tidal current.
U. NW of Sosambu-do (Shō-sampu-tō)	-	-	-	-	SSE	1	
V. NE of Ko-do (Ko-tō)	-	-	-	-	SE	1	
W. N entrance to Tonae-hae (Tōnai-kai)	-	NNW	1.25	-	SSE	1.75	
X. S of Yŏsŏ-do (Reizui-tō)	L+3 1/2	-	1.5	H+3 1/4	-	1.5	
Y. Channels between Ch'ŏngsan-do (Seizan-tō), Taemo-do (Daibō-tō), and Soan-do (Shoan-tō)	-	N	2	-	S	2	
Z. S of Choyak-to (Joyaku-tō)	-	WNW	2.5	-	ESE	2.5	Velocities at springs.
AA. Between Wan-do (Kan-tō) and Sinji-do (Shinchi-tō)	-	-	2	-	-	2	Overfalls. It is reported that the flood sets N and the ebb S, the N current beginning 4 hours after high water.
BB. Between Wan-do (Kan-tō) and Kogŭm-do (Kokon-tō)	-	-	-	-	-	-	Weak tidal currents.
CC. Mato-sudo (Matō-suidō)	-	W	3.5	-	E	3.5	

* In hours before (-) or after (+) local high water (H) or low water (L) unless noted.
† Velocity at strength in knots.

FIGURE III - 41. *Tidal Currents.*
Tungnyang-man (Tokuryō-wan) and Approaches. Area location shown on Index, FIGURE III - 2.

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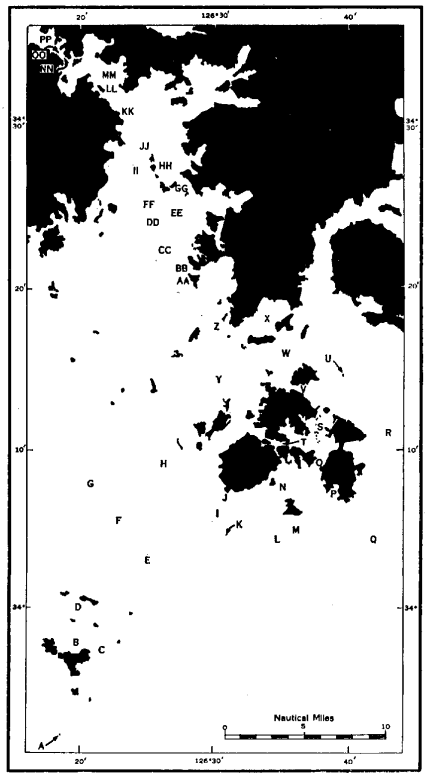

Location	Slack before flood*	Flood† Dir.	Flood† Vel.	Slack before ebb*	Ebb† Dir.	Ebb† Vel.	Remarks
A. Chŏlmyŏng-sŏ (Zetsumei-sho)	-	-	-	-	-	-	Heavy tide rips occur within 1 mi. NE of this rock.
B. Ch'uja-kundo (Shūshi-guntō)	L+2 1/2	NW	2.25	H+2 1/2	SE	2.25	Velocities are for the general area at spring tides, but in the narrow channels the maximum velocity is 5 kn. Overfalls and tide rips occur with strong currents.
C. E of Hach'uja-do (Ka-shūshi-tō)	-	NNW	1.75	-	SSE	2.5	
D. S of Hoenggan-do (Ōkan-tō)	H-3 1/2	WNW	-	H+2 1/2	-	-	During ebb countercurrents are set up between the islets and rocks; where they meet the main current, violent tide rips occur.
E. NE of Hoenggan-do (Ōkan-tō)	-	WNW	2.5	-	-	-	
F. WSW of Pogil-to (Hokitsu-tō)	-	WNW	1.5	-	-	-	
G. W of Pojuk-kak (Hochiku-kaku)	-	NW	1	-	-	-	
H. WSW of T'ogŭm-do (Tokin-tō)	-	NW	3.75	-	SE	2.5	
I. SW of Pojuk-kak (Hochiku-kaku)	-	WNW	3.25	-	SE	4.5	
J. Pojuk-kak (Hochiku-kaku)	-	-	-	-	-	-	There are strong currents and overfalls on the N side of Ya-do (Ya-tō). Tide rips extend S of Pojuk-kak (Hochiku-kaku) for nearly a mile.
K. Ch'ulun-ch'o (Izumo-shō)	-	-	-	-	-	-	Strong winds and tidal currents cause dangerous overfalls.
L. SSW of Hangmun-do (Kōmon-tō)	-	WNW	3.25	-	E	3.75	
M. S of Hangmun-do (Kōmon-tō)	H-3	-	2.5	H+3	-	2.5	Strong currents off the NE and SE points.
N. SE of Yejak-to (Reisaku-tō)	H-4	W	3	H+2	E	3	
O. W of Soan-do (Shoan-tō)	-	NNE	1.75	-	SSW	2	
P. Chinsanni-p'o (Chinsanri-ho)	-	-	-	-	-	-	Sheltered from the strong tidal current.
Q. SSE of Soan-do (Shoan-tō)	H-4	WSW	2.25-3.25	H+2	ENE	3-4.5	Current considerably affected by the wind. Off the S end of Soan-do (Shoan-tō) the flood divides into 2 parts; one sets N into Soan-hang (Shoan-kō) and the other, passing on both sides of Hangmun-do (Kōmon-to), sets W past the S coast of Pogil-to (Hokitsu-tō) and then NW. The ebb sets in the reverse directions. Maximum velocity is 4.5 kn.
R. E of Ch'ŏngbyŏn'gak (Seihen-kaku)	H-4	NNW	2	H+2	SE	2	
S. N entrance to Soan-hang (Shoan-kō)	-	SSW	1.25	-	N	1.5	N of Soan-do (Shoan-tō) the W current divides into 2 parts, one setting S into Soan-hang (Shoan-kō) and the other passing on both sides of Hoenggan-do (Ōkan-tō). The velocity is 2 to 4.5 kn.
T. Sado-sudo (Datō-suidō)	-	-	2.25-2.5	-	-	2.25-2.5	
U. Yongjŏn-ch'o (Tatsuta-shō)	-	-	-	-	-	-	Tide rips and overfalls with strong currents.
V. Changgu-sudo (Chōkyū-suidō)	-	W	-	-	E	4.5	
W. NW of Hoenggan-do (Ōkan-tō)	H-3	W	3.5	H+2	E	4.5	Current considerably affected by the wind.
X. Paekil-h g (Hakujitsu-kō)	-	-	4-5	-	-	4-5	Strong tidal currents in vicinity of Hŭgil-to (Kokujitu-tō) and at both E and W entrances of Paegil-to (Hakujitsu-tō). Weak currents at the anchorage W of Paegil-to (Hakujitsu-tō).
Y. N of Nae-do (Nai-tō)	-	WSW	2	-	E	2.25	
Z. Between Ŏryong-do (Gyoryū-tō) and Yang-do (Yō-tō)	-	NW	3	-	SE	4	
AA. W of Ŏbul-to (Obutsu-tō)	-	-	-	-	S	2.5	
BB. Off Ŏran-ni (Ōran-ri)	L+2	N	2-2.5	H+2	S	2-2.5	Times of slack refer to tide at Samma-do (Samba-tō).
CC. NW of Ŏbul-to (Obutsu-tō)	-	WNW	1.5	-	-	-	
DD. ESE of Kŭmho-do (Kinko-tō)	-	NNW	1.5	-	SSE	2	
EE. 4 mi. E of Kŭmho-do (Kinko-tō)	-	N	1.25	-	-	-	
FF. 1.75 mi. E of Kŭmho-do (Kinko-tō)	-	NNW	1.25	-	SSE	1.75	
GG. E of S part of Samma-do (Samba-	-	N	-	-	-	-	
HH. E of N part of Samma-do (Samba-tō)	-	NNW	1	-	SSE	1	
II. W of Samma-do (Samba-tō)	-	N	2	-	S	2	
JJ. NNW of Samma-do (Samba-tō)	-	NNW	1	-	S	2	
KK. SE of Kambu-do (Kambu-tō)	-	-	-	-	SE	1.5	
LL. E of Kambu-do (Kambu-tō)	-	NW	-	-	SSE	2.5	
MM. NE of Kambu-do (Kambu-tō)	-	-	-	-	SE	2.5	
NN. N entrance to Maro-hae (Baro-kai)	-	NNW	5	-	-	-	Strong currents.
OO. N entrance to Maro-hae (Baro-kai)	-	NW	7.5	-	-	-	Strong currents.
PP. Myŏnggyangdo (Meiyōto)	L+1	NW	-	H+1	SE	-	Times of slack refer to tide at Samma-do (Samba-tō). Velocities up to 11 kn. have been reported in the vicinity of Chin-do (Chin-tō).

* In hours before (-) or after (+) local high water (H) or ... water (L) unless noted.
† Velocity at strength in knots.

FIGURE III - 42. *Tidal Currents.*
Maro-hae (Baro-kai) and Approaches. Area location shown on Index, FIGURE III - 2.

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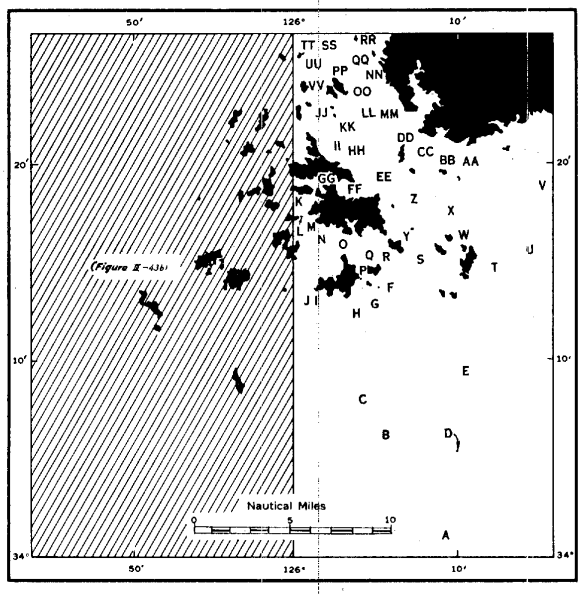

Location	Slack before flood*	Flood† Dir.	Flood† Vel.	Slack before ebb*	Ebb† Dir.	Ebb† Vel.
A. S of Poksa-ch'o (Fukusa-shō)	-	W	1	-	-	-
B. W of Poksa-ch'o (Fukusa-shō)	-	WNW	1.75	-	-	-
C. WNW of Poksa-ch'o (Fukusa-shō)	-	WNW	2	-	-	-
D. Poksa-ch'o (Fukusa-shō)	L+1 3/4	-	1.75	H+1 3/4	-	1.75
E. N of Poksa-ch'o (Fukusa-shō)	-	NW	-	-	-	-
F. E of Koktu-do (Kyokuto-tō)	-	NNW	1.25	-	-	-
G. SW of Namwŏl-ch'o (Nanetsu-shō)	-	N	1.5	-	-	-
H. SSE of Hyŏnje-do (Keitei-tō)	-	WNW	2	-	E	2.75
I. 0.75 mi. SW of Kwanmae-do (Kambai-tō)	-	WNW	4.75	-	SSE	3
J. 1.25 mi. SW of Kwanmae-do (Kambai-tō)	-	NW	4	-	-	-
K. SW of Nabae-do (Rahai-tō)	-	NNW	4.5	-	SE	5
L. Mo-do (Bō-tō)**	-	-	-	-	-	-
M. SW of Hajo-do (Kachō-tō)	-	NW	4.25	-	SE	5
N. N of Haesu-sō (Kaisui-sho)**	L+1‡	W	4.5	H+1‡	E	4.5
O. W entrance to Chukhang-sudo (Chikukō-suidō)	L+1‡	WNW	5††	H+1‡	SE	5††
P. Between Kwanmae-do (Kambai-tō) and Ch'ŏngdŭng-do (Seitō-tō)	-	NNW	-	-	-	-
Q. NNW of Ch'ŏngdŭng-do (Seitō-tō)	-	WNW	3	-	-	-
R. NE of Ch'ŏngdŭng-do (Seitō-tō)	-	NW	2.75	-	-	-
S. W of Tokkō-kundo (Dokukyo-guntō)	L+1‡	NNW	2.5	H+1‡	SSE	2.5
T. 0.75 mi. E of Tokkō-do (Dokukyo-tō)	-	NNW	3.5	-	SW	4
U. 2.75 mi. E of Tokkō-do (Dokukyo-tō)	-	NW	-	-	SE	-
V. WSW of Kuja-do (Kushi-tō)	-	WNW	2	-	-	-
W. N of Ku-do (Karumeki-tō)	-	WNW	3.5	-	ESE	4
X. S of Saja-do (Shishi-tō)	-	WNW	2.75	-	SE	3.75
Y. Between Chukhang-do (Chikukō-tō) and Kangdae-to (Kōdai-tō)	-	NNW	3.25	-	-	-
Z. E of Hajo-do (Kachō-tō)	-	NW	3.75	-	SE	6.5
AA. NE of Pulmu-do (Butsumu-tō)	-	-	-	-	E	2.75
BB. N of Saja-do (Shishi-tō)	-	WNW	2.75	-	E	3
CC. E of Changjuk-to (Chōchiku-tō)	-	WNW	3	-	-	-
DD. NE of Changjuk-to (Chōchiku-tō)	-	NW	6	-	SE	7
EE. NE of Hajo-do (Kachō-tō)	L+1 1/4‡	NW	6	H+1 1/4‡	SE	7
FF. SSE of Tang-dan (Dō-tan)	-	W	-	-	ENE	-
GG. Between Hajo-do (Kachō-tō) and Sangjo-do (Jōchō-tō) ‡‡	L+1‡	W	2	L+5‡	E	2
HH. NE of Sangjo-do (Jōchō-tō)	-	NW	5.75	-	-	-
II. E of Ok-to (Gyoku-tō)	-	-	-	-	SE	5
JJ. W of Haga-do (Kaka-tō)	-	NW	-	-	SE	4.5
KK. SSE of Haga-do (Kaka-tō)	-	NW	4.5	-	-	-
LL. 1.75 mi. E of Haga-do (Kaka-tō)	-	NNW	4	-	SSE	4
MM. 2.5 mi. E of Haga-do (Kaka-tō)	-	WNW	4	-	SSE	4.5
NN. E of Sŏngnam-do (Jōnan-tō)	-	-	-	-	SSE	5
OO. ESE of Sŏngnam-do (Jōnan-tō)	-	N	4	-	SSE	4
PP. NNE of Sŏngnam-do (Jōnan-tō)	-	-	-	-	SSE	3.25
QQ. WSW of Hwagari-do (Kakari-tō)	-	NNW	4.5	-	-	-
RR. SE of Pul-to (Butsu-tō)	-	N	4	-	-	-
SS. ENE of Mosa-do (Bōsa-tō)	-	NW	4	-	-	-
TT. NE of Mosa-do (Bōsa-tō)	-	NNW	4	-	S	3.75
UU. SE of Mosa-do (Bōsa-tō)	-	N	5	-	-	-
VV. E of Cho-do (Chō-tō)	-	N	4	-	S	4

* In hours before (-) or after (+) local high water (H) or low water (L) unless noted.
† Velocity at strength in knots.
‡ Times of slack refer to tide at Hajo-do (Kachō-tō).
** Strong currents.
†† Maximum velocities.
‡‡ Flood runs 4 hours, ebb 8 hours.

