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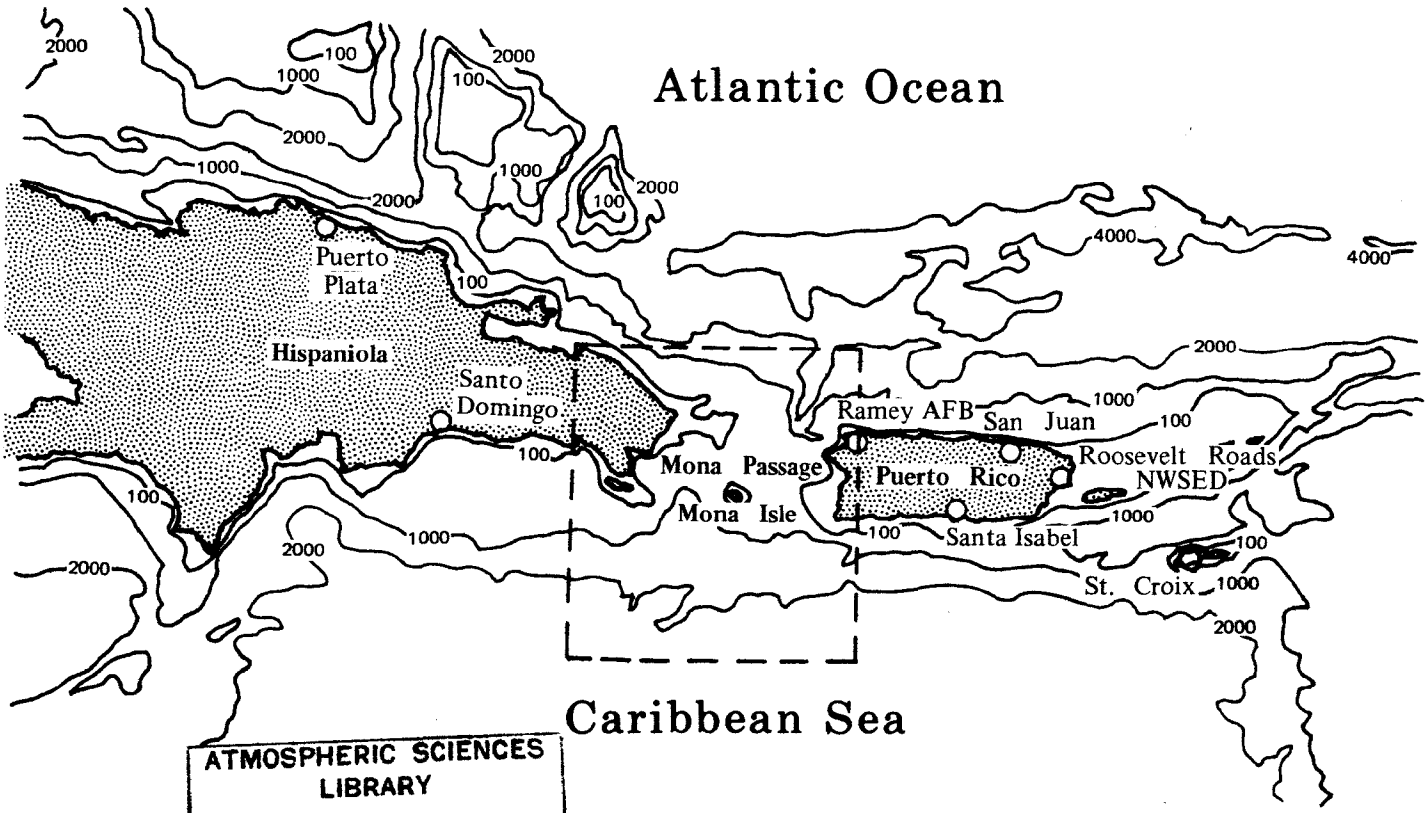
Environmental Guide for the Mona Passage Area



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ABSTRACT

This report presents a detailed environmental description for the Mona Passage Area. The Passage, located between the islands of Puerto Rico and Hispaniola, serves as the crossroads of the West Indies for ships steaming from the North Atlantic to the Pacific or from the Gulf of Mexico to the South Atlantic.

The Mona Passage Area, as described in this report, is bounded by 17°-19°N and 67°-69°W. The climatological description of this Area is based on approximately 35,000 marine observations collected by ships steaming within the Area during the over-all period 1856-1971. The primary period of marine data collection occurred over the years 1949-1971. These data were supplemented by available climatological summaries of coastal stations on the islands of Hispaniola and Puerto Rico.

A general description of the environmental controls governing the West Indies is followed by a detailed climatological summary of the Mona Passage Area. Narrative, tabulation and map presentations are included. Appendices contain frequencies and tracks of North Atlantic tropical cyclones and statistical tables of marine observations for the Mona Passage Area. The Glossary contains concepts essential to comprehension of the climatological descriptions.

This publication was compiled at the National Climatic Center, Federal Building, Asheville, North Carolina 28801.

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INTRODUCTION

General Description of the West Indies

The island of Puerto Rico is centrally located in an enormous crescent chain of tropical isles that stretches eastward and southward for 2500 miles from Florida to Venezuela (see Fig. 1). Known as the West Indies or Antilles, this long island chain is situated north of the equator between 10°-27°N and 60°-85°W and separates the two great continents of the western hemisphere. Originally inhabited by Arawak and Carib Indians, the archipelago was discovered in 1492 by Columbus, who erroneously believed he had reached India.

Geologically the isles represent the remainder of several Andean spurs, whose base and bulk are buried beneath the sea and meet in Puerto Rico. Puerto Rico is the smallest and easternmost of those mountain top islands that make up the Greater Antilles, the major island group of the West Indies. The remaining islands of the Greater Antilles are Hispaniola, Jamaica and Cuba. These four islands are the oldest of all land masses in the archipelago. The Lesser Antilles, those islands extending east and south of Puerto Rico, are of more recent formation, and volcanic activity is sometimes still apparent there. With few exceptions, the Antilles islands are high and generally mountainous and are for the most part densely wooded wherever there is no cultivation. The remaining islands of the West Indies are the Bahamas to the north, a straggling group of low lying islands of coral and limestone, for the most part swampy and barren.

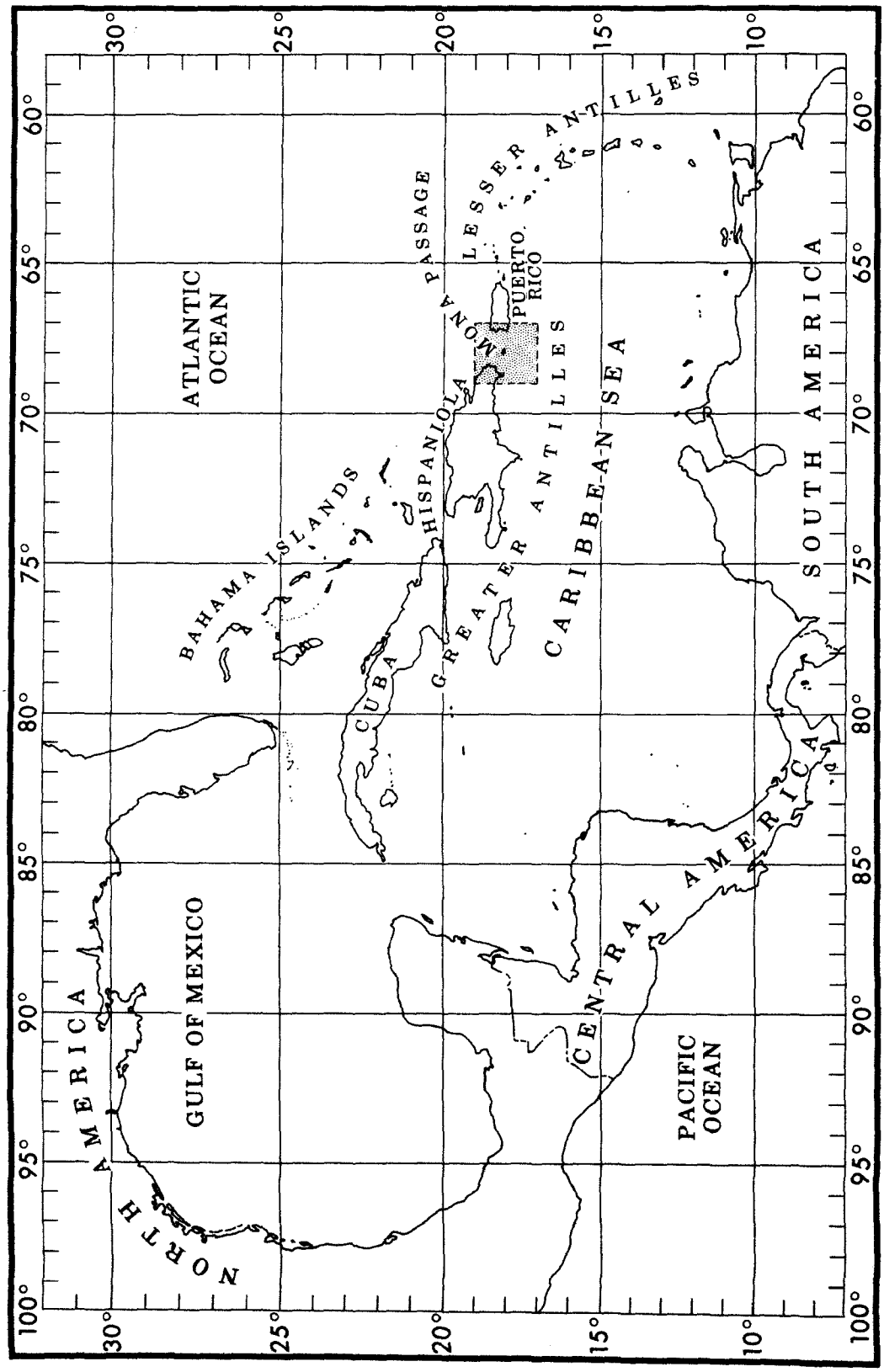


Figure 1 - Map of the West Indies.

The Antilles islands, which vary greatly in size and topography, comprise many thousands of miles of coast, and there are extensive areas of dangerous reefs and banks. The depths of passages over reefs may fluctuate due to the growth of live coral and by the destruction of dead coral or the redistribution of coral debris by waves and currents. The observed decrease in depths over coral reefs averages from about 2 to 12 inches a year.

The currents in the vicinity of the reefs and islands may be deflected and accelerated so that careful attention is required. Although the general current may be rather weak, it is usually strong in narrow passages. The predominant type of tide throughout the West Indies is mixed and the tide ranges are very small with spring ranges not exceeding 3 feet.

The topography of the archipelago offers its greatest relief contrast in height and depth near Puerto Rico. It ranges from land elevations of over 10,000 feet some 200 miles westward in central Hispaniola to water depths of 28,374 feet just 75 miles to the north in the Atlantic and 17,000 feet some 55 miles to the southwest in the Caribbean. The Atlantic depth, found in the Puerto Rico Trench, is the greatest known depth in the Atlantic Ocean.

The complex island-arc of the West Indies forms a natural breakwater separating the Atlantic Ocean from the American Mediterranean; the Gulf of Mexico and the Caribbean Sea. With numerous narrow straits permitting easy passage and the Panama Canal connecting the Pacific, the waters of the West Indies have become one of the world's busiest shipping lanes.

General Description of the Mona Passage Area

One important strait is the Mona Passage, which serves as the crossroads of the archipelago. Here, ships meet as they steam from the North Atlantic to the Pacific or from the Gulf of Mexico to the South Atlantic. Mona Passage, about 61 miles wide and with depths of over 100 fathoms, lies between the southeastern end of Hispaniola and the western end of Puerto Rico (see Fig. 2). Because of this strategically important passage, Puerto Rico is sometimes known as the "Gibraltar of the Caribbean." The island also boasts one of the largest and best harbors in the archipelago, San Juan.

The Passage presents little difficulty in navigation. The dangers that fringe the eastern coast of Hispaniola lie within about one mile offshore. Dangers extend up to 15 miles offshore from the southern part of the western coast of Puerto Rico and must be carefully avoided.

The three islets that lie in the middle of the Passage are high and good landmarks. Isla Desecheo, 715 feet high and wooded, lies about 11 miles westward of Punta Higüero, the western extremity of Puerto Rico. It forms one of the best landmarks for Mona Passage and the western coast of Puerto Rico. Isla Mona, a limestone shelf of 21 square miles raised 150 to 200 feet above sea level, lies in the middle of the southern part of Mona Passage about 26 miles southwestward of Isla Desecheo. Isla Monito, 213 feet high, is a steep and rocky islet that lies about three miles north-northwestward of Isla Mona.

The currents in Mona Passage are variable and, together with the tidal currents, are influenced by the force, direction, fetch and duration of the winds. The general set of the currents in the strait

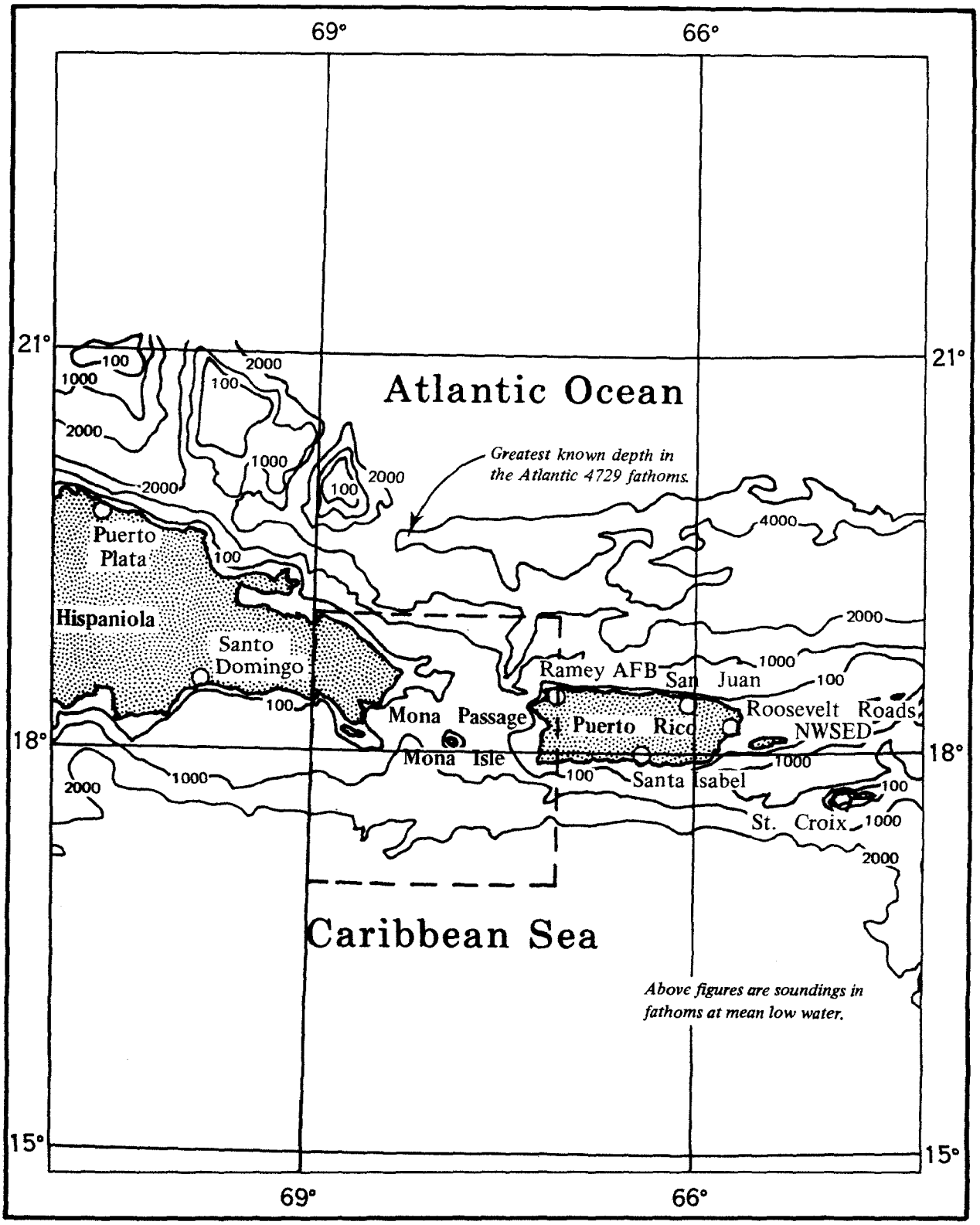


Figure 2 - Map of the Mona Passage Area.

is north-northwestward at a rate of about ¼ to ½ knot throughout the year. The tidal currents are of greater strength near the coasts of Puerto Rico and Hispaniola and probably have a pronounced effect upon the resultant currents. There is also some convergence of the currents setting westward along the north and south coasts of Puerto Rico. In winter, when the winds are more northeasterly and of greater force, a set southwestward may be expected in the middle part of the strait. In summer, when the trade winds have slackened and blow more from eastward and east-southeastward, a counter-current setting eastward along the south coast of Hispaniola tends to induce a set northward throughout the whole strait. The true tidal streams in Mona Passage set south-southwestward on the rising tide and north-northeastward on the falling tide at a rate of about one knot.

General Description of the West Coast of Puerto Rico

The west coast of Puerto Rico trends about 3½ miles southward from Punta Borinquen to the head of Bahía de Aguadilla and thence about 7½ miles southwestward to Punta Higüero. From Punta Higüero the coast trends somewhat irregularly almost 26 miles southward to Cabo Rojo and is indented by a number of small bights. The port of Mayagüez lies about 11 miles south-southeastward of Punta Higüero, and Bahía de Boqueron lies about 5 miles northward of Cabo Rojo.

Most of the coast is low and, at the head of some of the bights, it is marshy. The shore in general is sandy. Low hills back the coast, and the mountainous terrain inland attains a height of almost

3,000 feet about 11 miles eastward of Mayagüez. The interior of the island is mountainous and very rugged, the highest elevation being 4,400 feet.

All dangers along the west coast of Puerto Rico are contained within the 100-fathom curve, which lies between 3/4 mile and 15 miles offshore. The 10-fathom curve lies from 1/3 to 2/3 mile offshore between Punta Borinquen and Punta Cadena and contains all the dangers fringing this coastal region.

Between Punta Cadena and the entrance of Bahía de Mayagüez, the 10-fathom curve lies as much as 2 miles offshore and contains the dangerous reefs of Manchas Exterior and Manchas Interior.

An extensive coastal bank, as defined by the 100-fathom curve, extends about 17 miles westward from the coast between Mayagüez and Cabo Rojo. Its outer edge trends about 23 miles south-southeastward from a position about 17 miles westward of Mayaguez to a position about 4 miles southwestward of Cabo Rojo.

Arrecife Tourmaline, contained just inside the 10-fathom curve, lies with its western extremity about 9¼ miles westward of Punta Guanajibo, the southern extremity of Bahía de Mayagüez. Numerous dangers encumber that part of the coastal bank between Arrecife Tourmaline and the coast almost as far southward as Cabo Rojo. These dangers lie eastward of a line drawn south-southeastward from the western extremity of Arrecife Tourmaline to a position about 3 miles southwestward of Cabo Rojo. On the southwestern edge of the coastal bank a ridge, with irregular depths of about 4¼ to 9 fathoms, extends

about 14 miles north-northwestward from a position about 6¼ miles west-southwestward of Cabo Rojo.

CLIMATE OF THE WEST INDIES

General

The West Indies are located entirely in the tropics, an area of the world where most of the time the weather sequences differ distinctly from those of middle latitudes. Here, the average weather conditions generally change much more with latitude than with longitude.

Poleward of the tropical oceans in each hemisphere, there is a high pressure system at sea level through the year. Between these subtropical highs, a belt of lower pressure, known as the "equatorial trough," is found near the equator. On a global average it is centered near 5°S in January and near 12°-15°N in July. The seasonal trough displacement varies sharply around the globe; it oscillates from more than 30° latitude over the eastern hemisphere to less than 10° latitude over the western hemisphere. Its migration between seasons influences the seasonal march of cloudiness and rainfall and the formation of tropical storms. In the annual mean, the trough lies near 5°N rather than on the geographical equator.

Because of the location of the subtropical highs, there is a net flow of air directed toward the equator in both hemispheres. The resulting prevailing winds, always blowing from some easterly point, are known as the "trades." This trade wind belt covers the bulk of the tropics.

The width of the trades belt between the subtropical ridges and the equatorial trough undergoes a distinct seasonal variation. Although the subtropical ridges shift in phase with the equatorial trough, their

average displacement amounts to little more than 5° latitude, somewhat smaller than that of the trough. Consequently, the trades belt is broader and the winds stronger in the winter than in the summer. In the trades the constancy attains 80 percent - in no other major regime on earth do the winds blow so steadily.

The waters of the American Mediterranean are warmed in part by the North and South Equatorial Currents of the Atlantic Ocean. The average sea-surface temperatures of the Caribbean Sea ranges from a winter low of about 72°F along the coast of South America to a summer high of about 84°F in open water. The seasonal range for the Gulf of Mexico waters is larger, with a winter low of about 62°F along the Texas-Louisiana coastal area and a summer high of about 85°F in the mid-Gulf area.

Because of the tropical sunshine, the trade winds and the moderating influence of the warm waters, the horizontal temperature gradient over the West Indies is small, making the climate of the archipelago most agreeable. The only abrupt temperature changes occur in winter, when cold fronts from North America occasionally bring cold air into the area. But, as this air travels southward over the warm sea, the temperature discontinuity rapidly becomes less pronounced until it finally disappears completely.

Following are general descriptions of the major meteorological parameters that produce the climate of the West Indies.

Pressure

Three principal factors determine the pressure distribution of the West Indies: (1) the semi-permanent anticyclone of the North Atlantic

Ocean - its southern edge exerts a direct influence on the area throughout the year; (2) the equatorial trough of low pressure - its orientation and position varies somewhat from season to season as the semi-permanent anticyclones of both hemispheres adjust their shape and position in consequence of the periodic movement of the sun; and (3) the effect of heating by the sun on the two great land masses of North and South America.

The seasonal change in the pressure distribution over the West Indies area is not large; the monthly averages range from 1013 millibars during the warmer months to 1017 millibars during the cooler months. The pressure is generally lower over the southern islands, which lie nearer the equatorial trough; moreover, the range is smaller in the south. The winter maximum over the northern islands is accentuated by the penetration of the North American continental anticyclones into the area. The extension of an intensified Azores anticyclone towards the West Indies in June and July is also apparent from an increase in pressure. This summer increase, although small, is sufficient to modify the paths of hurricanes. There are seasonal pressure minima in spring and fall.

Average diurnal pressure variations in the tropics are remarkably regular. There are two maxima daily, at 1000 and 2200 local time and two minima at 0400 and 1600 local time. The maximum at 1000 and the minimum at 1600 are the more pronounced because at these hours the twelve-hour oscillation and the thermal component reinforce each other. The range of the diurnal oscillation in surface pressure decreases with

the distance from the equator. It is on the order of 3.5 millibars in the south of the area and about 2.0 millibars in the north.

Surface pressures of 950-960 millibars are not uncommon during a hurricane passage; pressures near 890 millibars have been recorded.

Winds

The trade winds over the West Indies blow with great regularity throughout the year. The wind direction varies somewhat with season from east-northeast in winter to east-southeast in summer. The trades extend northward to the Bahamas and southward to mid-Caribbean. The winds over the Caribbean, however, are much more variable because of the effects of the equatorial pressure trough.

Over the Gulf of Mexico there is a greater proportion of stronger winds associated with continental polar fronts, especially in winter. These fronts are sometimes accompanied by severe squalls and, in the Bahamas, fresh or strong squally winds from a northerly point, called "northers," may last for several days before veering gradually and then moderating. The season of northers lasts from November to February or March and frequently bring relatively low temperatures to the area. Occasionally, northers with winds of 30 to 40 miles per hour are reported as far south as Cuba and Jamaica.

There is little diurnal variation of wind at sea, but generally at land stations away from windward coasts the wind falls light soon after dark and continues relatively calm throughout the night. Coastal stations, on all but the smallest islands, are affected by sea-breezes by day and land-breezes by night. These breezes are caused by

differential heating and cooling of land and water. They are better developed with clear than cloudy skies and are strongest in the dry season. The prevailing easterlies, however, interfere or reinforce the land and sea breezes accordingly. The topography of the larger, mountainous islands, in turn, interrupts the prevailing winds, producing local variations.

During the hurricane season, winds greater than 160 mph have been observed over land. These winds are believed to have exceeded 200 mph over the open sea. By far the greatest damage is caused by winds and wind-produced hurricane tides and waves.

Waves

Although the state of the open sea around the West Indies is in general smooth or slight, especially in summer, moderate or even rough seas are not uncommon. The sea is of course very disturbed over a large area during a tropical storm, but it may be roughened locally, especially in shallow waters round the islands, by the squalls which frequently accompany heavy tropical showers or thunderstorms.

The sea may also become rough in narrow channels when a fresh wind blows counter to the current. A similar effect occurs in the narrow channels between islands of the Lesser Antilles where a tidal stream flowing from west to east runs counter to the prevailing wind. In winter there is another cause of disturbed seas. Strong northerly or northwesterly winds behind cold fronts produce rapid increases in the disturbed state of the sea, except in the lee of islands. But, conditions quickly return to normal as the wind moderates. This effect

is of course mainly apparent in the north of the area where the influence of cold fronts is strongest.

Moderate or rough seas also develop at times in winter when the northeast trades become strong. There is a considerable increase in swell during the period December to March, due to the increased strength of the northeast trades at this time of year. This is the season of "rollers" when series of huge swells are liable to appear at any time. The rollers are very probably caused by gales farther north over the Atlantic.

High winds of a tropical storm disturb the sea over a very wide area far from the center of the storm. The extreme wind stress exerted on the ocean surface produces huge waves with extreme height, reported to be more than 45 feet. These waves travel outward in all directions from the storm center and may be spotted as long sea swell 1,000 miles or more distant. As the center of the storm is slow-moving, unusually large swells become a valuable sign of an approaching storm some distance away.

Among the most severe effects of a tropical storm is the damage done along coasts by the ocean waves. Sustained winds of a storm may pile up water along the shore line so that the local high tide rises as much as 10 feet or more above normal. Such "storm tides" are a constant source of danger in all constricted seas of the West Indies. High tides permit the long swell to penetrate the shore line and break with full force over coastal settlements.

An even greater threat is the "hurricane wave," a wave that appears to occur in the proximity of the storm center and causes a sudden

rising of the water by 10-20 feet or more. Because the wave propagates so rapidly, there is no escape.

Visibility

In general, the frequency of visibility less than five nautical miles is less than five percent throughout the year over the West Indies. During the rainy season (January-May), except in rain or showers, visibility is normally 30 miles or more. Heavy rainfall may temporarily reduce visibility to a few hundred yards but conditions generally improve within the hour.

Visibility during the dry season (June-December) is usually impaired by haze and may on occasion deteriorate to as low as five miles. This haze normally extends to the level of the main cloud tops, generally somewhere between 5,000 and 10,000 feet. Visibility often improves after the passage of a cold front or the showers associated with a line of convergence.

Sea haze caused by salt spray from waves breaking on shore may be detected along bays and shore area. And, on rare occasions, haze may be traced to volcanic dust or dust from the Sahara transported by the prevailing easterlies.

Shallow fog frequently forms over low-lying basins and marshy ground as a result of nocturnal cooling but rapidly dissipates after sunrise. Patches of hill fog develop over high ground with the passage of cumulus or cumulonimubus cloud. However, sea fog is practically unknown.

Temperature and Humidity

During the summer, the West Indies is under the influence of moist, warm tropical air masses. In winter, while the Lesser Antilles come under the influence of the subsiding air of the Azores anticyclone, the Greater Antilles and the Bahamas are subject to polar outbreaks from the continental United States. Furthermore, the sea-surface temperature of the Caribbean Sea is warmer with less variation than the waters of the Gulf of Mexico throughout the year. Consequently, there is a much greater annual variation of air temperature over Cuba and the Bahamas than over the remaining islands of the archipelago. This applies also to relative humidity.

Except for the Bahamas, the islands of the West Indies have averages in daily extreme temperatures that range from an afternoon maximum of 85°-90°F to a nightly minimum of 73°-76°F during the warmest month, and from a daytime high of 80°-85°F to a nighttime low of 65°-70°F during the coolest month. The Bahamas, subject to higher latitude and continental influences, have slightly cooler averages.

Over the tropical waters away from land influence, the diurnal air temperature range remains within about 2°F. As the air over the warm waters is always moist, the relative humidity remains within the range of 70-90 percent.

Diurnal range of temperature is a complex phenomenon depending on cloud cover and location. On individual days, the biggest variation of temperature is associated with the cooling effect of showers. The sensation of oppressive heat during the rainy season is often the result of high temperatures combined with high humidity and little wind.

Precipitation

The rainfall over the West Indies varies within wide limits but is ample everywhere to support luxuriant tropical vegetation except on the small islands off the northern coast of South America.

A typical year in the West Indies can be divided into two seasons. The dry season, lasting from January to April or May, has days of little cloud and only light showers. The remainder of the year is a rainy season, with days of heavy showers and intervening fair periods.

The weather is of tropical origin during the rainy season. Towards the end of May the intertropical front, associated with the equatorial trough, moves up from South America, bringing with it the rain and showers characteristic of the rainy season. It's influence is generally felt as far north as the Barbados area. This point of northern extent experiences a rainfall maximum that is distributed over several months. The rainfall pattern of the Caribbean area to the south will reflect two maxima, as a result of the intertropical front's seasonal migration to and from the north. North of the Barbados area there are again two maxima, the earlier in May or June and the later in September or October. In general, this regime persists throughout the Greater Antilles. This rainy weather is associated with easterly waves and tropical cyclones. Though one of the factors contributing to the rainfall maximum in the fall is the heavy rain associated with hurricanes, this occurs only on rare occasions. The heavy showers of the rainy season are far heavier than anything normally experienced in temperature latitudes.

During the dry season, the intertropical front is south over the Guianas or the Amazon. Any deterioration which interrupts the generally fair and dry weather of this season is largely determined by the interplay of cold fronts associated with Atlantic depressions, the continental anticyclones which migrate southeastward across North America and the Gulf of Mexico, and the Azores anticyclone.

Since the cloud formations in the region are predominantly cumuliform, rain falls mainly as showers in both seasons of the year. The rain showers are usually of fairly short duration, though they may be very intense, especially in thunderstorms.

Occasionally, precipitation falls as continuous rain. In the extreme southeastern Antilles, the onset of the rainy season is marked by two or three periods of continuous rain of several hours duration. Further north, periods of continuous rain occur with the passage of a hurricane. The rain shield of a fully developed hurricane may cover an area 200 miles in radius. Rainfall of 20 inches is fairly common during the passage of a hurricane. A total of 96.5 inches of rain from a hurricane was recorded over a period of four days at Silver Hill in Jamaica. Although individual hurricanes are responsible for heavy rainfall, hurricanes collectively contribute a relatively small part of the total rainfall in the West Indies.

Prolonged and heavy rainfall may also occur with an intense cumulonimbus development when light, variable winds exist at all levels. Periods of rain may also be associated with troughs over the Greater Antilles and, in the Bahamas, prolonged periods of almost continuous slight or moderate rain may occur in the winter along a cold front.

Diurnal variation of rainfall is closely related to diurnal variation of cumulus cloud. The daily maximum development occurs in the early afternoon over the land and just before dawn over the sea. The former is generally the more intense because the amount of rain produced by convection over the island is, on the average, greater than that falling from cloud generated at sea and blown inland over the windward coast.

Thunder is much less frequent during the dry season and it is almost exclusively associated with polar troughs or meridional troughs. Summer thunderstorms are numerous but their frequency varies considerably from place to place, being greatest on the larger islands at higher elevations.

Waterspouts under large cumulonimbus cloud are quite common over most of the West Indies during the summer months.

Cloudiness

Clouds of the tropical atmosphere are predominantly cumulus or cumulonimbus and have a characteristic diurnal variation. Because of the high insolation over land in the tropics, cloudiness and rainfall over the islands generally reach their peak during the day, but the nights are clear. Shower clouds formed over an island may extend downwind for many miles and extend out over the sea. Cumulonimbus cloud is an almost daily occurrence over the larger, mountainous islands of the Greater Antilles.

Walls of clouds containing showers are banked on the shore or over the sea at night. Although cloud development over the sea intensifies

at night and reaches a maximum just before dawn, the diurnal variation of cloudiness over the oceans is small.

The frequency of observations taken over the West Indies having total cloud amount ≥ 8/10 varies from a winter-spring low of less than 20 percent to a summer-fall high of 20-40 percent. It follows that clear days are most frequent during the winter-spring seasons.

The average cloud base of the trade cumuli is generally 1,500 to 2,000 feet above sea level, but rises to 3,000 to 4,000 feet inland over the large islands by mid-afternoon. In the rainy season, the average range of the main cloud tops over much of the West Indies is often between 8,000 and 12,000 feet. Large cumulonimbus clouds may extend much higher, particularly over the larger islands; and, in the absence of wind shear, they may extend right up to the tropopause.

The freezing level over the West Indies is usually 14,000 to 15,000 feet, except in the extreme north in winter, when at times it may be as low as 8,000 to 10,000 feet. However, it is not necessary for clouds in the tropics to reach the freezing level to produce rain. Showers may occur from a cloud 5,000 to 6,000 feet thick. Severe turbulence may occur in or around any well developed cumulus cloud.

Extensive sheets of altostratus often occur in thundery weather and also in easterly waves over the islands of the Greater Antilles. Extensive sheets of cirrus and cirrostratus are common at all seasons of the year - they are not all connected with hurricanes.

CLIMATE OF THE MONA PASSAGE AREA

General

The Mona Passage Area, as described in this report, is bounded by 17°-19°W and 67°-69°W (see Fig. 2).

Centrally located within the archipelago, the Mona Passage Area has a climate that reflects the averages of the general climate of the West Indies. The Area has a pleasant tropical climate with a relatively dry winter and early spring and rainy the rest of the year. Other meteorological elements show little change from season to season.

The persistent trade winds are the dominant weather factor throughout the year. Although temperatures and humidities are quite high, the weather is rarely enervating because of the constant easterly winds.