FIGURE III - 43a. *Tidal Currents,*
Changjuk-sudo (Chōchiku-suidō) and Vicinity. Area location shown on Index, FIGURE III - 2.

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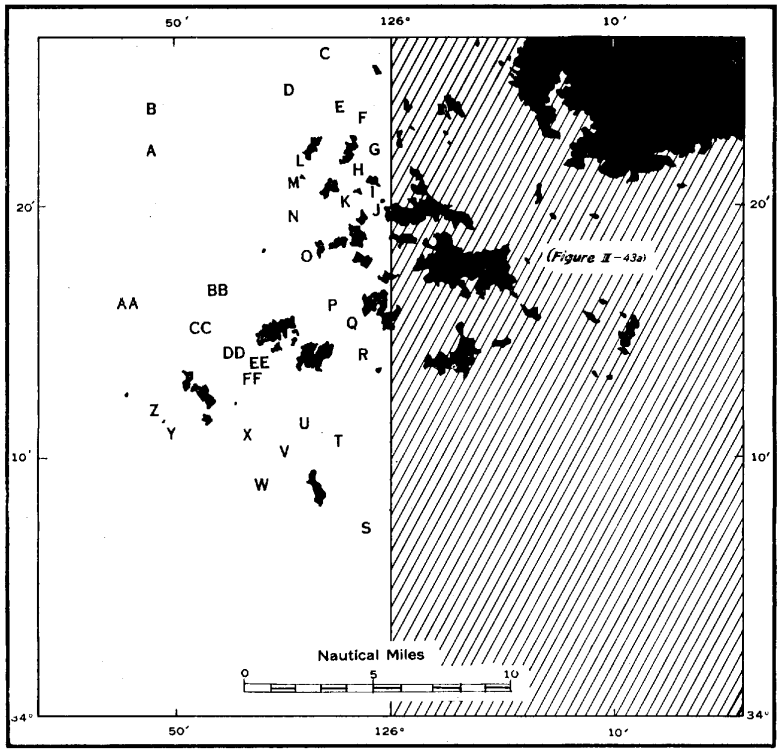

Locality	Slack before flood*	Flood† Dir.	Flood† Vel.	Slack before ebb*	Ebb† Dir.	Ebb† Vel.
A. W of Oepyŏng-to (Gaihei-tō)**	L+3‡	N	2.75	H+3‡	S	3
B. WNW of Oepyŏng-to (Gaihei-tō)	-	N	3-4	-	-	-
C. N of Oepyŏng-to (Gaihei-tō)††	L+2‡	NNE	2.5	H+2‡	S	2.75
D. NNW of Oepyŏng-to (Gaihei-tō)	-	-	-	-	SE	2.75
E. NNW of Naepyŏng-to (Naihei-tō)	-	WNW	3	-	-	-
F. NNE of Naepyŏng-to (Naihei-tō)	-	NNW	3	-	SSE	-
G. E of Naepyŏng-to (Naihei-tō)	-	-	-	-	S	3.5
H. WNW of Yugŭm-do (Ryūkin-tō)	-	NW	3.5	-	-	-
I SSW of Yugŭm-do (Ryūkin-tō)	-	NNW	4	-	-	-
J. W of Sangjo-do (Jōchō-tō)	-	N	5	-	S	5
K. SE of Nurok-to (Nōgyoku-tō)	-	WSW	2	-	-	-
L. N of Che-do (Sai-tō)	-	-	-	-	S	3.5
M. W of Nurok-to (Nōgyoku-tō)	-	N	-	-	S	4
N. NW of Kalmok-to (Karumoku-tō)	-	NNW	3.5	-	SSE	-
O. WSW of Kal-do (Katsu-tō)	-	NW	4.5	-	SSE	4
P. NNE of Tonggŏch'a-do (Tō-Kyoji-tō)	L+1 3/4‡	NW	7	H+1 3/4‡	SE	7
Q. NE of Tonggŏch'a-do (Tō-Kyoji-tō)	-	NW	6	-	-	-
R. WNW of Kōma-do (Kyoba-tō)	-	NNW	5	-	SSE	4.5
S. SE of Pyŏngp'ung-do (Byōbu-tō)	-	NW	2.5	-	-	-
T. NE of Pyŏngp'ung-do (Byōbu-tō)	-	NW	3.5	-	ESE	2-3
U. NNW of Pyŏngp'ung-do (Byōbu-tō)	-	NW	4.5	-	SE	4
V. NW of Pyŏngp'ung-do (Byōbu-tō)	-	-	-	-	SE	3.75
W. W of Pyŏngp'ung-do (Byōbu-tō)	-	NW	3	-	ESE	3.75
X. SE of Kwak-to (Kaku-tō)	-	NNW	3	-	-	-
Y. SSE of Kwang-sŏ (Kō-sho)	-	-	-	-	ESE	3.5
Z. WSW of Maenggol-to (Mōkotsu-tō)	-	-	-	-	SSE	-
AA. NW of Chuk-to (Chiku-tō)	-	NNW	2-3	-	SSE	2-3
BB. NW of Sŏgŏch'a-do (Sei-Kyoji-tō)	-	NW	2-3	-	-	-
CC. NNE of Chuk-to (Chiku-tō)	-	NW	6.75	-	-	-
DD. Between Maenggol-to (Mōkotsu-tō) and Sŏgŏch'a-do (Sei-Kyoji-tō)	L+2 1/4	-	4.5	H+2 1/4	-	4.5
EE. SSW of Sŏgŏch'a-do (Sei-Kyoji-tō)	-	NW	5.5	-	-	-
FF. NE of Myŏng-do (Mei-tō)	L+2‡	NW	6.5	H+2‡	SSE	5.5

* In hours before (-) or after (+) local high water (H) or low water (L) unless noted.
† Velocity at strength in knots.
‡ Times of slack refer to tide at Hajo-do (Kachō-tō).
** Rotary current, turning clockwise. Times are for minimum current, which sets W at 0.75 kn before flood and E at 1.25 kn. before ebb. Spring velocities.
†† Rotary current, turning clockwise. Times are for minimum current, which sets WSW at 1 kn. before flood and SSE at 1.75 kn. before ebb. Spring velocities.

FIGURE III - 43b. *Tidal Currents.*
Changjuk-sudo (Chōchiku-suidō) and Vicinity. Area location shown on Index, FIGURE III - 2.

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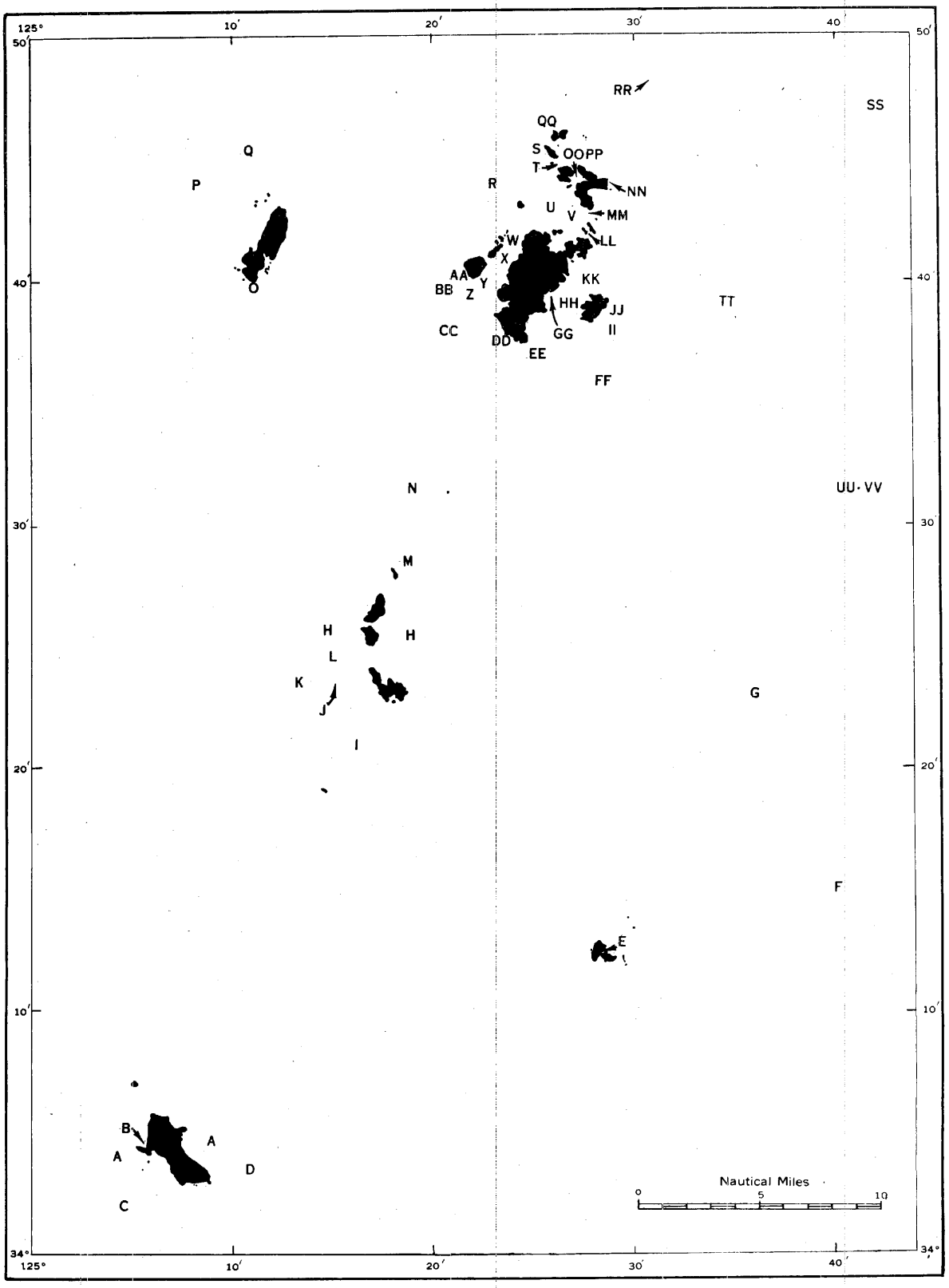

FIGURE III - 44. *Tidal Currents.*
Maemul-sudo (Maikotsu-suidō) and Vicinity. Area location shown on Index, FIGURE III - 2.

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Legend for

	Locality	Slack before flood*	Fl Dir.
A.	E and W sides of Sohŭksan-do (Shō-Kokusan-tō)	-	NNW
B.	Bay on NW side of Sohŭksan-do (Shō-Kokusan-tō)	-	-
C.	SW of Sohŭksan-do (Shō-Kokusan-tō)	-	WNW
D.	ESE of Sohŭksan-do (Shō-Kokusan-tō)	-	NW
E.	Bay on NE side of Manjae-do (Bansai-tō)	-	-
F.	ENE of Manjae-do (Bansai-tō)	-	NNW
G.	Between Manjae-do (Bansai-tō) and Maemul-to (Maikotsu-tō)	-	NNW
H.	E and W sides of Sangt'ae-do (Jōtai-tō)	L+1	N
I.	SSW of Sangt'ae-do (Jōtai-tō)	-	NNW
J.	Kwang-sŏ (Kō-sho)	-	-
K.	W of Kwang-sŏ (Kō-sho)	-	-
L.	N of Kwang-sŏ (Kō-sho)	-	NNW
M.	E of Northwest Rocks	-	-
N.	W of Pyŏn-sŏ (Ben-sho)	-	N
O.	S end of Maega-do (Baika-tō)	L+1	N
P.	NW of Maega-do (Baika-tō)	-	-
Q.	NNW of Maega-do (Baika-tō)	-	NNW
R.	Taehŭksan-kundo (Dai-Kokusan-guntō)	-	-
S.	W of Tuŏk-sŏ (Tooku-sho)	-	ENE
T.	Ch'unsŏ-sudo (Shunsho-suidō)	-	-
U.	N of Taehŭksan-do (Dai-Kokusan-tō)	-	-
V.	NNE of Choji-sŏ (Chōshi-sho)	-	NW
W.	N entrance of Changdo-sudo (Chōtō-suidō)	-	-
X.	Middle of Changdo-sudo (Chōtō-suidō)	-	NNE
Y.	SW entrance of Changdo-sudo (Chōtō-suidō)	-	NNE
Z.	WSW of Kŭmsaeng-ch'o (Kinsei-shō)	-	NNW
AA.	0.25 mi. SW of Taejang-do (Daichō-tō)	-	NW
BB.	1.25 mi. SW of Taejang-do (Daichō-tō)	-	NNW
CC.	WSW of Kallari-mal (Katsuran-matsu)	-	N
DD.	S coast of Taehŭksan-do (Dai-Kokusan-tō)	-	NW
EE.	SE of Sŏsan-mal (Seizan-matsu)	-	-
FF.	S of Yŏngsan-do (Eizan-tō)	-	-
GG.	Ch'onch'on-man (Senson-wan)	-	-
HH.	W of Yŏngsan-do (Eizan-tō)	-	ENE
II.	SE of Yŏngsan-do (Eizan-tō)	-	-
JJ.	Kwang-ch'o (Kō-shō)	-	-
KK.	NNW of Yŏngsan-do (Eizan-tō)	-	NNE
LL.	Kado-sudo (Gatō-suidō)	-	NW
MM.	Chongdal-sudo (Jūtatsu-suidō)	-	W
NN.	E end of Taedun-do (Daiton-tō)	-	-
OO.	Taedun-man (Daiton-wan)	-	-
PP.	Between Taedun-do (Daiton-tō) and Hagon-sŏ (Kakon-sho)	-	N
QQ.	NW of Turi-sŏ (Tori-sho)	-	NE
RR.	Yŏri-am (Jori-gan)	-	-
SS.	NE of Taehŭksan-kundo (Dai-Kokusan-guntō)	L+1 1/2	-
TT.	E of Yŏngsan-do (Eizan-tō)	-	N
UU.	W side of Maemul-to (Maikotsu-tō)	-	N
VV.	E side of Maemul-to (Maikotsu-tō)	L+2 1/2	N

* In hours before (-) or after (+) local high water (H) or low
† Velocity at strength in knots.

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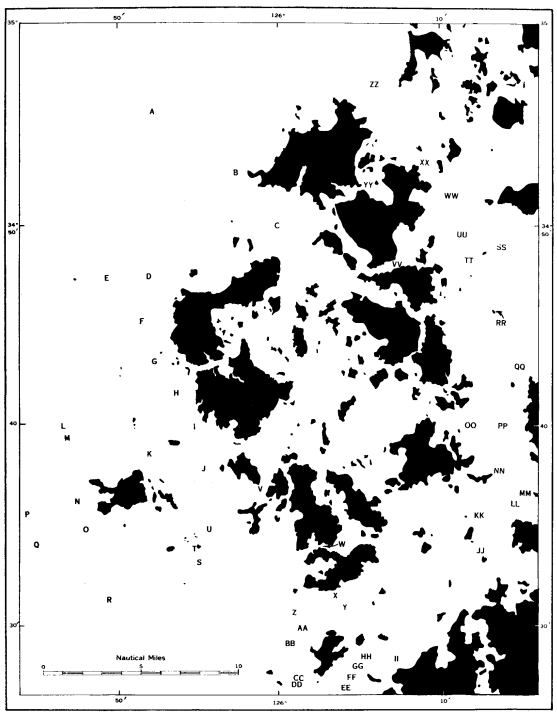

FIGURE III - 45. *Tidal Currents.*
Approaches to Sia-hae (Jiga-kai). Area location shown on Index, FIGURE III - 2.

	Locality	Slack before flood*	Flood† Dir.	Flood† Vel.	Slack before ebb*	Ebb† Dir.	Ebb† Vel.	Remarks
A.	SE of Sŏnyo-tai	-	NE	2.5	-	-	-	
B.	W of Chŏn-do (Jion-tŏ)	-	-	-	-	SSW	-	
C.	NNE of Pigŭm-do (Hikin-tŏ)	-	NW	3	-	SSE	2-3	
D.	WNW of Pigŭm-do (Hikin-tŏ)	-	NNE	4.5	-	-	-	
E.	E of Ch'ŭhal-to (Shichihatsu-tŏ)	L+1 1/2	N	4	H+1 1/2	S	4	Times of slack refer to tide at Pigŭm-sudo (Hikin-suidŏ).
F.	W of Pigŭm-do (Hikin-tŏ)	-	N	3.25	-	-	-	
G.	Between Pigŭm-do (Hikin-tŏ) and Chuk-to (Chiku-tŏ)	-	NNW	3.75	-	SSE	3.75	
H.	W of Toch'o-do (Tosŏ-tŏ)	-	NNW	4	-	SSE	3.75	There is a tide race when the wind blows against the current.
I.	NE of Kyŏngch'i-do (Keichi-tŏ)	L+1/2	NNW	4.25	H+1/2	SE	4.25	Times of slack refer to tide at Pigŭm-sudo (Hikin-suidŏ).
J.	SE of Kyŏngch'i-do (Keichi-tŏ)	-	NNW	3	-	SSE	3	
K.	Ui-sudo (Gyŭji-suidŏ)	-	-	3-4	-	-	3-4	
L.	W of Sŏktwang-to (Sekŏ-tŏ)	-	N	3.75	-	S	3.75	
M.	NW of Ui-do (Gyŭji-tŏ)	-	N	3.75	-	S	2.5	
N.	W of Ŭi-do (Gyŭji-tŏ)	-	NNW	2.5	-	-	-	
O.	W of Ŏrŭk-to (Gyorraku-tŏ)	-	NNW	-	-	-	-	
P.	WSW of Ui-do (Gyŭji-tŏ)	L+2 1/2	NNW	2-3	H+2 1/2	SSE	2-3	Times of slack refer to tide at Hajo-do (Kachŏ-tŏ).
Q.	SW of Ui-do (Gyŭji-tŏ)	L+1 1/4	-	1.75	H+1 1/4	-	1.75	
R.	S of Ui-do (Gyŭji-tŏ)	-	-	-	-	ESE	1.5	
S.	S of Pi-do (Bi-tŏ)	-	N	-	-	-	-	
T.	W of Pi-do (Bi-tŏ)	-	N	2	-	-	-	
U.	NE of Pi-do (Bi-tŏ)	-	NE	2	-	SSE	3	
V.	Taeya-sudo (Daiya-suidŏ)	-	-	-	-	-	-	Stronger and more irregular currents than in Toch'o-sudo (Tosŏ-suidŏ).
W.	Between Hallŭ-do (Kai-tŏ) and Hat'ae-do (Kadai-tŏ)	-	-	-	-	-	-	Very strong tidal currents.
X.	W of Tun-sŏ (Ki-tŏ)	L+2 3/4	E	3	H+2 3/4	W	3	Times of slack refer to tide at Hajo-do (Kachŏ-tŏ).
Y.	Between Kasa-do (Kasa-tŏ) and Hat'ae-do (Kadai-tŏ)	L+2	E	2.5	H+2	W	3	Times of slack refer to tide at Hajo-do (Kachŏ-tŏ).
Z.	SW of Hat'ae-do (Kadai-tŏ)	-	N	2.25	-	-	-	
AA.	NW of Kasa-do (Kasa-tŏ)	-	WNW	1.25	-	-	-	
BB.	W of Kasa-do (Kasa-tŏ)	-	N	3	-	S	3.25	
CC.	SW of Ma-do (Ma-tŏ)	-	N	3.5	-	-	-	
DD.	ESE of Kŏdŏk-to (Katoku-tŏ)	-	N	3.5	-	-	-	
EE.	N of Pal-to (Batsu-tŏ)	-	NW	3	-	-	-	
FF.	W of Chang-do (Chŏ-tŏ)	-	N	3.5	-	-	-	
GG.	Between Chang-do (Chŏ-tŏ) and Kasa-do (Kasa-tŏ)	L+1 1/2	NE	3	H+1 1/2	SW	4	Times of slack refer to tide at Hajo-do (Kachŏ-tŏ).
HH.	SSE of Chuji-do (Shushi-tŏ)	-	NE	4	-	-	-	
II.	SSE of Yangŭŏk-to (Ryŏkoku-tŏ)	-	-	-	-	WSW	1.75	
JJ.	Between Ko-do (Ki-tŏ) and Song-do (Shŏ-tŏ)	L+1/2	NE	3	H+1/2	SW	4	Times of slack refer to tide at Siha-do (Shika-tŏ).
KK.	NNE of Yul-to (Ritsu-tŏ)	-	NE	2.25	-	-	-	
LL.	WSW of Imha-do (Rinka-tŏ)	-	NNE	-	-	SSW	-	One-half mile E of this location the ebb sets ESE into Myŏngyangdo (Meiyŏkio).
MM.	W of Imha-do (Rinka-tŏ)	-	NW	-	-	SE	2.75	
NN.	ENE of Majo-do (Bashin-tŏ)	-	NNW	-	-	-	-	
OO.	WSW of Ch'i-do (Chi-tŏ)	-	-	-	-	-	-	The E flood from Changsan-sudo (Chŏsan-suidŏ) meets the N flood of Sia-hae (Jiga-kai).
PP.	Middle of Sia-hae (Jiga-kai)	L+1/2	N	4	H+1/2	S	4	Times of slack refer to tide at Siha-do (Shika-tŏ).
QQ.	Between Ch'i-do (Chi-tŏ) and Mokp'o-hang (Moppo-kŏ)	L+1/2	N	3-4	H+1/2	S	3-4	
RR.	Near Pulmugi-do (Fumuki-tŏ)	-	N	1.5	-	S	2	
SS.	ENE of Yong-do (Ryŏ-tŏ)	-	NNW	2	-	-	-	
TT.	WNW of Sangnaptŏk-to (Jŏnŏtoku-tŏ)	-	N	1.5	-	-	-	
UU.	NNW of Sangnaptŏk-to (Jŏnŏtoku-tŏ)	-	NNW	1.75	-	SSE	2	
VV.	Tetsuma Kangu	-	ENE	-	-	WSW	-	
WW.	SE of Amutel Light	L+1	NNW	1.5	H+1	SSE	1.75	One-half mile E of the lighthouse the velocity is said to reach 2.5 kn.
XX.	NNW of Amutel Light	-	-	-	-	SE	1	
YY.	Puktogang-sudo (Hokkŏ-suidŏ)	-	NE	-	-	SW	-	Flood velocities up to 2.5 kn. and ebb velocities up to 4.5 kn. have been reported.
ZZ.	Myŏndo-sudo (Mentŏ-suidŏ)	-	NW	-	-	SE	-	NW velocities up to 2.75 kn. in midchannel and SE velocities up to 2.25 kn. have been reported near shore W of Chŏnjung-do (Zensŏ-tŏ) and S of Huŭjŭng-do (Kŏsŏ-tŏ).

* In hours before (-) or after (+) local high water (H) or low water (L) unless noted.
† Velocity at strength in knots.

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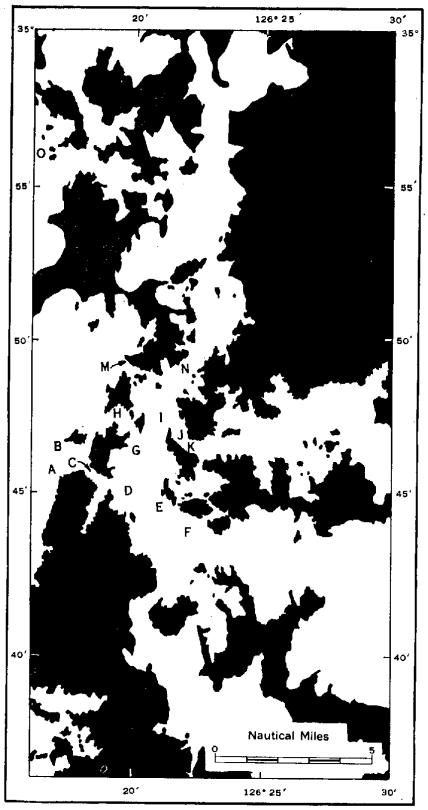

Locality	Slack before flood*	Flood† Dir.	Flood† Vel.	Slack before ebb*	Ebb† Dir.	Ebb† Vel.	Remarks
A. W of Mokuho Light	-	-	-	-	-	-	Spring velocity.
B. NW of Mokuho Light	-	ESE	2	-	NW	5	
C. Between Talli-do (Tatsuri-tō) and Hwawŏn-pando (Kagen-hantō)	L	SE	7-8	H	WNW	9	Times of slack refer to tide at Mokp'o (Moppo). The velocity increases rapidly from slack to strength, the maximum occurring about 2 hours after slack. The current is greatly affected by winds and freshets. Flood velocities of 10 kn. and ebb of 13 kn. are said to occur. There is an eddy during strong S or E winds.
D. SE of Talli-do (Tatsuri-tō)	-	ESE	6	-	-	-	
E. SW of Hŏsa-do (Kyosha-tō)	-	ESE	4.25	-	-	-	
F. WSW of Hwangsan-do (Kōzan-tō)	-	SE	3.75	-	-	-	
G. Talli-paekchi (Tatsuri-hakuchi)	-	-	-	-	-	-	Most of the flood entering between Talli-do (Tatsuri-tō) and Muan-pando (Muan-hantō) sets SE; the rest sets N in the passages between Talli-do (Tatsuri-tō) and Yŏngam-pando (Reigan-hantō). There is a counterclockwise eddy with a velocity of 1.5 kn. around the shoal between Talli-do (Tatsuri-tō) and Hŏsa-do (Kyosha-tō). The current along the W, N, and E coasts of Koha-do (Kōka-tō) has a velocity of 2 to 3 kn. A small part of the ebb sets S to the E of Koha-do (Kōka-tō) or W past the N end of Changja-do (Chōsa-tō), but the major part sets S, forming a counterclockwise eddy between Talli-do (Tatsuri-tō) and Hŏsa-do (Kyosha-tō). Strengths of current occur about 3 hours after high and low waters at Mokp'o (Moppo).
H. Between Kul-to (Totsu-tō) and Talli-do (Tatsuri-tō)	-	-	-	-	-	-	Strong currents.
I. NW of Koha-do (Kōka-tō)	-	-	5	-	-	7	Velocity may be increased by strong winds. Freshets are reported to double the ebb velocity and reduce the flood one half.
J. N of Koha-do (Kōka-tō)	-	SSE	-	-	NW	-	Maximum velocity of the ebb along NE side about 5 kn.
K. S of SW promontory of Muan-pando (Muan-hantō)	L+3/4	-	-	H+3/4	-	-	Strong and irregular currents; times of slack water greatly affected by the stage of the river.
L. Mokp'o-hang (Moppo-kō)	-	-	-	-	-	-	E of Mokp'o (Moppo) currents are irregular; to the SE flood velocity is 3 kn.
M. Between Aphae-do (Ōkai-tō) and Kul-to (Totsu-tō)	-	-	-	-	-	-	Strong tidal currents.
N. Between Aphae-do (Ōkai-tō) and Muan-pando (Muan-hantō)	-	NE	-	-	SW	-	
O. Between Koi-chedo (Koji-shotō) and Maehwa-chedo (Baika-shotō)	-	-	-	-	-	-	N flood with maximum velocity of 1.5 kn.

* In hours before (-) or after (+) local high water (H) or low water (L) unless noted.
† Velocity at strength in knots.

FIGURE III - 46. *Tidal Currents.*
Yongsan-gang (Eizan-kō) and Vicinity. Area location shown on Index, FIGURE III - 2.