Pressure

The pressure pattern over the Mona Passage Area is influenced by the North Atlantic (Bermuda) High throughout the year, while the annual migration of the equatorial trough of low pressure imparts a seasonal influence.

The seasonal change in sea-level pressures is not large. The average monthly values (in millibars) range from a September-October low of 1013 to a winter high of 1016. The winter maximum is a product of the seasonal migration of the equatorial trough southward and the penetration into the Area of an occasional continental anticyclone.

Diurnal pressure variations, remarkably regular, are as large as the seasonal variations. On the average there are two daily maxima, each of 1016 millibars, occurring about 1100 and 2300 hours, and two daily minima, each of 1014 millibars, occurring at 1700 and 0500 hours.

Recorded extreme pressures range from a high of 1026 millibars in March to a low of 996 millibars in September. Lowest pressures are likely to occur during the tropical storm season, May through November. The low pressure of 996 millibars was recorded during the passage of hurricane Beulah in September of 1967.

Winds

The surface winds over the Mona Passage Area are dominated by the general circulation of the Bermuda High throughout the year. Because of this permanent circulation the prevailing direction of the winds over the Area is from the east for all months. Although the Bermuda High shifts a little north in summer, its increase in strength generates winds having a considerably greater persistence in easterly direction.

Variations in the average monthly wind speeds are quite small. The monthly averages range from 9.9 knots in October to 13.2 knots in July, with an annual mean of 11.8 knots. A secondary maximum of 12.8 knots occurs during winter, a time when continental fronts and associated "northers" penetrate the Area. Winds of tropical storms (greater intensity than 33 knots) have been observed for all months.

There is also little diurnal variation in the speed and direction of the winds over the Area away from the influence of the island of Puerto Rico. Over land, the winds generally blow fresh during the day.

For example, Ramey AFB, located on the northwestern coast, has daily winds that vary significantly from a average of 5-6 knots with a easterly direction in the early morning to about 13 knots with a east-northeasterly direction in the early afternoon.

Factors which interrupt this trade wind flow are frontal and easterly wave passages. As the cold front approaches, the wind shifts to a more southerly direction, and then as the front passes there is a gradual shift through the southwest and northwest quadrants back to the east. The easterly wave passage is usually characterized by an east-northeast wind ahead of the wave and a change to east-southeast following its passage.

Tropical Cyclones

Another factor which interrupts the constant trade wind flow is the influence of tropical cyclones. Hurricanes and tropical storms are an important feature of the Area climate during summer and early autumn. The tropical cyclone season in the North Atlantic region extends from May through November. But, because of seasonal shifts in favored locations of tropical cyclone development, the Area is outside the main paths of these most severe tropical atmospheric disturbances, except from July through October.

Of the approximately 600 tropical cyclones recorded over the North Atlantic since 1886, 52 penetrated the Area bounded by 17.5°-20.0°N latitude and 67.5°-70.0°W longitude; of these, 22 were hurricanes (winds greater than 64 knots), 26 were tropical storms (winds 34-63 knots) and the remaining four were tropical depressions (winds less

than 34 knots). August and September contained the majority, with 14 and 24 storms, respectively. Based on an 84-year record, the (Poisson) probability of at least one tropical storm or hurricane penetrating the Area in any given year is 0.44.

Those hurricanes and tropical storms which do severly affect the Area develop primarily over the waters of the southern North Atlantic to the east of the Lesser Antilles. The movements of the storms are usually towards the west and northwest at an average speed of 10-15 knots. Wind gusts exceeding 140 knots were recorded at San Juan during the passage of hurricane "San Felipe" on September 13, 1928. The storm caused 300 fatalities and over $50 million in damage. In August of 1899, hurricane "San Ciriaco" caused 3,000 fatalities and $20 million in damage on the island of Puerto Rico.

Although these storms passed through the Area, storms passing to the north or south may also cause damage. The fringe effects of Hurricane Donna in September 1960 produced 10 to 15 inches of rain over much of Puerto Rico and caused the highest flash floods ever known on many of the island streams. This flooding resulted in several million dollars of crop and property damage and the drowning of over 100 persons.

Damage from high tides may also occur when there is a long duration of extreme winds from slow moving, intense storms. Fortunately, the area covered by extremely high winds in hurricanes in tropical latitudes is usually small and, as very slow forward speeds of storms are rare, high winds are usually sustained for only a very few hours at any place.

Appendix A contains additional information on tropical cyclone climatology.

Extreme Winds

Although the Area's number of marine observations for wind are approximately 40,000 for the period 1856-1971, the tendency for ships to avoid bad weather introduces a fair-weather bias into extreme wind statistics. The return values of maximum sustained winds shown below, therefore, are statistical estimates.

Mean Recurrence Interval	5 yr	10 yr	25 yr	50 yr	100 yr
Maximum Sustained Wind (knots)	70	75	83	91	99

These estimates suggest, on the average, there will be a maximum sustained wind speed of 75 knots in the Mona Passage Area once every 10 years.

Waves

The monthly averages of wave heights vary with the winds throughout the year. July, the month having the highest average in winds (13.2 knots), also has the monthly high in average wave heights (5 feet). The maximum frequency of wave heights equal to or above this average occurs in mid-winter (50.8%) and mid-summer (55.3%), with the primary minimum occurring in late summer and early fall (30-34%). Waves of 20 feet or greater were observed for all months.

An observed wave height of 32 feet or more, with easterly winds of 55 knots, was reported just southeast of Mona Island during the passage of tropical storm Gerda in September of 1958. The storm, passing to the south of the Area on a westerly course, dissipated south of Cuba without ever reaching hurricane strength.

As there are insufficient data for a climatological conclusion on wave heights, the table below contains a statistical estimate of high wave occurrences.

Mean Recurrence Interval	5 yr	10 yr	25 yr	50 yr	100 yr
Maximum Significant Wave Height (feet)	33	37	44	49	55

From the table it can be expected there will be, on the average, one occurrence every 10 years having a significant wave height of 37 feet. It must be borne in mind that the above figure could be expected to occur only in the deeper waters of the study area.

Visibility

Visibility normally presents no problem in the Mona Passage Area. During the primary period of record from 1949 to 1971, less than one-half of one percent of the marine observations reported surface visibility less than ½ nautical mile; and, only 0.8 percent of the observations reported visibility less than five nautical miles.

At Ramey AFB, for the period 1940 to 1967, there were no occurrences of surface visibility less than ½ nautical mile and only 0.7 percent of hourly observations had visibility less than five nautical miles.

The infrequent occurrences of low visibility are due to heavy rains and are often associated with tropical storms.

Fog, in the sense that it is known elsewhere with visibility reduced to almost zero, is unknown over the Area. Occasionally, fog does occur and the frequency increases slightly seaward. Hourly

observations at Ramey AFB show a monthly maximum of only 0.1 percent and this drops to zero during the summer months. The frequency over water reaches a maximum of 0.5 percent during March and a minimum of 0.1 percent during the summer.

Extremely good visibility is also rare. A persistent faint haze is present most of the time and rarely allows the visibility to exceed 15 miles.

Temperature

Surface air temperatures over the Mona Passage Area are remarkably uniform. Temperature extremes are tempered by the combined effects of the prevailing easterly winds and relatively constant sea-surface temperatures. Although there are local variations on the islands as a result of topography, exposure and other factors, these variations disappear seaward. Such variations, however, are insignificant compared to those of a more temperate climate.

The extreme marine temperatures observed range from a minimum of 66°F in spring to a maximum of 95°F in summer and fall. Mean monthly temperatures have a very small range between the warmest month, September - 83.0°F, and the coolest month, February - 77.6°F. The average annual temperature is a pleasant 80.6°F.

The frequency of marine observations having temperatures above 85°F range from a February low of 1.6 percent to a September high of 19.3 percent. The daily range of marine air temperature is typically less than 4°F. The daily range increases landward and approaches 25°F at higher elevations of Puerto Rico during the winter season.

The mean annual temperatures along the western coast of Puerto Rico vary little with latitude. For example, the annual means at Ramey AFB and Mayagüez are 77.7°F and 77.5°F, respectively; and, their monthly means differ by less than 1°F. However, the daily range in temperature extremes at Ramey AFB is smaller due to a greater exposure of the station to the tempering prevailing winds and the warm sea.

In spite of such tempering effects, the frequency of observations having temperatures of 85°F or greater at Ramey AFB is much higher than that of the marine data for all months. This is because of a greater diurnal variation in temperature over land.

Observational extremes in sea-surface temperatures show a minimum of 66°F in spring and a maximum of 90°F in September. The mean diurnal range of sea-surface temperature in open water away from land influence is about 0.5°F to 0.7°F. The temperature of the sea-surface averages from 0.3°-1.5°F warmer than that of the overlying atmosphere for all months, with winter and summer having the greatest and least differences, respectively. Less than one in four of the marine observations report the air warmer than the sea. Such small differences in temperatures between the air and sea reflect the dominating influence of the sea on the marine atmosphere.

Precipitation

Mean monthly precipitation, rather evenly distributed throughout the year, shows a relatively dry season during winter and early spring and a relatively wet season from May through November. The rainy period

includes a secondary minimum in summer. Abundant sunshine prevails throughout the year, even during the so called rainy season.

There are two rainfall-producing mechanisms in the Area: easterly waves and cold fronts. During the rainy season, the Area experiences easterly waves. An easterly wave of slight intensity may produce little more than greater-than-normal cloudiness. However, an intense easterly wave, especially if it is moving slowly may bring one or more cloudy, rainy days which may produce sufficient rain to cause flooding on the islands. Tropical storms occasionally develop in these waves and may cause torrential rain, particularly over the mountainous island of Puerto Rico.

Occasionally during winter the trailing edge of a cold front off the continental United States penetrates the Area and brings a change in the weather that may range from only cloudier-than-normal skies to heavy and continual rainfall lasting for several days.

Most of the precipitation that falls over the Area, however, is instability shower-type rain which is normally short in duration, often less than one hour. Rainfall over Puerto Rico is primarily orographic in nature.

There is a precipitation gradient north to south along the western coast of Puerto Rico. Average annual rains for the following coastal stations are: Ramey AFB-51 inches; Rinco-about 60 inches; Mayagüez-76 inches; Cabo Rajo-64 inches; and, over the southwest corner of the island, a minimum of about 35 inches occurs.

The mean number of days per month having rain along the western coast ranges from a winter low of about 7-12 days to a summer high of 14-18 days, with an annual average of 140-160 days.

Seaward of the coast beyond island influence, the precipitation becomes more uniform. Rainfall patterns over Mona Passage are not well defined due to lack of sufficient observations, but existing data indicate about 40 to 55 inches of rain annually with appreciable amounts falling in nearly all months. Mona Island, representative of the Mona Passage Area, has an average annual rainfall of about 41 inches. Although the days-with-rain statistics are unknown, they should fall within the range of the coastal area noted above.

Frozen precipitation is rarely observed throughout the year and, when it does occur, it is in the form of hail.

Cloudiness

Cloud cover over the Mona Passage Area does not vary greatly from season to season. The seasonal variation of cloudiness shows a double maximum, in late spring and again in early fall, with spring somewhat more pronounced. Average monthly cloud cover increases slightly from a minimum of about 35 percent in March to a maximum of about 50 percent in May and June. The annual normal is 44 percent.

The percent frequency of overcast skies also ranges from a March minimum to a May maximum. In all seasons, maximum cloudiness and precipitation occur during the afternoon hours over Puerto Rico and during the night hours over the small islands and waters of Mona

Passage. Total obscuration of the sky, although infrequent, occurs primarily during short-duration rain showers.

Most of the cloudiness consist of trade-wind cumulus. This type of cumulus is generally of small vertical extent, with the bases averaging 2,000 to 3,000 feet in height over the Area. Cloud tops average 6,000 to 8,000 feet in winter and increases in summer, rising to 9,000 to 13,000 feet over the higher elevations of Puerto Rico. Other clouds, such as the cumulonimbus and stratiform types, occur during the passage of easterly waves, frontal systems and tropical storms.

Relative Humidity

The relative humidity over the Mona Passage Area is rather high, averaging 80 percent over the course of the year. The monthly average percentages range from a March low of 77 to a May-June high of 81.

The diurnal variation, although small over open water, is appreciable over land. Early morning hours usually have the highest values of relative humidity (80-90 percent), while the lower values occur in mid afternoon (60-75 percent).

High relative humidities are recorded during rainfall and when occasional cold fronts or easterly waves pass over.

Physical comfort is enhanced by the combined factors of consistent easterly winds and the diurnal march of temperature and relative humidity, with the lowest relative humidities occurring at the time of maximum temperatures.

MEANS AND EXTREMES

Station: AGUADILLA/RAMEY AFB — Standard time used: ATLANTIC — Latitude: 18° 30' — Longitude: 67° 08' — Elevation (ground): 247 feet

Month	Temperature: Means: Daily maximum	Temperature: Means: Daily minimum	Temperature: Means: Monthly	Temperature: Extremes: Record highest	Temperature: Extremes: Year	Temperature: Extremes: Record lowest	Temperature: Extremes: Year	Normal heating degree days (Base 65°)	Precipitation: Normal total	Precipitation: Maximum monthly	Precipitation: Year	Precipitation: Minimum monthly	Precipitation: Year	Precipitation: Maximum in 24 hrs.	Precipitation: Year	Snow, Ice pellets: Mean total	Snow, Ice pellets: Maximum monthly	Snow, Ice pellets: Year	Snow, Ice pellets: Maximum in 24 hrs.	Snow, Ice pellets: Year	Relative humidity: 00-02 Hour (Local time)	Relative humidity: 06-08 Hour	Relative humidity: 12-14 Hour	Relative humidity: 18-20 Hour	Wind: Mean speed	Wind: Prevailing direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Year	Pct. of possible sunshine	Mean sky cover sunrise to sunset	Mean number of days: Sunrise to sunset: Clear	Partly cloudy	Cloudy	Precipitation .01 inch or more	Snow, Ice pellets 1.0 inch or more	Thunderstorms	Heavy fog	Temperatures: Max. 90° and above	Max. 32° and below	Min. 32° and below	Min. 0 and below	Average daily solar radiation - langleys
(a)	27	27	27	27		27			27	27		27		27		27	27		27		27	27	27	27			18								27	27	21	21	27	27	27	27	
J	80.2	68.6	74.5	87	1963	60	1948	—	2.82	10.44	—	1.12	—	3.48	1959	0.0	0.0		0.0		84	84	68	76	9.8	E	53	ENE	1950						12	0	*	*	0	0	0	0	
F	80.4	68.2	74.4	89	1946	61	1965	—	2.40	6.96	—	.03	—	2.83	1956	0.0	0.0		0.0		83	83	68	76	9.6	E	43	ENE	1949						9	0	*	*	0	0	0	0	
M	81.5	69.0	75.3	90	1952	62	1951+	—	2.84	9.48	—	.23	—	4.43	1963	0.0	0.0		0.0		82	81	66	76	9.8	E	38	ENE	1950						9	0	*	*	0	0	0	0	
A	82.2	70.6	76.5	90	1958+	64	1946	—	4.46	14.14	—	.47	—	5.53	1958	0.0	0.0		0.0		84	81	69	78	9.4	E	39	E	1966						11	0	2	*	*	0	0	0	
M	83.6	72.5	78.2	90	1964+	67	1962+	—	5.40	10.24	—	.70	—	4.40	1945	0.0	0.0		0.0		85	82	72	80	8.0	E	36	E	1963						14	0	8	*	*	0	0	0	
J	84.9	75.4	79.3	93	1963	66	1943	—	6.22	12.34	—	1.67	—	3.61	1956	0.0	0.0		0.0		86	82	72	81	8.7	E	57	ENE	1963						14	0	14	*	*	0	0	0	
J	85.3	74.2	79.8	95	1962	68	1945	—	4.23	8.03	—	.96	—	2.60	1966	0.0	0.0		0.0		86	84	72	80	10.6	E	43	E	1950						14	0	13	*	*	0	0	0	
A	85.8	74.2	80.1	92	1940	68	1940	—	5.16	10.64	—	1.70	—	4.60	1956	0.0	0.0		0.0		87	84	72	81	8.8	E	41	ENE	1950						15	0	12	*	*	0	0	0	
S	86.0	75.8	80.0	92	1963+	66	1942	—	4.74	8.44	—	1.35	—	3.67	1954	0.0	0.0		0.0		87	84	71	81	7.2	E	54	ESE	1949						14	0	14	*	1	0	0	0	
O	85.5	75.2	79.5	92	1963+	66	1946	—	5.43	9.46	—	1.73	—	3.74	1958	0.0	0.0		0.0		87	84	71	82	6.0	E	35	SSE	1965						13	0	12	*	*	0	0	0	
N	83.6	71.9	77.9	90	1963	64	1966	—	3.80	10.62	—	.61	—	4.07	1961	0.0	0.0		0.0		86	84	69	79	7.7	E	40	ENE	1950						12	0	4	*	*	0	0	0	
D	81.6	70.0	75.9	87	1963+	62	1949	—	3.86	10.04	—	.80	—	3.27	1959	0.0	0.0		0.0		85	84	68	78	9.0	E	38	E	1965						13	0	1	*	0	0	0	0	
YR	83.4	71.7	77.7	95	JUL 1962	60	JAN 1948	—	51.16	14.14	APR —	.03	FEB —	5.53	APR 1958	0.0	0.0		0.0		85	83	70	79	8.7	E	57	ENE	JUN 1963						150	0	80	*	1	0	0	0	

THIS TABLE CONSISTS OF DATA EXTRACTED FROM THE USAF PUBLICATION, "REVISED UNIFORM SUMMARY OF SURFACE WEATHER OBSERVATIONS." YEARS OF RECORD: 1940-1966

JAN. 49—DEC. 68 N 18°15' W 65°38' ZONE: +4 HOURS — NWSED, ROOSEVELT ROADS, P. R.

Month	Temperature: Means: Daily maximum	Temperature: Means: Daily minimum	Temperature: Means: Monthly	Temperature: Extremes: Record highest	Temperature: Extremes: Year	Temperature: Extremes: Record lowest	Temperature: Extremes: Year	Mean degree days	Precipitation: Mean	Precipitation: Maximum monthly	Precipitation: Year	Precipitation: Minimum monthly	Precipitation: Year	Precipitation: Maximum in 24 hrs.	Precipitation: Year	Snow, Sleet: Mean	Snow, Sleet: Maximum monthly	Snow, Sleet: Year	Snow, Sleet: Maximum in 24 hrs.	Snow, Sleet: Year	Relative humidity: Mean: 0200 LST	Relative humidity: Mean: 0800 LST	Relative humidity: Mean: 1400 LST	Relative humidity: Mean: 2000 LST	Wind: Mean speed (Kts)	Wind: Prevailing direction	Wind: Peak gust: Speed (Kts)	Wind: Peak gust: Direction	Wind: Peak gust: Year	Mean cloud amount	Mean number of days: Precipitation .01 inch or more	Snow, Sleet 1.0 inch or more	Thunder and Thunderstorms	Fog	Temperature: Max. 90° and above	Max. 32° and below	Min. 32° and below	Min. 0° and below	Mean number of 3 hrly. obs.: Temperature: wb 73° and above	db 93° and above	wb 67° and above	db 88° and above
	13	13	13	13		13		13	13	13		13		13		13	13		13		13	13	13	13	13		12			13	13	13	13	13	13	13	13	13	13	13	13	
J	82.7	71.2	77.2	88	1961	62	1963	0	3.46	10.82	1958	1.69	1965	4.26	1958	0.0	0.0		13		79	79	66	77	8.8	ENE	47	ENE	1950	.5	17	0	*	0	0	0	0	0	60	0	227	59
F	83.0	71.2	77.3	90	1964	62	1966	0	2.14	7.48	1950+	1.30	1960	1.49	1950+	0.0	0.0		0.0		80	78	65	76	8.5	E	43	ESE	1950+	.5	16	0	1	*	*	0	0	0	51	0	205	58
M	84.1	72.1	78.4	89	1965+	64	1949	0	2.33	5.96	1960	0.23	1958	8.25	1949	0.0	0.0		0.0		80	76	63	76	8.4	E	41	ESE	1949	.5	13	0	*	0	0	0	0	0	76	0	234	82
A	84.5	73.3	79.2	90	1964	64	1968	0	4.06	9.14	1969	0.87	1967	4.11	1960	0.0	0.0		0.0		81	75	66	78	8.6	E	35	E	1960	.5	15	0	1	0	*	0	0	0	129	0	231	92
M	85.7	75.1	80.7	91	1964+	68	1963+	0	6.21	13.28	1959	1.60	1964	4.35	1959	0.0	0.0		0.0		84	78	70	81	8.3	E	37	S	1960	.6	19	0	2	*	2	0	0	0	205	0	247	126
J	86.9	76.7	82.1	92	1960	70	1967+	0	4.99	9.61	1962	2.30	1961	2.74	1967	0.0	0.0		0.0		82	76	69	79	8.3	E	40	E	1960	.6	18	0	5	0	3	0	0	0	228	0	239	164
J	87.3	77.3	82.6	92	1962	71	1967+	0	5.13	9.71	1958	2.77	1967	2.97	1958	0.0	0.0		0.0		81	76	69	80	9.0	E	46	ENE	1960+	.6	21	0	5	0	2	0	0	0	243	0	248	201
A	88.0	77.5	83.0	93	1960	70	1967	0	5.40	10.04	1960	2.43	1967	2.59	1960	0.0	0.0		0.0		82	77	68	80	8.3	E	44	S	1949	.5	19	0	4	0	3	0	0	0	245	0	247	207
S	88.2	76.4	82.3	92	1960+	68	1960	0	6.50	16.27	1960	2.53	1967	7.39	1960	0.0	0.0		0.0		84	79	69	81	8.4	E	76	SW	1960	.6	20	0	7	0	3	0	0	0	230	0	239	181
O	87.7	75.2	81.7	92	1963+	69	1965+	0	5.26	10.65	1949	2.01	1957	4.00	1961	0.0	0.0		0.0		84	80	68	80	5.4	E	38	ESE	1958	.6	17	0	5	0	4	0	0	0	218	0	247	160
N	86.3	73.7	80.2	93	1957	66	1963	0	5.23	9.82	1957	2.05	1964	5.48	1966	0.0	0.0		0.0		83	81	67	80	6.0	E	41	S	1958	.5	17	0	2	*	2	0	0	0	169	*	237	115
D	84.1	72.5	78.6	91	1966	63	1949	0	4.85	11.28	1960	1.92	1967	2.76	1965	0.0	0.0		0.0		82	81	68	79	7.3	E	40	NE	1949	.5	19	0	1	0	*	0	0	0	121	0	232	80
	85.7	74.4	80.3	93	AUG 1968+	62	FEB 1966+	0	55.72	16.27	SEP 1960	0.23	MAR 1958	8.25	MAR 1949	0.0	0.0		0.0		82	78	67	79	7.7	E	76	SW	SEP 1960	.5	211	0	33	*	23	0	0	0	1969	*	2833	1525

Tables 1-2 Climatological data summaries for Aguadilla/Ramey AFB and Roosevelt Roads, Puerto Rico.

LATITUDE 18° 26' N
LONGITUDE 66° 00' W
ELEVATION (ground) 47 feet

NORMALS, MEANS, AND EXTREMES

SAN JUAN, PUERTO RICO
STOP 4, PONCE DE LEON AVENUE
1964

Month	Temperature: Normal: Daily maximum	Daily minimum	Monthly	Extremes: Record highest	Year	Record lowest	Year	Normal degree days	Precipitation: Normal total	Maximum monthly	Year	Minimum monthly	Year	Maximum in 24 hrs.	Year	Snow, Sleet: Mean total	Maximum monthly	Year	Maximum in 24 hrs.	Year	Relative humidity				Wind: Mean hourly speed	Prevailing direction	Fastest mile: Speed	Direction	Year	Pct. of possible sunshine	Mean sky cover sunrise to sunset	Mean number of days -%: Sunrise to sunset: Clear	Partly cloudy	Cloudy	Precipitation .01 inch or more	Snow, Sleet 1.0 inch or more	Thunderstorms	Heavy fog	Temperatures: Max. 90° and above	32° and below	Min. 32° and below	0° and below
(a)	(b)	(b)	(b)	66		66		(b)	(b)	66		66		66		66	66		66																								
J	79.9	70.3	75.1	90	1958	63	1917+		4.13	15.47	1937	0.74	1960	4.52	1934	0.0	0.0		0.0															66	66	66	66	66	66	66	66
F	80.0	70.1	75.1	92	1964	62	1917		2.70	8.13	1954	0.05	1941	4.84	1918	0.0	0.0		0.0															20	0	*	0	*	0	0	0
M	81.0	71.0	76.0	96	1958	63	1911		2.07	9.38	1927	0.29	1957	5.26	1956	0.0	0.0		0.0															14	0	*	0	*	0	0	0
A	81.8	72.2	77.0	93	1900	65	1922+		3.89	13.17	1915	0.42	1935	6.72	1915	0.0	0.0		0.0															14	0	*	0	*	0	0	0
M	83.4	74.1	78.8	94	1964+	66	1903		7.16	16.88	1936	0.71	1925	5.37	1936	0.0	0.0		0.0															14	0	2	0	1	0	0	0
J	84.4	75.4	79.9	94	1964	66	1909		5.83	12.22	1902	1.43	1945	6.47	1938	0.0	0.0		0.0															16	0	5	0	2	0	0	0
J	84.2	76.0	80.1	92	1942	70	1960+		6.02	11.19	1961	1.10	1929	4.05	1901	0.0	0.0		0.0															17	0	6	0	1	0	0	0
A	85.3	76.2	80.8	94	1955	68	1904		6.34	14.10	1944	1.53	1919	9.83	1944	0.0	0.0		0.0															19	0	7	0	*	0	0	0
S	85.8	75.6	80.7	94	1961+	69	1929+		6.04	13.68	1928	1.49	1940	8.50	1928	0.0	0.0		0.0															20	0	7	0	1	0	0	0
O	85.5	74.9	80.2	94	1963	68	1903+		5.24	12.15	1927	1.61	1915	3.87	1927	0.0	0.0		0.0															18	0	10	0	2	0	0	0
N	83.5	73.7	78.6	93	1915	65	1898		6.05	15.64	1931	1.63	1910	8.06	1931	0.0	0.0		0.0															18	0	8	0	2	0	0	0
D	81.4	72.0	76.7	90	1962+	62	1917+		4.89	15.40	1910	0.58	1963	10.55	1910	0.0	0.0		0.0															19	0	3	0	*	0	0	0
					OCT.		DEC.				MAY		FEB.		DEC.																			20	0	1	0	*	0	0	0
YR	83.0	73.5	78.3	96	1963+	62	1917+		60.36	16.88	1936	0.05	1941	10.55	1910	0.0	0.0		0.0															208	0	49	0	10	0	0	0

Station: SAN JUAN, PUERTO RICO ISLA VERDE INTL AIRPORT Standard time used: ATLANTIC Latitude: 18° 26' N Longitude: 66° 00' W Elevation (ground): 13 feet Year: 1973

Month	Temperature: Normal: Daily maximum	Daily minimum	Monthly	Extremes: Record highest	Year	Record lowest	Year	Normal heating degree days (Base 65°)	Precipitation: Normal total	Maximum monthly	Year	Minimum monthly	Year	Maximum in 24 hrs.	Year	Snow, Ice pellets: Mean total	Maximum monthly	Year	Maximum in 24 hrs.	Year	Relative humidity: Hour 02 (Local time)	Hour 08	Hour 14	Hour 20	Wind & Mean speed	Prevailing direction	Fastest mile: Speed	# Direction	Year	Pct. of possible sunshine	Mean sky cover sunrise to sunset	Mean number of days: Sunrise to sunset: Clear	Partly cloudy	Cloudy	Precipitation .01 inch or more	Snow, Ice pellets 1.0 inch or more	Thunderstorms	Heavy fog	Temperatures: Max. 90° and above	32° and below	Min. 32° and below	0° and below	Average daily solar radiation - langleys
(a)	(b)	(b)	(b)	19		19		(b)	(b)	19		19		19		18	19		19		18	18	18	18	18	8	18	18		18	18	18	18	18	18	18	18	18	18	18	18	18	18	
J	81.9	68.8	75.4	90	1958	61	1962	0	3.73	7.49	1969	0.94	1960	5.08	1969	0.0	0.0		0.0		83	83	65	76	8.9	ENE	34	NE	1967+	65	5.2	8	18	5	17	0	*	0	*	0	0	0	
F	82.1	68.4	75.3	92	1968	62	1968+	0	2.50	6.44	1956	0.79	1965	2.73	1969	0.0	0.0		0.0		81	81	62	74	9.2	ENE	40	E	1965	68	5.1	7	16	5	13	0	*	0	1	0	0	0	
M	83.6	68.9	76.3	93	1958	60	1957	0	2.04	5.41	1958	0.72	1970	3.91	1969	0.0	0.0		0.0		81	79	61	74	9.6	ENE	37	NE	1969	74	5.0	9	18	4	12	0	*	0	2	0	0	0	
A	84.4	70.6	77.5	93	1973+	64	1968	0	3.40	8.48	1973	0.50	1968	6.37	1973	0.0	0.0		0.0		81	77	63	74	9.2	ENE	35	E	1970+	68	5.5	7	16	7	14	0	1	0	2	0	0	0	
M	85.6	72.8	79.2	94	1973	66	1962	0	6.34	14.99	1965	0.44	1972	3.08	1965	0.0	0.0		0.0		84	79	66	77	8.7	ENE	34	S	1969	60	6.6	2	17	12	18	0	4	0	4	0	0	0	
J	87.0	74.0	80.5	96	1972	69	1957+	0	5.64	10.96	1965	1.24	1971	3.55	1965	0.0	0.0		0.0		85	79	67	77	8.9	ENE	38	NE	1970	57	6.7	3	15	12	17	0	6	0	5	0	0	0	
J	87.0	74.8	80.9	93	1965	69	1959	0	6.41	9.25	1961	1.69	1971	2.28	1969	0.0	0.0		0.0		84	80	67	78	9.9	ENE	34	SE	1958	65	6.2	3	19	9	20	0	5	0	4	0	0	0	
A	87.5	75.1	81.3	94	1972	70	1956	0	6.98	11.76	1955	3.06	1972	5.08	1955	0.0	0.0		0.0		84	80	66	77	9.2	ENE	80	NE	1956	66	6.2	3	19	9	19	0	6	0	5	0	0	0	
S	87.6	74.6	81.1	94	1971+	69	1960+	0	6.07	10.85	1963	1.93	1961	3.08	1963	0.0	0.0		0.0		85	80	67	78	7.6	ENE	47	SE	1973	60	6.3	3	17	10	18	0	8	0	7	0	0	0	
O	87.4	73.7	80.6	95	1970	67	1959	0	5.64	15.06	1970	1.63	1963	5.00	1970	0.0	0.0		0.0		85	81	66	79	6.7	ENE	44	NE	1972	62	6.3	3	17	11	17	0	7	0	6	0	0	0	
N	85.0	72.3	78.7	92	1973+	66	1969+	0	5.49	11.11	1968	2.31	1971	3.72	1968	0.0	0.0		0.0		84	82	66	77	7.6	ENE	35	NE	1961	60	5.8	4	18	8	18	0	3	0	1	0	0	0	
D	83.1	70.5	76.8	90	1965+	63	1964	0	4.71	10.00	1961	0.68	1963	3.54	1961	0.0	0.0		0.0		83	81	66	77	8.7	ENE	46	NE	1970	56	5.8	5	19	7	19	0	*	0	*	0	0	0	
					JUN.		MAR.				OCT.		MAY		APR.														AUG.															
YR	85.2	72.0	78.6	96	1972	60	1957	0	59.15	15.06	1970	0.44	1972	6.37	1973	0.0	0.0		0.0		83	80	65	76	8.7	ENE	80	NE	1956	63	5.9	57	209	99	200	0	41	0	37	0	0	0	

Means and extremes above are from existing and comparable exposures.
Annual extremes at City locations (1890-1964) were: Highest temperature 96 in October 1963 and earlier; lowest temperature 62 in December 1917 and earlier; maximum monthly precipitation 16.88 in May 1936; minimum monthly precipitation 0.05 in February 1941; maximum precipitation in 24 hours 10.55 in December 1910; fastest mile of wind 149 from East in September 1928.

(a) Length of record, years, based on January data. Other months may be for more or fewer years if there have been breaks in the record.
(b) Climatological normals (1941-1970).
* Less than one half.
\+ Also on earlier dates, months, or years.
T Trace, an amount too small to measure.
— Below zero temperatures are preceded by a minus sign.
‡ ≥ 70° at Alaskan stations.

The prevailing direction for wind in the Normals, Means, and Extremes table is from records through 1963.

Unless otherwise indicated, dimensional units used in this bulletin are: temperature in degrees F.; precipitation, including snowfall, in inches; wind movement in miles per hour; and relative humidity in percent. Heating degree day totals are the sums of negative departures of average daily temperatures from 65° F. Cooling degree day totals are the sums of positive departures of average daily temperatures from 65° F. Sleet was included in snowfall totals beginning with July 1948. The term "ice pellets" includes solid grains of ice (sleet) and particles consisting of snow pellets encased in a thin layer of ice. Heavy fog reduces visibility to 1/4 mile or less.

Sky cover is expressed in a range of 0 for no clouds or obscuring phenomena to 10 for complete sky cover. The number of clear days is based on average cloudiness 0-3, partly cloudy days 4-7, and cloudy days 8-10 tenths.

Solar radiation data are the averages of direct and diffuse radiation on a horizontal surface. The langley denotes one gram calorie per square centimeter.

& Figures instead of letters in a direction column indicate direction in tens of degrees from true North; i.e., 09 - East, 18 - South, 27 - West, 36 - North, and 00 - Calm. Resultant wind is the vector sum of wind directions and speeds divided by the number of observations. If figures appear in the direction column under "Fastest mile" the corresponding speeds are fastest observed 1-minute values.

To 8 compass points only.

Tables 3-4 Climatological data summaries for San Juan/City Office and San Juan/Isla Verde Airport, Puerto Rico.