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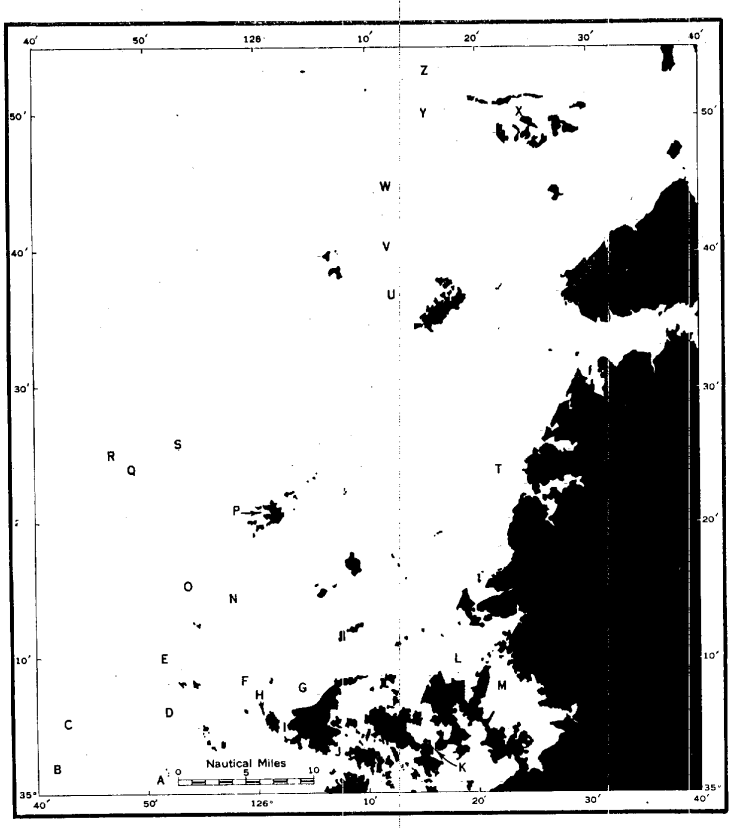

Locality	Slack before flood*	Flood† Dir.	Flood† Vel.	Slack before ebb*	Ebb† Dir.	Ebb† Vel.	Remarks
A. SW of Kunsŏnyo	-	-	-		SSW	2	Neap velocity.
B. W of Kunsŏnyo	-	N	2.25	-	SSW	2.25	
C. WNW of Kunsŏnyo	L+1	NNE	2.25	H+1	SSW	2.25	
D. SSW of Sohŏsa-do (Shō-kyōsa-tō)	-	NNE	-	-	-	-	
E. NW of Sohŏsa-do (Shō-kyōsa-tō)	-	NNW	-	-	SW	-	
F. NNW of Taerorok-to (Dai-roroku-tō)	-	-	-	-	SW	-	
G. NW of Imja-do (Jinshi-tō)	-	NE	-	-	SW	-	Maximum velocities of 2.5 kn. have been reported between Chaewŏn-do (Zaien-tō) and Nakwŏl-sat'oe (Rakugetsu-satai).
H. Chaewŏnsŏ-sudo (Zaien-nishi-suidō)	L+1/2‡	N	3.25	H+1/2‡	S	3.5	Maximum velocities.
I. Chaewŏndong-sudo (Zaien-higashi-suidō)	L+1/2‡	N	2.75	H+1/2‡	S	3.5	Maximum velocities.
J. Sudo-sudo (Suitō-suidō)	L‡	NE	2.25	H‡	SW	3.75	Maximum velocities. The current sets N at 3 kn. and S at 5 kn. in the narrow channel between Imja-do (Jinshi-tō) and the small island to the E. The current sets N at 3.25 kn. about 0.5 mi. W of the W end of Hujŭng-do (Kōsō-tō).
K. Between Chi-do (Chi-tō) and Imch'i-pando (Rinsui-hantō)	-	N	3-4	-	SSE	3-4	
L. Approach to Hamp'yŏng-man (Kampei-wan)	-	ENE	2.5	-	WSW	2.75	Maximum velocities. Flood sets SSE at 3.75 kn. and ebb NW at 3 kn. off the NE end of Imch'i-pando (Rinsui-hantō).
M. Hamp'yŏng-man (Kampei-wan)	L	-	-	-	N	-	Weak current.
N. NE of Taebich'i-do (Dai-hichi-tō)	-	-	-	-	ESE	-	
O. NNW of Sobich'i-do (Shō-hichi-tō)	-	NNE	-	-	-	-	
P. Anma-kundo (Amba-guntō)	L	NE	1-2.5	H	SW	1-3.25	Weak currents in the passages between the islands and strong off the outer sides of the islands.
Q. 10 mi. WNW of Anma-kundo (Amba-guntō)	-	NE	2	-	SW	2	
R. 11 mi. WNW of Anma-kundo (Amba-guntō)	L+1	-	1.25	H+1	-	1.25	
S. NW of Anma-kundo (Amba-guntō)	-	NE	1	-	WSW	1	
T. SSE of Wi-do (I-tō)	-	NE	1.25	-	SW	1	
U. Between Wi-do (I-tō) and Hawangdŭng-do (Kōto-tō)	-	NE	1.5	-	SW	2	
V. ENE of Yŏl-to (Retsu-tō)	-	-	-	-	WSW	1.5	
W. SW of Hŭksan-chedo (Kokusan-shotō)	-	-	-	-	SSW	1	Neap velocity.
X. Between N and S groups of Hŭksan-chedo (Kokusan-shotō)	L+1	E	1-2.75	H+1	W	1-2.75	Strong flood accompanied by overfalls in the passages between the islands. Maximum velocity off the E end of Pangch'uk-to (Bōchiku-tō) is 3 kn. and tide rips occur in this channel.
Y. WSW of Mal-to (Matsu-tō)	-	ENE	1.5	-	-	-	
Z. NW of Mal-to (Matsu-tō)	-	N	1.5	-	SSW	1.25	

* In hours before (-) or after (+) local high water (H) or low water (L) unless noted.
† Velocity at strength in knots.
‡ Times of slack refer to tide at Anma-do (Amba-tō).

FIGURE III - 47. *Tidal Currents.*
Hamp'yong-man (Kampei-wan) to Huksan-chedo (Kokusan-shotō). Area location shown on Index, FIGURE III - 2.

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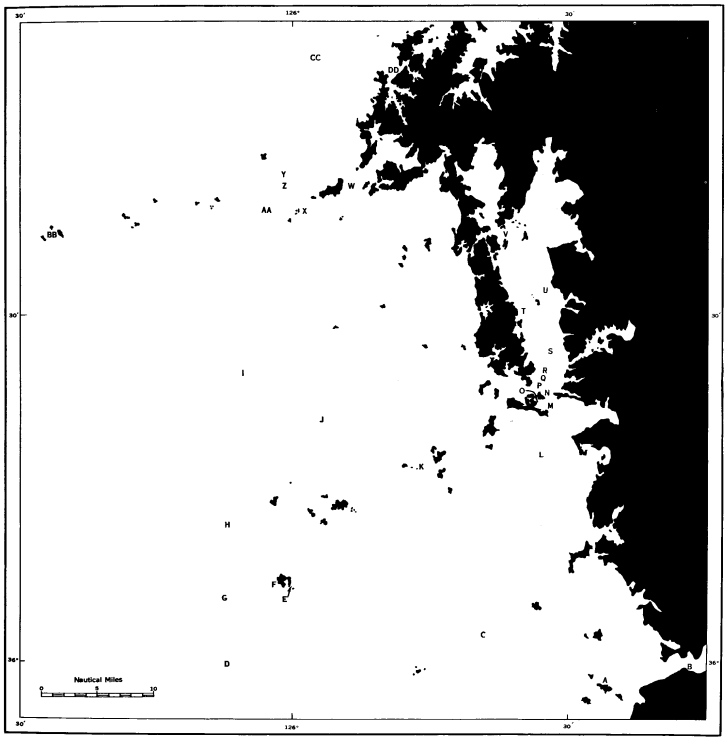

FIGURE III - 48. *Tidal Currents.*
Kunsan-hang (Gunzan-kō) to Tong-sudo (Higashi-suidō). Area location shown on Index, FIGURE III - 2.

Location	Slack before flood*	Flood† Dir.	Flood† Vel.	Slack before ebb*	Ebb† Dir.	Ebb† Vel.	Remarks
A. Off Orang-do (Gorō-tō)	L+3/4‡	E	-	H+3/4‡	W	-	Flood in Kunsan-hang (Gunzan-kō) is strongest between Chŏnmang-san (Zembō-san) and a point E of Yubu-do (Yufu-tō), and ebb is strongest along the S side of Yubu-do (Yufu-tō). Freshets increase the velocity and duration of the ebb; the velocity may be doubled.
B. Off Kunsan (Gunzan)	L+1 1/4‡	E	2.25-3	H+1 1/4‡	W	3.5-4	
C. WSW of Yŏn-do (En-tō)	-	NE	2	-	WSW	1.75	
D. SW of Ŏch'ŏng-do (Osei-tō)	-	NNE	1.75	-	SW	1.75	
E. Between Semich'i-mal (Saibiji-matsu) and Kajin-sŏ (Kashin-sho)	-	NNE	1.5	-	SSW	1.5	During the winter N and NW winds cause eddies in Ŏch'ŏngto-choji (Oseitō-byōchi).
F. W of Ŏch'ŏng-do (Osei-tō)	L+1 1/4	-	1	H+1 1/4	-	1	
G. WSW of Ŏch'ŏng-do (Osei-tō)	-	-	-	-	SSW	1.5	
H. SW of Hwang-do (Kō-tō)	-	NNE	1.75	-	-	-	
I. SW of Tae-sŏ (Dai-sho)	L+1	NNE	1.75	H+1	S	1.75	
J. N of Oeyŏn-do (Gaien-rettō)	-	NNE	2	-	WSW	1.75	
K. Channel E of Taegitsan-do (Dai-Kitsusan-to)	-	N	2	-	S	2	
L. Between Yong-do (Ryū-tō) and Wŏnsan-do (Genzan-tō)	-	N	2.5	-	S	3.5	Maximum velocities. The velocity is 2 kn. at Tasurigii-amu. Tide rips occur at Sonyō-amu except at slack water. Strong overfalls occur within 0.5 mile SE of the SE end of Wŏnsan-do (Genzan-tō) and there are rips over the shoal 0.75 mile ESE of the point.
M. SE of Hyoja-do (Kōshi-tō)	L+1	N	5.75	H+1	S	6.25	Relatively weak current in the anchorage 1.3 mi. E of the E end of Wŏnsan-do (Genzan-tō).
N. E of Hyoja-do (Kōshi-tō)	-	NNW	4.5	-	SSE	5.75	Irregular current near the N end of Hyoja-do (Kōshi-tō).
O. Between Hyoja-do (Kōshi-tō) and Wŏnsan-do (Genzan-tō)	-	-	-	-	-	-	Velocity 5 kn. or more.
P. Kan-sŏ (Kan-sho)	-	-	-	-	-	-	Overfalls except near the times of slack water. Rips mark the reef 0.5 mi. to the E.
Q. SW of Yuk-to (Riku-tō)	-	N	5.5	-	S	5.5	
R. NNW of Yuk-to (Riku-tō)	-	N	6.25	-	S	-	
S. E of Kye-do (Kei-tō)	-	-	-	-	-	-	Weak currents.
T. SW of Chuk-to (Chiku-tō)	-	NNW	3	-	SSE	3	
U. NE of Chuk-to (Chiku-tō)	-	NNW	3	-	SSE	3	
V. SSE of Kŏmho-do (Kenchō-tō)	-	-	-	-	E	3	
W. E of Kaŭi-do (Kagi-tō)	L+1	N	4	H+1	S	4	Maximum spring velocities. Overfalls during spring tides.
X. E of Ong-do (Ō-tō)	-	-	-	-	-	3.33	
Y. SE of Hŭk-to (Koku-tō)	-	NNE	2.25	-	S	2.25	
Z. NNW of Ong-do (Ō-tō)	-	N	1.5	-	S	3.5	
AA. W of Ong-do (Ō-tō)	L+1	-	1.5	H+1	-	1.5	
BB. Kyŏngnŏibi-yŏito (Kakureppi-rettō)	L+1	NNE	1-2	H+1	SSW	1-2	Velocities do not apply to the immediate vicinity of the islands.
CC. NNE of Hŭk-to (Koku-tō)	L+1/2	NNE	2.5	H+1/2	SSW	2.5	
DD. Pŏl-man (Batsu-wan)	-	-	1-2	-	-	1-2	Irregular currents.

* In hours before (-) or after (+) local high water (H) or low water (L) unless noted.
† Velocity at strength in knots.
‡ Times of slack refer to tide at Chuk-to (Chiku-tō).

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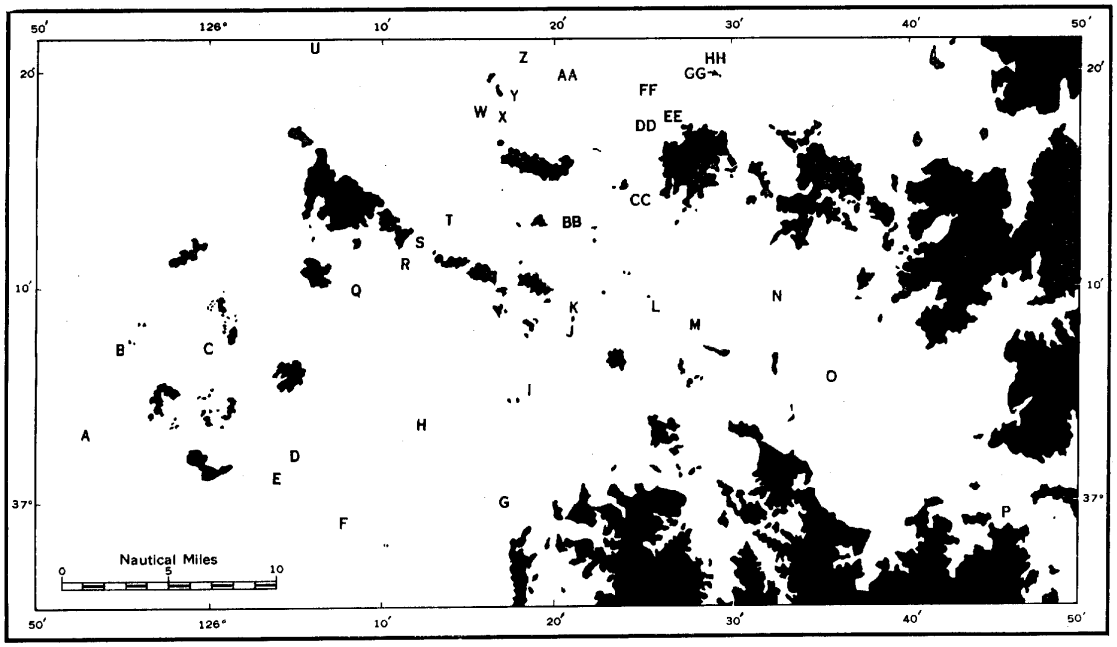