LATITUDE 17° 42' N
LONGITUDE 64° 48' W
ELEVATION (ground) 53 feet

NORMALS, MEANS, AND EXTREMES

ST. CROIX, VIRGIN ISLANDS, U.S.A.
ALEXANDER HAMILTON FIELD
1953

Month	Temperature: Normal: Daily maximum	Temperature: Normal: Daily minimum	Temperature: Normal: Monthly	Temperature: Extremes: Record highest	Temperature: Extremes: Year	Temperature: Extremes: Record lowest	Temperature: Extremes: Year	Normal degree days	Precipitation: Normal total	Precipitation: Maximum monthly	Precipitation: Year	Precipitation: Minimum monthly	Precipitation: Year	Precipitation: Maximum in 24 hrs.	Precipitation: Year	Snow, Sleet, Hail: Mean total	Snow, Sleet, Hail: Maximum monthly	Snow, Sleet, Hail: Year	Snow, Sleet, Hail: Maximum in 24 hrs.	Snow, Sleet, Hail: Year	Relative humidity: 2:30 a.m. AST	Relative humidity: 8:30 a.m. AST	Relative humidity: 2:30 p.m. AST	Relative humidity: 8:30 p.m. AST	Wind: Mean hourly speed	Wind: Prevailing direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Year	Pct. of possible sunshine	Mean sky cover sunrise to sunset	Mean number of days: Sunrise to sunset: Clear	Mean number of days: Sunrise to sunset: Partly cloudy	Mean number of days: Sunrise to sunset: Cloudy	Mean number of days: Precipitation .01 inch or more	Mean number of days: Snow, Sleet, Hail 1.0 inch or more	Mean number of days: Thunderstorms	Mean number of days: Heavy fog	Mean number of days: Temperatures: Max. 90° and above	Mean number of days: Temperatures: Max. 32° and below	Mean number of days: Temperatures: Min. 32° and below	Mean number of days: Temperatures: Min. 0° and below
(a)	(b)	(b)	(b)					(b)	(b)	6		6		6		6	6		6		6	6	6	6	6	6					6	6	6	6	6	6	6	6	6	6	6	6
J	82.5	69.1	75.8	88	1948	64	1953+		2.97	4.77	1952	1.17	1953	2.88	1952	0.0	0.0		0.0		81	76	66	80	12.7	ENE					5.6	5	20	6	19	0	0	0	0	0	0	0
F	82.7	69.0	75.9	88	1948	62	1951		2.80	8.33	1950	0.93	1953	3.95	1950	0.0	0.0		0.0		84	76	63	80	12.2	ENE					5.8	5	17	6	13	0	0	0	0	0	0	0
M	83.7	69.5	76.6	88	1949	62	1951		2.33	6.63	1949	0.17	1951	3.42	1949	0.0	0.0		0.0		83	73	63	79	12.6	ENE					5.7	5	21	5	13	0	1	0	0	0	0	0
A	84.7	71.5	78.1	89	1951	65	1953+		2.21	5.38	1952	0.22	1953	1.24	1948	0.0	0.0		0.0		85	74	66	81	12.3	ESE					5.9	4	19	7	13	0	1	0	0	0	0	0
M	85.8	73.7	79.8	90	1948	68	1950		4.90	6.21	1950	2.72	1953	2.84	1951	0.0	0.0		0.0		87	78	70	83	12.0	ESE					7.2	2	14	15	16	0	4	0	0	0	0	0
J	87.0	75.0	81.0	91	1953	68	1953		2.93	4.76	1953	1.70	1952	3.47	1953	0.0	0.0		0.0		84	75	69	82	13.0	ESE					6.9	1	18	11	15	0	5	0	4	0	0	0
J	88.2	75.5	81.9	95	1948	69	1949		2.77	6.14	1952	1.51	1947	2.00	1952	0.0	0.0		0.0		86	77	70	84	13.0	ENE					7.0	1	17	13	19	0	4	0	6	0	0	0
A	88.7	75.2	82.0	93	1953	70	1947		4.04	6.67	1952	2.22	1947	2.19	1952	0.0	0.0		0.0		87	77	69	85	12.1	ENE					6.1	2	21	8	18	0	6	0	10	0	0	0
S	87.8	74.1	81.0	92	1953+	68	1949		5.84	15.23	1947	2.61	1948	7.76	1953	0.0	0.0		0.0		88	78	73	86	11.0	ESE					7.0	2	15	13	17	0	9	0	5	0	0	0
O	86.7	73.7	80.2	90	1953+	67	1951		5.34	8.66	1950	2.58	1951	2.35	1948	0.0	0.0		0.0		90	80	72	87	9.4	ESE					6.5	3	17	11	17	0	7	0	2	0	0	0
N	85.1	72.7	78.9	89	1953+	64	1952		4.17	10.35	1953	2.43	1948	4.49	1953	0.0	0.0		0.0		90	80	72	87	9.4	ENE					6.0	4	19	7	18	0	4	0	0	0	0	0
D	83.7	71.0	77.4	87	1953+	63	1949		2.05	4.56	1953	1.06	1952	1.89	1953	0.0	0.0		0.0		86	79	69	83	11.2	ENE					5.8	5	18	8	18	0	2	0	0	0	0	0
Year	85.6	72.5	79.1	95	July 1948	62	March 1951+		42.35	15.23	Sept 1947	0.17	Mar. 1951	7.76	Sept 1953	0.0	0.0		0.0		86	77	69	83	11.7	ENE					6.3	39	216	110	196	0	43	0	27	0	0	0

(a) Length of record, years.
(b) Normal values are based on the period 1931-1960

LATITUDE 17° 58' N
LONGITUDE 66° 24' W
ELEVATION (ground) 28 feet

SANTA ISABEL, PUERTO RICO
SANTA ISABEL AIRPORT
1953

Month	Temperature: Normal: Daily maximum	Temperature: Normal: Daily minimum	Temperature: Normal: Monthly	Temperature: Extremes: Record highest	Temperature: Extremes: Year	Temperature: Extremes: Record lowest	Temperature: Extremes: Year	Normal degree days	Precipitation: Normal total	Precipitation: Maximum monthly	Precipitation: Year	Precipitation: Minimum monthly	Precipitation: Year	Precipitation: Maximum in 24 hrs.	Precipitation: Year	Snow, Sleet, Hail: Mean total	Snow, Sleet, Hail: Maximum monthly	Snow, Sleet, Hail: Year	Snow, Sleet, Hail: Maximum in 24 hrs.	Snow, Sleet, Hail: Year	Relative humidity: 2:30 a.m. AST	Relative humidity: 8:30 a.m. AST	Relative humidity: 2:30 p.m. AST	Relative humidity: 8:30 p.m. AST	Wind: Mean hourly speed	Wind: Prevailing direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Year	Pct. of possible sunshine	Mean sky cover sunrise to sunset	Mean number of days: Sunrise to sunset: Clear	Mean number of days: Sunrise to sunset: Partly cloudy	Mean number of days: Sunrise to sunset: Cloudy	Mean number of days: Precipitation .01 inch or more	Mean number of days: Snow, Sleet, Hail 1.0 inch or more	Mean number of days: Thunderstorms	Mean number of days: Heavy fog	Mean number of days: Temperatures: Max. 90° and above	Mean number of days: Temperatures: Max. 32° and below	Mean number of days: Temperatures: Min. 32° and below	Mean number of days: Temperatures: Min. 0° and below
(a)	(b)	(b)	(b)	8		8		(b)	(b)	8		8		8		8	8		8		8	8	8	8	8	8					8	8	8	8	8	8	8	8	8	8	8	8
J	83.0	64.9	74.0	89	1947	59	1951		0.74	1.19	1952	0.05	1948	0.91	1952	0.0	0.0		0.0		83	78	59	76	6.7	ENE					4.3	13	15	3	4	0	0	0	0	0	0	0
F	82.0	64.3	73.2	88	1949+	57	1951		0.82	1.30	1950	0.07	1948	0.54	1950	0.0	0.0		0.0		84	76	61	75	6.2	NE					4.9	11	14	3	5	0	0	0	0	0	0	0
M	82.2	65.1	73.7	89	1948	58	1951		0.48	1.07	1949	0.09	1951	0.44	1949	0.0	0.0		0.0		83	71	61	75	7.7	ESE					4.5	14	14	3	3	0	0	0	0	0	0	0
A	83.0	67.1	75.1	90	1947	62	1953+		1.41	3.73	1952	0.22	1949	1.66	1952	0.0	0.0		0.0		73	62	57	66	7.1	SE					5.0	11	12	7	7	0	0	0	0	0	0	0
M	84.0	70.4	77.2	89	1952+	60	1950		4.29	5.28	1946	0.31	1947	1.70	1946	0.0	0.0		0.0		76	63	58	69	6.5	SE					6.5	4	16	11	11	0	5	0	0	0	0	0
J	85.6	71.7	78.7	94	1948	67	1950		3.38	4.02	1952	0.77	1946	1.94	1952	0.0	0.0		0.0		75	63	58	68	7.2	SE					6.4	4	16	10	9	0	6	0	6	0	0	0
J	86.9	72.0	79.5	96	1948	67	1950		3.41	6.11	1949	0.19	1946	3.97	1949	0.0	0.0		0.0		74	61	58	67	7.4	SE					6.1	7	14	10	9	0	8	0	10	0	0	0
A	87.1	72.0	79.6	95	1950	68	1950		4.36	7.02	1952	2.46	1951	3.33	1953	0.0	0.0		0.0		86	71	67	79	6.9	E					5.2	9	16	6	9	0	12	0	10	0	0	0
S	87.0	71.6	79.3	93	1953+	68	1952+		4.54	12.37	1952	2.17	1950	6.62	1949	0.0	0.0		0.0		87	76	70	85	5.8	E					6.5	5	13	12	13	0	15	0	6	0	0	0
O	85.9	70.5	78.2	91	1947	67	1950		4.24	12.10	1948	2.49	1952	4.02	1950	0.0	0.0		0.0		90	78	71	86	5.4	N					6.1	8	16	9	11	0	18	0	2	0	0	0
N	84.9	68.6	76.8	91	1948	63	1952		3.96	7.06	1950	0.45	1952	5.17	1950	0.0	0.0		0.0		90	80	66	85	5.1	NE					5.0	9	15	6	10	0	5	0	1	0	0	0
D	83.6	66.0	74.9	88	1953+	59	1950+		1.02	2.82	1948	0.10	1952	1.98	1948	0.0	0.0		0.0		88	80	63	82	5.2	NE					4.6	12	14	5	8	0	1	0	0	0	0	0
Year	84.8	68.7	76.7	96	July 1948	57	Feb. 1951		32.65	12.37	Sept 1952	0.05	Jan 1948	6.62	Sept 1949	0.0	0.0		0.0		82	72	62	76	6.4	SE					5.4	105	175	85	99	0	70	0	35	0	0	0

(a) Length of record, years.
(b) Normal values are based on the period 1931-1960.

Tables 5-6 Climatological data summaries for St. Croix/Alexander Hamilton Field, Virgin Islands and Santa Isabel Airport, Puerto Rico.

Puerto Plata, Dominican Republic.—*Lat. 19°49′N., long. 70°41′W., elevation 21 feet*

Weather elements	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Years of record
TEMPERATURE														
Average (° F.)	74	73	74	75	77	79	79	80	80	79	77	74	77	25
Average daily maximum, (° F.)	80	80	80	82	84	85	85	86	86	86	82	80	83	25
Average daily minimum (° F.)	68	67	68	69	71	73	74	74	74	72	71	69	71	25
Extreme highest each month (° F.)	88	90	92	90	99	96	95	93	97	91	91	90	[1] 99	19
Extreme lowest each month (° F.)	59	62	61	64	64	67	70	68	69	70	65	62	[1] 59	19
RELATIVE HUMIDITY														
Average daily percent	79	78	78	78	78	80	81	81	80	80	82	80	80	6
CLOUD COVER														
Average amount, tenths	4.0	4.0	3.7	3.9	3.6	3.4	3.4	3.3	3.1	3.1	4.3	4.1	3.7	9
Mean number of clear days	9	7	9	5	8	12	11	13	9	9	6	7	105	5
Mean number of cloudy days	2	2	2	4	2	0	1	1	1	4	5	2	26	5
PRECIPITATION														
Average amount (inches)	7.65	5.61	4.58	5.26	4.49	1.85	2.94	3.45	4.52	5.34	14.69	10.70	71.10	35
Greatest amount (inches)	17.42	15.13	17.83	21.54	14.80	7.87	9.21	9.59	9.84	12.04	51.12	30.26	118.73	24
Least amount (inches)	1.22	0.83	1.13	0.00	0.00	0.00	0.22	0.20	0.51	0.00	1.06	1.23	26.40	24
Maximum in 24 hours (inches)	8.74	9.65	5.51	12.36	9.25	2.86	4.33	5.51	6.69	4.26	10.75	8.66	12.36	26
Mean number of days with rain	14	9	10	9	10	6	8	8	9	11	16	16	126	26
WIND														
Direction (percent of all 0800 and 2000 observations):														
North	3	5	5	5	2	1	(2)	1	3	4	7	4	3	17
Northeast	8	7	10	6	6	2	1	3	5	4	9	6	6	17
East	48	50	44	50	51	57	71	62	57	47	35	45	51	17
Southeast	21	13	17	16	15	21	21	18	14	15	16	17	17	17
South	4	5	3	3	3	3	2	2	2	4	5	6	4	17
Southwest	2	3	3	1	1	(2)	(2)	1	2	2	3	4	2	17
West	3	4	3	2	3	(2)	(2)	1	3	5	4	3	3	17
Northwest	1	1	2	2	1	1	0	1	1	1	2	1	1	17
Calm	10	13	13	15	19	13	4	11	13	18	19	13	13	17
Mean wind speed (knots)	6.4	5.1	4.3	5.2	4.3	5.2	6.8	10.0	6.2	4.4	3.3	6.9	5.7	4
VISIBILITY (mean number of days)														
Mean number of days with fog	3.2	1.2	0.1	0	0	0	0	0	0	0	0.2	2.8	7.5	19

[1] Extreme values.
[2] Less than ½ percent.

Santo Domingo, Dominican Republic.—*Lat. 18°28′ N., long. 69°54′ W., elevation 69 feet*

Weather elements	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year	Years of record
SEA LEVEL PRESSURE														
Average (millibars)	1,017	1,017	1,017	1,016	1,016	1,016	1,017	1,015	1,014	1,013	1,014	1,016	1,016	8
TEMPERATURE														
Average (° F.)	75	75	76	77	79	80	80	81	80	79	78	76	78	26
Average daily maximum (° F.)	84	85	84	85	86	87	88	88	88	87	86	85	86	26
Average daily minimum (° F.)	66	66	67	69	71	72	72	73	72	72	70	67	70	26
Extreme highest each month (° F.)	92	93	94	95	94	96	98	98	98	95	97	95	[1] 98	8–27
Extreme lowest each month (° F.)	59	57	58	62	65	67	68	64	68	66	61	59	[1] 57	8–27
RELATIVE HUMIDITY														
Average percent (0600 L. S. T.)	91	88	90	90	89	90	90	90	91	92	92	91	90	4
Average percent (1200 L. S. T.)	64	58	60	62	65	66	66	66	66	66	66	66	64	4
CLOUD COVER														
Average amount, tenths	4.4	4.5	4.3	5.1	5.2	5.0	4.6	4.8	4.5	4.4	4.3	4.7	4.6	4
PRECIPITATION														
Average amount (inches)	2.24	1.20	2.18	3.65	6.42	6.06	6.39	6.25	7.24	6.13	4.93	2.16	54.85	30
Greatest amount (inches)	3.99	3.76	2.45	4.41	16.31	13.05	16.65	8.07	6.92	14.64	8.06	6.08	67.27	6
Least amount (inches)	0.41	0.29	0.06	0.63	0.64	1.69	2.53	4.12	2.89	3.59	2.06	2.05	35.12	6
Maximum in 24 hours (inches)	2.30	1.40	2.78	8.85	4.95	5.39	5.72	4.04	20.00	4.56	6.10	1.44	20.00	25
0.04 inch or more, mean number of days	7	6	5	7	11	12	11	11	11	11	10	8	110	26–29
Mean number of days with rain	9	6	7	9	14	14	15	14	14	13	11	9	135	25
WIND														
Direction (percent of observations):														
North	55	51	46	40	35	35	41	42	38	40	45	46	42	18
Northeast	18	13	19	16	19	18	17	19	16	14	18	27	18	18
East	5	4	7	6	7	7	6	6	6	14	3	7	6	18
Southeast	6	5	7	8	8	10	12	9	12	11	8	8	9	18
South	9	15	12	18	20	23	17	16	18	20	15	4	15	18
Southwest	(2)	1	1	2	2	1	1	1	3	5	5	1	2	18
West	0	1	(2)	1	1	1	1	1	1	1	1	(2)	1	18
Northwest	5	7	5	6	6	3	5	5	5	3	4	4	5	18
Calm	2	2	2	2	3	2	1	1	2	2	1	2	2	18
Mean wind speed (knots)	7.6	7.2	7.8	7.6	7.2	7.4	7.6	7.0	6.8	7.2	8.2	8.4	7.5	8
Mean number of days with gales	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.3	7
VISIBILITY (mean number of days)														
Mean number of days with fog	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	7

[1] Extreme values.
[2] Less than ½ percent.

Tables 7-8 Climatological data summaries for Puerto Plata and Santo Domingo, Dominican Republic.

ENVIRONMENTAL DATA SUMMARY (PART 1)

AREA: Mona Passage — CENTRAL POSITION: 17.9°N 67.9°W

ENVIRONMENTAL FACTORS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
WIND SPEED (KNOTS)													
01% ≤	0	0	0	0	0	1	2	1	0	0	0	0	0
05% ≤	4	3	3	3	3	4	4	4	2	1	1	4	4
25% ≤	7	7	7	7	7	7	7	7	6	5	7	7	7
50% ≤	12	11	11	10	11	12	13	11	9	8	9	11	11
75% ≤	16	16	16	16	16	16	16	16	15	14	15	16	16
95% ≤	23	22	21	21	20	21	21	21	20	20	21	22	21
99% ≤	27	26	26	25	26	27	27	27	26	25	26	27	26
Maximum observed (1856-1971)	Maximum winds in excess of 140 knots are estimated to have occurred over Puerto Rico in September of 1928.												
Mean	12.8	12.2	12.1	11.4	11.6	12.6	13.2	11.8	10.6	9.9	11.0	12.0	11.8
≥ 34 Knots (% freq.)	0.1	+	0.1	0.1	+	0.1	+	0.1	0.2	+	+	0.1	0.1
≥ 41 Knots (% freq.)	+	+	+	+	+	+	+	+	+	+	+	+	+
Prevailing direction	E	E	E	E	E	E	E	E	E	E	E	E	E
SEA-LEVEL PRESSURE (MB)													
Minimum	1001	998	1001	1001	1004	1001	1001	1001	996	997	998	1002	996
01% ≤	1007	1008	1008	1008	1008	1008	1008	1006	1006	1006	1005	1008	1007
05% ≤	1011	1012	1012	1012	1011	1013	1013	1011	1010	1009	1009	1011	1011
25% ≤	1015	1015	1015	1014	1014	1015	1015	1014	1012	1012	1012	1013	1014
50% ≤	1016	1016	1016	1015	1015	1016	1016	1015	1014	1013	1013	1015	1015
75% ≤	1018	1018	1018	1017	1016	1017	1018	1016	1015	1014	1015	1016	1017
95% ≤	1020	1020	1020	1019	1018	1019	1019	1018	1017	1016	1017	1019	1018
99% ≤	1022	1022	1022	1020	1020	1021	1021	1019	1018	1018	1019	1020	1020
Maximum	1024	1025	1026	1025	1023	1024	1026	1023	1024	1021	1023	1023	1026
Mean	1016	1016	1016	1015	1015	1016	1015	1014	1013	1013	1015	1015	1015
WEATHER & CLOUDS (% FREQ.)													
Precipitation	2.7	2.9	1.9	2.1	4.5	3.0	3.6	2.9	3.3	3.4	4.2	3.4	3.2
Freezing precipitation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Frozen precipitation	0.0	0.0	0.0	+	0.0	0.0	+	+	+	0.0	0.0	+	+
Thunder & lightning	0.2	0.2	0.2	0.5	2.4	3.6	3.4	3.6	5.8	5.9	3.1	1.0	2.5
Sky ≤2/8	47.0	44.4	48.8	41.9	27.7	27.1	32.6	36.2	32.7	33.2	39.6	39.7	37.6
Low cloud overcast	2.1	3.2	2.1	2.5	5.1	3.4	3.8	2.7	3.3	2.9	2.5	2.8	3.0
Total sky overcast	3.9	4.6	3.3	4.7	10.5	9.4	9.5	7.0	7.0	7.4	5.6	5.5	6.5
Sky obscured	+	+	0.1	0.1	0.2	+	0.1	0.1	+	0.2	0.1	0.1	0.1
Mean cloud cover (eighths)	3.0	3.1	2.9	3.2	4.1	4.1	3.8	3.5	3.7	3.7	3.4	3.4	3.5
VISIBILITY (% FREQ.)													
Visibility <½ N. mile	+	0.0	0.1	0.0	+	0.0	0.1	0.0	0.1	0.1	0.0	0.0	+
Visibility <1 N. mile	+	0.1	0.1	0.0	+	0.1	0.2	0.0	0.2	0.2	0.1	0.1	0.1
Visibility <2 N. mile	0.1	0.3	0.2	0.1	0.2	0.2	0.4	0.2	0.4	0.4	0.2	0.2	0.2
Visibility <5 N. mile	0.6	1.1	0.4	0.6	0.9	1.0	1.1	0.8	0.9	1.2	0.9	0.8	0.8
Visibility <10 N. mile	7.4	11.0	9.6	9.0	10.7	11.5	12.6	9.3	9.4	8.9	9.5	8.2	9.7
FOG													
Occurrence of fog (% freq.)	0.4	0.2	0.5	0.4	0.4	0.4	0.1	0.2	0.3	0.1	0.2	0.4	0.3

+ = Less than 0.05%.

Table 9 Environmental data summary; for Mona Passage Area.

ENVIRONMENTAL DATA SUMMARY (PART 2)

AREA: Mona Passage

CENTRAL POSITION: 17.9°N 67.9°W

ENVIRONMENTAL FACTORS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
WAVES (FEET)													
01% ≤	+	+	+	+	+	+	+	+	+	+	+	+	+
05% ≤	1	+	+	+	1	1	1	1	+	+	+	1	+
25% ≤	3	3	2	2	3	3	3	3	2	2	2	3	3
50% ≤	5	4	4	4	4	4	5	4	4	3	4	4	4
75% ≤	6	6	6	6	6	6	7	6	5	5	6	6	6
95% ≤	9	9	9	7	7	8	9	8	7	7	8	8	8
99% ≤	12	12	12	11	11	11	12	11	11	11	12	11	11
Maximum observed	22	25	22	20	22	32	22	25	32	22	22	25	32
Mean	4	4	4	4	4	4	5	4	4	3	4	4	4
≥ 5 Feet (% freq.)	50.8	44.9	42.4	39.1	40.8	47.5	55.3	43.3	34.3	30.6	39.2	43.3	42.6
≥ 8 Feet (% freq.)	10.0	8.5	7.2	5.1	4.8	6.4	9.0	5.4	3.7	3.7	6.7	6.8	6.4
≥ 12 Feet (% freq.)	1.3	1.3	1.5	0.5	0.7	0.5	1.2	0.6	0.7	0.8	1.1	0.6	0.9
≥ 20 Feet (% freq.)	0.1	0.1	0.1	+	0.1	0.1	0.1	+	0.2	0.1	0.1	+	0.1
RELATIVE HUMIDITY (%)													
Mean	78	78	77	78	81	81	81	80	79	79	78	78	79
AIR TEMPERATURE (°F)													
Minimum	68	68	68	66	70	70	71	69	70	72	72	70	66
01% ≤	72	72	73	73	75	77	77	78	77	77	76	74	75
05% ≤	74	74	74	75	77	79	79	80	80	79	78	76	77
25% ≤	76	75	76	77	78	80	80	81	81	80	79	77	78
50% ≤	78	77	78	79	80	82	82	82	83	82	81	79	80
75% ≤	81	80	81	82	83	84	84	85	85	84	83	81	83
95% ≤	82	82	83	84	85	86	86	87	87	87	86	84	85
99% ≤	85	85	86	87	88	88	89	90	90	90	89	87	88
Maximum	94	91	91	91	93	93	94	95	95	95	95	94	95
Mean	78.1	77.6	78.0	79.1	80.7	81.9	82.3	82.8	83.0	82.6	81.3	79.5	80.6
≤ 32 °F (% freq.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
≥ 85 °F (% freq.)	1.5	1.6	2.0	3.4	7.5	10.7	12.7	17.8	19.3	16.4	9.1	3.6	8.8
SEA TEMPERATURE (°F)													
Minimum	66	66	68	68	70	72	73	74	73	72	69	66	66
01% ≤	73	74	74	74	76	78	79	79	79	79	78	75	75
05% ≤	76	75	76	76	78	79	80	81	81	81	80	78	77
25% ≤	78	77	77	79	80	81	81	82	83	83	82	80	80
50% ≤	80	79	79	80	81	82	82	83	84	84	83	81	82
75% ≤	81	80	80	81	82	83	84	84	85	85	84	82	83
95% ≤	83	82	82	83	85	86	86	86	86	86	86	84	86
99% ≤	84	84	84	85	86	87	87	88	88	88	88	86	87
Maximum	88	87	88	89	90	91	91	90	90	92	91	89	92
Mean	79.6	78.9	79.0	79.7	81.3	82.2	82.6	83.3	83.9	83.7	82.8	81.0	81.5
SALINITY (‰) #													
Mean	35.4	35.8	36.2	36.3	36.3	36.2	36.0	35.8	35.3	34.9	34.9	35.3	35.7
DENSITY (ρ) #													
Mean (σ_t)*	26.3	26.7	26.8	27.0	27.0	26.9	26.9	26.6	26.2	25.9	25.9	26.1	26.5

+ = Less than 0.05%. * $\sigma_t = (\rho - 1) \times 10^3; \rho = \text{gm cm}^{-3}$. # Magueyes Island, Puerto Rico (1957-71).

Table 9 Continued.

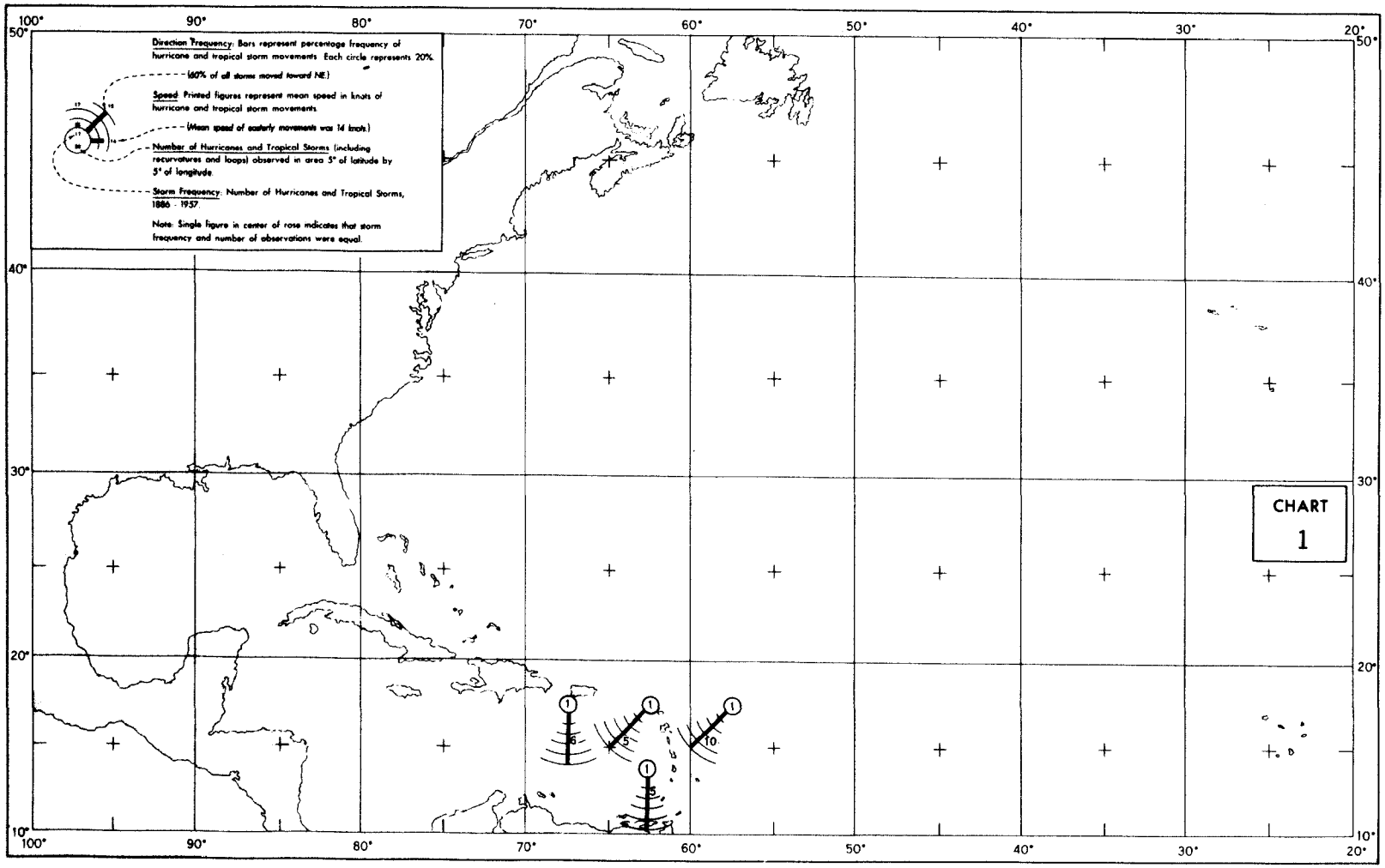
APPENDIX A

Tropical Cyclone Charts

The following charts present generalized tropical cyclone statistics for the North Atlantic area. Charts 1-12 were derived from *The Climatological and Oceanographic Atlas for Mariners*, U.S. Departments of Commerce and The Navy, 1959. The remainder of the charts were derived from an article titled "Computer Methods Applied to Atlantic Area Tropical Storm and Hurricane Climatology" by John R. Hope and Charles J. Neumann, and appearing in the September 1971 issue of the *Mariners Weather Log*.

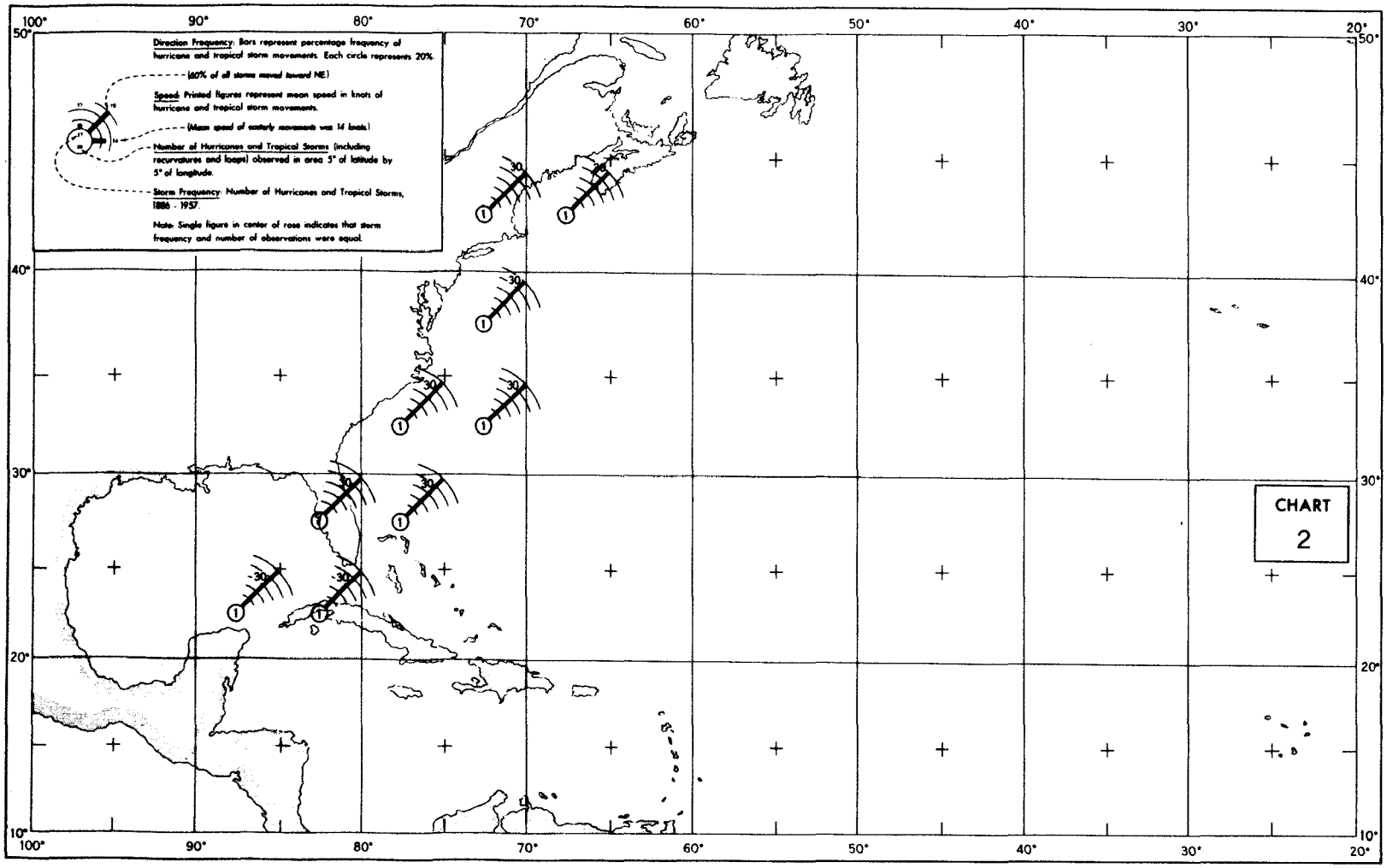
TROPICAL STORMS & HURRICANES

JANUARY



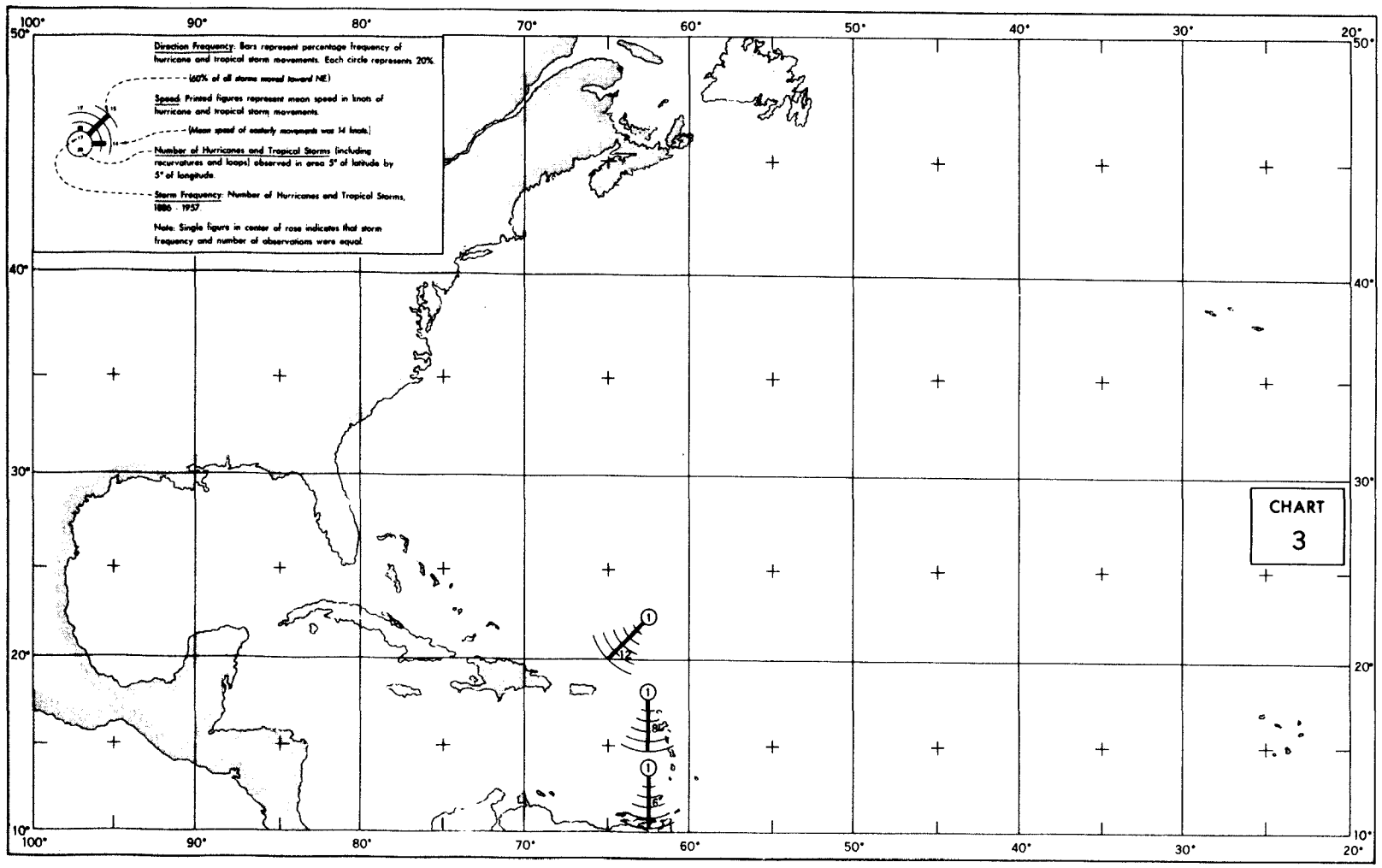
TROPICAL STORMS & HURRICANES

FEBRUARY



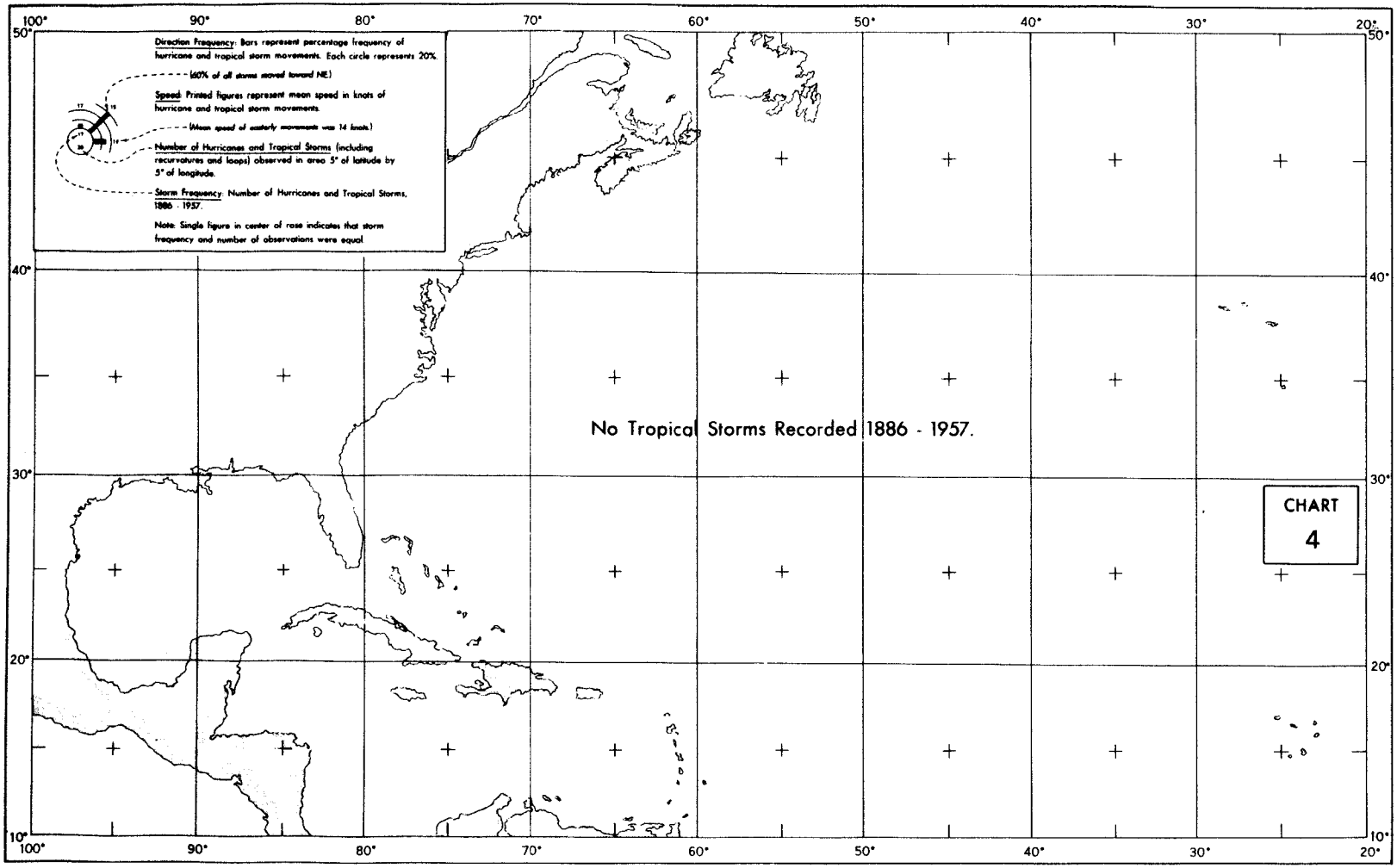
TROPICAL STORMS & HURRICANES

MARCH



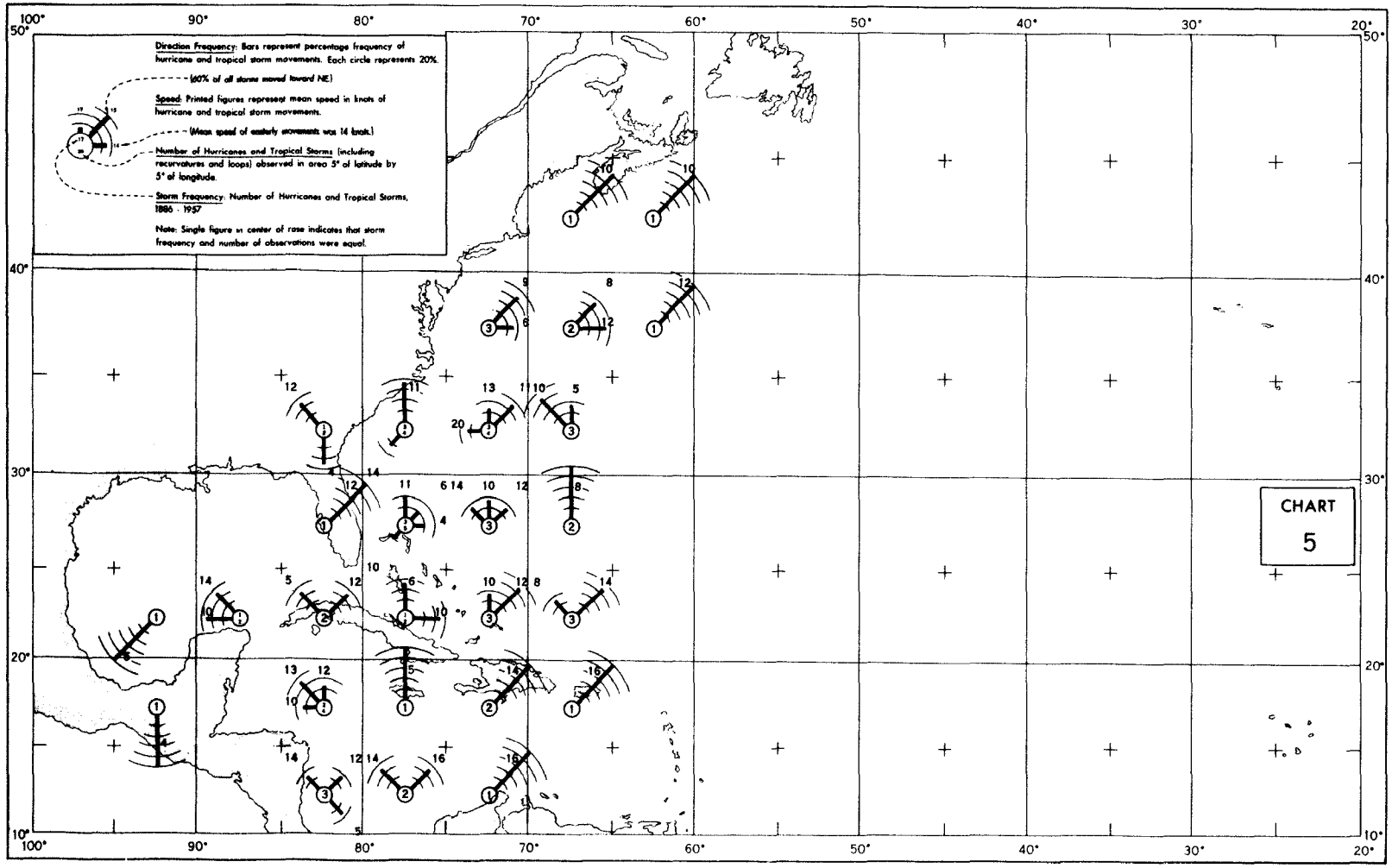
TROPICAL STORMS & HURRICANES

APRIL



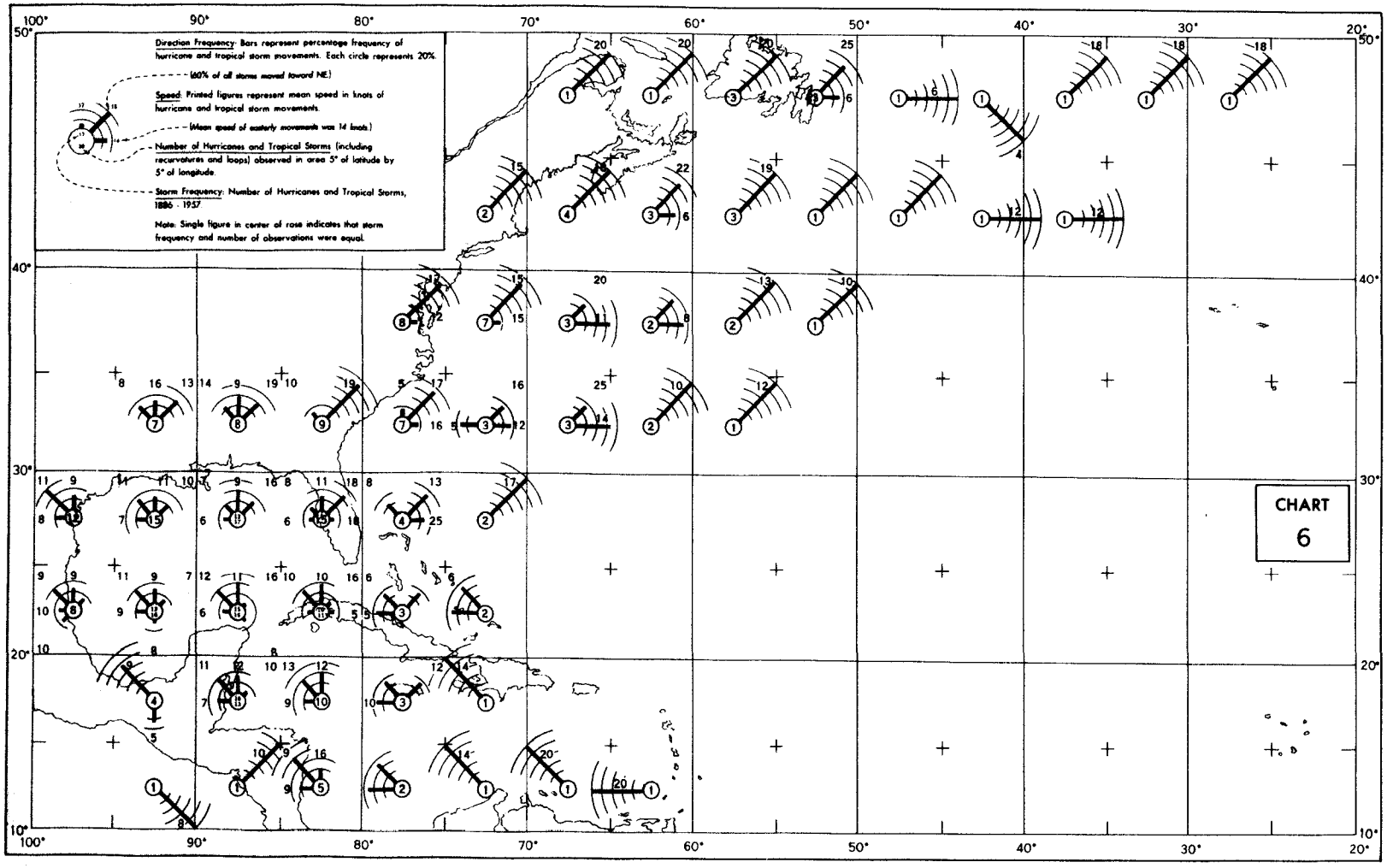
TROPICAL STORMS & HURRICANES

MAY



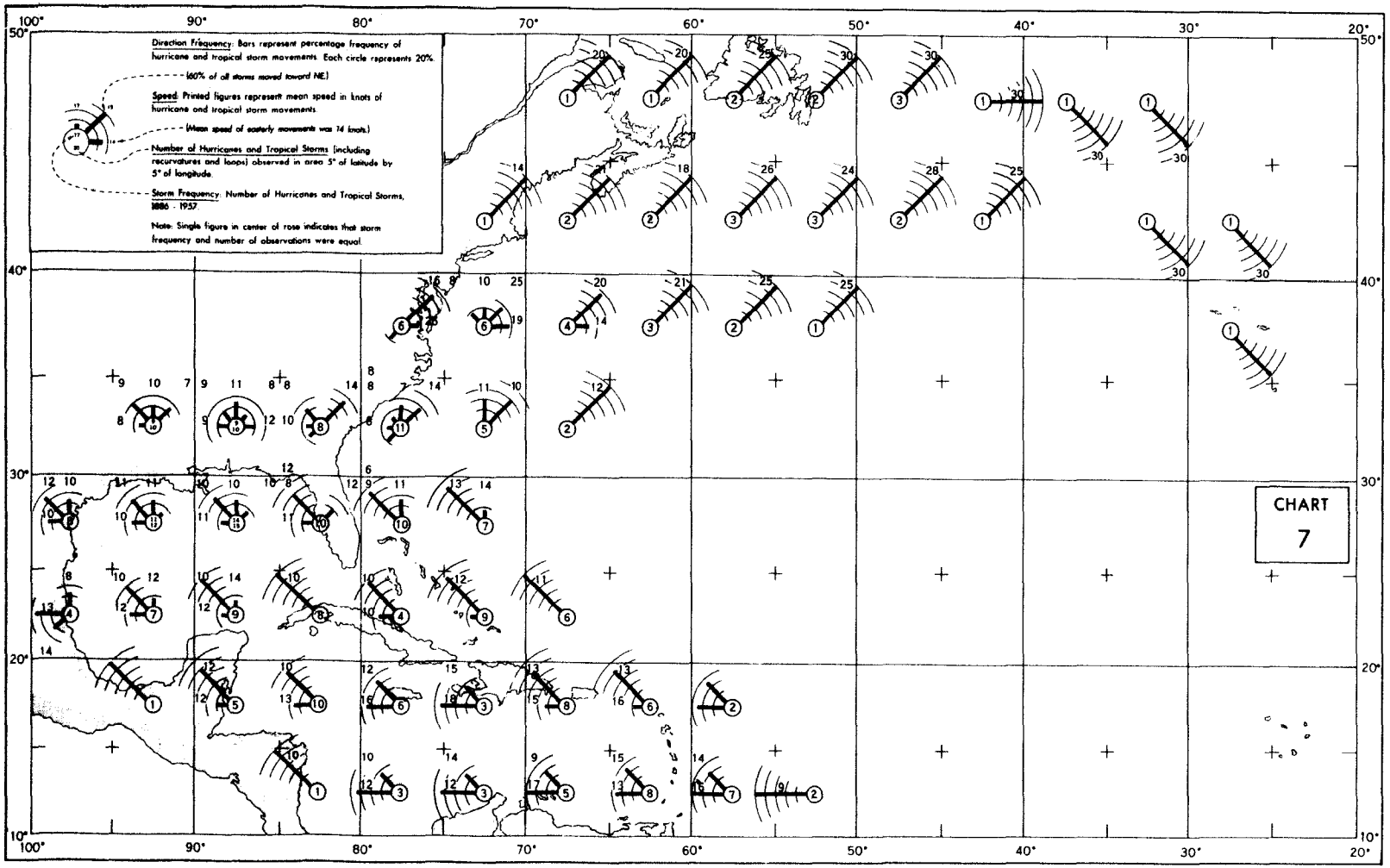
TROPICAL STORMS & HURRICANES

JUNE



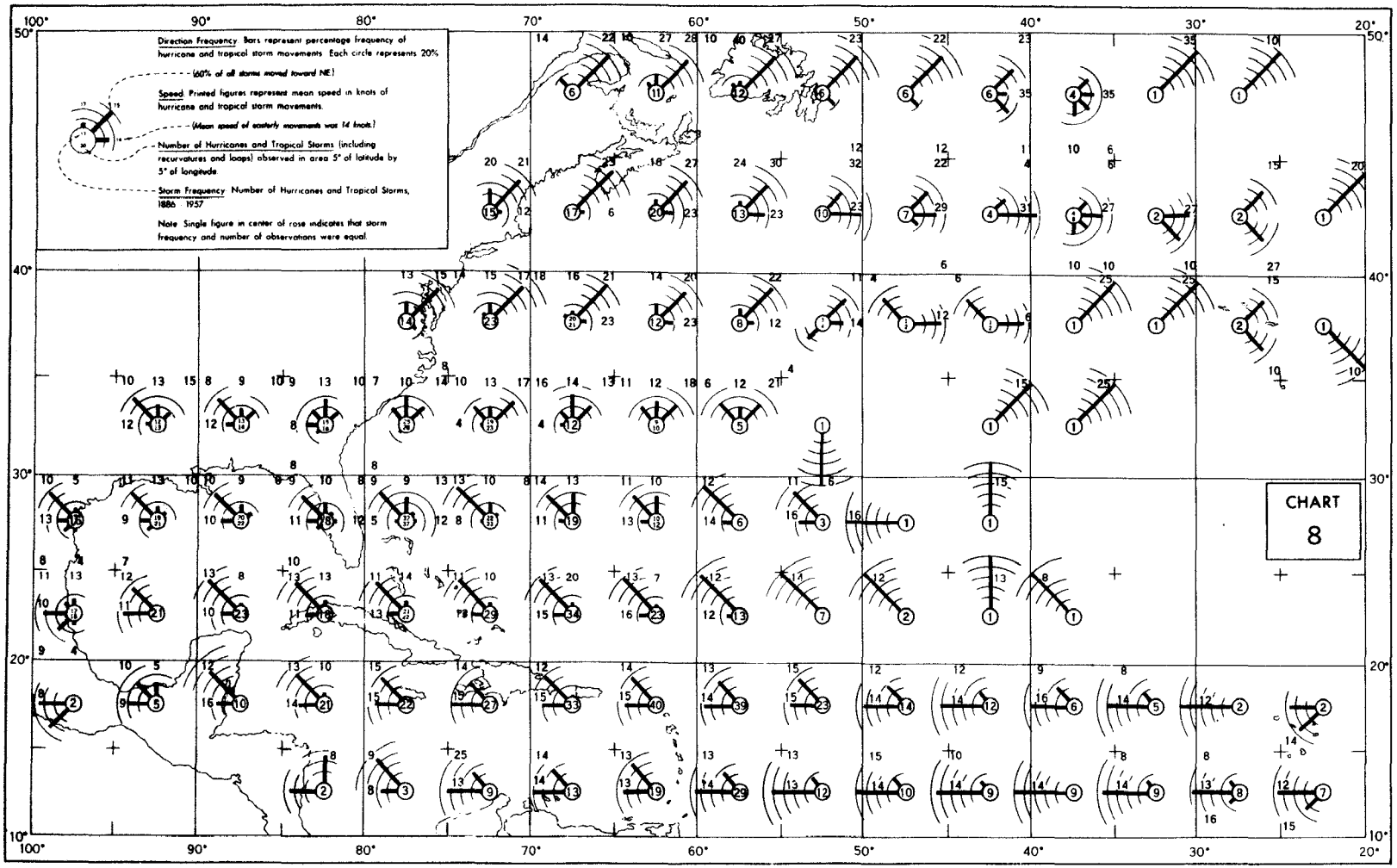
TROPICAL STORMS & HURRICANES

JULY



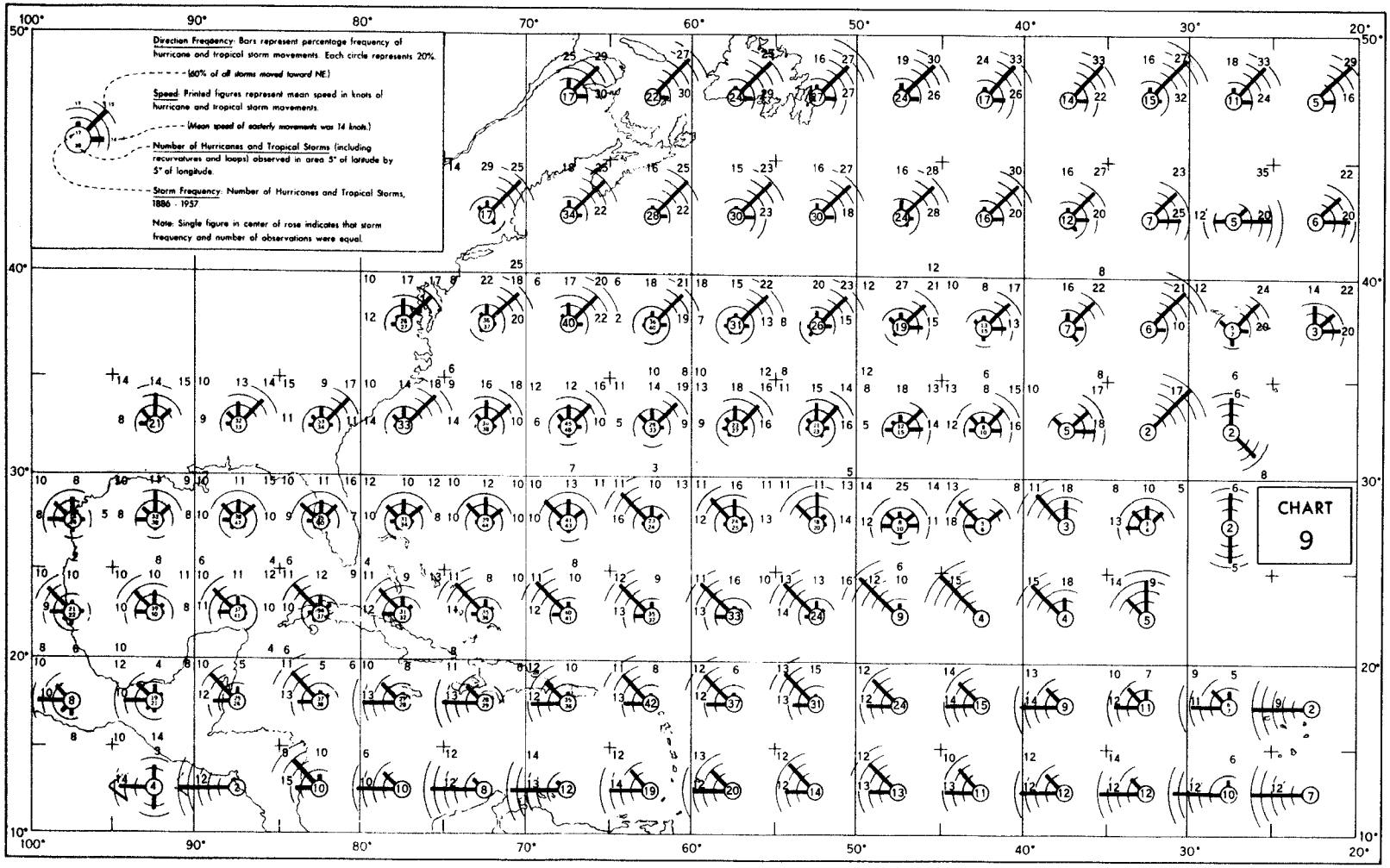
TROPICAL STORMS & HURRICANES

AUGUST



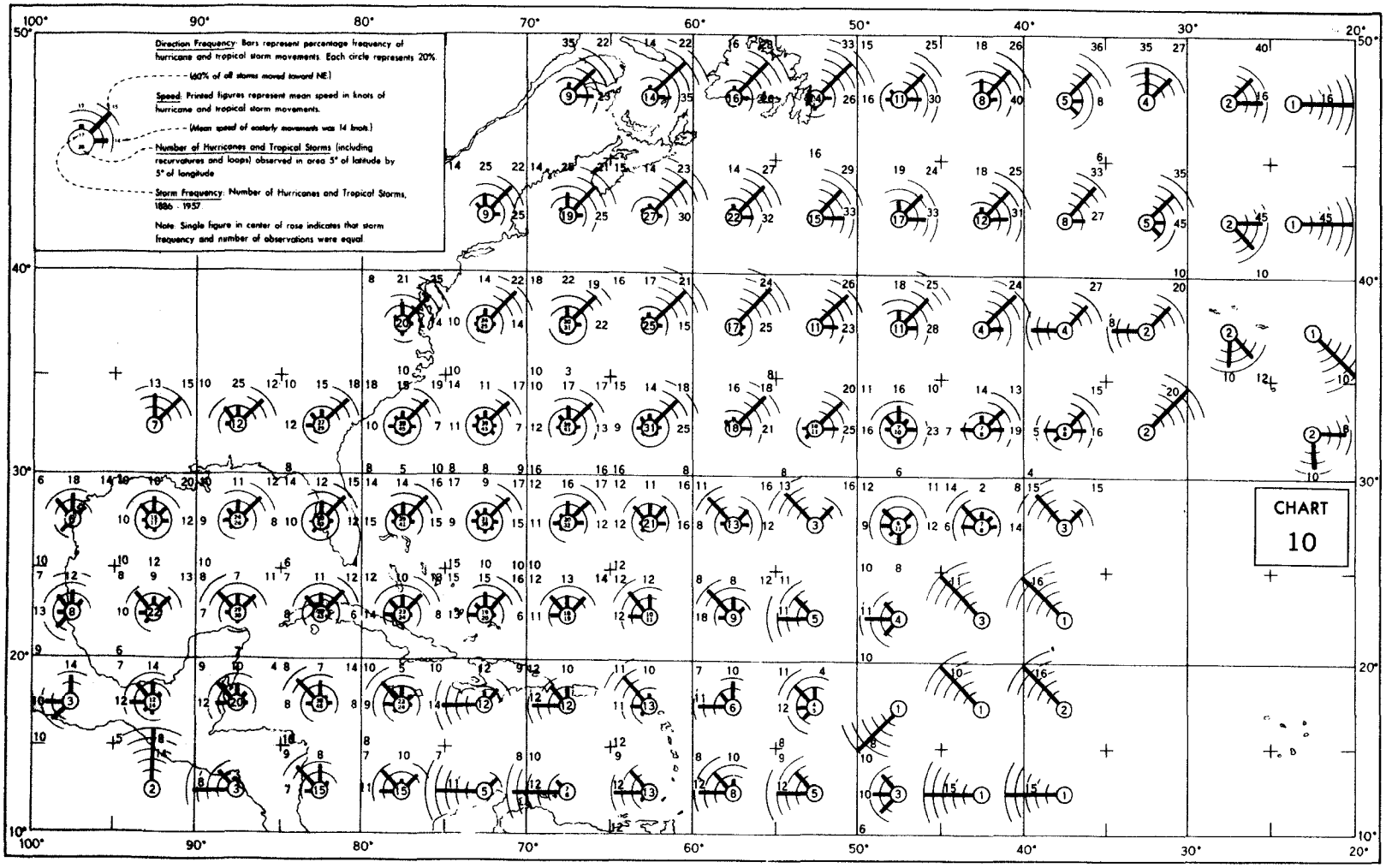
TROPICAL STORMS & HURRICANES

SEPTEMBER



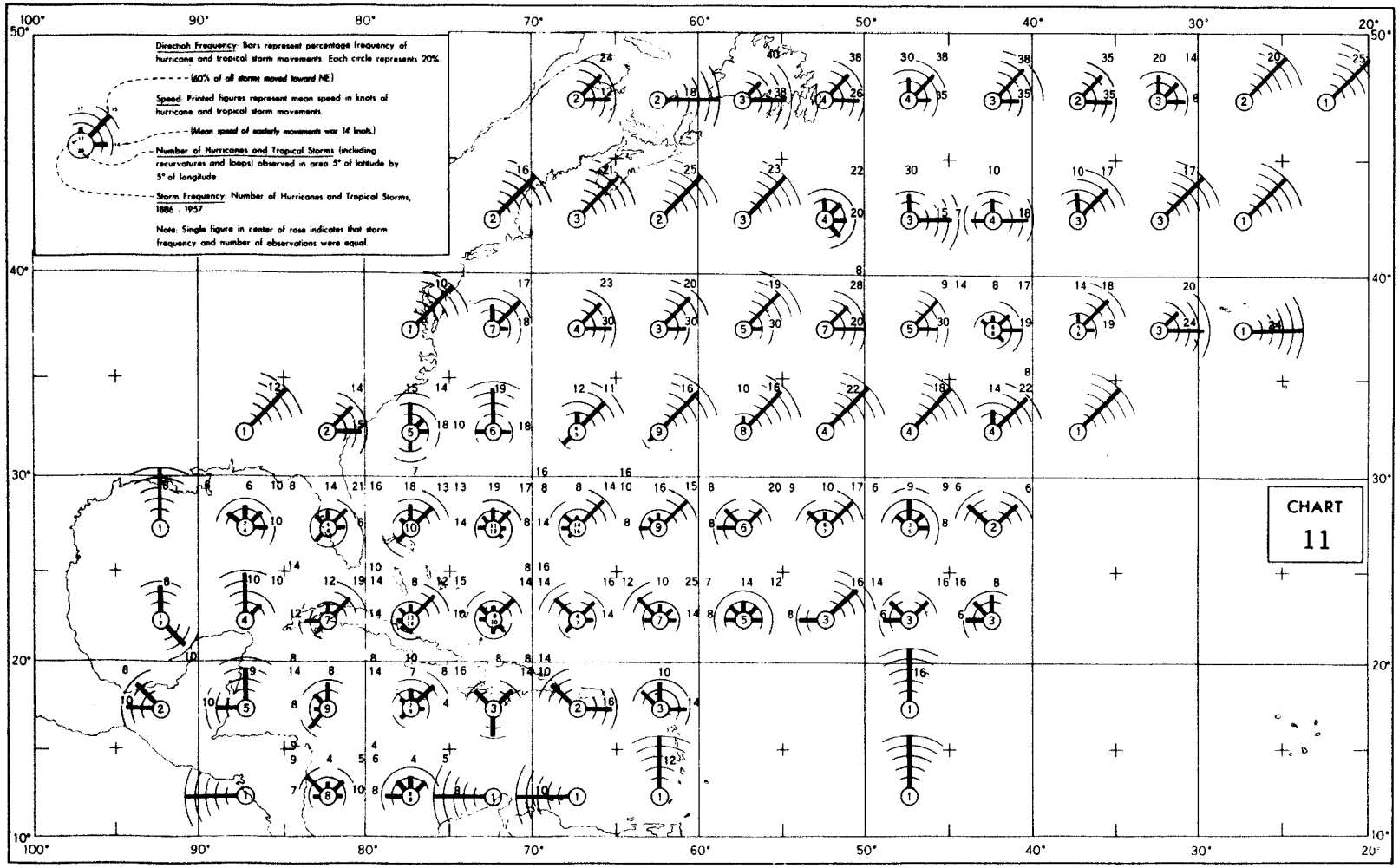
TROPICAL STORMS & HURRICANES

OCTOBER



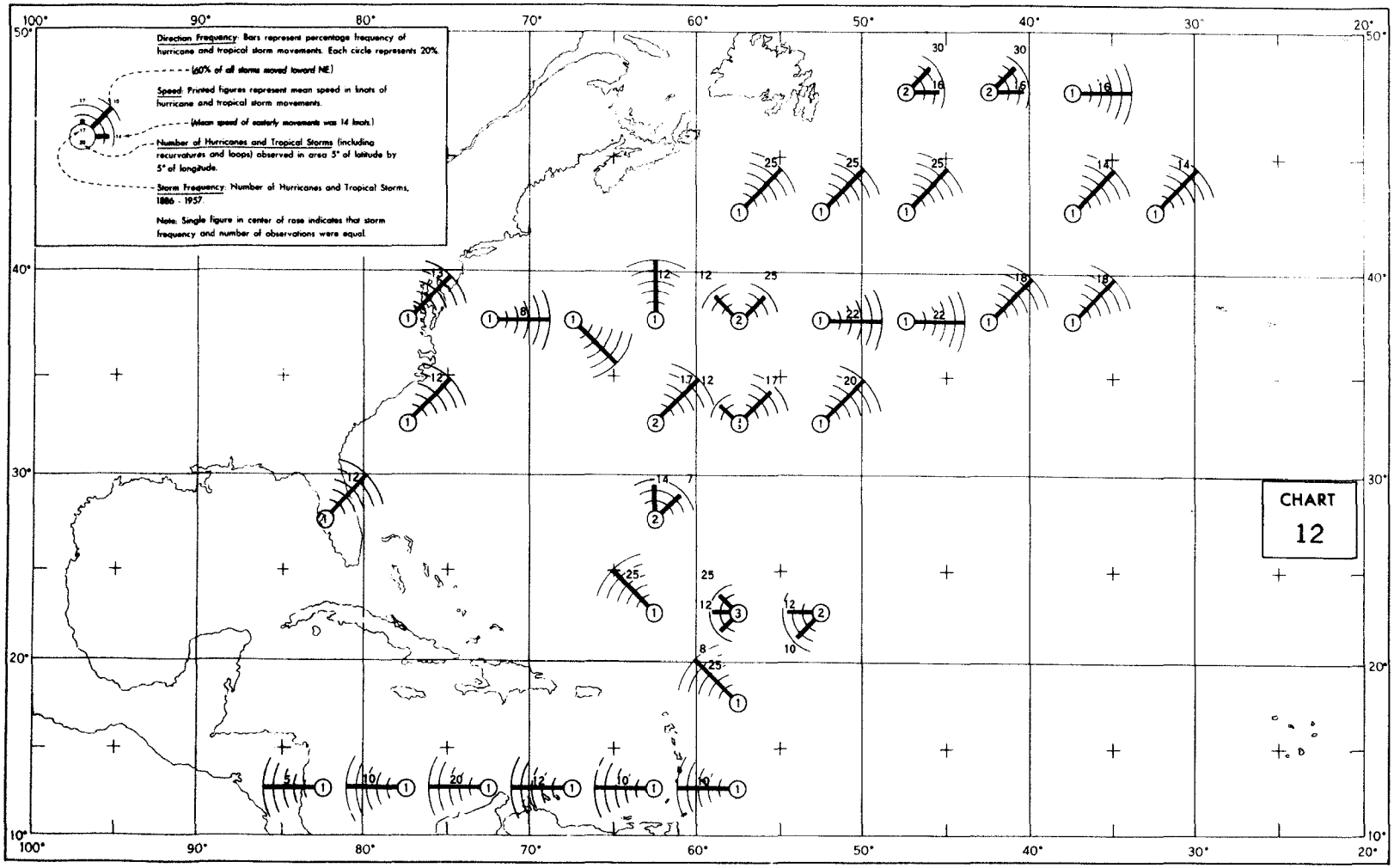
TROPICAL STORMS & HURRICANES

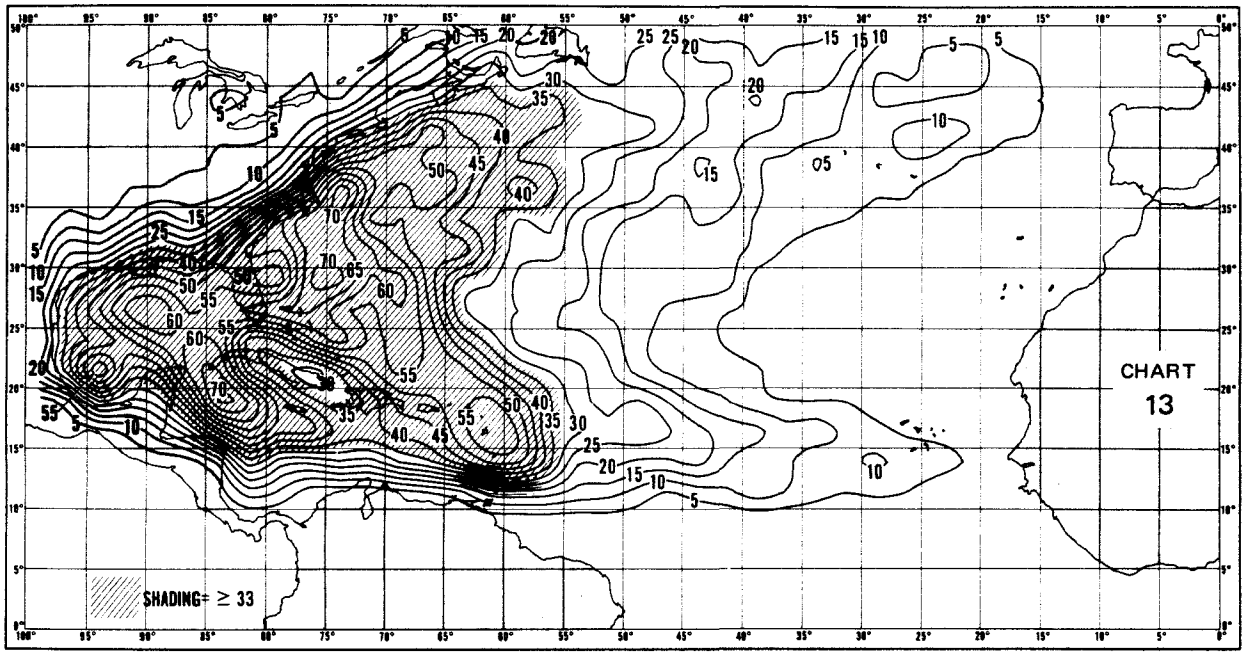
NOVEMBER



TROPICAL STORMS & HURRICANES

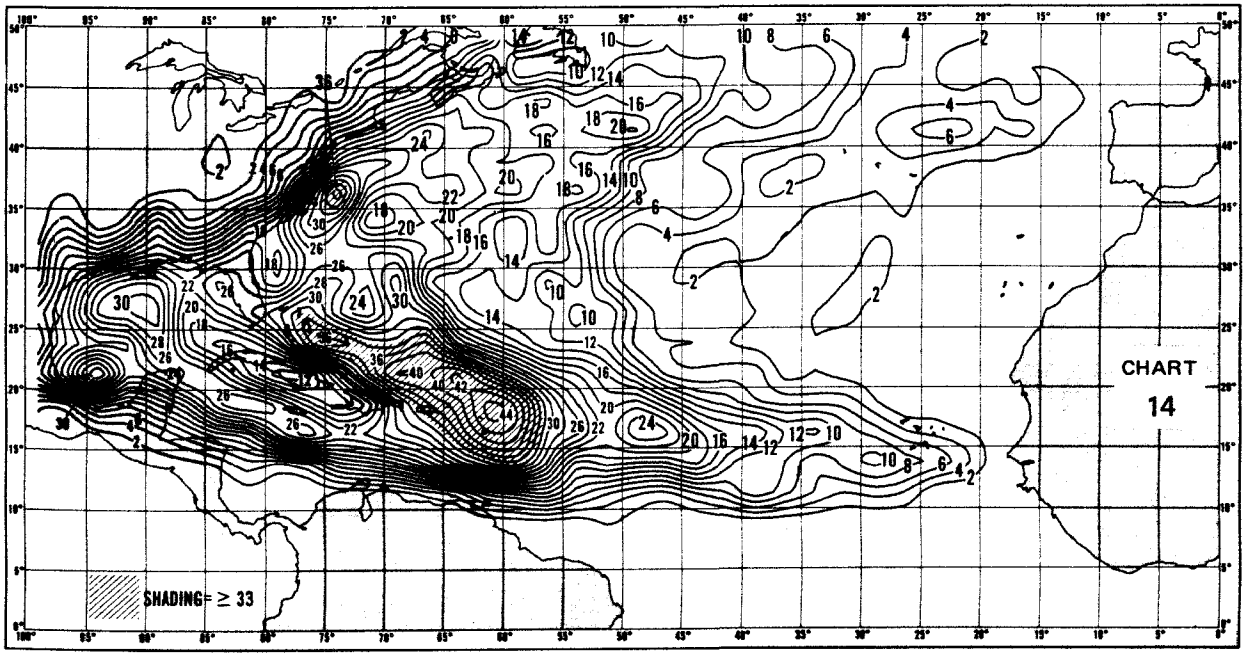
DECEMBER





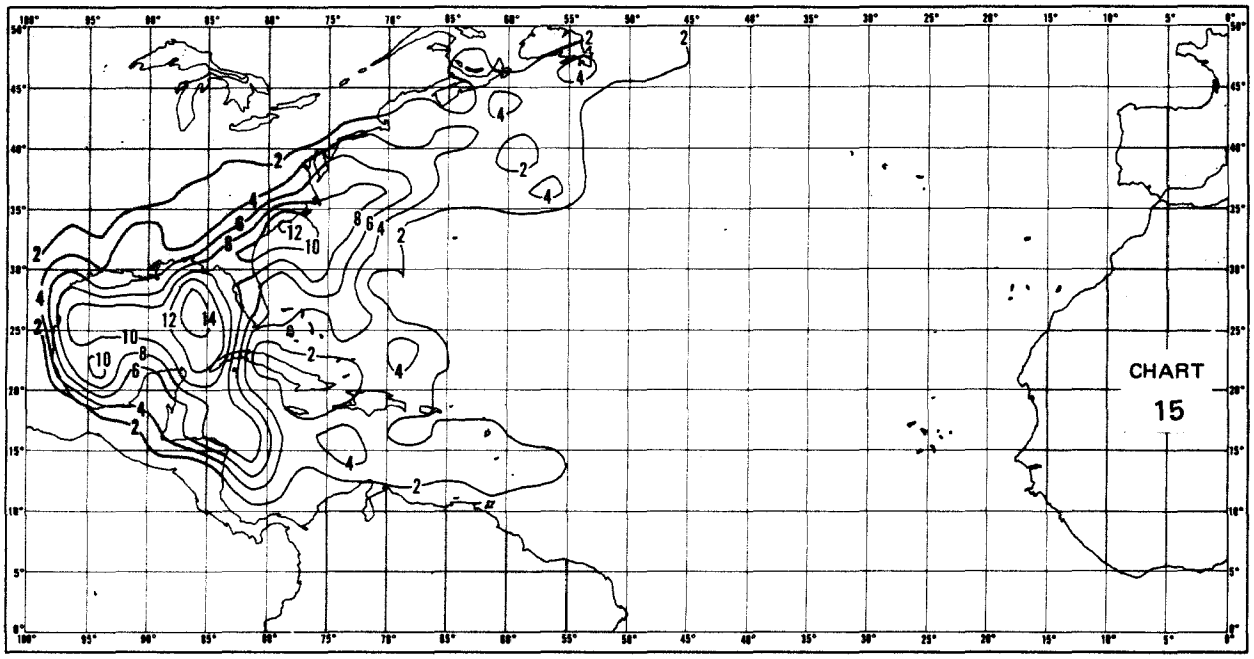
MAY 1 THROUGH NOVEMBER 30. 1886-1968

Number of tropical storms and hurricanes passing through 2½° latitude-longitude boxes, entire season.



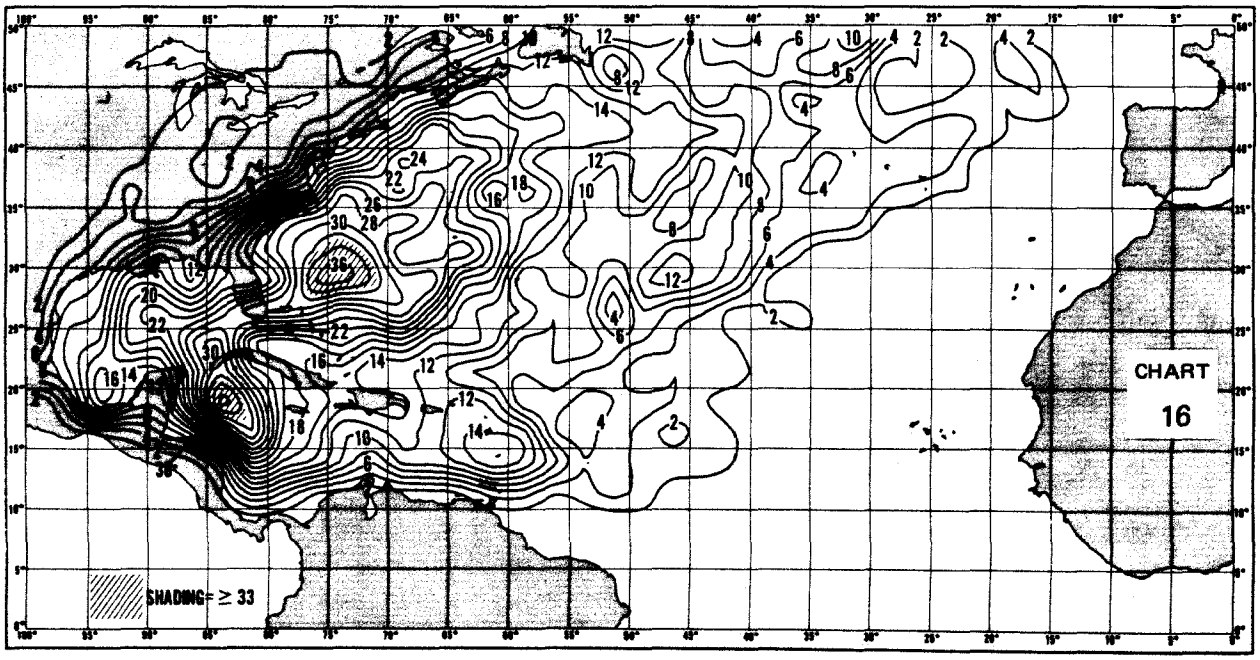
JULY 16 THROUGH SEPTEMBER 20, 1886-1968

Number of tropical storms and hurricanes passing through 2½° latitude-longitude boxes, midseason.



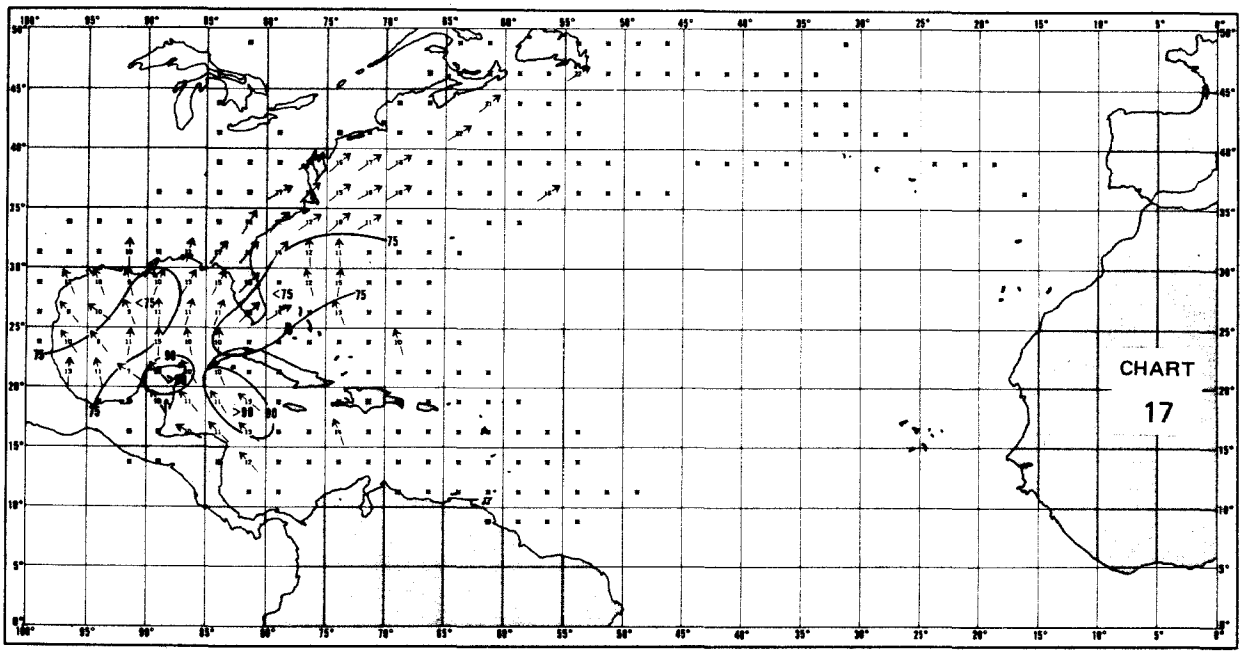
MAY 1 THROUGH JULY 15, 1886-1968

Number of tropical storms and hurricanes passing through 2½° latitude-longitude boxes, early season.



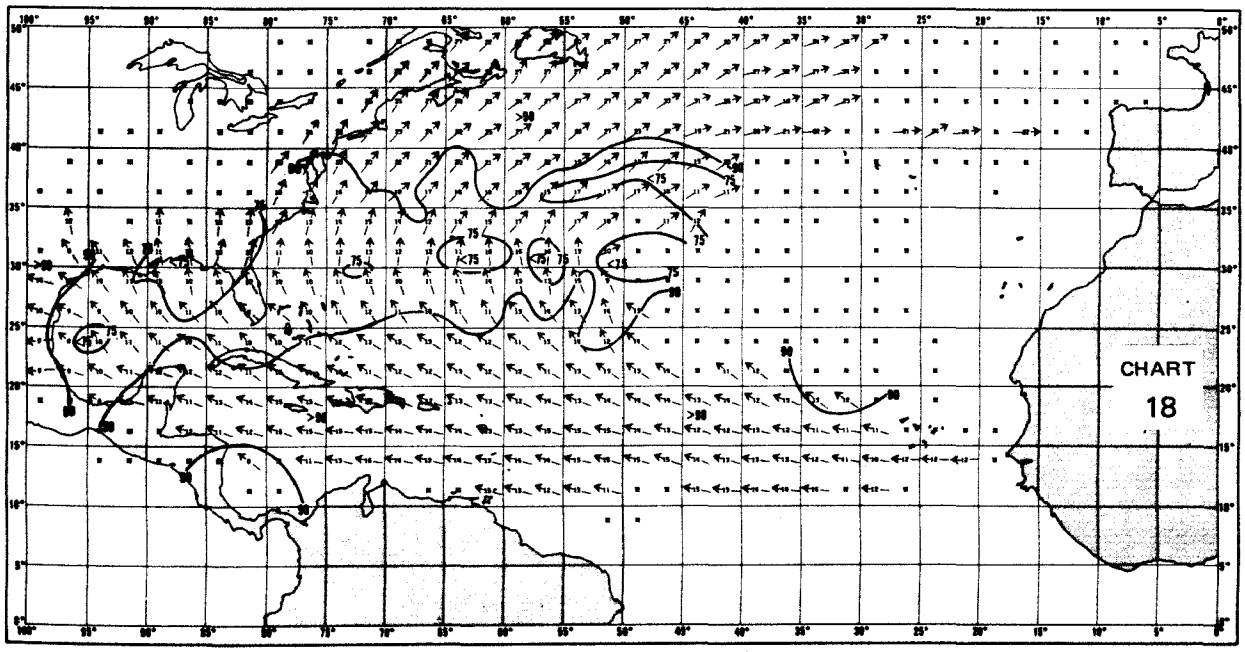
SEPTEMBER 21 THROUGH NOVEMBER 30, 1886-1968

Number of tropical storms and hurricanes passing through 2½° latitude-longitude boxes, late season.



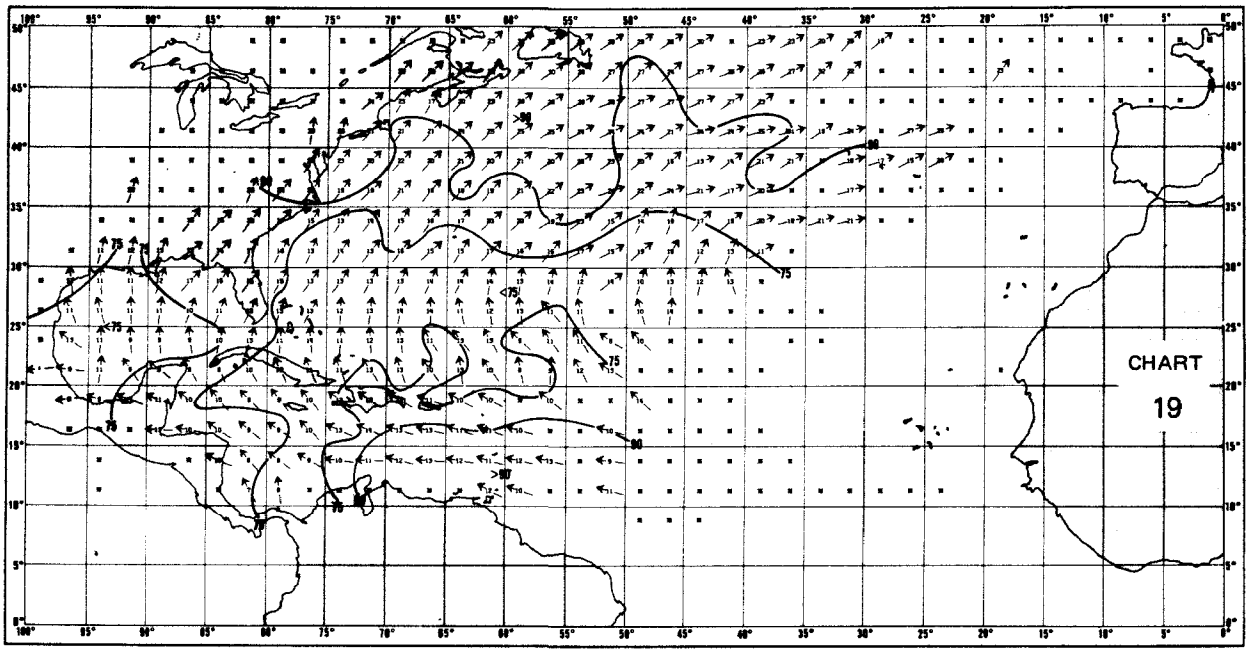
MAY 1 THROUGH JULY 15, 1886-1968

Resultant direction and mean scalar speed of tropical storms and hurricanes passing through 2½° latitude-longitude boxes, early season. The contours are steadiness values.



JULY 16 THROUGH SEPTEMBER 20, 1886-1968

Resultant direction and mean scalar speed of tropical storms and hurricanes passing through 2½° latitude-longitude boxes, midseason. The contours are steadiness values.



SEPTEMBER 21 THROUGH NOVEMBER 30, 1886-1968

Resultant direction and mean scalar speed of tropical storms and hurricanes passing through 2½° latitude-longitude boxes, late season. The contours are steadiness values.

APPENDIX B

Summary of Synoptic Meteorological Observations

The following tables show monthly and annual summaries of marine surface observations that were taken by ships sailing within the Mona Passage Area (17°-19°N, 67°-69°W) over the general period 1856-1971.

SUMMARY OF SYNOPTIC METEOROLOGICAL OBSERVATIONS (MONTHLY AND ANNUAL)

The data contained in these tables were obtained from tape data Family 11 (TDF-11), Marine Surface observations. TDF-11 was primarily funded by the Naval Weather Service Command and selected by NWSED Asheville as the most comprehensive collection of marine surface observations from which to develop a series of coastal marine summaries. The source was punched cards of weather observations taken aboard vessels of varying registry. They were recorded on magnetic tape in a common format. Elements not in WMO code were converted to this code where possible. Where this was not possible, the original data were retained within the tape record as supplemental data. A very limited quality control was attempted as the punched cards were converted to taped records and, where possible, missing psychrometric data were computed.

Before the tables are prepared, extreme values of selected parameters are scrutinized so that obvious errors can be excluded. This method is necessarily subjective since the only available record of many observations is the punched card from which the tape records were prepared. Frequently there is no concrete evidence to prove or disprove the validity of questionable data.

Also, it should be noted that these data are based upon observations made by ships in passage. Such ships tend to avoid bad weather when possible, thus biasing our data toward good weather samples.

Because the number of observations may vary from one table to the other, no absolute relationship exists between the tables. As an example, air temperature counts for Tables 13 and 17 may not be identical since only observations containing both air temperature and relative humidity were counted in Table 13 and only those with both temperature and air-sea temperature difference were counted in Table 17. No requirement for simultaneous recording of all elements was made.

The primary period of record is that period (extending back in time from the most recent data) during which eighty percent of the total number of observations were recorded. The overall period is the earliest to the latest observed data used in compiling the tables. Tables 18 and 19 were tabulated from selected decks only and the overall period indicates the period of record of this data source. The primary period for these tables is not shown.

THE TABLES

Percentage frequencies are computed to hundredths and rounded to tenths. An asterisk (*) indicates percentage frequency > 0 and $< .05$. A value followed by a plus sign indicates greater than or equal to that value (8+ means 8 or greater). NH = low cloud amount (or middle cloud amount when low clouds are not present). The hours given in this publication are GMT.

The geographic position shown on the tables is the central position (centroid) of the observations within the area. This value may fall outside irregular areas.

Annual values are computed on the basis of the sum of the monthlies divided by the number of months.

Tables 1 through 19 appear in numerical order for each month, with the annual tables appearing after the tables for December. Tables 20 and 21 appear at the end of the entire series, after the annual summary for Table 19. The series of summaries appear in numerical order by area number.

Table 1 - Percentage Frequency of Weather Occurrence by Wind Direction (8 pts.).

Table 2 - Percentage Frequency of Weather Occurrence by Hour (GMT).