Locality	Slack before flood*	Flood† Dir.	Flood† Vel.	Slack before ebb*	Ebb† Dir.	Ebb† Vel.	Remarks
A. SW of Paega-do (Hakuga-tō)	-	E	2	-	-	-	
B. NW of Paega-do (Hakuga-tō)	-	-	-	-	SSW	2.25	
C. Vicinity of Wi-do (Uru-tō), Paega-do (Hakuga-tō), and Kurŏp-to (Katsugyō-tō)	L‡	NE	2	H‡	SW	2	Irregular currents. Near the islands the currents follow the directions of the shores.
D. E of Wi-do (Uru-tō)	L‡	NE	4.25	H‡	SW	4.25	
E. ESE of Wi-do (Uru-tō)	-	NE	4.5	-	SSW	3.25	
F. NW of An-do (An-tō)	L+3/4	-	1.75	H+3/4	-	1.75	
G. Channel SE of Changan-t'oe (Chōan-tai)	-	-	-	-	-	-	Strong current.
H. WSW of Changan-sŏ (Chōan-sho)	L‡	NE	2.5-2.75	H‡	SW	2.75-3.25	
I. NE of Changan-sŏ (Chōan-sho)	L‡	-	-	H‡	SW	3.5	
J. SSW of P'i-do (Hi-tō)	L‡	NE	3.5	H‡	SW	4	
K. N of P'i-do (Hi-tō)	L+3/4‡	-	2.75	H+1/2‡	-	2.75	
L. SE of Mudang-sŏ (Fudō-sho)	L‡	ENE	2.75	H‡	WSW	3.5	
M. NNE of Yuk-to (Roku-tō)	L	E	2.75	H	WNW	3.25	Maximum velocity of ebb is 4.5 kn. Very strong currents near Yuk-to (Roku-tō) and P'ung-do (Hō-tō).
N. N of Ipp'a-do (Ritsuha-tō)	-	E	3	-	W	3	
O. E of Ipp'a-do (Ritsuha-tō)	-	SE	2.5	-	WNW	3.5	
P. ENE of Nae-do (Nai-tō)	-	E	2.75	-	WNW	3.25	
Q. SW of Soya-do (Soya-tō)	-	-	-	-	WSW	5.25	
R. SSE of Soya-do (Soya-tō)	L‡	ENE	3.75	H‡	WSW	6.75	
S. Between Soya-do (Soya-tō) and Tongbaek-to (Dōhaku-tō)	L‡	NE	4.5	H‡	SSW	5.5	
T. N of Taeijak-to (Daiisaku-tō)	-	NE	3	-	SW	2.75	
U. NNE of Sŏnmi-do (Zenbi-tō)	L	NE	2.75	H‡	SW	3.25	
V. 3.5 mi. SW of Ch'och'i-kundo (Sōchi-guntō)	L‡	NE	1.5	H‡	WSW	1.5	Rotary current turning counterclockwise. Minimum current before flood sets SSE at 0.5 kn. and before ebb sets NNW at 0.75 kn.
W. 1.25 mi. SW of Ch'och'i-kundo (Sōchi-guntō)	-	NE	2	-	WSW	2.75	
X. S of Ch'och'i-kundo (Sōchi-guntō)	-	ENE	3	-	WSW	3	
Y. SE of Ch'och'i-kundo (Sōchi-guntō)	-	NE	2	-	-	-	
Z. NE of Ch'och'i-kundo (Sōchi-guntō)	L‡	NE	1.25	H‡	SW	1.5	Rotary current turning counterclockwise. Minimum currents before flood and ebb have velocities of about 0.75 kn.
AA. E of Ch'och'i-kundo (Sōchi-guntō)	-	-	-	-	WSW	2.75	
BB. SW of Sŏŏbok (Shoobatsu)	L‡	NE	2.5	H‡	SW	2.5	
CC. SE of Sŏŏbok (Shoobatsu)	L‡	N	3	H‡	SSW	3	
DD. 1.25 mi. NW of Yŏnghŭng-do (Reikō-tō)	-	NE	2.5	-	SW	3.25	
EE. 0.5 mi. NW of Yŏnghŭng-do (Reikō-tō)	-	NE	3	-	SW	3	
FF. S of Taemuŭi-do (Daibui-tō)	L	NE	2.5-3	H	SW	2.5-3	
GG. Pukchangja-sŏ (Hoku-chōshi-sho)	L+3/4‡	-	2	H+1/2‡	-	2	
HH. N of Pukchangja-sŏ (Hoku-chōshi-sho)	-	NE	3	-	WSW	3	

* In hours before (-) or after (+) local high water (H) or low water (L) unless noted.
† Velocity at strength in knots.
‡ Times of slack refer to tides at Inch'ŏn-hang (Jinsen-kō).

FIGURE III - 49. *Tidal Currents.*
So-sudo (Nishi-suidō) and Vicinity. Area location shown on Index, FIGURE III - 2.

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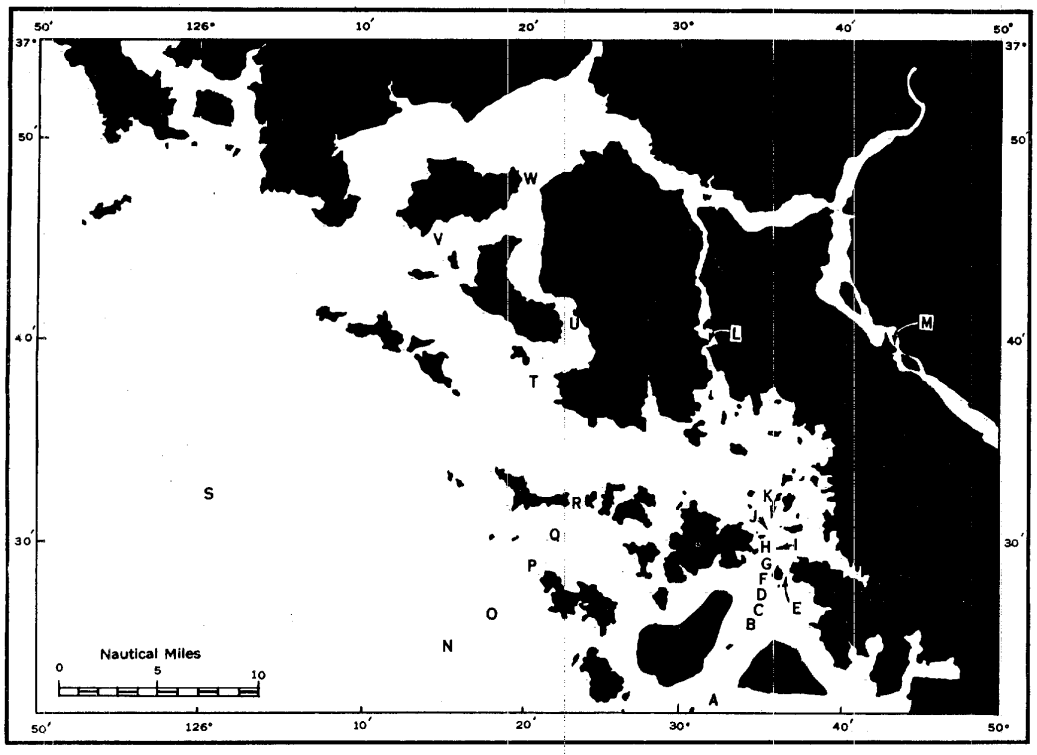

Locality	Slack before flood*	Flood† Dir.	Flood† Vel.	Slack before ebb*	Ebb† Dir.	Ebb† Vel.	Remarks
A. ENE of P'almi-do (Hachibi-tō)	-	NE	2.25	-	-	-	
B. SW of Sowŏlmi-do (Shō-getsubi-tō)	-	-	-	-	S	2	
C. SSW of Wŏlmi-do (Getsubi-tō)	L+1/2	NNE	2	H+1/2	SSW	2	Times of slack refer to tide at Inch'ŏn-hang (Jinsen-kō).
D. SW of Wŏlmi-do (Getsubi-tō)	-	N	2.25	-	S	2.25	
E. Inch'ŏn-hang (Jinsen-kō)	L+1/2	NNE	1.75	H+1/2	SSW	1.75	Times of slack refer to tide at Inch'ŏn-hang (Jinsen-kō). The current is weak and sets with the wind when the wind is strong.
F. W of Wŏlmi-do (Getsubi-tō)	-	N	2.5	-	-	-	
G. WNW of Wŏlmi-do (Getsubi-tō)	-	NNE	2.75	-	SW	3.25	Tide rips occur near the reef NW of the N end.
H. SSE of Chakyak-to (Shakuyaku-tō)	-	NNE	2.75	-	-	-	
I. SE of Chakyak-to (Shakuyaku-tō)	-	NE	2.75	-	SSW	2.75	
J. E of Chakyak-to (Shakuyaku-tō)	L+1/2	N	2.5	H+1/2	S	2.5	Times of slack refer to tide at Inch'ŏn-hang (Jinsen-kō). Tide rips.
K. NE of Chakyak-to (Shakuyaku-tō)	-	N	2.25	-	S	2.5	
L. Yŏm-ha (En-ka)	-	-	-	-	-	-	The maximum velocity is 8 kn. at spring tides in the narrowest parts.
M. Han-gang (Kan-kō)	-	-	-	-	-	-	The maximum velocity is 7 kn. at spring tides in narrow parts of channel.
N. W of Taemuŭi-do (Daibui-tō)	-	NE	2	-	SSW	1	
O. WSW of Yongyu-do (Ryūyū-tō)	-	NE	3	-	SSW	1.5	
P. NW of Yongyu-do (Ryūyū-tō)	L+1/2	NE	2.75	H+1/2	SW	2	Times of slack refer to tide at Changbong-do (Chōhō-tō).
Q. NNW of Yongyu-do (Ryūyū-tō)	-	NE	2.5	-	-	-	
R. Between Changbong-do (Chōhō-tō) and Chabannes Islands	-	-	-	-	-	-	Maximum velocity 6 kn.
S. NW of Sin-do (Shin-tō)	-	NE	4	-	SW	4.5	
T. Off Ŏyujŏng-to (Gyoyūsei-tō)	L+1 1/2	NE	3.75	H+1/2	SW	3	Times of slack refer to tide at Ach'a-to (Ashi-tō).
U. Off E end of Sŏngmo-do (Sekimō-tō)	-	-	-	-	-	-	The current attains a velocity of 6 kn.
V. Kyodong-sudo (Kyōdō-suidō)	-	E	-	H+1/2	W	-	Times of slack refer to tide at Ach'a-to (Ashi-tō). The velocity exceeds 5 kn. in the narrow parts of the passage.
W. Between Hodu-got (Kotō-kan) and Inhwa-kot (Inka-kan)	L+1 1/2	N	5.75	H+1/2	S	5	Times of slack refer to tide at Ach'a-to (Ashi-tō).

* In hours before (-) or after (+) local high water (H) or low water (L) unless noted.
† Velocity at strength in knots.

FIGURE III - 50. *Tidal Currents.*
Han-gang (Kan-kō) and Approaches. Area location shown on Index, FIGURE III - 2.

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FIGURE III - 51. *Tidal Currents.*
Taedong-man (Daitō-wan) and Vicinity. Area location shown on Index, FIGURE III - 2.

Locality	Slack before flood*	Flood† Dir.	Flood† Vel.	Slack before ebb*	Ebb† Dir.	Ebb† Vel.	Remarks
A. Off Haeju-man (Kaishū-wan)	-	-	-	-	-	-	Rotary current between Yŏnp'yŏng-yŏkto (Empei-retto) and Kyŏngnŏibi-yŏkto (Kakureppi-retto) turning counterclockwise. Minimum current before flood sets about SSE at low water, and strength of flood sets about ENE 3 hours after low water. Minimum current before ebb sets about NNW at high water, and strength of ebb sets about WSW 3 hours after high water.
B. S of Soyŏnp'yŏng-do (Shō-Empei-tō)	L	E	2	H	W	2	Spring velocities. Rotary current turning counterclockwise. The minimum currents occur at about the times of low and high water. Minimum before flood sets S at 1.5 kn. and before ebb sets N at 1 kn.
C. Between Soyŏnp'yŏng-do (Shō-Empei-tō) and Taeyŏnp'yŏng-do (Tai-Empei-tō)	L	NE	2.5	H	SW	2.5	
D. E entrance to Haeju-man (Kaishū-wan)	L	NNE	2.25	H	SSW	2.25	In the bay the velocity of the current in the channels is 2.5 to 4.5 kn. and in Haeju (Kaishū), 6 kn. Slack waters occur at high and low waters.
E. W entrance to Haeju-man (Kaishū-wan)	L	NNE	2.75	H	SSW	4	
F. Between Soyŏnp'yong-do (Shō-Empei-tō) and Tŏngsan-got (Tōsan-kan)	L	E	-	H	W	-	
G. SE of Tŏngsan-got (Tōsan-kan)	L	E	3.5	H	W	3.5	
H. S of Sunwi-do (Junī-tō)	-	-	-	-	-	-	Rotary current turning counterclockwise. During spring tides, the current sets NNW at 1.1 kn. at high water at Sunwi-do (Junī-tō), W at 1.4 kn. 3 hours after high water, SSE at 1.1 kn. at low water, and E at 1.4 kn. 3 hours after low water.
I. 17 mi. SSW of Sunwi-do (Junī-tō)	-	-	-	-	-	-	Rotary current turning counterclockwise. During spring tides, it sets NNW at 0.8 kn. at high water at Sunwi-do (Junī-tō), WSW at 1.4 kn. 3 hours after high water, SSE at 0.8 kn. at low water, and ENE at 1.4 kn. 3 hours after low water.
J. 1.75 mi. SSW of Sunwi-do (Junī-tō)	L+3	WNW	2.75	H+3	ESE	3.25	There are tide rips near the SW end of the island where the maximum velocity is 4 kn.
K. E of Sunwi-do (Junī-tō)	L+1 1/2	-	-	H+1 1/2	-	-	
L. E of Yongwi-do (Ryūi-tō)	L+1/2	NNE	2.5	H+1/2	SSW	2.5	Strong and irregular currents.
M. Between Sunwi-do (Junī-tō) and Ōhwa-do (Gyoka-tō)	L	N	2.5	H	S	2.5	
N. Pŭap-to (Hitō-tō)	-	-	-	-	-	-	Eddies when the currents are strong.
O. W of Ch'angin-do (Shōrin-tō)	-	-	-	-	-	-	Rips.
P. NNE of Kirin-do (Kirin-tō)	L+3	NW	3.75	H+3	SE	3.75	Rips occur 1 mi. E of the NE end of the island.
Q. SW end of Mahap-to (Makō-tō)	-	-	-	-	-	-	Tide rips extend about 0.5 mi.
R. W end of Kirin-do (Kirin-tō)	-	-	-	-	-	-	Heavy tide rips.
S. SSW of Kirin-do (Kirin-tō)	-	NW	3.5	-	SE	3.5	Flood sets NW and ebb SE along the coast and on both sides of the islands that lie between Ōhwa-do (Gyoka-tō) and Taedong-man (Daitō-wan).
T. Taech'ŏng-kundo (Taisei-gunto)	L+3	NNW	3-4.25	H+3	SSE	3-4.25	Considerable diurnal inequality in the flood but little in the ebb. Greater flood is the flood with higher high water. The current is greatly influenced by the winds of the preceding day.
U. E of Taech'ong-do (Taisei-tō)	-	NW	3	-	SE	3	
V. SW of Soch'ŏng-do (Shōsei-tō)	-	NNW	3.75	-	SSE	3.75	Tide rips extend about 1.5 mi. off the SW end and 0.5 mi. off the NE end.
W. Between Soch'ŏng-do (Shōsei-tō) and Taech'ŏng-do (Taisei-tō)	L+2 3/4	NE	3	H+2 3/4	SW	3	Tide rips off the S end of Taech'ŏng-do (Taisei-tō).
X. Between Taech'ŏng-do (Taisei-tō) and Paengnyŏng-do (Hakurei-tō)	L+2 3/4	NW	3-4.25	H+2 3/4	SE	3-4.25	Tide rips near Middle Rock.
Y. NE of Paengnyŏng-do (Hakurei-tō)	-	NW	4.25	-	SE	4.25	Tide rips off the NE end of the island.
Z. SW of Paengnyŏng-do (Hakurei-tō)	-	NW	3.5	-	SE	3.5	Rips W of the SW end of the island.
AA. W of Taech'ŏng-kundo (Taisei-gunto)	-	N	1.6	-	S	1.6	
BB. Coast N of Changsan-got (Chōzan-kan)	L+1 1/2	N	-	H+1 1/2	S	-	
CC. SW of Changsan-got (Chōzan-kan)	L+1 1/2	N	5-7	H+1 1/2	S	5-7	The velocity 10 mi. W of the point is 5 kn.
DD. Near Wŏllae-do (Getsudai-tō)	L+2 1/2	NW	1.5	H+2 1/2	SE	1.5	
EE. Taedong-man (Daitō-wan)	-	E	weak	-	W	weak	