Table 3 - Percentage Frequency of Wind Direction (8 pts.) by Speed and by Hour (GMT). This table includes mean wind speed (kts.) by direction (8 pts.).

Table 3A - Percentage Frequency of Wind Direction (8 pts.) by Speed and by Hour (GMT). This table includes mean wind speed (kts.) by direction.

Table 4 - Percentage Frequency of Wind Speed by Hour (GMT). This table includes mean speed by hour.

Table 5 - Percentage Frequency of Total Cloud Amount (Oktas) by Wind Direction (8 pts.). This table includes mean cloud amount by wind direction.

Table 6 - Percentage Frequency of Ceiling Heights (feet, NH > 4/8) and Occurrence of NH < 5/8 by Wind Direction (8 pts.).

Table 7 - Cumulative Percentage Frequency of Occurrence of Ceiling Height (feet, NH > 4/8) and Visibility (Nautical Miles).

Table 7A - Percentage Frequency of Low Cloud Amount (or Middle Cloud Amount if Low Clouds are not present). and Percentage Frequency of Sky Obscured. Amounts are in Oktas.

Table 8 - Percentage Frequency of Wind Direction (8 pts.) vs. Occurrence or Non-Occurrence of Precipitation at Observation Time with Varying Values of Visibility (Nautical Miles).

Table 9 - Percentage Frequency of Wind Direction (8 pts.) vs. Wind Speed (kts.) with Varying Values of Visibility (Nautical Miles).

Table 10 - Percentage Frequency of Ceiling Heights (feet, NH > 4/8) and Occurrence of NH < 5/8 by Hour (GMT).

Table 11 - Percentage Frequency of Visibility (Nautical Miles) by Hour (GMT).

Table 12 - Cumulative Percentage Frequency of Ranges of Visibility (Nautical Miles) and Ceiling Height (feet, NH > 4/8) by Hour (GMT).

Table 13 - Percentage Frequency of Relative Humidity (%) by Air Temperature (° F.).

Table 14 - Percentage Frequency of Wind Direction (8 pts.) by Air Temperature (° F.).

Table 15 - Means, Extremes, and Percentiles of Air Temperature (° F.) by Hour (GMT). Extreme temperatures are the one maximum and one minimum value appearing in the marine data file. The Extremes may be unrepresentative due to sampling errors. Extrapolation from the percentile values usually gives a better estimate of expected extreme conditions.

Table 16 - Percentage Frequency of Relative Humidity (%) by Hour (GMT).

Table 17 - Percentage Frequency of Air Temperature (° F.) and the Occurrence of Fog vs. Air-Sea Temperature Difference (° F.).

Air-Sea Temperature Difference is:

Positive when the air is warmer than the sea surface; Negative when the air is cooler than the sea surface. In the table heading, the limits of the temperature ranges appear in a vertical arrangement along the top of the table.

Table 18 - Percentage Frequency of Surface Wind Speed (kts.) and Direction (8 pts.) vs. Sea Height (feet). Source deck 128 for which data are available from mid-1963 was used for these tables. This deck represents the latest and most complete homogeneous source of wave data available. Here, only sea waves generated by local winds in the vicinity of the observer are summarized.

Table 19 - Percentage Frequency of Wave Height (feet) vs. Wave Period (seconds). In this table when both sea and swell waves are present in an observation, the higher of the two is used. If both are the same height, the longer period is chosen. When only one of the wave groups is observed, either sea or swell, it is used in the summary. Swell waves are those generated by winds distant from the local area where the observation is taken.

Tables 1-19 appear together for each month and in the annual summary. The following two tables appear at the end of the entire series for each area.

Table 20 - Monthly and Annual Percentage Frequencies and Means of Sea Surface Temperature (° F.).

Table 21 - Monthly and Annual Sea Level Pressures (millibars). This table includes means by hour and for all hours, extreme values and percentile values.

Note: In this volume, percentage frequencies at specified hours of the day refer to percentages of observations taken at those hours, rather than percentages of observations taken at all hours. Data at adjacent hours are summarized with data at synoptic hours, i.e., data from 02 and 04 GMT are combined with data from 03 GMT.

DIRECTION AND WEATHER CODES

CONVERSION OF WIND AND WAVE DIRECTION TO 8 POINTS

A reduced bias system was employed in converting wind and wave directions to 8 points. This method attaches weighting values to observations which overlap two different 8 point sectors and treats them as "decimal observation counts." These decimal quantities are rounded to whole numbers for presentation as "observational counts" in the tables. Figures 1-4 below show the 8 point system with other systems superimposed.

Note: Because of rounding, sub-total sums of "observation counts" may not equal grand totals.

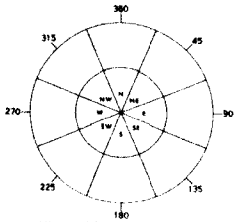


Fig 1. The 8 point direction system.

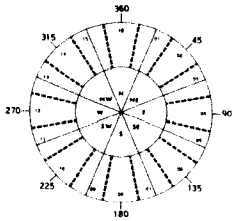


Fig 2. The 16 point direction system superimposed on the 8 point system.

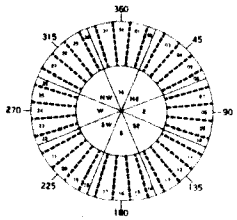


Fig 3. The 32 point direction system superimposed on the 8 point system.

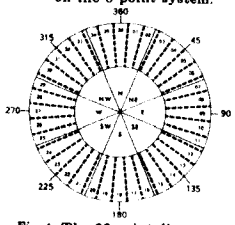


Fig 4. The 36 point direction system superimposed on the 8 point system.

VISIBILITY (VV)

CODE	INTERPRETATION (NAUTICAL MILES)
90-93	VV<1/2
94	1/2≤VV<1
95	1≤VV<2
96	2≤VV<5
97	5≤VV<10
98	10≤VV<25
99	≥25

NOTE: <means less than; >means greater than; ≤means less than or equal to; ≥means greater than or equal to.

PRESENT WEATHER (1960 WMO CODE 4677)

CODE	INTERPRETATION
58-59, 60-65, 91-94, (68-69,95,97 IF TEMP >40°F)	RAIN
80-82,(83-84 IF TEMP >40°F)	RAIN SHOWERS
50-55,58-59	DRIZZLE
56-57, 66-67	FREEZING PRECIPITATION
70-75,85-86, (68-69,83-84, 95,97 IF TEMP ≤40°F)	SNOW
76-79	OTHER FROZEN PRECIPITATION
87-90, 93-94, 96,99	HAIL

CODE	INTERPRETATION
13,17, 95-99	THUNDER LIGHTNING THUNDERSTORM
10-12, 40-49	FOG (WITHOUT PRECIPITATION)
04-05	SMOKE HAZE
06-09, 30-39	DUST BLOWING DUST BLOWING SNOW
00-03, 14-16, 18-29	NO SIGNIFICANT WEATHER AT OB TIME
00-49	NO PRECIPITATION AT OB TIME
50-99	PRECIPITATION AT OB TIME

NOTE: The following WMO codes were counted in two weather categories. 58-59 (rain and drizzle); 68-69 (rain and snow); 93-94 (rain and hail); 96 and 99 (hail and thunder/lightning/thunderstorm); 95 and 97 (snow and thunder/lightning/thunderstorm), or (rain and thunder/lightning/thunderstorm).

WAVE HEIGHT (from source decks 128 and 116)

RECORDED CODE (HALF METERS)	RANGE (METERS)	AS RECORDED IN TABULATION (FEET)
00	≤.25	<1
01	>.25 to .75	1-2
02	>.75 to 1.25	3-4
03	>1.25 to 1.75	5-6
04	>1.75 to 2.25	7
05	>2.25 to 2.75	8-9
06	>2.75 to 3.25	10-11
07	>3.25 to 3.75	12
08	>3.75 to 4.25	13-16
09	>4.25 to 4.75	
10	>4.75 to 5.25	17-19
11	>5.25 to 5.75	
12	>5.75 to 6.25	20-22
13	>6.25 to 6.75	
14	>6.75 to 7.25	23-25
15	>7.25 to 7.75	
16	>7.75 to 8.25	26-32
17	>8.25 to 8.75	
18	>8.75 to 9.25	
19	>9.25 to 9.75	
20	>9.75 to 10.25	33-40
21	>10.25 to 10.75	
22	>10.75 to 11.25	
23	>11.25 to 11.75	
24	>11.75 to 12.25	
25	>12.25 to 12.75	41-48
26	>12.75 to 13.25	
27	>13.25 to 13.75	
28	>13.75 to 14.25	
29	>14.25 to 14.75	
30	>14.75 to 15.25	49-60
31	>15.25 to 15.75	
32	>15.75 to 16.25	
33	>16.25 to 16.75	
34	>16.75 to 17.25	
35	>17.25 to 17.75	
36	>17.75 to 18.25	
37	>18.25 to 18.75	61-70
38	>18.75 to 19.25	
39	>19.25 to 19.75	
40	>19.75 to 20.25	
41	>20.25 to 20.75	
42	>20.75 to 21.25	
43	>21.25 to 21.75	71-86
44	>21.75 to 22.25	
45	>22.25 to 22.75	
46	>22.75 to 23.25	
47	>23.25 to 23.75	
48	>23.75 to 24.25	
49	>24.25 to 24.75	
50	>24.75 to 25.25	
51	>25.25 to 25.75	
52	>25.75 to 26.25	
53-99	>26.25 to 49.75	≥87

Indeterminate=INDET

JANUARY

PERIOD: (PRIMARY) 1949-1971
(OVER-ALL) 1882-1971

AREA MONA PASSAGE 17.9N 67.8W

TABLE 1

PERCENTAGE FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

WND DIR	RAIN	RAIN SHWR	DRZL	PRECIPITATION TYPE FRZG PCPN	SNOW	OTHER FRZN PCPN	HAIL	PCT FREQ PCPN AT OB TIME	TOTAL PCPN OBS	THDR LTNG	OTHER WEATHER PHENOMENA FOG WO PCPN	SMOKE HAZE	DUST BLWG BLWG	DUST SNOW	NO SIG WEA	TOTAL OBS
N	.2	.1	.0	.0	.0	.0	.0	.3		*	.1	*		.0	6.2	
NE	.2	.6	.1	.0	.0	.0	.0	.9		.1	.1	*		.0	31.9	
E	.3	.8	.1	.0	.0	.0	.0	1.1		.1	.1	.0		*	43.9	
SE	.1	.1	*	.0	.0	.0	.0	.3		.0	*	.0		*	9.3	
S	*	.0	.0	.0	.0	.0	.0	*		.0	.0	.0		*	2.2	
SW	*	*	.0	.0	.0	.0	.0	*		.0	.0	.0		.0	.6	
W	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	.0		.0	.5	
NW	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	.0		.0	1.1	
VAR	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	.0		.0	.0	
CALM	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	.0		.0	1.0	
TOT OBS									67							2510
TOT PCT	.8	1.7	.2	.0	.0	.0	.0	2.7		.2	.4	*		.1	96.6	

TABLE 2

PERCENTAGE FREQUENCY OF WEATHER OCCURRENCE BY HOUR

HOUR (GMT)	RAIN	RAIN SHWR	DRZL	PRECIPITATION TYPE FRZG PCPN	SNOW	OTHER FRZN PCPN	HAIL	PCT FREQ PCPN AT OB TIME	TOTAL PCPN OBS	THDR LTNG	OTHER WEATHER PHENOMENA FOG WO PCPN	SMOKE HAZE	DUST BLWG BLWG	DUST SNOW	NO SIG WEA	TOTAL OBS
00&03	1.3	1.6	.2	.0	.0	.0	.0	2.9		.3	.7	.2		.2	95.7	
06&09	.9	1.6	.0	.0	.0	.0	.0	2.5		.6	.3	.0		.0	96.6	
12&15	.0	1.6	.2	.0	.0	.0	.0	1.8		.0	.0	.0		.0	98.2	
18&21	.9	2.2	.5	.0	.0	.0	.0	3.5		.0	.5	.0		.2	95.9	
TOT									68							2527
PCT	.8	1.7	.2	.0	.0	.0	.0	2.7		.2	.4	*		.1	96.6	

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

WND DIR	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	34-47	48+	TOTAL OBS	PCT FREQ	MEAN SPD	HOUR (GMT) 00	03	06	09	12	15	18	21
N	.5	2.1	2.9	.4	.0	.0		5.9	12.1	7.1	5.9	6.0	3.3	6.8	1.2	4.9	3.2
NE	.9	9.0	20.7	2.7	.1	.0		33.3	13.8	33.6	35.8	34.9	31.9	32.0	36.1	31.8	40.2
E	.9	16.2	26.2	2.9	.1	.0		46.3	13.1	44.0	43.8	44.8	58.6	46.7	53.6	47.3	44.0
SE	.3	4.8	4.0	.3	.0	.0		9.4	11.0	9.7	6.3	9.4	5.2	9.6	7.5	10.4	7.9
S	.2	1.2	.6	.0	.0	.0		2.0	8.5	1.8	4.2	1.4	.0	2.3	1.6	2.8	2.2
SW	.1	.2	.2	.0	.0	.0		.6	10.4	1.2	.0	.4	.0	.6	.0	.3	.0
W	.1	.3	.1	.0	.0	.0		.4	8.9	.3	.0	.6	1.0	.4	.0	.5	.0
NW	.1	.5	.4	.1	.0	.0		1.0	10.5	1.3	1.4	1.3	.0	.6	.0	1.1	.0
VAR	.0	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
CALM	1.0							1.0	.0	.9	2.8	1.2	.0	1.0	.0	.8	2.5
TOT OBS	119	1014	1629	189	3	0	2954		12.8	649	72	654	105	673	63	657	79
TOT PCT	4.0	34.3	55.1	6.4	.1	.0		100.0		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 3A

WND DIR	WIND SPEED (KNOTS) 0-6	7-16	17-27	28-40	41+	TOTAL OBS	PCT FREQ	MEAN SPD	HOUR (GMT) 00 03	06 09	12 15	18 21
N	1.1	3.5	1.3	*	.0		5.9	12.1	7.0	5.7	6.3	4.8
NE	3.6	19.8	9.5	.4	.0		33.3	13.8	33.8	34.5	32.3	32.7
E	4.7	30.3	11.0	.2	.0		46.3	13.1	44.0	46.7	47.3	47.0
SE	2.2	5.9	1.3	.0	.0		9.4	11.0	9.4	8.8	9.5	10.2
S	.8	1.1	.1	.0	.0		2.0	8.5	2.0	1.2	2.2	2.8
SW	.1	.4	*	.0	.0		.6	10.4	1.1	.4	.5	.3
W	.1	.3	*	.0	.0		.4	8.9	.3	.6	.4	.4
NW	.3	.6	.1	.0	.0		1.0	10.5	1.3	1.1	.6	1.0
VAR	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	.0
CALM	1.0						1.0	.0	1.1	1.1	.9	1.0
TOT OBS	413	1829	692	20	0	2954		12.8	721	759	738	736
TOT PCT	14.0	61.9	23.4	.7	.0		100.0		100.0	100.0	100.0	100.0

JANUARY

PERIOD: (PRIMARY) 1949-1971
(OVER-ALL) 1882-1971

AREA MONA PASSAGE
17.9N 67.8W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

HOUR	CALM	1-3	4-10	WIND SPEED (KNOTS) 11-21	22-33	34-47	48+	MEAN	PCT FREQ	TOTAL OBS
00&03	1.1	2.8	35.6	54.2	6.2	.0	.0	12.6	100.0	721
06&09	1.1	3.4	38.2	51.4	5.5	.4	.0	12.4	100.0	759
12&15	.9	2.7	34.0	54.7	7.6	.0	.0	12.8	100.0	738
18&21	1.0	3.1	29.3	60.3	6.3	.0	.0	13.2	100.0	736
TOT	30	89	1014	1629	189	3	0	12.8		2954
PCT	1.0	3.0	34.3	55.1	6.4	.1	.0		100.0	

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS) BY WIND DIRECTION

WND DIR	0-2	3-4	5-7	8 & OBSCD	TOTAL OBS	MEAN CLOUD COVER
N	1.9	2.0	1.7	.8		4.0
NE	14.8	8.6	7.3	1.6		3.1
E	22.7	13.9	8.3	1.0		2.8
SE	4.5	3.2	1.9	.2		2.9
S	1.1	.7	.5	*		2.5
SW	.5	.1	.1	.0		1.8
W	.3	.1	*	*		2.3
NW	.5	.3	.2	.1		3.3
VAR	.0	.0	.0	.0		.0
CALM	.6	.2	.1	*		2.3
TOT OBS	1034	638	441	85	2198	3.0
TOT PCT	47.0	29.0	20.1	3.9	100.0	

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT,NH >4/8) AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

WND DIR	000 149	150 299	300 599	600 999	1000 1999	2000 3499	3500 4999	5000 6499	6500 7999	8000+	NH <5/8 ANY HGT	TOTAL OBS
N	.0	.0	.1	.3	.6	.5	.2	*	.1	*	4.6	
NE	.0	.0	.3	1.0	1.8	1.3	.4	.2	.1	*	27.3	
E	*	*	.1	1.2	2.3	1.2	.4	.2	.1	.1	40.2	
SE	*	*	*	.4	.4	.3	.1	.0	.0	.0	8.6	
S	.0	*	*	.0	.1	.0	*	.0	.0	.0	2.1	
SW	.0	.0	*	.0	*	.0	.0	.0	.0	.0	.7	
W	.0	.0	.0	.0	*	*	.0	.0	.0	.0	.4	
NW	.0	.0	*	.1	.1	.1	*	.0	.0	.0	.8	
VAR	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
CALM	.0	.0	.0	*	*	.0	*	.0	.0	.0	.8	
TOT OBS	2	3	14	66	118	73	26	8	5	4	1879	2198
TOT PCT	.1	.1	.6	3.0	5.4	3.3	1.2	.4	.2	.2	85.5	100.0

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

CEILING (FEET)	VSBY (NM) = OR >10	= OR >5	= OR >2	= OR >1	= OR >1/2	= OR >1/4	= OR >50YD	= OR >0
= OR >6500	.4	.4	.4	.4	.4	.4	.4	.4
= OR >5000	.8	.8	.8	.8	.8	.8	.8	.8
= OR >3500	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
= OR >2000	4.8	5.2	5.2	5.2	5.2	5.2	5.2	5.2
= OR >1000	9.3	10.4	10.5	10.6	10.6	10.6	10.6	10.6
= OR >600	11.7	13.3	13.5	13.5	13.5	13.5	13.5	13.5
= OR >300	12.2	13.9	14.1	14.2	14.2	14.2	14.2	14.2
= OR >150	12.4	14.0	14.3	14.3	14.4	14.4	14.4	14.4
= OR > 0	12.4	14.1	14.4	14.4	14.4	14.4	14.4	14.4
TOTAL	272	310	316	317	318	318	318	318

TOTAL NUMBER OF OBS: 2201 PCT FREQ NH <5/8: 85.6

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

0	1	2	3	4	5	6	7	8	OBSCD	TOTAL OBS
13.5	19.6	23.4	19.1	9.8	4.8	5.1	2.6	2.1	*	2311

JANUARY

PERIOD: (PRIMARY) 1949-1971
(OVER-ALL) 1882-1971

AREA MONA PASSAGE
17.9N 67.8W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF PRECIPITATION WITH VARYING VALUES OF VISIBILITY

VSBY (NM)		N	NE	E	SE	S	SW	W	NW	VAR	CALM	PCT	TOTAL OBS
<1/2	PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	ND PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	TOT %	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
1/2<1	PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	ND PCP	.0	*	.0	.0	.0	.0	.0	.0	.0	.0	*	
	TOT %	.0	*	.0	.0	.0	.0	.0	.0	.0	.0	*	
1<2	PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	ND PCP	*	*	*	.0	.0	.0	.0	.0	.0	.0	.1	
	TOT %	*	*	*	.0	.0	.0	.0	.0	.0	.0	.1	
2<5	PCP	.0	.1	.1	*	.0	.0	.0	.0	.0	.0	.2	
	ND PCP	*	.1	*	.0	.0	.0	.0	.0	.0	.0	.2	
	TOT %	*	.2	.1	*	.0	.0	.0	.0	.0	.0	.4	
5<10	PCP	.2	.4	.3	.1	*	*	.0	.0	.0	.0	1.0	
	ND PCP	.6	1.9	2.4	.5	.2	*	.0	.1	.0	.1	5.9	
	TOT %	.8	2.3	2.7	.6	.2	*	.0	.1	.0	.1	6.9	
10+	PCP	.1	.4	.8	.2	.0	*	.0	.0	.0	.0	1.4	
	ND PCP	5.8	30.0	41.6	8.8	2.0	.6	.5	1.0	.0	.9	91.2	
	TOT %	5.9	30.4	42.3	9.0	2.0	.6	.5	1.0	.0	.9	92.6	
	TOT OBS												2499
	TOT PCT	6.7	33.0	45.2	9.6	2.3	.6	.5	1.1	.0	1.0	100.0	

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED WITH VARYING VALUES OF VISIBILITY

VSBY (NM)	SPD KTS	N	NE	E	SE	S	SW	W	NW	VAR	CALM	PCT	TOTAL OBS
<1/2	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	11-21	.0	.0	*	.0	.0	.0	.0	.0	.0		*	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	.0	.0	*	.0	.0	.0	.0	.0	.0	.0	*	
1/2<1	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.0	*	.0	.0	.0	.0	.0	.0	.0		*	
	11-21	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	.0	*	.0	.0	.0	.0	.0	.0	.0	.0	*	
1<2	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	11-21	.0	*	*	*	.0	.0	.0	.0	.0		.1	
	22+	*	.0	.0	.0	.0	.0	.0	.0	.0		*	
	TOT %	*	*	*	*	.0	.0	.0	.0	.0	.0	.1	
2<5	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	*	*	.1	.0	.0	.0	.0	.0	.0		.1	
	11-21	.0	.1	.1	*	.0	.0	.0	.0	.0		.3	
	22+	.0	*	.0	.0	.0	.0	.0	.0	.0		*	
	TOT %	*	.2	.2	*	.0	.0	.0	.0	.0	.0	.5	
5<10	0-3	.1	.1	.2	.0	.0	.0	.0	*	.0	.1	.5	
	4-10	.2	.5	1.0	.3	.2	*	.0	*	.0		2.2	
	11-21	.4	1.4	1.4	.3	.1	*	.0	*	.0		3.6	
	22+	*	.2	.2	*	.0	.0	.0	.0	.0		.4	
	TOT %	.7	2.2	2.8	.6	.2	*	.0	.1	.0	.1	6.7	
10+	0-3	.4	.7	.7	.3	.2	.1	.1	*	.0	1.0	3.5	
	4-10	2.0	8.4	14.9	4.6	1.1	.2	.3	.5	.0		31.9	
	11-21	2.6	19.1	24.8	3.6	.5	.2	.1	.4	.0		51.3	
	22+	.3	2.4	2.7	.3	.0	.0	.0	.1	.0		5.9	
	TOT %	5.3	30.6	43.1	8.8	1.9	.6	.5	.9	.0	1.0	92.7	
	TOT OBS												2803
	TOT PCT	6.1	33.1	46.1	9.4	2.1	.6	.5	1.0	.0	1.0	100.0	

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TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND OCCURRENCE OF NH <5/8 BY HOUR

HOUR (GMT)	000 149	150 299	300 599	600 999	1000 1999	2000 3499	3500 4999	5000 6499	6500 7999	8000+	TOTAL	NH <5/8 ANY HGT	TOTAL OBS
00&03	.2	.2	.7	3.9	3.6	4.9	.6	.6	.4	.2	15.1	84.9	535
06&09	.0	.0	.5	2.6	5.2	2.4	.9	.2	.2	.3	12.3	87.7	577
12&15	.0	.2	.7	3.0	7.1	3.3	1.4	.2	.2	.2	16.2	83.8	574
18&21	.2	.2	.7	2.1	4.8	2.3	1.6	.5	.2	.0	12.5	87.5	607
TOT	2	3	15	66	119	73	26	8	5	4	321	1972	2293
PCT	.1	.1	.7	2.9	5.2	3.2	1.1	.3	.2	.2	14.0	86.0	100.0

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

HOUR (GMT)	<1/2	1/2<1	1<2	2<5	5<10	10+	TOTAL OBS
00&03	.0	.0	.0	.4	8.8	90.7	680
06&09	.1	.0	.3	.4	6.9	92.3	728
12&15	.0	.1	.1	.4	6.0	93.3	704
18&21	.0	.0	.0	.6	5.5	93.9	708
TOT	1	1	3	13	191	2611	2820
PCT	*	*	.1	.5	6.8	92.6	100.0

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR CEILING HGT (FEET, NH >4/8), BY HOUR

HOUR (GMT)	<150 <50YD	<600 <1	<1000 <5	1000+ AND5+	NH <5/8 AND 5+	TOTAL OBS
00&03	.2	1.2	5.6	10.1	84.3	517
06&09	.0	.5	3.6	9.2	87.1	552
12&15	.0	.9	3.8	12.9	83.3	550
18&21	.2	1.0	3.8	9.3	86.9	582
TOT	2	20	92	228	1881	2201
PCT	.1	.9	4.2	10.4	85.5	100.0

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

TEMP F	0-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100	TOTAL OBS	PCT FREQ
90/94	.0	.0	*	*	*	.1	.0	.0	5	.2
85/89	.0	*	*	.3	.3	.2	.3	.1	28	1.4
80/84	.0	.0	.1	.7	6.9	10.8	4.6	2.6	517	25.8
75/79	.0	.0	.1	1.1	6.5	33.1	18.8	8.3	1365	68.0
70/74	.0	.0	.0	*	.6	1.1	1.4	1.2	89	4.4
65/69	.0	.0	.0	.0	.0	*	.0	.1	3	.1
TOTAL	0	1	8	47	288	909	506	248	2007	100.0
PCT	.0	*	.4	2.3	14.3	45.3	25.2	12.4		

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

N	NE	E	SE	S	SW	W	NW	VAR	CALM
.0	.1	.1	.1	.0	.0	.0	.0	.0	.0
.2	.4	.7	*	.0	.0	.0	.0	.0	.0
1.1	5.7	13.2	4.1	1.1	.2	*	*	.0	.1
3.9	24.2	31.1	5.7	1.1	.4	.3	.6	.0	.6
1.0	2.0	.9	.2	.1	.0	.0	.1	.0	.1
.0	*	*	.0	.0	.0	.0	.1	.0	.0
6.2	32.5	46.1	10.1	2.3	.6	.4	.9	.0	.9

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

HOUR (GMT)	MAX	99%	95%	50%	5%	1%	MIN	MEAN	TOTAL OBS
00&03	84	82	81	78	74	73	69	77.8	722
06&09	89	81	80	77	74	72	68	77.0	761
12&15	86	82	81	78	74	72	71	77.6	736
18&21	94	88	84	80	76	74	68	80.2	736
TOT	94	85	82	78	74	72	68	78.1	2955

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

HOUR (GMT)	0-29	30-59	60-69	70-79	80-89	90-100	MEAN	TOTAL OBS
00&03	.0	1.7	11.2	47.5	27.9	11.8	79	484
06&09	.0	1.9	8.0	45.5	30.7	13.9	80	527
12&15	.0	2.4	9.8	46.9	26.5	14.4	79	499
18&21	.0	5.1	28.4	41.0	16.1	9.4	74	510
TOT	0	56	290	913	511	250	78	2020

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

AIR-SEA TMP DIF	65 68	69 72	73 76	77 80	81 84	85 88	89 92	>92	TOT	W FOG	WO FOG
11/13	.0	.0	.0	.2	.0	.0	*	.1	7	.0	.3
9/10	.0	.0	.0	.0	.0	.0	*	.0	1	.0	*
7/8	.0	.0	*	*	.1	.2	.1	.0	12	.0	.5
6	.0	.0	.0	.2	*	.3	.0	.0	12	.0	.5
5	.0	.0	.0	.3	.3	.2	.0	.0	18	.0	.8
4	.0	.0	.2	.3	1.2	*	.0	.0	38	.0	1.7
3	.0	.0	.1	.7	1.5	.4	.0	.0	61	*	2.6
2	.0	.0	.1	1.5	2.8	.1	.0	.0	101	.0	4.4
1	.0	.0	.3	3.5	2.4	.1	.0	.0	142	*	6.2
0	.0	.0	.5	9.7	2.8	.0	.0	.0	297	.2	12.9
-1	.0	*	1.5	13.2	1.0	.0	.0	.0	358	*	15.7
-2	.0	*	2.9	13.6	.7	.0	.0	.0	394	*	17.3
-3	.0	*	3.9	9.8	.3	.0	.0	.0	318	.0	14.0
-4	.0	.0	5.1	5.4	.2	.0	.0	.0	241	*	10.6
-5	.0	.1	2.9	2.2	*	.0	.0	.0	119	.0	5.2
-6	.0	.1	2.0	1.1	.0	.0	.0	.0	71	.0	3.1
-7/-8	.0	.2	1.3	.8	.0	.0	.0	.0	52	.0	2.3
-9/-10	*	.1	.7	.1	.0	.0	.0	.0	24	.0	1.1
-11/-13	*	.2	*	.0	.0	.0	.0	.0	6	.0	.3
-14/-16	*	.0	.0	.0	.0	.0	.0	.0	1	.0	*
TOTAL	3	19	490	1421	305	28	5	2	2273	9	2264
PCT	.1	.8	21.6	62.5	13.4	1.2	.2	.1	100.0	.4	99.6

PERIOD: (OVER-ALL) 1963-1971

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

N

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.0	.0	.0	.0	.0	.0	.0
1-2	.2	1.3	.0	.0	.0	.0	1.4
3-4	.0	.7	2.0	.4	.0	.0	3.1
5-6	.0	.5	.6	.1	.0	.0	1.2
7	.0	.0	.8	.1	.0	.0	.9
8-9	.0	.0	.0	.0	.0	.0	.0
10-11	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.2	2.4	3.5	.6	.0	.0	6.6

NE

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.3	.8	.2	.0	.0	.0	1.3
1-2	.2	3.7	3.1	.0	.0	.0	6.9
3-4	.3	2.9	6.4	.7	.0	.0	10.4
5-6	*	.4	8.5	.9	.0	.0	9.9
7	.0	*	2.6	.5	.0	.0	3.1
8-9	.0	.0	1.3	.9	.0	.0	2.2
10-11	.0	.0	*	.2	.0	.0	.3
12	.0	.0	.0	.3	.0	.0	.3
13-16	.0	.0	.2	.0	.0	.0	.2
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.8	7.8	22.1	3.6	.0	.0	34.4

E

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.2	.9	.3	.0	.0	.0	1.3
1-2	.2	6.1	3.2	.0	.0	.0	9.5
3-4	.0	6.6	8.0	.5	.0	.0	15.0
5-6	.1	2.2	9.0	.9	.0	.0	12.3
7	.0	.2	2.5	.3	.0	.0	3.1
8-9	.0	.0	.3	1.0	.0	.0	1.3
10-11	.0	.0	.3	.4	.0	.0	.7
12	.0	.0	.0	.2	.0	.0	.2
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.4	16.0	23.6	3.3	.0	.0	43.2

SE

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.2	.7	.0	.0	.0	.0	.9
1-2	.0	2.6	.5	.0	.0	.0	3.2
3-4	.0	1.4	2.4	.0	.0	.0	3.8
5-6	.0	.4	1.5	.2	.0	.0	2.2
7	.0	*	.9	.2	.0	.0	1.1
8-9	.0	.0	.2	*	.0	.0	.2
10-11	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.2	5.2	5.5	.4	.0	.0	11.3

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TABLE 18 (CONT)

AREA MONA PASSAGE 17.9N 67.8W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

	S							SW						
HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.1	.2	.0	.0	.0	.0	.3	.0	.2	.0	.0	.0	.0	.2
1-2	.0	.6	.3	.0	.0	.0	.9	.0	.0	.0	.0	.0	.0	.0
3-4	.0	.3	.6	.0	.0	.0	.9	.0	*	*	.0	.0	.0	.1
5-6	.0	.0	.2	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0
7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8-9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10-11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.1	1.0	1.1	.0	.0	.0	2.3	.0	.2	*	.0	.0	.0	.2

	W							NW							TOTAL
HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT	1-3	4-10	11-21	22-33	34-47	48+	PCT	PCT
<1	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.2	
1-2	.0	.0	.0	.0	.0	.0	.0	.0	.3	.3	.0	.0	.0	.6	
3-4	.0	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.0	.2	
5-6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
8-9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
10-11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
13-16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
17-19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
20-22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
23-25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
26-32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
33-40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
41-48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
49-60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
61-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
71-86	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
87+	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
TOT PCT	.0	.0	.0	.0	.0	.0	.0	.2	.3	.5	.0	.0	.0	.9	99.1

WIND SPEED (KTS) VS SEA HEIGHT (FT)

HGT	0-3	4-10	11-21	22-33	34-47	48+	PCT	TOT OBS
<1	2.2	2.7	.5	.0	.0	.0	5.3	
1-2	.5	14.6	7.4	.0	.0	.0	22.4	
3-4	.3	11.9	19.6	1.6	.0	.0	33.3	
5-6	.2	3.4	19.9	2.2	.0	.0	25.7	
7	.0	.3	6.7	1.1	.0	.0	8.1	
8-9	.0	.0	1.7	1.9	.0	.0	3.6	
10-11	.0	.0	.3	.6	.0	.0	.9	
12	.0	.0	.0	.5	.0	.0	.5	
13-16	.0	.0	.2	.0	.0	.0	.2	
17-19	.0	.0	.0	.0	.0	.0	.0	
20-22	.0	.0	.0	.0	.0	.0	.0	
23-25	.0	.0	.0	.0	.0	.0	.0	
26-32	.0	.0	.0	.0	.0	.0	.0	
33-40	.0	.0	.0	.0	.0	.0	.0	
41-48	.0	.0	.0	.0	.0	.0	.0	
49-60	.0	.0	.0	.0	.0	.0	.0	
61-70	.0	.0	.0	.0	.0	.0	.0	
71-86	.0	.0	.0	.0	.0	.0	.0	
87+	.0	.0	.0	.0	.0	.0	.0	
TOT PCT	3.1	32.9	56.2	7.8	.0	.0	100.0	639

PERIOD: (OVER-ALL) 1949-1971

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

PERIOD (SEC)	<1	1-2	3-4	5-6	7	8-9	10-11	12	13-16	17-19	20-22	23-25	26-32	33-40	41-48	49-60	61-70	71-86	87+	TOTAL	MEAN HGT
<6	2.2	11.3	20.3	9.4	2.9	.9	.2	.2	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	887	3
6-7	.1	1.0	7.8	11.6	5.9	2.8	.5	.2	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	560	5
8-9	.0	.3	.5	2.9	3.9	1.9	.6	.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	195	7
10-11	.0	.4	.5	.5	.9	.6	.4	.2	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	67	6
12-13	.0	.0	.3	.2	.2	.1	.2	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	19	6
>13	.0	.0	.0	.1	.0	.0	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	3	9
INDET	1.7	1.2	1.7	1.4	.9	.3	.2	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	139	4
TOTAL	74	266	579	488	275	122	41	17	7	0	1	0	0	0	0	0	0	0	0	1870	4
PCT	4.0	14.2	31.0	26.1	14.7	6.5	2.2	.9	.4	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	100.0	

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PERIOD: (PRIMARY) 1949-1971
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TABLE 1

PERCENTAGE FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

WND DIR	RAIN	RAIN SHWR	DRZL	PRECIPITATION TYPE FRZG PCPN	SNOW	OTHER FRZN PCPN	HAIL	PCT FREQ PCPN AT OB TIME	TOTAL PCPN OBS	THDR LTNG	OTHER WEATHER PHENOMENA FOG WD PCPN	SMOKE HAZE	DUST BLWG DUST SNOW	ND SIG WEA	TOTAL OBS
N	.1	.1	.1	.0	.0	.0	.0	.3		.0	*	.0	.0	4.8	
NE	.3	.6	.1	.0	.0	.0	.0	1.0		*	.1	.0	.0	26.6	
E	.1	.8	.1	.0	.0	.0	.0	1.0		.1	.1	*	.0	47.7	
SE	.1	.2	*	.0	.0	.0	.0	.3		.0	.0	.1	.0	11.9	
S	.0	*	.0	.0	.0	.0	.0	*		.0	.0	*	.0	2.8	
SW	.0	*	.0	.0	.0	.0	.0	*		.0	.0	.0	.0	.4	
W	.0	*	.0	.0	.0	.0	.0	*		.0	.0	.0	.0	.3	
NW	*	*	.0	.0	.0	.0	.0	*		.0	.0	.0	.0	1.1	
VAR	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	
CALM	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	.0	.0	1.1	
TOT OBS									74						2567
TOT PCT	.6	1.9	.4	.0	.0	.0	.0	2.9		.1	.2	.2	.0	96.7	

TABLE 2

PERCENTAGE FREQUENCY OF WEATHER OCCURRENCE BY HOUR

HOUR (GMT)	RAIN	RAIN SHWR	DRZL	PRECIPITATION TYPE FRZG PCPN	SNOW	OTHER FRZN PCPN	HAIL	PCT FREQ PCPN AT OB TIME	TOTAL PCPN OBS	THDR LTNG	OTHER WEATHER PHENOMENA FOG WD PCPN	SMOKE HAZE	DUST BLWG DUST SNOW	ND SIG WEA	TOTAL OBS
00&03	.6	1.8	.3	.0	.0	.0	.0	2.5		.5	.2	.0	.0	96.8	
06&09	.3	1.8	.6	.0	.0	.0	.0	2.7		.0	.5	.2	.0	96.6	
12&15	1.1	1.6	.3	.0	.0	.0	.0	3.1		.0	.2	.5	.0	96.2	
18&21	.6	2.3	.3	.0	.0	.0	.0	3.1		.1	.0	.0	.0	96.9	
TOT									75						2600
PCT	.7	1.9	.4	.0	.0	.0	.0	2.9		.2	.2	.2	.0	96.7	

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

WND DIR	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	34-47	48+	TOTAL OBS	PCT FREQ	MEAN SPD	HOUR (GMT) 00	03	06	09	12	15	18	21
N	.5	1.5	2.4	.3	.0	.0		4.7	12.4	4.8	2.1	4.2	4.0	4.5	6.0	5.8	3.6
NE	.8	9.5	16.8	2.4	.0	.0		29.4	13.3	29.9	41.8	29.2	38.9	29.5	35.2	27.9	36.8
E	1.0	18.4	26.2	2.4	.0	.0		47.9	12.7	46.4	41.8	49.4	42.2	50.0	41.5	49.9	40.0
SE	1.2	6.6	4.2	.2	.0	.0		12.1	9.7	12.5	8.5	14.0	10.6	11.9	11.6	10.9	11.8
S	.3	1.7	.8	.1	.0	.0		2.8	9.0	3.8	2.4	3.5	1.9	1.5	2.0	2.7	3.8
SW	.1	.3	.1	.0	.0	.0		.5	7.7	.5	.6	.3	1.4	.5	.3	.4	.4
W	.1	.2	*	.0	.0	.0		.3	7.2	.2	1.2	.8	.0	.1	.0	.2	.0
NW	.1	.6	.3	.0	.0	.0		1.0	8.8	1.2	.6	.5	.9	.8	1.1	1.2	2.7
VAR	.0	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
CALM	1.1							1.1	.0	.5	1.2	2.0	.0	1.1	2.3	1.0	.9
TOT OBS	151	1160	1517	159	0	0	2987		12.2	630	85	643	106	639	88	684	112
TOT PCT	5.1	38.8	50.8	5.3	.0	.0		100.0		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 3A

WND DIR	WIND SPEED (KNOTS) 0-6	7-16	17-27	28-40	41+	TOTAL OBS	PCT FREQ	MEAN SPD	HOUR (GMT) 00 03	06 09	12 15	18 21
N	.9	2.6	1.2	.1	.0		4.7	12.4	4.5	4.2	4.7	5.5
NE	4.0	16.8	8.1	.5	.0		29.4	13.3	31.3	27.1	30.2	29.1
E	5.8	31.2	10.5	.4	.0		47.9	12.7	45.8	48.4	49.0	48.5
SE	3.7	7.2	1.1	.1	.0		12.1	9.7	12.1	13.6	11.8	11.0
S	1.1	1.5	.2	.0	.0		2.8	9.0	3.7	3.2	1.6	2.8
SW	.3	.2	.0	.0	.0		.5	7.7	.5	.5	.5	.4
W	.2	.2	.0	.0	.0		.3	7.2	.3	.7	.1	.2
NW	.4	.5	.1	.0	.0		1.0	8.8	1.2	.6	.8	1.4
VAR	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	.0
CALM	1.1						1.1	.0	.6	1.7	1.2	1.0
TOT OBS	525	1798	633	31	0	2987		12.2	715	749	727	796
TOT PCT	17.6	60.2	21.2	1.0	.0		100.0		100.0	100.0	100.0	100.0

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TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

HOUR	CALM	WIND SPEED (KNOTS) 1-3	4-10	11-21	22-33	34-47	48+	MEAN	PCT FREQ	TOTAL OBS
00&03	.6	5.2	39.7	49.2	5.3	.0	.0	12.1	100.0	715
06&09	1.7	2.7	40.2	50.2	5.2	.0	.0	12.1	100.0	749
12&15	1.2	3.9	37.6	53.2	4.1	.0	.0	12.2	100.0	727
18&21	1.0	4.0	37.9	50.5	6.5	.0	.0	12.3	100.0	796
TOT	34	117	1160	1517	159	0	0	12.2		2987
PCT	1.1	3.9	38.8	50.8	5.3	.0	.0		100.0	

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS) BY WIND DIRECTION

WND DIR	0-2	3-4	5-7	8 & OBSCD	TOTAL OBS	MEAN CLOUD COVER
N	1.4	1.3	1.5	.6		4.2
NE	10.9	8.1	6.2	1.2		3.3
E	23.0	16.6	8.9	1.9		3.0
SE	6.1	3.5	2.1	.5		2.8
S	1.4	.9	.5	.1		2.9
SW	.1	.1	.2	*		4.2
W	.2	*	.1	*		3.1
NW	.5	.2	.4	.1		3.6
VAR	.0	.0	.0	.0		.0
CALM	.8	.2	.1	*		2.0
TOT OBS	970	679	436	100	2185	3.1
TOT PCT	44.4	31.1	20.0	4.6	100.0	

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT,NH >4/8) AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