* In hours before (-) or after (+) local high water (H) or low water (L) unless noted.
† Velocity at strength in knots.

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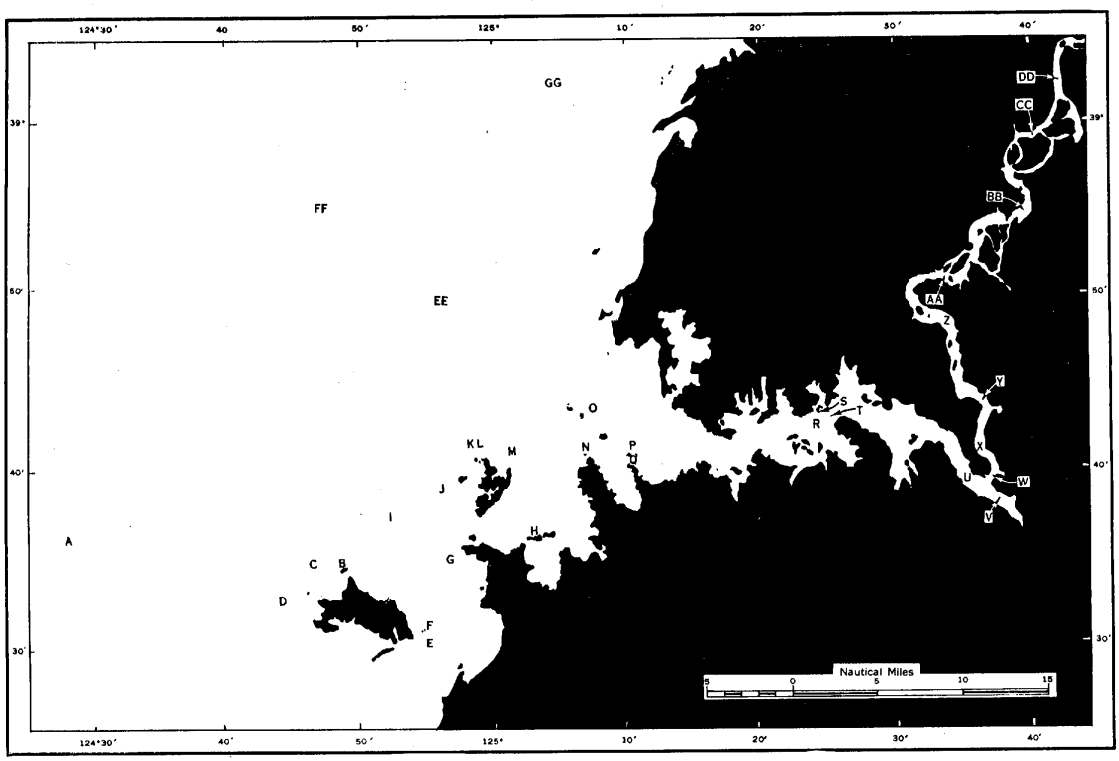

Locality	Slack before flood*	Flood† Dir.	Flood† Vel.	Slack before ebb*	Ebb† Dir.	Ebb† Vel.	Remarks
A. WNW of Ch'o-do (Shō-tō)	-	N	1.6	-	S	1.6	
B. N of Tŏk-to (Toku-tō)	-	-	-	-	-	-	Rips.
C. NNE of Sō-do (Sei-tō)	-	NE	2.25	-	SW	2.75	
D. WSW of Sō-do (Sei-tō)	-	NNE	2.25	-	SSW	2.5	
E. ESE of Ch'o-do (Shō-tō)	L+1/2	NNE	2.25	H+1/2	SSW	3	
F. ENE of Hŭibong-kap (Kiho-kō)	-	-	-	-	-	-	Tide rips and overfalls.
G. SW of Pip'a-got (Biwa-kan)	-	-	-	-	SSW	2.25	Overfalls. Rips occur about 0.5 mi. to the N.
H. N of Ch'ŏngyang-do (Seiyō-tō)	-	E	1-1.5	-	W	3-3.5	
I. WNW of Pip'a-got (Biwa-kan)	L+1/2	NE	2.75	H+1/2	SW	3	
J. W of Sŏk-to (Seki-tō)	-	-	-	-	SSW	2.5	
K. NW of Sŏk-to (Seki-tō)	-	N	-	-	SW	2.5	
L. N of Chemae-do (Shimai-tō)	L+1/2	ENE	2.25	H+1/2	WSW	3.75	
M. ENE of Chemae-do (Shimai-tō)	-	E	2.75	-	W	3.5	
N. N of San-do (San-tō)	-	E	2.5	-	W	3.75	
O. E of Hach'wira-to (Ka-suira-tō)	-	ESE	1.75	-	WNW	3.75	
P. N of P'i-do (Pi-tō)	L+1/2	SE	2	H+1/2	WNW	3.5	
Q. P'ido-sudo (Hitō-suidō)	L+3/4	ESE	3.5	H+1/4	WNW	4.5	
R. S of Chinnamp'o (Chinnampo)	L+1 3/4	ENE	3.5	H	WSW	4.5	Slack before ebb occurs 1 to 2 hours earlier near the river than in midstream. Velocity is 3 to 4 kn. about 400 yards outside the drying mud banks off the city. Freshets increase the velocity and duration of the ebb and decrease the flood. Wind also modifies the current.
S. The Basin	-	-	-	-	-	-	Strong, irregular currents from 1 to 2 hours after high and low waters. During the ebb there is a strong eddy along the E wall.
T. Off The Basin	-	ENE	2.5	-	WSW	4	Irregular currents and eddies. The strongest part of the flood is in the middle of the river, but the strongest part of the ebb flows close to The Basin.
U. NE of Tuanp'o (Togampo)	-	SE	3	-	NW	3.75	
V. Between Ch'ŏl-do (Tetsu-tō) and Chaeryŏng-gang (Sainei-kō)	-	ESE	2.5	-	WNW	4	
W. N of Hŭksong-ki (Kokushō-saki)	L+1	NE	5	H	SW	7.25	Times of slack refer to tide at Kyŏmip'o (Kenjiho).
X. W of Kwang-ju (Hiro-shū)	L+3/4	N	3.5	H	S	4.25	Times of slack refer to tide at Kyŏmip'o (Kenjiho).
Y. S of Kyŏmip'o (Kenjiho)	L+1 1/2	NW	3.5-4	H+1 1/4	SE	4	Slack waters usually occur about 1 hour earlier near the river banks than in midstream.
Z. S of Yop'o-ri (Yōho-ri)	L+1/4	NW	3.5	H+1/4	SE	4.25	
AA. Off Hosan-hang (Hosan-kō)	L+1/4	NE	2.5	H+1/2	SW	3.5	Slack waters occur about 10 minutes earlier on the sides than in the center.
BB. Sŏkho-chŏng (Sekikotei)	L+3/4	N	1.5	H+1/2	S	3	Slack waters occur about 10 minutes earlier on the sides than in the center.
CC. S of Sangman'gyŏngdae (Kami-mankeidai)	L+1/2	E	1	H+1/4	W	1.5	Slack waters occur about 10 minutes earlier on the sides than in the center.
DD. E of P'yŏngyang (Heijō)	L+1/4	N	1	H	S	1.5	
EE. W of Hwa-do (Ka-tō)	-	NE	2.5	-	-	-	Spring velocity.
FF. E of Piradesu-shō	-	-	-	-	SW	2.75	Spring velocity.
GG. W of Iap-to (Nitō-tō)	-	-	-	-	SW	2.5	Spring velocity.

* In hours before (-) or after (+) local high water (H) or low water (L) unless noted.
† Velocity at strength in knots.

FIGURE III - 52. *Tidal Currents.*
Taedong-gang (Daidō-kō). Area location shown on Index, FIGURE III - 2.

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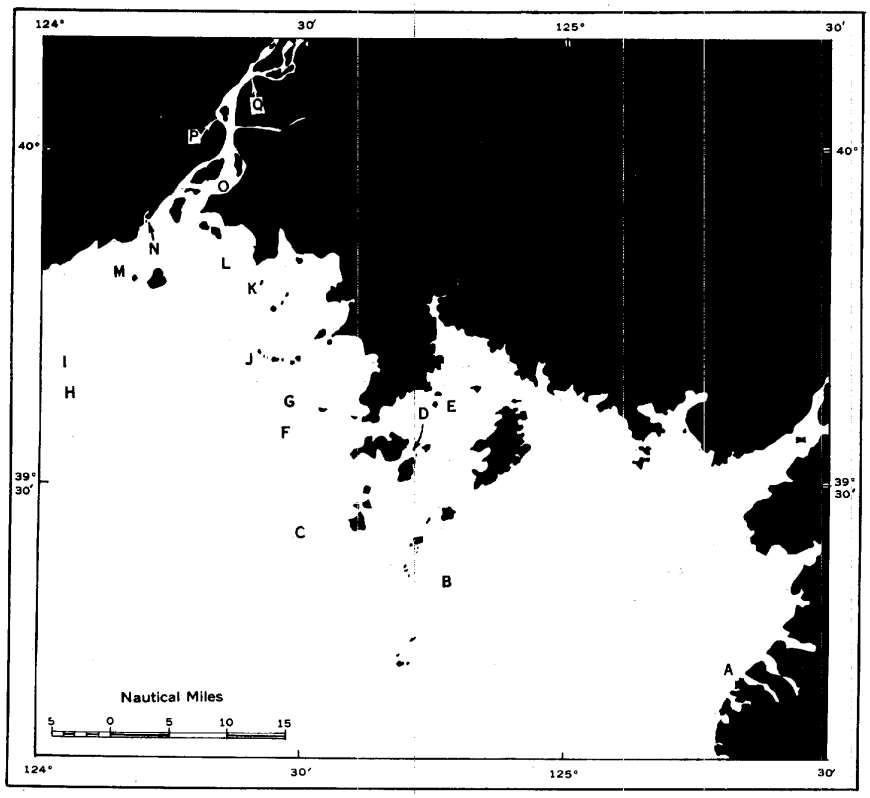

Locality	Slack before flood*	Flood† Dir.	Flood† Vel.	Slack before ebb*	Ebb† Dir.	Ebb† Vel.	Remarks
A. Hanch'ŏn-p'o (Kansen-ho)	-	-	-	-	-	-	Strong flood during the rising tide.
B. SE of Taehwa-do (Daiwa-tō)	-	NE	2.5‡	-	-	-	
C. W of Taehwa-do (Daiwa-tō)	-	NNE	3‡	-	SW	3‡	
D. Kado-choji (Katō-byōchi)	-	-	-	-	-	-	Strong tidal currents and invisible shoals in the approach to the anchorage.
E. Sŏnch'ŏn-man (Sensen-wan)	-	-	-	-	-	-	Strong tidal currents and invisible shoals in the approaches to the anchorages in the bay.
F. SW of Ŏyŏng-do (Gyoei-tō)	-	NE	2‡	-	SW	2‡	
G. WNW of Ŏyŏng-do (Gyoei-tō)	-	-	-	-	SSW	3‡	
H. SSW of Sin-do (Shin-tō)	-	-	-	-	SSW	2	
I. SW of Sin-do (Shin-tō)	L+1	N	1.75	H+1	S	1.75	Times of slack refer to tide at Suun-do (Suiun-tō). Flood decreases and ebb increases after heavy rains.
J. Channel W of Suun-do (Suiun-tō)	L+1 1/2	N	2.25‡	H	S	2.75‡	Tidal currents in the Yalu River and the channels leading to it are modified by the drainage current of the river.
K. Taedasa-do (Daitasa-tō)	L+1	N	3.25	H+1	S	4.25	
L. Tong-sudo (Higashi-suidō)	L+1 1/2	NW	3.25	H+1/2	SE	4.25	
M. Off Sindo-yŏlto (Shintō-rettō)	L+1 1/2	NE	1.5-3.75	H+1	SW	3.5-4.5	Times of slack refer to tide at Suun-do (Suiun-tō).
N. Off Chao-shih-kou	L+1	-	3.25	H+1	-	4.5	Velocity of ebb is about 6 kn. and flood is weak in Sŏ-sudo (Nishi-suidō) during the rainy season (summer).
O. Off Yongamp'o (Ryūgampo)	L+3/4	N	3.25	H+3/4	S	3.5	Flood nearly disappears and ebb increases to 5 kn. in July and August during freshets.
P. Off San-tao-lang-t'ou	-	-	3	-	-	3.25	Flood nearly disappears and ebb increases to 5 kn. in July and August during freshets.
Q. Off An-tung	L+1/2	-	2	H	-	2.75	Flood nearly disappears and ebb increases to 6 kn. during freshets.

* In hours before (-) or after (+) local high water (H) or low water (L) unless noted.
† Velocity at strength in knots.
‡ Spring velocity.

FIGURE III - 53. *Tidal Currents.*
Hanch'on-p'o (Kansen-ho) to Yalu River. Area location shown on Index, FIGURE III - 2.

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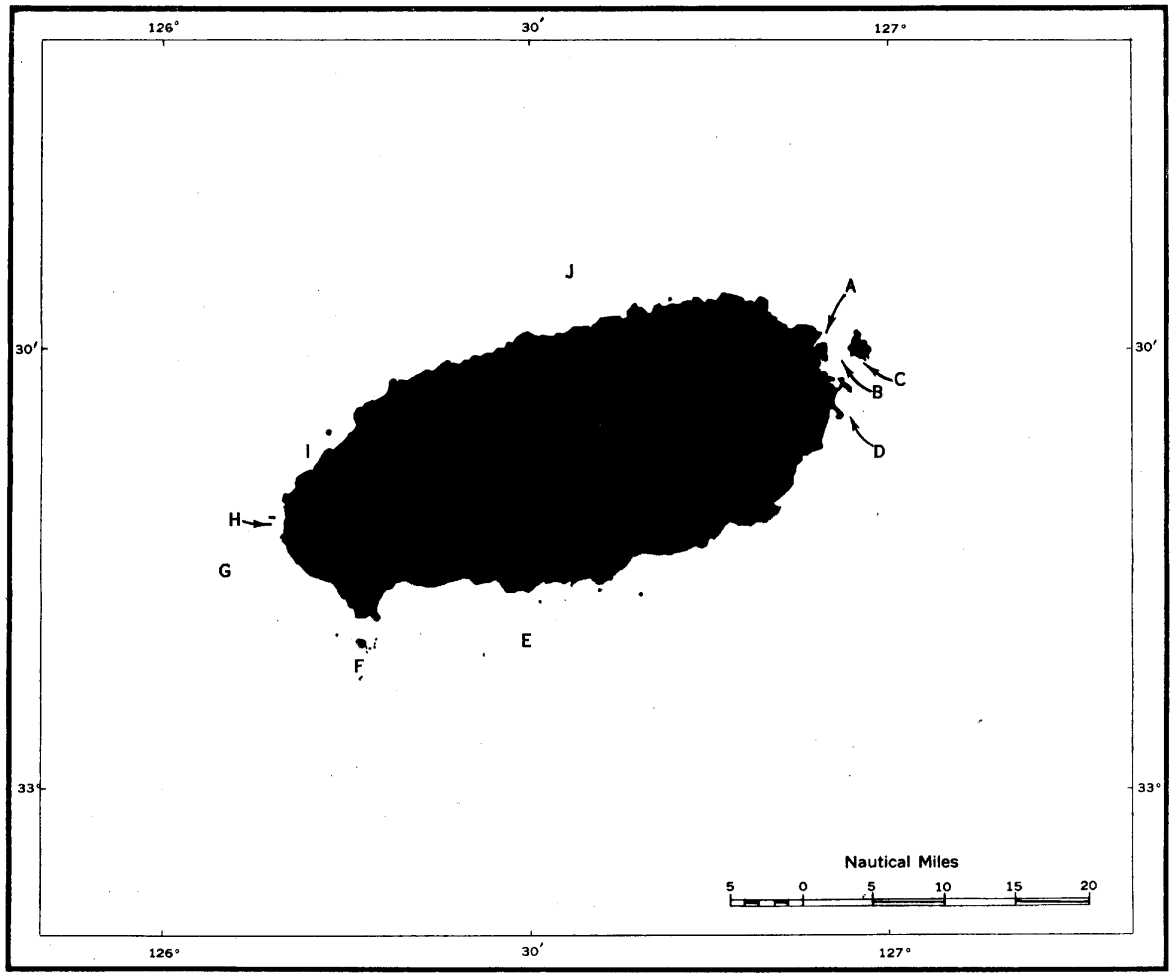

Locality	Slack before flood*	Flood† Dir.	Flood† Vel.	Slack before ebb*	Ebb† Dir.	Ebb† Vel.	Remarks
A. Kwangjo-ch'oe (Kōchō-shi)	-	-	-	-	-	-	There is a tide race when the wind blows against the current.
B. Udo-sudo (Gyūtō-suidō)	L+2	NNW	3	H+2	SSE	2.5	
C. S of U-do (Gyū-tō)	-	-	-	-	-	-	Weak NE tidal current at about the time of low water.
D. E coast of Cheju-do (Saishū-tō)	L+2 1/2	N	-	H+2 1/2	S	-	
E. S coast of Cheju-do (Saishū-tō)	L+2 1/2	W	0.5-0.75	H+2 1/2	E	0.5-0.75	Greatest velocity 3 kn. near Mara-to (Bara-tō). Ebb tends to set toward shore.
F. Channel N of Mara-to (Bara-tō)	-	-	-	-	-	-	Strong currents. Tide race usually occurs.
G. SW coast of Cheju-do (Saishū-tō)	L+2 1/2	N	-	H+2 1/2	S	-	
H. W coast of Cheju-do (Saishū-tō)	L+2 1/2	N	-	H+2 1/2	S	-	
I. NW coast of Cheju-do (Saishū-tō)	L+2 1/2	SW	2.5	H+2 1/2	NE	2.5	Currents follow coast. Velocities are for vicinity of Piyang-to (Hiyō-tō).
J. N of Cheju-hang (Saishū-kō)	L+2 1/2	W	-	H+2 1/2	E	-	Currents follow coast.

* In hours before (-) or after (+) local high water (H) or low water (L) unless noted.
† Velocity at strength in knots.

FIGURE III - 54. *Tidal Currents.*
Cheju-do (Saishū-tō). Area location shown on Index, FIGURE III - 2.

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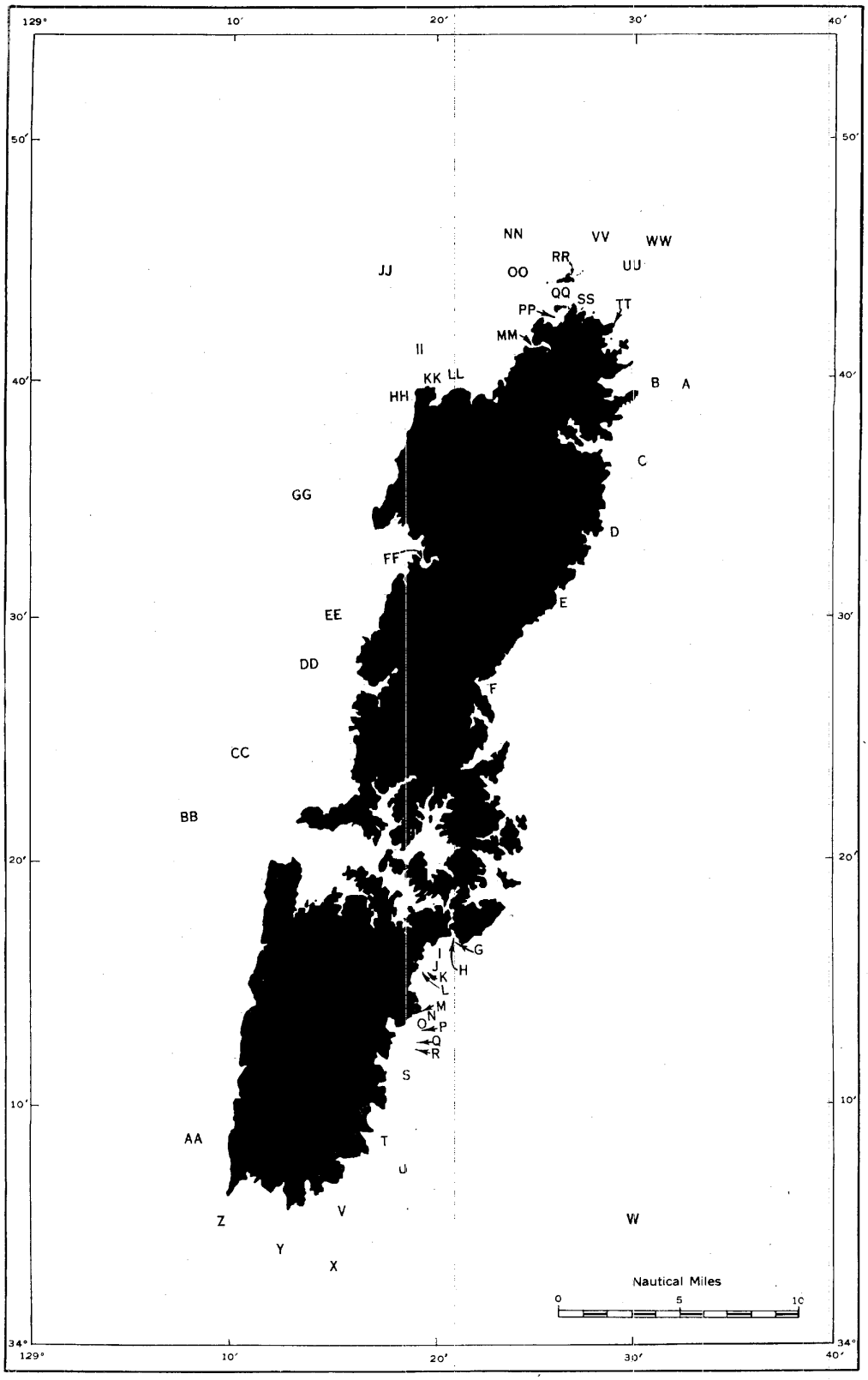

FIGURE III - 55. *Tidal Currents.*
Tsushima. Area location shown on Index, FIGURE III - 2.

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Legend for FIGURE III - 55

Location	Slack before flood*	Flood† Dir.	Flood† Vel.	Slack before ebb*	Ebb† Dir.	Ebb† Vel.	Remarks
A. ENE of Jōdono-saki	-	WSW	0.5	-	-	-	
B. NE of Jōdono-saki	-	SSW	-	-	-	-	
C. SE of Shinaki-shima	-	-	-	-	N	1	
D. Off Kin-saki	-	S	1.5	-	N	1.5	
E. Off Oshika-wan	-	S	1.25	-	N	1.25	
F. Saga-wan entrance	-	S	0.75	-	N	0.75	
G. W of Tsunakake-saki	-	-	-	-	ESE	0.75	
H. Ōfunakoshi-seto	H-3	S	2-4	H+4 1/2	N	2-4	Strong S winds delay the beginning of the flood.
I. SE of Ōta-ura	-	NE	1	-	-	-	Eddies probably occur in Kechi-wan.
J. ESE of Takahama-kō	-	-	-	-	NNW	0.75	
K. SE of Takahama-kō	-	-	-	-	NW	0.75	
L. SSE of Takahama-kō	-	-	-	-	SW	0.25	
M. Ōkaji-saki	-	-	-	-	-	-	Strong currents. Rips with strong NE winds.
N. SE of Ōkaji-saki	-	-	-	-	NNE	1.25	
O. S of Ōkaji-saki	-	-	-	-	NE	1.75	
P. E of Azu-kō	-	-	-	-	NNE	1	
Q. ESE of entrance to Azu-kō	-	-	-	-	NNW	0.75	
R. ENE of Yara-saki	-	-	-	-	NNW	0.75	
S. ESE of Tora-saki	-	-	-	-	NNE	0.75	
T. NE of Agami-saki	-	SW	2	-	NE	1.5	
U. ESE of Agami-saki	-	SW	1.25	-	NNE	1	
V. ESE of Naiin-shima	-	-	-	-	ENE	2.75	Tide rips extend about 1 mile E and SE of the island.
W. E of Kō-saki	L+3/4	SSW	1.25	H+3/4	NNE	1.25	Values apply only to the semidiurnal tidal current.
X. SE of Kō-saki	-	SSW	2	-	E	3	
Y. S of Kō-saki	-	WSW	2.25	-	ESE	2.25	Tide rips extend about 1 mile S of the point.
Z. SSW of Tsutsu-saki	-	NW	0.75-2	-	SE	0.5-2.25	Velocities may be greater at flood or ebb strength. Tide rips extend about 1 mile from the point.
AA. NNW of Tsutsu-saki	-	SSE	0.5	-	NNW	0.5	
BB. W of Karasu-saki	-	-	-	-	-	-	NNE nontidal current with a velocity of 1 kn.
CC. WSW of Tsuna-shima	-	-	-	-	-	-	NE nontidal current with a velocity of 1.5 kn.
DD. W of Omae-saki	-	-	-	-	NNE	2	
EE. NW of Omae-saki	-	SSW	1.5	-	N	3	
FF. Nita-wan	-	-	-	-	-	-	Strong currents during freshets at the anchorage.
GG. WNW of Tomi-yama	-	-	-	-	-	-	The NNE nontidal current has a velocity of 0.5 kn. about 2.25 miles offshore and 1.5 kn. about 4.5 miles offshore.
HH. W of Sao-saki	-	-	-	-	NNE	3	Tide rips extending about 1.75 miles in a NE-SW direction occur 0.75 to 1.5 miles off Sao-saki.
II. N of Sao-saki	-	-	-	-	NE	2	
JJ. NNW of Sao-saki	-	-	-	-	-	-	NNE nontidal current with a velocity of 2 kn.
KK. Off Uose-hana	-	W	2	-	E	2	Tide rips when wind is between N and W.
LL. N of Sembyōmaki-yama	-	-	-	-	-	-	Irregular tidal currents.
MM. Ōkawachi-wan entrance	-	S	1	-	N	1	
NN. NW of Mitsu-shima	-	WSW	2	-	ENE	2	Tide rips extend about 2 miles E of this location.
OO. W of Mitsu-shima	-	SSW	2	-	-	-	
PP. Between Maru-saki and Uni-shima	-	NNW	3.25	-	E	1.5	Strong tidal currents.
QQ. Between Mitsu-shima and Uni-shima	-	NNW	3.5	-	E	1.5	Confused seas with N winds.
RR. Near Mitsu-shima	-	S	-	-	NE	-	Maximum velocities are 4 kn. or over near the lighthouse and 2.5 kn. on the W side of Mitsu-shima. Irregular eddies N and NE of Maru-saki and rips and overfalls within 4 miles N of Maru-saki and Atsu-saki.
SS. 0.75 mi. NE of Maru-saki	-	S	1.5	-	NE	3	
TT. Atsu-saki	-	-	-	-	-	-	Directions are uncertain. Velocities up to 1.5 kn. have been reported within 3.5 miles ENE of the point.
UU. 3 mi. NE of Maru-saki	-	NW	2	-	E	-	The velocity may be greater at flood strength. Rips and whirls.
VV. NNE of Maru-saki	-	-	-	-	E	2	
WW. 4.5 mi. NE of Maru-saki	-	-	-	-	ESE	2.5	

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† Velocity at strength in knots.