WND DIR	000 149	150 299	300 599	600 999	1000 1999	2000 3499	3500 4999	5000 6499	6500 7999	8000+	NH <5/8 ANY HGT	TOTAL OBS
N	.0	.0	*	.5	.5	.3	*	.1	.0	.0	3.3	
NE	*	.1	.2	.9	2.0	1.1	.7	.2	.0	*	21.1	
E	.0	.0	.4	1.6	1.9	1.8	.8	.2	*	.1	43.6	
SE	.0	.0	*	.1	.6	.4	.2	.0	*	.0	10.8	
S	.0	.0	.0	.1	.1	.1	*	.0	.0	*	2.6	
SW	*	.0	.0	.0	.0	.0	*	.0	.0	*	.4	
W	.0	.0	.0	.0	.0	*	.0	.0	.0	.0	.3	
NW	.0	.0	.0	.1	.1	.0	.0	.0	.0	.0	.9	
VAR	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
CALM	.0	.0	*	.0	*	.0	.0	.0	.0	.0	1.1	
TOT OBS	2	2	16	74	115	84	38	10	1	5	1838	2185
TOT PCT	.1	.1	.7	3.4	5.3	3.8	1.7	.5	*	.2	84.1	100.0

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

CEILING (FEET)	VSBY (NM) = OR >10	= OR >5	= OR >2	= OR >1	= OR >1/2	= OR >1/4	= OR >50YD	= OR >0
= OR >6500	.2	.3	.3	.3	.3	.3	.3	.3
= OR >5000	.6	.7	.7	.7	.7	.7	.7	.7
= OR >3300	2.1	2.5	2.5	2.5	2.5	2.5	2.5	2.5
= OR >2000	5.2	6.2	6.2	6.3	6.3	6.3	6.3	6.3
= OR >1000	9.7	11.4	11.5	11.5	11.5	11.5	11.5	11.5
= OR >600	12.4	14.6	14.8	14.9	14.9	14.9	14.9	14.9
= OR >300	12.9	15.4	15.5	15.6	15.6	15.6	15.6	15.6
= OR >150	13.0	15.5	15.6	15.7	15.7	15.7	15.7	15.7
= OR > 0	13.0	15.5	15.6	15.8	15.8	15.8	15.8	15.8
TOTAL	285	340	343	346	346	346	346	346

TOTAL NUMBER OF OBS: 2192 PCT FREQ NH <5/8: 84.2

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

0	1	2	3	4	5	6	7	8	OBSCD	TOTAL OBS
12.7	20.2	22.9	18.1	10.0	5.2	4.7	2.8	3.2	*	2321

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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF PRECIPITATION WITH VARYING VALUES OF VISIBILITY

VSBY (NM)		N	NE	E	SE	S	SW	W	NW	VAR	CALM	PCT	TOTAL OBS
	PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
<1/2	NO PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	TOT %	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	PCP	.0	*	.0	.0	.0	.0	.0	.0	.0	.0	*	
1/2<1	NO PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	TOT %	.0	*	.0	.0	.0	.0	.0	.0	.0	.0	*	
	PCP	*	*	.0	*	.0	*	.0	.0	.0	.0	.2	
1<2	NO PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	TOT %	*	*	.0	*	.0	*	.0	.0	.0	.0	.2	
	PCP	.0	.1	.1	.0	.0	.0	.0	.0	.0	.0	.2	
2<5	NO PCP	.0	*	.2	*	.0	.0	.0	.0	.0	.0	.3	
	TOT %	.0	.1	.3	*	.0	.0	.0	.0	.0	.0	.4	
	PCP	.1	.4	.4	.1	*	.0	*	*	.0	.0	1.2	
5<10	NO PCP	.6	3.0	3.9	.7	.1	*	*	*	.0	.1	8.6	
	TOT %	.6	3.4	4.3	.9	.2	*	.1	.1	.0	.1	9.7	
	PCP	.2	.4	.5	.2	.0	.0	.0	*	.0	.0	1.3	
10+	NO PCP	4.3	23.5	44.0	11.1	2.8	.4	.3	1.0	.0	1.0	88.3	
	TOT %	4.5	23.9	44.5	11.3	2.8	.4	.3	1.0	.0	1.0	89.6	
	TOT OBS												2556
	TOT PCT	5.2	27.6	49.1	12.2	2.9	.4	.3	1.1	.0	1.1	100.0	

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED WITH VARYING VALUES OF VISIBILITY

VSBY (NM)	SPD KTS	N	NE	E	SE	S	SW	W	NW	VAR	CALM	PCT	TOTAL OBS
	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
<1/2	4-10	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	11-21	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
1/2<1	4-10	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	11-21	.0	.1	.0	*	.0	.0	.0	.0	.0		.1	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	.0	.1	.0	*	.0	.0	.0	.0	.0	.0	.1	
	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
1<2	4-10	.0	.0	*	.0	.0	.0	.0	.0	.0		*	
	11-21	.0	*	.0	*	.0	*	.0	.0	.0		.1	
	22+	*	*	.0	.0	.0	.0	.0	.0	.0		*	
	TOT %	*	*	*	*	.0	*	.0	.0	.0	.0	.2	
	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
2<5	4-10	.0	.1	.1	*	.0	.0	.0	.0	.0		.2	
	11-21	.0	.1	.3	*	.0	.0	.0	.0	.0		.4	
	22+	.0	.1	*	.0	.0	.0	.0	.0	.0		.1	
	TOT %	.0	.3	.4	.1	.0	.0	.0	.0	.0	.0	.8	
	0-3	*	.1	.1	.1	*	*	*	.0	.0	.1	.5	
5<10	4-10	.2	.9	1.4	.4	.1	*	.1	*	.0		3.2	
	11-21	.3	2.2	2.4	.3	.1	.0	.0	*	.0		5.3	
	22+	*	.4	.3	*	.0	.0	.0	.0	.0		.8	
	TOT %	.6	3.6	4.2	.8	.2	.1	.1	.1	.0	.1	9.7	
	0-3	.4	.7	.9	1.0	.3	*	*	.1	.0	1.0	4.4	
10+	4-10	1.4	8.1	16.9	6.1	1.6	.3	.2	.5	.0		35.0	
	11-21	2.2	14.3	24.0	3.9	.8	.1	*	.3	.0		45.5	
	22+	.3	1.9	2.0	.1	.1	.0	.0	.0	.0		4.4	
	TOT %	4.2	25.0	43.8	11.1	2.7	.4	.2	1.0	.0	1.0	89.3	
	TOT OBS												2855
	TOT PCT	4.8	29.0	48.4	12.0	2.8	.5	.3	1.0	.0	1.1	100.0	

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PERIOD: (PRIMARY) 1949-1971
(OVER-ALL) 1880-1971

AREA MONA PASSAGE
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TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET,NH >4/8) AND OCCURRENCE OF NH <5/8 BY HOUR

HOUR (GMT)	000 149	150 299	300 599	600 999	1000 1999	2000 3499	3500 4999	5000 6499	6500 7999	8000+	TOTAL	NH <5/8 ANY HGT	TOTAL OBS
00&03	.0	.0	.7	4.1	6.9	3.9	2.2	.2	.0	.7	18.8	81.2	538
06&09	.2	.0	.7	3.9	4.3	2.6	.7	.3	.0	.2	12.8	87.2	584
12&15	.0	.0	.9	2.3	4.9	4.3	2.1	.6	.0	.0	15.0	85.0	532
18&21	.2	.3	.5	2.6	4.4	3.9	1.9	.6	.2	.0	14.5	85.5	643
TOT	2	2	16	74	116	84	39	10	1	5	349	1948	2297
PCT	.1	.1	.7	3.2	5.1	3.7	1.7	.4	*	.2	15.2	84.8	100.0

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

HOUR (GMT)	<1/2	1/2<1	1<2	2<5	5<10	10+	TOTAL OBS
00&03	.0	.1	.1	.7	11.5	87.5	696
06&09	.0	.0	.0	.8	11.1	88.1	722
12&15	.0	.4	.1	1.0	8.8	89.6	703
18&21	.0	.0	.4	.5	8.2	90.9	768
TOT	0	4	5	22	285	2573	2889
PCT	.0	.1	.2	.8	9.9	89.1	100.0

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR CEILING HGT (FEET,NH >4/8),BY HOUR

HOUR (GMT)	<150 <50YD	<600 <1	<1000 <5	1000+ AND5+	NH <5/8 AND 5+	TOTAL OBS
00&03	.0	.8	5.1	14.4	80.5	507
06&09	.2	.9	5.3	8.0	86.7	563
12&15	.0	1.0	3.9	12.1	84.0	511
18&21	.2	1.0	3.9	11.3	84.8	611
TOT	2	20	100	249	1843	2192
PCT	.1	.9	4.6	11.4	84.1	100.0

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

TEMP F	0-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100	TOTAL OBS	PCT FREQ
90/94	.0	.0	.0	.0	.0	*	.0	.0	1	*
85/89	.0	.0	.0	.1	.3	.4	.2	.2	26	1.3
80/84	.0	.0	*	.3	5.3	8.5	2.5	1.2	360	17.9
75/79	.0	.0	.0	.9	6.9	35.3	22.8	7.9	1484	73.8
70/74	.0	.0	.0	.1	1.3	1.6	2.1	1.7	138	6.9
65/69	.0	.0	.0	.0	.0	.0	*	*	2	.1
TOTAL	0	0	1	31	278	923	555	223	2011	100.0
PCT	.0	.0	*	1.5	13.8	45.9	27.6	11.1		

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

N	NE	E	SE	S	SW	W	NW	VAR	CALM
.0	.0	*	.0	.0	.0	.0	.0	.0	.0
.1	.3	.7	.1	*	.0	.0	*	.0	.0
.4	3.6	10.2	2.6	.6	*	*	.2	.0	.2
3.5	21.2	36.3	8.7	2.0	.3	.2	.8	.0	.8
1.0	2.9	1.8	.5	.1	.1	.1	.2	.0	.1
*	.0	*	.0	.0	.0	.0	*	.0	.0
5.1	28.0	49.0	11.9	2.7	.4	.3	1.3	.0	1.1

TABLE 15

MEANS,EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

HOUR (GMT)	MAX	99%	95%	50%	5%	1%	MIN	MEAN	TOTAL OBS
00&03	86	82	80	77	74	73	70	77.3	722
06&09	84	81	79	76	74	72	69	76.3	752
12&15	87	83	81	77	73	71	68	77.1	731
18&21	91	87	84	80	75	73	71	79.6	791
TOT	91	85	82	77	74	72	68	77.6	2996

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

HOUR (GMT)	0-29	30-59	60-69	70-79	80-89	90-100	MEAN	TOTAL OBS
00&03	.0	.6	8.5	49.9	31.2	9.9	79	497
06&09	.0	.7	6.7	42.5	36.3	13.7	80	534
12&15	.0	1.3	13.4	46.3	26.3	12.7	78	479
18&21	.0	3.6	26.5	45.5	16.2	8.2	75	525
TOT	0	32	281	936	560	226	78	2035

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PERIOD: (PRIMARY) 1949-1971
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AREA MONA PASSAGE
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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

AIR-SEA TMP DIF	69 72	73 76	77 80	81 84	85 88	89 92	TOT	W FOG	WO FOG
11/13	.0	.0	.0	.0	.0	*	1	.0	*
9/10	.0	.0	.0	.0	.1	.1	5	.0	.2
7/8	.0	.0	.2	*	.3	*	13	.0	.6
6	.0	.0	.1	.1	.2	.0	8	.0	.3
5	.0	.0	.1	.6	.2	.0	19	.0	.8
4	.0	.1	.4	1.2	.4	.0	50	.0	2.1
3	.0	.1	1.0	1.6	*	.0	64	.0	2.7
2	.0	.1	2.7	1.8	*	.0	109	.0	4.7
1	.0	.6	4.7	1.7	.1	.0	165	.0	7.1
0	.0	1.3	10.3	1.0	*	.0	296	.0	12.7
-1	.0	3.5	13.1	.9	.0	.0	408	.1	17.4
-2	*	6.7	10.2	.3	.0	.0	403	*	17.2
-3	*	6.0	6.5	.3	.0	.0	299	.0	12.8
-4	*	5.9	3.3	.2	.0	.0	218	.0	9.3
-5	*	4.5	2.0	.0	.0	.0	152	.0	6.5
-6	.3	2.3	.5	*	.0	.0	73	*	3.1
-7/-8	.2	1.2	.3	.0	.0	.0	41	.0	1.8
-9/-10	.1	.2	.0	.0	.0	.0	8	.0	.3
-11/-13	*	*	.0	.0	.0	.0	2	.0	.1
TOTAL	20	756	1293	228	33	4	2334	4	2330
PCT	.9	32.4	55.4	9.8	1.4	.2	100.0	.2	99.8

PERIOD: (OVER-ALL) 1963-1971

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

N

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.0	.3	.0	.0	.0	.0	.3
1-2	.0	.7	.5	.0	.0	.0	1.2
3-4	.0	.5	.6	.0	.0	.0	1.1
5-6	.0	.4	1.2	.3	.0	.0	1.8
7	.0	.0	.0	.1	.0	.0	.1
8-9	.0	.0	.0	.1	.0	.0	.1
10-11	.0	.0	.1	.0	.0	.0	.1
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.0	1.9	2.4	.5	.0	.0	4.8

NE

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.1	1.8	.0	.0	.0	.0	1.9
1-2	.3	3.5	3.3	.0	.0	.0	7.1
3-4	.0	3.5	4.0	.2	.0	.0	7.7
5-6	.1	.9	4.7	.7	.0	.0	6.4
7	.0	.0	2.7	.3	.0	.0	3.0
8-9	.0	.1	.8	.7	.0	.0	1.6
10-11	.0	.0	.2	.6	.0	.0	.8
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.1	.0	.0	.1
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.6	9.9	15.7	2.5	.0	.0	28.6

E

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.1	1.9	.0	.0	.0	.0	2.0
1-2	.5	7.5	4.2	.0	.0	.0	12.3
3-4	.0	6.4	10.0	.9	.0	.0	17.3
5-6	.0	2.1	9.0	.4	.0	.0	11.5
7	.0	.5	2.9	.7	.0	.0	4.1
8-9	.0	.0	.4	.1	.0	.0	.5
10-11	.0	.0	.4	.1	.0	.0	.5
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.3	.0	.0	.3
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.7	18.4	26.9	2.6	.0	.0	48.6

SE

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.0	1.2	.0	.0	.0	.0	1.2
1-2	.3	2.9	.7	.0	.0	.0	3.9
3-4	.1	1.4	1.9	*	.0	.0	3.3
5-6	.0	.9	.6	.0	.0	.0	1.5
7	.0	*	.3	*	.0	.0	.3
8-9	.0	.1	.0	.0	.0	.0	.1
10-11	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.5	6.6	3.4	.1	.0	.0	10.6

PERIOD: (OVER-ALL) 1963-1971

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TABLE 18 (CONT)

AREA MONA PASSAGE 17.9N 67.8W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

	S							SW						
HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.0	.3	.1	.0	.0	.0	.4	.0	.1	.0	.0	.0	.0	.1
1-2	.0	.7	.1	.0	.0	.0	.8	.0	.2	.0	.0	.0	.0	.2
3-4	.0	.5	.5	.0	.0	.0	1.0	.0	.0	.0	.0	.0	.0	.0
5-6	.0	.4	.3	.0	.0	.0	.7	.0	.0	.0	.0	.0	.0	.0
7	.0	.0	.1	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
8-9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10-11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.0	1.9	1.2	.0	.0	.0	3.0	.0	.3	.0	.0	.0	.0	.3

	W							NW							TOTAL
HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT	1-3	4-10	11-21	22-33	34-47	48+	PCT	PCT
<1	.0	.1	.0	.0	.0	.0	.1	.1	.1	.0	.0	.0	.0	.3	
1-2	.1	.0	.0	.0	.0	.0	.1	*	.3	.2	.0	.0	.0	.5	
3-4	.0	.1	.0	.0	.0	.0	.1	.0	.1	.3	.0	.0	.0	.4	
5-6	.0	.0	.0	.0	.0	.0	.0	.0	.0	*	.0	.0	.0	*	
7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
8-9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
10-11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
13-16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
17-19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
20-22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
23-25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
26-32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
33-40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
41-48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
49-60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
61-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
71-86	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
87+	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
TOT PCT	.1	.3	.0	.0	.0	.0	.4	.2	.6	.5	.0	.0	.0	1.3	97.5

WIND SPEED (KTS) VS SEA HEIGHT (FT)

HGT	0-3	4-10	11-21	22-33	34-47	48+	PCT	TOT OBS
<1	3.6	5.8	.1	.0	.0	.0	9.5	
1-2	1.4	15.7	8.8	.0	.0	.0	26.0	
3-4	.3	12.4	17.2	1.2	.0	.0	31.0	
5-6	.1	4.6	15.6	1.3	.0	.0	21.6	
7	.0	.6	5.9	1.2	.0	.0	7.6	
8-9	.0	.3	1.2	.9	.0	.0	2.3	
10-11	.0	.0	.7	.7	.0	.0	1.4	
12	.0	.0	.0	.0	.0	.0	.0	
13-16	.0	.0	.0	.4	.0	.0	.4	
17-19	.0	.0	.0	.0	.0	.0	.0	
20-22	.0	.0	.0	.0	.0	.0	.0	
23-25	.0	.0	.0	.0	.0	.0	.0	
26-32	.0	.0	.0	.0	.0	.0	.0	
33-40	.0	.0	.0	.0	.0	.0	.0	
41-48	.0	.0	.0	.0	.0	.0	.0	
49-60	.0	.0	.0	.0	.0	.0	.0	
61-70	.0	.0	.0	.0	.0	.0	.0	
71-86	.0	.0	.0	.0	.0	.0	.0	
87+	.0	.0	.0	.0	.0	.0	.0	
TOT PCT	5.5	39.4	49.5	5.6	.0	.0	100.0	693

PERIOD: (OVER-ALL) 1949-1971

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

PERIOD (SEC)	<1	1-2	3-4	5-6	7	8-9	10-11	12	13-16	17-19	20-22	23-25	26-32	33-40	41-48	49-60	61-70	71-86	87+	TOTAL	MEAN HGT
<6	2.8	14.2	20.1	8.2	1.7	.7	.6	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	899	3
6-7	.2	1.3	6.6	11.3	4.4	1.6	.6	.2	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	487	5
8-9	.2	.6	1.5	2.8	3.9	1.1	.7	.4	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	211	6
10-11	.0	.3	.5	.6	.3	.8	.5	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	57	6
12-13	.0	.0	.2	.3	.0	.2	.1	.2	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	17	7
>13	.0	.0	.0	.3	.1	.1	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	9	8
INDET	2.0	2.2	2.4	1.7	.8	.3	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	175	3
TOTAL	96	345	580	467	207	86	48	17	8	0	0	1	0	0	0	0	0	0	0	1855	4
PCT	5.2	18.6	31.3	25.2	11.2	4.6	2.6	.9	.4	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	100.0	

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PERIOD: (PRIMARY) 1949-1971
(OVER-ALL) 1860-1971

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TABLE 1

PERCENTAGE FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

WND DIR	RAIN	RAIN SHWR	DRZL	PRECIPITATION TYPE FRZG PCPN	SNOW	OTHER FRZN PCPN	HAIL	PCT FREQ PCPN AT OB TIME	TOTAL PCPN OBS	THDR LTNG	OTHER WEATHER PHENOMENA FOG WD PCPN	SMOKE HAZE	DUST BLWG DUST SNOW	NO SIG WEA	TOTAL OBS
N	.1	*	*	.0	.0	.0	.0	.2		.0	*	*	.0	4.3	
NE	.2	.3	*	.0	.0	.0	.0	.5		.0	.1	.1	*	23.9	
E	.2	.7	.1	.0	.0	.0	.0	1.0		*	.2	.2	*	48.6	
SE	.0	.1	*	.0	.0	.0	.0	.1		.1	.2	.1	.0	13.9	
S	*	*	.0	.0	.0	.0	.0	.1		.0	*	.0	.0	3.5	
SW	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	.0	.0	.7	
W	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	.0	.0	.1	
NW	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	.0	.0	.6	
VAR	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	
CALM	*	.0	.0	.0	.0	.0	.0	*		*	.0	*	.0	1.2	
TOT OBS									60						3082
TOT PCT	.6	1.2	.2	.0	.0	.0	.0	1.9		.2	.6	.5	.1	96.8	

TABLE 2

PERCENTAGE FREQUENCY OF WEATHER OCCURRENCE BY HOUR

HOUR (GMT)	RAIN	RAIN SHWR	DRZL	PRECIPITATION TYPE FRZG PCPN	SNOW	OTHER FRZN PCPN	HAIL	PCT FREQ PCPN AT OB TIME	TOTAL PCPN OBS	THDR LTNG	OTHER WEATHER PHENOMENA FOG WD PCPN	SMOKE HAZE	DUST BLWG DUST SNOW	NO SIG WEA	TOTAL OBS
00&03	.8	1.1	.1	.0	.0	.0	.0	2.1		.8	.3	.3	.0	96.5	
06&09	.5	.9	.4	.0	.0	.0	.0	1.8		.0	.6	.4	.0	97.2	
12&15	.6	1.8	.1	.0	.0	.0	.0	2.6		.0	.5	.4	.3	96.3	
18&21	.2	1.1	.0	.0	.0	.0	.0	1.3		.0	.7	.8	.0	97.1	
TOT									60						3113
PCT	.5	1.2	.2	.0	.0	.0	.0	1.9		.2	.5	.5	.1	96.8	

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

WND DIR	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	34-47	48+	TOTAL OBS	PCT FREQ	MEAN SPD	HOUR (GMT) 00	03	06	09	12	15	18	21
N	.2	2.1	1.8	.1	.0	.0		4.2	11.0	5.0	5.7	4.2	2.6	4.0	2.7	4.0	3.8
NE	.8	8.7	14.4	1.9	.1	.0		25.8	13.3	26.6	26.9	24.9	23.5	24.3	26.5	26.5	30.8
E	1.0	18.1	28.0	2.5	*	.0		49.6	12.7	46.2	56.5	51.2	57.6	52.1	54.6	46.1	46.6
SE	.7	7.4	5.8	.2	.0	.0		14.2	10.5	14.6	6.5	14.1	12.7	13.6	11.9	16.3	13.9
S	.3	2.1	1.0	*	.0	.0		3.4	9.1	4.2	1.9	2.6	1.0	3.9	2.3	3.9	3.4
SW	.1	.5	.1	.0	.0	.0		.7	8.3	.5	.8	.5	.6	.6	.0	1.2	.6
W	*	*	.1	.0	.0	.0		.1	8.4	.0	.0	.1	.0	.4	.0	.1	.0
NW	.1	.2	.2	.0	.0	.0		.6	8.9	.5	.0	.7	.6	.3	1.2	.8	.3
VAR	.0	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
CALM	1.4							1.4	.0	2.3	1.7	1.9	1.3	.8	.8	1.0	.6
TOT OBS	166	1397	1839	172	3	0	3577		12.1	733	119	744	155	760	130	776	160
TOT PCT	4.6	39.1	51.4	4.8	.1	.0		100.0		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 3A

WND DIR	WIND SPEED (KNOTS) 0-6	7-16	17-27	28-40	41+	TOTAL OBS	PCT FREQ	MEAN SPD	HOUR (GMT) 00 03	06 09	12 15	18 21
N	1.0	2.6	.6	*	.0		4.2	11.0	5.1	3.9	3.8	4.0
NE	3.0	15.7	6.6	.4	*		25.8	13.3	26.6	24.7	24.6	27.2
E	5.6	32.9	10.8	.3	.0		49.6	12.7	47.7	52.3	52.5	46.2
SE	3.2	9.7	1.3	.1	.0		14.2	10.5	13.5	13.8	13.3	15.9
S	1.2	2.0	.2	.0	.0		3.4	9.1	3.9	2.3	3.7	3.8
SW	.3	.3	.1	.0	.0		.7	8.3	.6	.5	.5	1.1
W	.1	.1	.0	.0	.0		.1	8.4	.0	.1	.3	.1
NW	.2	.4	.0	.0	.0		.6	8.9	.4	.7	.4	.7
VAR	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	.0
CALM	1.4						1.4	.0	2.2	1.8	.8	1.0
TOT OBS	570	2279	698	29	1	3577		12.1	852	899	890	936
TOT PCT	15.9	63.7	19.5	.8	*		100.0		100.0	100.0	100.0	100.0

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TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

HOUR	CALM	1-3	4-10	WIND SPEED (KNOTS) 11-21	22-33	34-47	48+	MEAN	PCT FREQ	TOTAL OBS
00&03	2.2	4.6	38.6	48.1	6.3	.1	.0	12.0	100.0	852
06&09	1.8	2.4	42.2	49.5	4.0	.1	.0	11.9	100.0	899
12&15	.8	3.3	39.9	51.8	4.2	.1	.0	12.0	100.0	890
18&21	1.0	2.7	35.7	55.9	4.8	.0	.0	12.5	100.0	936
TOT	51	115	1397	1839	172	3	0	12.1		3577
PCT	1.4	3.2	39.1	51.4	4.8	.1	.0		100.0	

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS) BY WIND DIRECTION

WND DIR	0-2	3-4	5-7	8 & OBSCD	TOTAL OBS	MEAN CLOUD COVER
N	2.0	1.5	1.1	.4		3.4
NE	11.4	7.6	5.2	1.0		3.1
E	24.0	15.3	8.1	1.4		2.9
SE	7.8	4.5	1.9	.5		2.6
S	2.2	1.0	.5	.1		2.5
SW	.4	.1	*	*		1.9
W	*	*	*	*		4.2
NW	.2	.2	*	.0		2.5
VAR	.0	.0	.0	.0		.0
CALM	.7	.3	.3	.1		2.7
TOT OBS	1240	777	437	87	2541	2.9
TOT PCT	48.8	30.6	17.2	3.4	100.0	

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT,NH >4/8) AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

WND DIR	000 149	150 299	300 599	600 999	1000 1999	2000 3499	3500 4999	5000 6499	6500 7999	8000+	NH <5/8 ANY HGT	TOTAL OBS
N	.0	.0	*	.3	.3	.3	.1	.0	.0	.0	3.9	
NE	*	*	.3	.8	1.6	1.2	.4	*	.0	.1	20.9	
E	*	.0	.2	1.0	2.2	1.3	.6	.3	.1	.0	43.1	
SE	*	.0	.1	.2	.6	.3	.1	*	*	.0	13.2	
S	.0	.0	.0	*	.1	.1	.1	.0	.1	.0	3.4	
SW	.0	.0	.0	.0	*	.0	.0	.0	.0	.0	.6	
W	.0	.0	.0	.0	*	*	.0	.0	.0	.0	.1	
NW	.0	.0	.0	.0	*	*	.0	.0	.0	.0	.5	
VAR	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
CALM	.0	*	*	.0	.1	.0	.0	.0	.0	.0	1.2	
TOT OBS	3	2	17	59	126	82	33	9	4	2	2204	2541
TOT PCT	.1	.1	.7	2.3	5.0	3.2	1.3	.4	.2	.1	86.7	100.0

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

CEILING (FEET)	VSBY (NM) * OR >10	* OR >5	* OR >2	* OR >1	* OR >1/2	* OR >1/4	* OR >50YD	* OR >0
* OR >6500	.2	.2	.2	.2	.2	.2	.2	.2
* OR >5000	.5	.6	.6	.6	.6	.6	.6	.6
* OR >3500	1.6	1.8	1.8	1.8	1.8	1.8	1.9	1.9
* OR >2000	4.2	5.0	5.0	5.0	5.0	5.0	5.1	5.1
* OR >1000	8.5	10.0	10.0	10.0	10.0	10.0	10.1	10.1
* OR >600	10.4	12.2	12.3	12.3	12.3	12.3	12.4	12.4
* OR >300	11.0	12.9	12.9	13.0	13.0	13.0	13.0	13.0
* OR >150	11.0	12.9	13.0	13.1	13.1	13.1	13.1	13.1
* OR > 0	11.1	13.1	13.1	13.2	13.2	13.2	13.3	13.3
TOTAL	284	334	336	338	338	338	339	339

TOTAL NUMBER OF OBS: 2556 PCT FREQ NH <5/8: 86.7

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

0	1	2	3	4	5	6	7	8	OBSCD	TOTAL OBS
13.5	20.8	25.8	18.0	8.7	4.1	4.2	2.8	2.1	.1	2722

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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF PRECIPITATION WITH VARYING VALUES OF VISIBILITY

VSBY (NM)		N	NE	E	SE	S	SW	W	NW	VAR	CALM	PCT	TOTAL OBS
	PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
<1/2	NO PCP	.0	*	.1	.0	.0	.0	.0	.0	.0	.0	.1	
	TOT %	.0	*	.1	.0	.0	.0	.0	.0	.0	.0	.1	
	PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
1/2<1	NO PCP	.0	.0	*	*	.0	.0	.0	.0	.0	.0	*	
	TOT %	.0	.0	*	*	.0	.0	.0	.0	.0	.0	*	
	PCP	.0	*	.0	.0	.0	.0	.0	.0	.0	*	.1	
1<2	NO PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	TOT %	.0	*	.0	.0	.0	.0	.0	.0	.0	*	.1	
	PCP	.0	*	.1	*	.0	.0	.0	.0	.0	.0	.1	
2<5	NO PCP	*	.0	.0	.0	.0	.0	.0	*	.0	.0	.1	
	TOT %	*	*	.1	*	.0	.0	.0	*	.0	.0	.2	
	PCP	.1	.2	.4	*	*	.0	.0	.0	.0	.0	.8	
5<10	NO PCP	.3	2.3	4.6	.8	.2	.1	*	*	.0	.1	8.4	
	TOT %	.5	2.5	5.0	.9	.2	.1	*	*	.0	.1	9.3	
	PCP	*	.3	.6	*	*	.0	.0	.0	.0	.0	.9	
10+	NO PCP	4.0	21.9	44.4	13.3	3.3	.6	.1	.5	.0	1.2	89.4	
	TOT %	4.0	22.2	45.0	13.4	3.4	.6	.1	.5	.0	1.2	90.4	
	TOT OBS												3070
	TOT PCT	4.5	24.7	50.1	14.3	3.6	.7	.1	.6	.0	1.3	100.0	

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED WITH VARYING VALUES OF VISIBILITY

VSBY (NM)	SPD KTS	N	NE	E	SE	S	SW	W	NW	VAR	CALM	PCT	TOTAL OBS
	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
<1/2	4-10	.0	*	.1	.0	.0	.0	.0	.0	.0		.1	
	11-21	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	.0	*	.1	.0	.0	.0	.0	.0	.0	.0	.1	
	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
1/2<1	4-10	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	11-21	.0	.0	*	*	.0	.0	.0	.0	.0		*	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	.0	.0	*	*	.0	.0	.0	.0	.0	.0	*	
	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	*	*	
1<2	4-10	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	11-21	.0	*	.0	.0	.0	.0	.0	.0	.0		*	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	.0	*	.0	.0	.0	.0	.0	.0	.0	*	.1	
	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
2<5	4-10	*	.0	*	*	*	.0	.0	.0	.0		.1	
	11-21	.0	*	.1	*	.0	.0	.0	*	.0		.1	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	*	*	.1	*	*	.0	.0	*	.0	.0	.2	
	0-3	*	.1	.1	.1	.1	.0	.0	.0	.0	.1	.4	
5<10	4-10	.3	.5	1.5	.3	.1	.1	*	*	.0		2.9	
	11-21	.2	1.5	3.1	.5	*	.0	.0	.0	.0		5.2	
	22+	.0	.3	.4	.0	.0	.0	.0	.0	.0		.7	
	TOT %	.5	2.4	5.0	.9	.2	.1	*	*	.0	.1	9.2	
	0-3	.2	.7	.9	.6	.2	.1	*	.1	.0	1.2	4.1	
10+	4-10	1.7	8.0	16.3	7.1	2.6	.4	.0	.2	.0		35.8	
	11-21	1.6	13.0	25.3	5.3	1.0	.1	.1	.2	.0		46.6	
	22+	.1	1.4	2.2	.2	*	.0	.0	.0	.0		3.9	
	TOT %	3.7	23.1	44.6	13.3	3.3	.6	.1	.5	.0	1.2	90.4	
	TOT OBS												3373
	TOT PCT	4.2	25.6	49.9	14.2	3.5	.7	.1	.5	.0	1.3	100.0	

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TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET,NH >4/8) AND OCCURRENCE OF NH <5/8 BY HOUR

HOUR (GMT)	000 149	150 299	300 599	600 999	1000 1999	2000 3499	3500 4999	5000 6499	6500 7999	8000+	TOTAL	NH <5/8 ANY HGT	TOTAL OBS
00&03	.2	.2	.8	2.9	4.5	4.2	2.1	.5	.0	.0	15.4	84.6	616
06&09	.1	.0	.4	1.9	5.9	2.4	1.3	.3	.1	.3	12.9	87.1	675
12&15	.0	.3	1.0	1.9	5.1	3.6	.9	.1	.3	.0	13.3	86.7	670
18&21	.1	.0	.3	2.0	3.4	2.2	.7	.5	.1	.0	9.3	90.7	741
TOT	3	3	17	59	127	82	33	10	4	2	340	2362	2702
PCT	.1	.1	.6	2.2	4.7	3.0	1.2	.4	.1	.1	12.6	87.4	100.0

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

HOUR (GMT)	<1/2	1/2<1	1<2	2<5	5<10	10+	TOTAL OBS
00&03	.2	.0	.0	.2	9.0	90.5	801
06&09	.1	.1	.0	.0	11.4	88.3	856
12&15	.0	.0	.2	.2	8.3	91.3	846
18&21	.0	.0	.0	.3	8.1	91.6	902
TOT	3	1	2	7	313	3079	3405
PCT	.1	*	.1	.2	9.2	90.4	100.0

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR CEILING HGT (FEET,NH >4/8),BY HOUR

HOUR (GMT)	<150 <50YD	<600 <1	<1000 <5	1000+ AND5+	NH <5/8 AND 5+	TOTAL OBS
00&03	.2	1.4	4.7	11.8	83.6	578
06&09	.2	.8	2.8	11.1	86.1	633
12&15	.0	1.4	3.6	10.5	85.9	639
18&21	.1	.4	2.5	7.1	90.4	706
TOT	3	25	86	255	2215	2556
PCT	.1	1.0	3.4	10.0	86.7	100.0