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FIGURE III - 56a
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Key to Encircled Numbers on FIGURE III - 56a.*

1. Tanan-gang (Tōenan-kō)
2. Choson-man (Zōzan-wan)
3. Sosura-hang (Seisuira-kō)
4. East Bay
5. Taejin-man (Daishin-wan)
6. Uiggi-hang (Yuki-kō)
7. Ch'angjin-man (Sōshin-wan)
8. Najin-hang (Rashin-kō)
9. Yujin-p'o (Yushin-ho)
10. Naksan-man (Rakusan-wan)
11. Ijin-man (Rishin-wan)
12. Sajin-man (Sashin-wan)
13. Yongjo-man (Ryūzō-wan)
14. Samgap'o-man (Sōkō-wan)
15. Kidong-man (Kidō-wan)
16. Ch'ongjin-hang (Seishin-kō)
17. Odaejin-hang (Gyōtaishin-kō)
18. Iam-man (Rigan-wan)
19. Tajin-man (Tashin-wan)
20. Taeryanghwa-man (Dairyō-kwa-wan)
21. Whangjin-man (Kōshin-wan)
22. Pubang-man (Hōkō-wan)
23. Kalma-p'o (Karuma-ho)
24. Whanggaldong (Kōgandō-hyōchi)
25. Immyong-hae (Rinmei-kai)
26. Songjin-hang (Joshin-kō)
27. Yongdae (Ryūdai-hyōchi)
28. Iwon (Rigen-hakuchi)
29. Ch'abo-hang (Shako-kō)
30. Sinch'ang-hang (Shinshō-kō)
31. Yanghwa-man (Yōka-wan)
32. Sing'o-hang (Shinko-kō)
33. Tongjoson-man (Higashi-Chōsen-wan)
34. Mayang-do (Baryō-tō)
35. Hamhung-man (Kankō-wan)
36. Sohajin-hang (Seikashin-kō)
37. Hyongjé-um (Keitei-gan)
38. Yunghung-man (Eiko-wan)
39. Songjon-man (Shōden-wan)
40. Woesan-hang (Gaizan-kō)
41. Kojo-p'o (Kozo-ho)
42. Changjon-hang (Chōsen-kō)
43. Changsdae-dan (Chōgadai-tan)
44. Suwon-dan (Suigen-tan)
45. Pongsu-hang (Hōsui-kō)
46. Kojin (Kyushin-bakuchi)
47. Sokch'o-hang (Sokusō-kō)
48. Taep'o-hang (Daihō-kō)
49. Chumunjin-hang (Chūmonshin-kō)
50. Mukho-hang (Bokuko-kō)
51. Ullung-do (Utsuryō-tō)
52. Chukpyon-man (Chikuhen-wan)
53. Ch'uksan-p'o (Chiizan-ho)
54. Yongil-man (Geijitsu-wan)
55-139. See FIGURE III - 56b.
140. Huksan-chedo (Kokusan-shotō)
141. Kunsan-hang (Gunzan-kō)
142. Kunsan (Gunzan)
143. Chuk-to (Chiku-tō)
144. Och'ong-do (Osei-tō)
145. Ocyon-do (Gaien-tō)
146. So-to (Sō-tō)
147. Ch'onsu-man (Sensui-wan)
148. Mohang-ni (Bōkō-ri)
149. Tang-sudo (Higashi-suidō)
150. Umu-do (Gyōbu-tō)
151. Hanjin-ni (Kanshin-ri)
152. Asan (Gasan-hyōchi)
153. Sō-suido (Nishi-suido)
154. Sōya-do (Soya-tō)
155. Taemui-do (Daibui-tō)
156. Inch'on-hang (Jinsen-kō)
157. Yongjong-do (Eiso-tō)
158. Changbong-sudo (Chōhō-suidō)
159. Sinan-ni (Shingan-ri)
160. Chumun-do (Chūmon-tō)
161. Taeyomp'yong-do (Tai-Empei-tō)
162. Haeju (Kaishū)
163. Mu-do (Mo-tō)
164. Tungsan-got (Tōsan-kan)
165. Sunwido (Junitō-hyōchi)
166. Kirin-do (Kirin-tō)
167. Taech'ong-kundo (Taisei-gunto)
168. Taech'ong-do (Taisei-tō)
169. Wollae-do (Getsurai-tō)
170. Taedong-man (Daitō-wan)
171. Ch'angam-dong (Sōgan-dō)
172. Changsan-got (Chōzan-kan)
173. Monggum-do (Mukin-tō)
174. Chinpo Ki
175. Ch'odo-sudo (Shōtō-suidō)
176. Ch'o-do (Shiku-tō)
177. Taedong gang (Daidō-kō)
178. P'i-do (Hi-to)
179. P'ido-sudo (Hito-suidō)
180. Chinnamp'o-hang (Chinnampo-kō)
181. Ch'ol-do (Tetsu-tō)
182. Sokuheidon
183. Kyomip'o (Kenjiho)
184. Sokho-cheng (Sekkōsei)
185. P'yongyang (Heijō)
186. Umnu-do (Umnu-tō)
187. Yop-do (Rō-tō)
188. Taehwa-do (Daiwa-tō)
189. Ka-do (Ka-tō)
190. Ch'olsan-pando (Tetsuzan-hantō)
191. Suan-do (Suian-tō)
192. Taedaea-do (Daitaza-tō)
193. Yongamp'o (Ryūgampo)
194. Sindo-sobo (Shintō-rentō)
195. Yalu River
196-235. See FIGURE III - 56b.

* See Topic 37 for variants of place names.

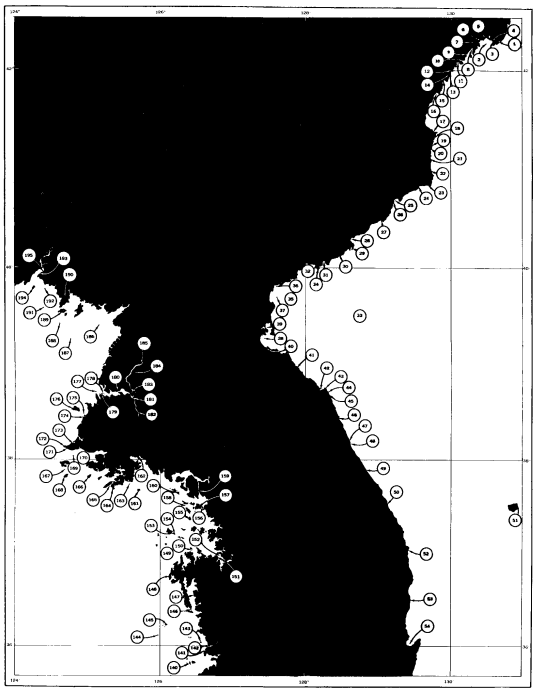

FIGURE III - 56a. *Location Map.*
East and West Coasts of Korea (Chōsen). Names of places indicated by encircled numbers are given in the accompanying list. These numbers appear in parentheses after the place names throughout the text.

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FIGURE III - 56b
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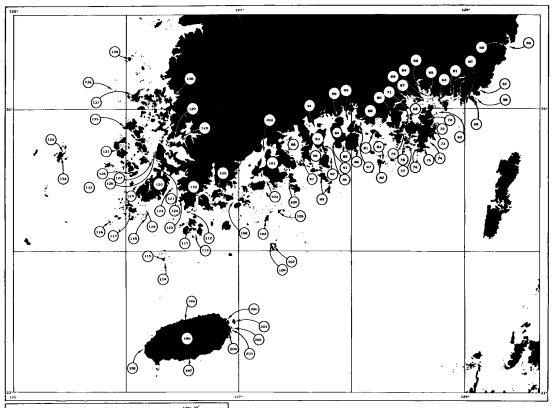
Key to Encircled Numbers on FIGURE III - 56b.*

1-54. See FIGURE III - 56a.
55. Ulsan-man (Ulsan-wan)
56. Oehwang-kang (Gaikō-kō)
57. Suyong-man (Suiei-wan)
58. Pusan-hang (Fusan-kō)
59. Mak-so (Makuto-so)
60. Kamnae-p'o (Kan'nai-ho)
61. Naktong-p'o (Rakuto-ho)
62. Kadok-sudo (Kado-suido)
63. Ch'ŏnjaeng-man (Tenjō-wan)
64. Pudo-sudo (Futō-suido)
65. Haengjon-man (Kōgan-wan)
66. Masan-hang (Masan-kō)
67. Namp'o-man (Rampo-wan)
68. Chinhae-man (Chinkai-wan)
69. Unbang (Unbō)
70. Koje-do (Kyosai-tō)
71. Hyoonaeryang-haehyop (Keunairyō-kaikyō)
72. Ok-p'o (Gyoku-ho)
73. Chinae-p'o (Chine-po)
74. Tojang-p'o (Tōzō-ho)
75. Tadae-p'o (Tadai-ho)
76. Chokuri-man (Chokyiri-wan)
77. Changgang-sudo (Chōkō-suido)
78. Koje-man (Kyosai-wan)
79. T'ongyong-hang (Tōei-kō)
80. Kosong-man (Kojō-wan)
81. Sang-do (Jō-tō)
82. Yokchi-do (Yokuchi-tō)
83. Yokchi-sudo (Yokuchi-suido)
84. Namhae-do (Nankai-tō)
85. Aenggang-man (Ōkō-wan)
86. Mijo-man (Mijo-wan)
87. So-sudo (Nishi-suido)
88. Samch'ong'o (Sanzenho)
89. Kangjin-hae (Kōshin-kai)
90. Naepangjin (Rorojishin)
91. P'yongsan-ni (Heizan-ri)
92. Yosu-haeman (Reisui-ka-wan)
93. Yosu-pando (Reisui-hanto)
94. Kwangyang-man (Kōyō-wan)
95. Yosu-hang (Reisui-kō)
96. Kamag-yang (Gabaku-yō)
97. Chobal-ri (Sōhatsu-ri)
98. Yoja-man (Joji-wan)
99. Kumo-yolo (Kingō-retto)
100. Sayang-do (Shiyō-tō)
101. Kohung-pando (Kōkō-hanto)
102. Kogum-sudo (Kyokin-suido)
103. Tungnyang-man (Tokuryō-wan)
104. Ch'odo-kundo (Shōto-gunto)
105. Sunjak-to (Sonchiku-to)
106. Kumun-do (Kyobun-tō)
107. Tonae-hae (Tōnai-kai)
108. Hwado-sudo (Kado-suido)
109. Mato-sudo (Mato-suido)
110. Wan-do (Kan-tō)
111. Soan-kundo (Shoan-gunto)
112. Hoenggan-sudo (Kōkan-suido)
113. Soan-hang (Shoan-kō)
114. Ch'uja-kundo (Shūshi-gunto)
115. Sangch'uja-do (Jōshushi-tō)
116. Maenggol-sudo (Mōkotsu-suido)
117. Hajo-do (Kachō-tō)
118. Tokko-kundo (Dokukyo-gunto)
119. Changjuk-sudo (Chōchiku-suido)
120. Chin-do (Chin-tō)
121. Maro-hae (Baro-kai)
122. Oran-ni (Oran-ri)
123. Samma-do (Sanba-tō)
124. Myongyangdo (Meiyōto)
125. Chongdung-hae (Teitō-kai)
126. Hae'ae-do (Kaiai-tō)
127. Sia-hae (Jiga-kai)
128. Siha-do (Shika-tō)
129. Mokp'o (Mokpo)
130. Yongsan-gang (Eizan-kō)
131. Pigum-sudo (Hikin-suido)
132. Maemul-sudo (Maikotsu-suido)
133. Taebuksan-kundo (Dai-Kokusan-gunto)
134. Taebaksan-do (Dai-Kokusan-tō)
135. Chuan-do (Jiō-tō)
136. Hoga-kundo (Kyoga-gunto)
137. Imja-do (Jinshi-tō)
138. Hamp'yong-man (Kampei-wan)
139. Anma-do (Anma-tō)
140-195. See FIGURE III - 56a.
196. Cheju-do (Saishū-tō)
197. Sogwi-ri (Seiki-ri)
198. Ch'ŏgwi-do (Shuki-tō)
199. Hwabuk-ni (Kahoku-ri)
200. Chungdalli-p'o (Shūdatsuri-ho)
201. U-do (Gyū-tō)
202. Udo-sudo (Gyūtō-suido)
203. Soogaanp'o-hang (Jōsanho-kō)
204. Pangdo-p'o (Bōtō-ho)
205. Minu-shima
206. Izumi-ura
207. Minda-ura
208. Nishizumari-wan, Ajiro
209. Shiichi-wan
210. Kin-wan
211. Oshika-wan, Oshika
212. Saga-wan
213. Miura-wan
214. Kechi-wan
215. Takahama-ko
216. Azu-ko
217. Tsubara-minato
218. Shita-Ana
219. Ōsaki
220. Wa'jima
221. Agami-wan
222. Kuwa-wan
223. Naiin-shima
224. Tsuzu-wan
225. Tsutsu-saki
226. Aso-wan
227. Osaki
228. Mikata
229. Takashiki-kō
230. Tsuna-shima
231. Mire-wan
232. Nita-wan
233. Sagu-wan
234. Sasuna-kō
235. Okawachi-wan

* See Topic 37 for variants of place names.



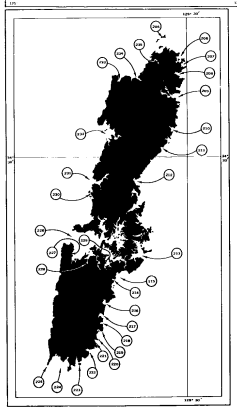


FIGURE III - 56b. *Location Map.*
South Coast of Korea (Chōsen), Cheju-do (Saishū-tō), and Tsushima. Names of places indicated by encircled numbers are given in the accompanying list. These numbers appear in parentheses after the place names throughout the text.

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