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

TEMP F	0-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100	TOTAL OBS	PCT FREQ
90/94	.0	.0	.0	.1	.0	.0	*	.0	4	.2
85/89	.0	.0	.0	.2	.6	.6	.2	.1	43	1.7
80/84	.0	.0	.1	.8	5.9	8.6	3.6	1.9	529	20.9
75/79	.0	.0	.0	1.1	6.8	36.4	21.2	7.1	1840	72.6
70/74	.0	.0	.0	.1	.8	1.4	1.3	1.0	117	4.6
65/69	.0	.0	.0	.0	.0	.0	*	.0	1	*
TOTAL	0	0	3	57	359	1190	668	257	2534	100.0
PCT	.0	.0	.1	2.2	14.2	47.0	26.4	10.1		

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

	N	NE	E	SE	S	SW	W	NW	VAR	CALM
	.0	*	*	.1	.0	.0	.0	.0	.0	.0
	.0	.2	.8	.4	.1	.1	.0	.0	.0	*
	1.0	3.7	9.9	4.0	1.5	.2	*	.1	.0	.4
	3.4	19.2	36.8	9.3	2.1	.5	.1	.4	.0	.8
	.3	1.7	2.1	.3	*	*	*	*	.0	.1
	*	*	.0	.0	.0	.0	.0	.0	.0	.0
	4.7	25.0	49.7	14.1	3.7	.8	.2	.6	.0	1.3

TABLE 15

MEANS,EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

HOUR (GMT)	MAX	99%	95%	50%	5%	1%	MIN	MEAN	TOTAL OBS
00&03	87	82	80	78	74	72	71	77.6	854
06&09	83	81	79	77	74	72	70	76.6	905
12&15	88	84	81	78	74	72	68	77.6	885
18&21	91	88	85	80	76	74	73	80.2	932
TOT	91	86	83	78	74	73	68	78.0	3576

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

HOUR (GMT)	0-29	30-59	60-69	70-79	80-89	90-100	MEAN	TOTAL OBS
00&03	.0	1.0	10.3	49.8	28.5	10.4	79	603
06&09	.0	.3	6.0	43.0	36.7	13.9	80	646
12&15	.0	1.8	12.5	47.9	28.3	9.5	78	654
18&21	.0	6.2	27.5	46.5	13.2	6.5	73	658
TOT	0	61	364	1197	681	258	77	2561

MARCH

PERIOD: (PRIMARY) 1949-1971
(OVER-ALL) 1860-1971

AREA MONA PASSAGE 17.9N 67.8W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION) VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

AIR-SEA TMP DIF	65 68	69 72	73 76	77 80	81 84	85 88	89 92	TOT	W FOG	WO FOG
11/13	.0	.0	.0	.0	.0	.0	*	1	.0	*
9/10	.0	.0	.0	.0	.1	.1	.2	10	.0	.4
7/8	.0	.0	.0	.1	.3	.3	.0	20	.0	.7
6	.0	.0	.0	.2	.1	.5	.0	24	.0	.8
5	.0	.0	.0	.2	.8	.4	.0	41	*	1.4
4	.0	.0	.1	.4	1.4	.2	.0	56	*	1.9
3	.0	.0	.1	.6	2.5	.1	.0	95	.1	3.3
2	.0	.0	.3	2.6	2.2	.1	.0	145	*	5.0
1	.0	.0	.5	5.3	2.1	.1	.0	225	.1	7.7
0	.0	.0	.8	12.3	1.6	.0	.0	420	.1	14.6
-1	.0	.0	2.9	13.7	.9	.0	.0	498	.1	17.4
-2	.0	.0	6.9	11.3	.4	.0	.0	530	.1	18.5
-3	.0	.0	4.7	6.1	.1	.0	.0	311	.0	10.9
-4	.0	*	5.1	3.8	.0	.0	.0	255	.0	8.9
-5	.0	.1	2.5	1.7	.1	.0	.0	122	.0	4.3
-6	.0	.2	1.2	.5	.0	.0	.0	56	.0	2.0
-7/-8	.0	.2	.7	.4	.0	.0	.0	36	.0	1.3
-9/-10	*	.0	.1	.1	.0	.0	.0	7	.0	.2
TOTAL	1		737		355		6		17	2835
		16		1685		52		2852		
PCT	*	.6	25.8	59.1	12.4	1.8	.2	100.0	.6	99.4

PERIOD: (OVER-ALL) 1963-1971

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

N

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.1	.2	.0	.0	.0	.0	.3
1-2	.0	1.1	.6	.0	.0	.0	1.7
3-4	.0	.4	.7	.2	.0	.0	1.4
5-6	.0	.0	.4	.1	.0	.0	.5
7	.0	.0	.2	.0	.0	.0	.2
8-9	.0	.1	.3	.0	.0	.0	.4
10-11	.0	.0	.2	.0	.0	.0	.2
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.1	1.8	2.6	.3	.0	.0	4.8

NE

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.3	1.0	.0	.0	.0	.0	1.2
1-2	.4	3.7	3.3	.0	.0	.0	7.4
3-4	.0	3.0	7.6	.6	.0	.0	11.1
5-6	.0	.3	6.6	.6	.0	.0	7.5
7	.0	.5	3.1	.3	.0	.0	3.8
8-9	.0	*	.3	.6	.0	.0	.9
10-11	.0	.0	.5	.5	.0	.0	1.1
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.1	.0	.0	.1
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.7	8.5	21.3	2.8	.0	.0	33.2

E

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.1	1.2	.1	.0	.0	.0	1.5
1-2	.5	8.3	5.5	.0	.0	.0	14.3
3-4	.0	5.3	9.3	.4	.0	.0	15.0
5-6	.0	1.2	8.8	.9	.0	.0	11.0
7	.1	.4	2.9	.4	.0	.0	3.8
8-9	.0	.0	.6	.1	.0	.0	.7
10-11	.0	.1	.3	.0	.0	.0	.4
12	.0	.0	.1	.0	.0	.0	.1
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.1	.0	.0	.0	.1
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.7	16.5	27.7	1.9	.0	.0	46.9

SE

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.3	.4	.0	.0	.0	.0	.7
1-2	.3	2.8	1.2	.0	.0	.0	4.3
3-4	.0	1.6	1.8	*	.0	.0	3.4
5-6	.0	.5	1.3	.0	.0	.0	1.8
7	.0	.0	.2	.0	.0	.0	.2
8-9	.0	.0	.0	.0	.0	.0	.0
10-11	.0	*	.0	.0	.0	.0	*
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.5	5.3	4.5	*	.0	.0	10.3

PERIOD: (OVER-ALL) 1963-1971 MARCH AREA MONA PASSAGE 17.9N 67.8W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

	S							SW						
HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.0	.1	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
1-2	.0	1.2	.1	.0	.0	.0	1.3	.0	.2	.0	.0	.0	.0	.2
3-4	.0	.4	.4	.0	.0	.0	.7	.0	.0	.1	.0	.0	.0	.1
5-6	.0	.1	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8-9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10-11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.0	1.8	.5	.0	.0	.0	2.3	.0	.2	.1	.0	.0	.0	.3

	W							NW							TOTAL
HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT	1-3	4-10	11-21	22-33	34-47	48+	PCT	PCT
<1	.0	.0	.0	.0	.0	.0	.0	*	.0	.0	.0	.0	.0	*	
1-2	.0	.0	.1	.0	.0	.0	.1	.0	.1	.1	.0	.0	.0	.2	
3-4	.0	.0	.0	.0	.0	.0	.0	.0	.0	.3	.0	.0	.0	.3	
5-6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
8-9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
10-11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
13-16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
17-19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
20-22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
23-25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
26-32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
33-40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
41-48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
49-60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
61-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
71-86	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
87+	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
TOT PCT	.0	.0	.1	.0	.0	.0	.1	*	.1	.4	.0	.0	.0	.5	98.5

WIND SPEED (KTS) VS SEA HEIGHT (FT)

HGT	0-3	4-10	11-21	22-33	34-47	48+	PCT	TOT OBS
<1	2.4	3.0	.1	.0	.0	.0	5.6	
1-2	1.3	17.4	10.9	.0	.0	.0	29.6	
3-4	.1	10.5	19.9	1.3	.0	.0	31.9	
5-6	.0	2.2	17.0	1.7	.0	.0	20.8	
7	.1	.9	6.4	.6	.0	.0	8.0	
8-9	.0	.1	1.1	.8	.0	.0	2.0	
10-11	.0	.1	1.0	.5	.0	.0	1.7	
12	.0	.0	.1	.0	.0	.0	.1	
13-16	.0	.0	.0	.1	.0	.0	.1	
17-19	.0	.0	.1	.0	.0	.0	.1	
20-22	.0	.0	.0	.0	.0	.0	.0	
23-25	.0	.0	.0	.0	.0	.0	.0	
26-32	.0	.0	.0	.0	.0	.0	.0	
33-40	.0	.0	.0	.0	.0	.0	.0	
41-48	.0	.0	.0	.0	.0	.0	.0	
49-60	.0	.0	.0	.0	.0	.0	.0	
61-70	.0	.0	.0	.0	.0	.0	.0	
71-86	.0	.0	.0	.0	.0	.0	.0	
87+	.0	.0	.0	.0	.0	.0	.0	
TOT PCT	3.9	34.3	56.8	5.0	.0	.0	100.0	787

PERIOD: (OVER-ALL) 1949-1971 TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

PERIOD (SEC)	<1	1-2	3-4	5-6	7	8-9	10-11	12	13-16	17-19	20-22	23-25	26-32	33-40	41-48	49-60	61-70	71-86	87+	TOTAL	MEAN HGT
<6	2.4	15.8	22.0	9.5	2.4	.4	.2	.1	*	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	1111	3
6-7	.0	1.1	5.7	10.8	4.3	1.4	.7	.1	.1	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	309	5
8-9	*	.6	2.0	1.6	2.6	1.1	.4	.1	.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	183	6
10-11	.0	.5	.4	.6	.5	.3	.3	*	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	59	6
12-13	.0	.0	.3	.3	.2	.0	.1	.0	.0	.0	*	.0	.0	.0	.0	.0	.0	.0	.0	21	6
>13	.0	.0	.0	.1	.1	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	8	7
INDET	2.5	2.3	2.0	1.6	.6	.3	.4	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	203	3
TOTAL	104	425	677	514	225	73	46	11	14	4	1	0	0	0	0	0	0	0	0	2094	4
PCT	5.0	20.3	32.3	24.5	10.7	3.5	2.2	.5	.7	.2	*	.0	.0	.0	.0	.0	.0	.0	.0	100.0	

APRIL

PERIOD: (PRIMARY) 1950-1971
(OVER-ALL) 1862-1971

AREA MONA PASSAGE
17.9N 67.8W

TABLE 1

PERCENTAGE FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

WND DIR	RAIN	RAIN SHWR	DRZL	PRECIPITATION TYPE FRZG PCPN	SNOW	OTHER FRZN PCPN	HAIL	PCT FREQ PCPN AT OB TIME	TOTAL PCPN OBS	THDR LTNG	OTHER WEATHER PHENOMENA FOG WD PCPN	SMOKE HAZE	DUST BLWG BLWG	DUST SNOW	NO SIG WEA	TOTAL OBS
N	*	.1	*	.0	.0	.0	.0	.2		*	*	*		.0	4.4	
NE	.2	.3	*	.0	.0	.0	.0	.5		.1	.1	*		.0	23.3	
E	.2	.6	.1	.0	.0	.0	*	.9		.2	.3	.1		.0	46.3	
SE	*	.1	.0	.0	.0	.0	.0	.2		.1	*	.1		.0	15.2	
S	.0	.1	.0	.0	.0	.0	.0	.1		*	.0	*		.0	3.8	
SW	.0	.1	.0	.0	.0	.0	.0	.1		.0	.0	.0		.0	.7	
W	.0	.0	.0	.0	.0	.0	.0	.0		*	.0	.0		.0	.5	
NW	*	*	.0	.0	.0	.0	.0	*		.0	.0	*		.0	.9	
VAR	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	.0		.0	.0	
CALM	*	.0	*	.0	.0	.0	.0	*		.0	.0	.0		.0	1.6	
TOT OBS									55							2737
TOT PCT	.5	1.3	.2	.0	.0	.0	*	2.0		.5	.4	.4		.0	96.7	

TABLE 2

PERCENTAGE FREQUENCY OF WEATHER OCCURRENCE BY HOUR

HOUR (GMT)	RAIN	RAIN SHWR	DRZL	PRECIPITATION TYPE FRZG PCPN	SNOW	OTHER FRZN PCPN	HAIL	PCT FREQ PCPN AT OB TIME	TOTAL PCPN OBS	THDR LTNG	OTHER WEATHER PHENOMENA FOG WD PCPN	SMOKE HAZE	DUST BLWG BLWG	DUST SNOW	NO SIG WEA	TOTAL OBS
00&03	.3	1.7	.6	.0	.0	.0	.0	2.7		.9	.6	.3		.0	95.5	
06&09	.7	1.9	.1	.0	.0	.0	.0	2.8		1.0	.1	.6		.0	95.4	
12&15	.4	.9	.0	.0	.0	.0	.0	1.3		.1	.6	.4		.0	97.6	
18&21	.4	1.1	.1	.0	.0	.0	.1	1.6		.1	.4	.3		.0	97.7	
TOT									57							2766
PCT	.5	1.4	.2	.0	.0	.0	*	2.1		.5	.4	.4		.0	96.6	

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

WND DIR	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	34-47	48+	TOTAL OBS	PCT FREQ	MEAN SPD	HOUR (GMT) 00	03	06	09	12	15	18	21
N	.4	2.0	1.6	.2	.1	.0		4.3	11.2	5.0	2.5	3.2	2.1	4.9	7.2	4.4	4.1
NE	.7	9.3	13.4	1.4	*	.0		24.9	12.6	25.2	32.7	22.8	30.9	25.3	23.4	22.7	36.5
E	1.2	21.4	24.5	1.3	*	.0		48.5	11.8	48.2	53.1	51.3	50.8	49.5	37.8	47.2	37.0
SE	.6	8.8	5.5	.1	.0	.0		15.0	10.1	14.9	10.2	15.6	10.9	15.7	15.3	15.4	12.2
S	.5	1.7	1.4	.1	.0	.0		3.6	9.6	3.8	1.2	3.8	1.1	2.4	1.3	5.5	2.1
SW	.1	.5	.1	.0	.0	.0		.7	7.3	.7	.0	1.1	.0	.3	1.9	.9	.9
W	*	.3	.2	.0	.0	.0		.5	9.2	.4	.0	.4	1.1	.0	2.5	.4	3.0
NW	.1	.6	.3	.0	.0	.0		.9	9.0	.2	.3	.9	2.1	.9	8.1	.7	1.7
VAR	.0	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
CALM	1.6							1.6	.0	1.6	.0	.9	1.1	1.0	2.5	2.7	2.6
TOT OBS	162	1410	1485	99	4	0	3160		11.4	676	81	680	94	716	80	716	117
TOT PCT	5.1	44.6	47.0	3.1	.1	.0		100.0		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 3A

WND DIR	WIND SPEED (KNOTS) 0-6	7-16	17-27	28-40	41+	TOTAL OBS	PCT FREQ	MEAN SPD	HOUR (GMT) 00 03	06 09	12 15	18 21
N	1.3	2.3	.6	.1	.0		4.3	11.2	4.7	3.1	5.1	4.4
NE	3.6	15.9	5.2	.2	.0		24.9	12.6	26.0	23.8	25.2	24.7
E	6.8	34.4	7.2	.1	.0		48.5	11.8	48.7	51.2	48.3	45.8
SE	3.2	10.8	1.0	*	.0		15.0	10.1	14.4	15.0	15.7	15.0
S	1.3	1.8	.5	.0	.0		3.6	9.6	3.5	3.5	2.3	5.0
SW	.4	.3	*	.0	.0		.7	7.3	.6	1.0	.4	.9
W	.2	.3	*	.0	.0		.5	9.2	.4	.5	.3	.8
NW	.3	.6	*	.0	.0		.9	9.0	.2	1.0	1.6	.9
VAR	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	.0
CALM	1.6						1.6	.0	1.5	.9	1.1	2.6
TOT OBS	588	2093	464	15	0	3160		11.4	757	774	796	833
TOT PCT	18.6	66.2	14.7	.5	.0		100.0		100.0	100.0	100.0	100.0

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PERIOD: (PRIMARY) 1950-1971
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TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

HOUR	CALM	1-3	4-10	WIND SPEED (KNOTS) 11-21	22-33	34-47	48+	MEAN	PCT FREQ	TOTAL OBS
00&03	1.5	2.6	44.3	47.7	4.0	.0	.0	11.3	100.0	757
06&09	.9	3.9	47.3	44.4	3.4	.1	.0	11.4	100.0	774
12&15	1.1	3.4	43.3	49.6	2.3	.3	.0	11.6	100.0	796
18&21	2.6	4.3	43.7	46.2	3.0	.1	.0	11.3	100.0	833
TOT	49	113	1410	1485	99	4	0	11.4		3160
PCT	1.6	3.6	44.6	47.0	3.1	.1	.0		100.0	

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS)
BY WIND DIRECTION

WND DIR	0-2	3-4	5-7	8 & OBSCD	TOTAL OBS	MEAN CLOUD COVER
N	2.0	.7	1.6	.3		3.5
NE	10.3	7.0	5.1	1.2		3.2
E	19.4	15.9	11.1	2.3		3.3
SE	6.3	3.1	3.2	.7		3.2
S	2.0	1.1	.7	.2		2.9
SW	.2	.2	.3	*		4.2
W	.3	.1	*	.0		1.5
NW	.3	.2	.3	*		3.7
VAR	.0	.0	.0	.0		.0
CALM	1.1	.3	.3	.0		2.1
TOT OBS	1004	733	543	115	2395	3.2
TOT PCT	41.9	30.6	22.7	4.8	100.0	

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT,NH >4/8)
AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

WND DIR	000 149	150 299	300 599	600 999	1000 1999	2000 3499	3500 4999	5000 6499	6500 7999	8000+	NH <5/8 ANY HGT	TOTAL OBS
N	*	.0	.1	.3	.5	.1	.1	.1	*	.0	3.5	
NE	.1	.0	*	.7	1.5	.8	.4	*	.1	.1	20.0	
E	*	.0	.4	1.8	2.7	1.5	.7	.4	.1	*	41.2	
SE	.0	*	.1	.4	.7	.2	.1	.1	*	.0	13.6	
S	.0	*	.1	.2	.2	.1	.0	.0	.0	.0	3.5	
SW	.0	.0	.0	.0	.1	.1	.0	.0	.0	.0	.6	
W	.0	.0	.0	*	.0	.0	.0	.0	.0	.0	.3	
NW	.0	.0	.0	.1	.0	.1	.0	.0	.0	.0	.6	
VAR	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
CALM	.0	.0	.0	.0	.1	*	*	.0	.0	.0	1.5	
TOT OBS	3	2	18	85	138	68	31	15	6	2	2027	2395
TOT PCT	.1	.1	.8	3.5	5.8	2.8	1.3	.6	.3	.1	84.6	100.0

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE
OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

CEILING (FEET)	VSBY (NM) = OR >10	= OR >5	= OR >2	= OR >1	= OR >1/2	= OR >1/4	= OR >50YD	= OR >0
= OR >6500	.3	.3	.3	.3	.3	.3	.3	.3
= OR >5000	.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0
= OR >3500	2.0	2.2	2.2	2.2	2.2	2.2	2.2	2.2
= OR >2000	4.4	5.1	5.1	5.1	5.1	5.1	5.1	5.1
= OR >1000	9.4	10.8	10.8	10.8	10.8	10.8	10.8	10.8
= OR >600	12.1	14.2	14.2	14.3	14.3	14.3	14.3	14.3
= OR >300	12.8	14.9	15.0	15.0	15.0	15.0	15.0	15.0
= OR >150	12.8	15.0	15.0	15.1	15.1	15.1	15.1	15.1
= OR > 0	12.8	15.1	15.2	15.2	15.2	15.2	15.2	15.2
TOTAL	309	363	365	367	367	367	367	367

TOTAL NUMBER OF OBS: 2407 PCT FREQ NH <5/8: 84.8

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

0	1	2	3	4	5	6	7	8	OBSCD	TOTAL OBS
10.4	20.4	24.2	17.5	12.2	5.7	4.3	2.8	2.5	.1	2542

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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF PRECIPITATION WITH VARYING VALUES OF VISIBILITY

VSBY (NM)		N	NE	E	SE	S	SW	W	NW	VAR	CALM	PCT	TOTAL OBS
<1/2	PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	NO PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	TOT %	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
1/2<1	PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	NO PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	TOT %	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
1<2	PCP	.0	.0	.0	.0	*	.0	.0	.0	.0	.0	*	
	NO PCP	*	*	.0	*	.0	.0	.0	.0	.0	.0	.1	
	TOT %	*	*	.0	*	*	.0	.0	.0	.0	.0	.1	
2<5	PCP	*	*	.0	*	*	*	.0	.0	.0	.0	.1	
	NO PCP	*	*	.1	*	*	.0	.0	.0	.0	.0	.2	
	TOT %	.1	.1	.1	*	.1	*	.0	.0	.0	.0	.4	
5<10	PCP	.1	.2	.3	*	*	.0	.0	*	.0	.0	.8	
	NO PCP	.5	1.8	3.3	1.0	.1	*	.2	.2	.0	.3	7.5	
	TOT %	.7	2.0	3.7	1.0	.2	*	.2	.3	.0	.3	8.3	
10+	PCP	*	.3	.5	.1	.0	*	.0	*	.0	*	1.1	
	NO PCP	3.9	21.6	43.4	14.4	3.7	.7	.4	.7	.0	1.4	90.1	
	TOT %	3.9	22.0	44.0	14.5	3.7	.7	.4	.7	.0	1.4	91.2	
	TOT OBS												2729
	TOT PCT	4.7	24.1	47.7	15.6	3.9	.8	.6	1.0	.0	1.6	100.0	

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED WITH VARYING VALUES OF VISIBILITY

VSBY (NM)	SPD KTS	N	NE	E	SE	S	SW	W	NW	VAR	CALM	PCT	TOTAL OBS
<1/2	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	11-21	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
1/2<1	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	11-21	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
1<2	0-3	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	*	
	4-10	.0	*	.0	.0	.0	.0	.0	.0	.0		*	
	11-21	.0	.0	.0	*	*	.0	.0	.0	.0		.1	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	*	*	.0	*	*	.0	.0	.0	.0	.0	.1	
2<5	0-3	.0	.0	*	.0	.0	.0	.0	.0	.0	.0	*	
	4-10	.1	.1	.1	*	.0	.0	.0	.0	.0		.2	
	11-21	.0	*	*	*	.1	*	.0	.0	.0		.2	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	.1	.1	.2	*	.1	*	.0	.0	.0	.0	.5	
5<10	0-3	.1	*	.1	*	*	*	.0	*	.0	.2	.7	
	4-10	.2	.7	1.6	.6	.1	.0	*	.1	.0		3.3	
	11-21	.2	1.2	2.0	.3	.0	*	.1	.1	.0		4.1	
	22+	.1	.1	.2	.0	.0	.0	.0	.0	.0		.4	
	TOT %	.6	2.1	3.8	1.0	.1	.1	.2	.2	.0	.2	8.4	
10+	0-3	.2	.6	1.1	.6	.4	.1	*	.1	.0	1.3	4.4	
	4-10	1.0	8.6	19.6	8.4	1.6	.5	.3	.4	.0		41.3	
	11-21	1.4	12.0	22.4	5.1	1.3	.1	*	.2	.0		42.6	
	22+	.2	1.3	1.1	.1	.1	.0	.0	.0	.0		2.7	
	TOT %	3.7	22.5	44.3	14.2	3.4	.7	.3	.6	.0	1.3	91.0	
	TOT OBS												3023
	TOT PCT	4.4	24.7	48.3	15.2	3.7	.8	.5	.9	.0	1.5	100.0	

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TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET,NH >4/8) AND OCCURRENCE OF NH <5/8 BY HOUR

HOUR (GMT)	000 149	150 299	300 599	600 999	1000 1999	2000 3499	3500 4999	5000 6499	6500 7999	8000+	TOTAL	NH <5/8 ANY HGT	TOTAL OBS
00&03	.2	.2	1.1	4.2	6.7	3.4	1.6	.7	.2	.2	18.3	81.7	567
06&09	.3	.2	.3	3.8	6.5	2.9	1.5	.2	.3	.0	16.0	84.0	613
12&15	.0	.0	.9	2.9	4.0	3.1	1.1	.9	.3	.0	13.3	86.7	645
18&21	.0	.0	.6	2.7	4.9	1.7	.9	.6	.1	.1	11.6	88.4	697
TOT	3	2	18	85	138	69	31	15	6	2	369	2153	2522
PCT	.1	.1	.7	3.4	5.5	2.7	1.2	.6	.2	.1	14.6	85.4	100.0

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

HOUR (GMT)	<1/2	1/2<1	1<2	2<5	5<10	10+	TOTAL OBS
00&03	.0	.0	.0	.3	9.1	90.6	722
06&09	.0	.0	.0	.5	7.7	91.8	753
12&15	.0	.0	.3	.8	9.6	89.3	778
18&21	.0	.0	.3	.3	7.3	92.2	799
TOT	0	0	4	14	257	2777	3052
PCT	.0	.0	.1	.5	8.4	91.0	100.0

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR CEILING HGT (FEET,NH >4/8),BY HOUR

HOUR (GMT)	<150 <50YD	<600 <1	<1000 <5	1000+ AND5+	NH <5/8 AND 5+	TOTAL OBS
00&03	.2	1.5	5.8	13.1	81.1	549
06&09	.3	.9	4.9	11.9	83.1	587
12&15	.0	1.0	4.3	9.8	85.9	603
18&21	.0	.6	3.4	8.7	87.9	668
TOT	3	23	110	259	2038	2407
PCT	.1	1.0	4.6	10.8	84.7	100.0

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

TEMP F	0-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100	TOTAL OBS	PCT FREQ
90/94	.0	.0	.0	.1	.2	.0	.1	.0	9	.4
85/89	.0	.0	*	.2	1.2	1.2	.3	.1	68	3.1
80/84	.0	.0	.0	.9	5.4	18.4	8.1	3.0	792	35.9
75/79	.0	.0	.0	.8	5.8	24.4	20.0	8.1	1306	59.1
70/74	.0	.0	.0	.0	.1	.4	.8	.2	34	1.5
TOTAL	0	0	1	45	280	981	647	255	2209	100.0
PCT	.0	.0	*	2.0	12.7	44.4	29.3	11.5		

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

N	NE	E	SE	S	SW	W	NW	VAR	CALM
.0	.1	.1	*	*	*	*	*	.0	*
.1	.4	1.6	.5	.1	.0	.1	.2	.0	*
1.0	7.4	16.7	7.1	2.1	.3	.2	.2	.0	.8
3.6	16.6	28.0	7.1	1.4	.5	.2	.7	.0	1.0
.1	.8	.5	.0	.0	.0	.1	.0	.0	*
4.8	25.3	46.8	14.7	3.7	.9	.7	1.1	.0	1.9

TABLE 15

MEANS,EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

HOUR (GMT)	MAX	99%	95%	50%	5%	1%	MIN	MEAN	TOTAL OBS
00&03	90	84	82	79	75	74	73	78.6	752
06&09	84	82	81	78	75	72	66	77.5	771
12&15	91	85	83	79	75	73	66	78.8	799
18&21	91	89	86	81	77	75	72	81.2	827
TOT	91	87	84	79	75	73	66	79.1	3149

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

HOUR (GMT)	0-29	30-59	60-69	70-79	80-89	90-100	MEAN	TOTAL OBS
00&03	.0	.6	7.7	43.0	35.4	13.3	80	505
06&09	.0	1.3	4.7	39.6	38.5	15.9	81	548
12&15	.0	2.3	12.7	46.6	27.1	11.2	78	597
18&21	.0	3.8	24.8	47.3	17.6	6.5	75	584
TOT	0	46	286	988	655	259	78	2234

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PERIOD: (PRIMARY) 1950-1971
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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

AIR-SEA TMP DIF	69 72	73 76	77 80	81 84	85 88	89 92	TOT	W FOG	WO FOG
14/16	.0	.0	.0	.0	*	.0	1	.0	*
11/13	.0	.0	.0	.0	.0	.1	3	.0	.1
9/10	.0	.0	.1	*	.0	.3	11	.0	.4
7/8	.0	.0	.0	.3	.4	.1	19	.0	.8
6	.0	.0	.2	.2	.6	*	26	.0	1.1
5	.0	.0	.1	.7	.5	*	33	.0	1.3
4	.0	.1	.3	1.4	.4	.0	54	*	2.2
3	.0	*	.5	2.3	.4	.0	80	.0	3.3
2	.0	.1	2.3	3.6	.1	.0	151	*	6.1
1	.0	.2	4.4	4.8	.2	.0	237	.2	9.5
0	.0	.7	12.6	4.2	.0	.0	428	.2	17.3
-1	.0	.9	14.6	2.1	*	.0	432	.0	17.6
-2	*	2.0	12.2	.9	.0	.0	370	*	15.0
-3	.0	2.6	7.0	.5	.0	.0	249	.0	10.1
-4	.0	2.9	3.9	.2	.0	.0	172	.0	7.0
-5	.0	1.5	2.2	.2	.0	.0	95	.0	3.9
-6	.0	1.0	.6	.1	.0	.0	41	.0	1.7
-7/-8	.1	.7	.7	*	.0	.0	36	.0	1.5
-9/-10	.2	.2	.2	.0	.0	.0	17	.0	.7
-11/-13	.0	.0	.1	.0	.0	.0	2	.0	.1
TOTAL	8	317	1516	532	70	14	2457	11	2446
PCT	.3	12.9	61.7	21.7	2.8	.6	100.0	.4	99.6

PERIOD: (OVER-ALL) 1963-1971

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

N

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.1	.4	.0	.0	.0	.0	.6
1-2	.0	1.8	.9	.0	.0	.0	2.7
3-4	.0	.9	1.2	.0	.0	.0	2.2
5-6	.0	.1	.5	.0	.1	.0	.7
7	.0	.3	.2	.0	.0	.0	.5
8-9	.0	.1	.0	.2	.1	.0	.5
10-11	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.1	3.8	2.9	.2	.2	.0	7.2

NE

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.2	1.5	*	.0	.0	.0	1.7
1-2	.5	5.5	3.0	.0	.0	.0	9.0
3-4	.0	2.8	8.0	.5	.0	.0	11.4
5-6	.0	.5	4.9	.9	*	.0	6.3
7	.0	.1	2.6	.7	.0	.0	3.4
8-9	.0	.0	.5	*	.0	.0	.5
10-11	.0	.0	.3	.3	.0	.0	.6
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.6	10.4	19.3	2.5	*	.0	32.9

E

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.2	1.2	.2	.0	.0	.0	1.6
1-2	.6	8.2	4.3	.0	.0	.0	13.1
3-4	.2	4.3	8.0	.1	.0	.0	12.7
5-6	.0	1.6	5.9	.0	.0	.0	7.6
7	.0	.5	2.3	.1	.0	.0	2.9
8-9	.0	.1	1.1	.1	.0	.0	1.4
10-11	.0	.0	.3	.3	.0	.0	.6
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.1	.0	.0	.0	.1
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	1.0	15.9	22.3	.6	.0	.0	39.9

SE

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.2	1.0	.0	.0	.0	.0	1.3
1-2	.6	4.7	1.2	.0	.0	.0	6.5
3-4	.1	1.2	1.9	.0	.0	.0	3.2
5-6	.0	.4	.9	.0	.0	.0	1.3
7	.0	.0	.1	.0	.0	.0	.1
8-9	.0	.0	.0	.0	.0	.0	.0
10-11	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.9	7.4	4.1	.0	.0	.0	12.4

PERIOD: (OVER-ALL) 1963-1971 APRIL AREA MONA PASSAGE 17.9N 67.8W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

	S							SW						
HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.2	.4	.0	.0	.0	.0	.6	*	.2	.0	.0	.0	.0	.2
1-2	.0	1.0	.3	.0	.0	.0	1.3	.0	.2	.0	.0	.0	.0	.2
3-4	.1	.1	.1	.0	.0	.0	.4	.0	.0	.0	.0	.0	.0	.0
5-6	.0	.0	.1	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8-9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10-11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.3	1.6	.5	.0	.0	.0	2.4	*	.4	.0	.0	.0	.0	.4

	W							NW							TOTAL
HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT	1-3	4-10	11-21	22-33	34-47	48+	PCT	PCT
<1	.1	.1	.0	.0	.0	.0	.2	.0	.1	.0	.0	.0	.0	.1	
1-2	.0	.3	.0	.0	.0	.0	.3	.0	.9	.3	.0	.0	.0	1.2	
3-4	.0	.1	.0	.0	.0	.0	.1	.0	.0	*	.0	.0	.0	*	
5-6	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.1	
7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
8-9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
10-11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
13-16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
17-19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
20-22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
23-25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
26-32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
33-40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
41-48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
49-60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
61-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
71-86	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
87+	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
TOT PCT	.1	.5	.0	.0	.0	.0	.6	.0	1.1	.4	.0	.0	.0	1.5	97.4

WIND SPEED (KTS) VS SEA HEIGHT (FT)

HGT	0-3	4-10	11-21	22-33	34-47	48+	PCT	TOT OBS
<1	3.6	5.3	.3	.0	.0	.0	9.2	
1-2	2.1	22.5	9.8	.0	.0	.0	34.4	
3-4	.5	9.4	19.1	.7	.0	.0	29.8	
5-6	.0	2.8	12.2	.9	.1	.0	16.1	
7	.0	.8	5.2	.8	.0	.0	6.8	
8-9	.0	.3	1.6	.4	.1	.0	2.4	
10-11	.0	.0	.7	.5	.0	.0	1.2	
12	.0	.0	.0	.0	.0	.0	.0	
13-16	.0	.0	.1	.0	.0	.0	.1	
17-19	.0	.0	.0	.0	.0	.0	.0	
20-22	.0	.0	.0	.0	.0	.0	.0	
23-25	.0	.0	.0	.0	.0	.0	.0	
26-32	.0	.0	.0	.0	.0	.0	.0	
33-40	.0	.0	.0	.0	.0	.0	.0	
41-48	.0	.0	.0	.0	.0	.0	.0	
49-60	.0	.0	.0	.0	.0	.0	.0	
61-70	.0	.0	.0	.0	.0	.0	.0	
71-86	.0	.0	.0	.0	.0	.0	.0	
87+	.0	.0	.0	.0	.0	.0	.0	
TOT PCT	6.3	41.1	49.1	3.3	.3	.0	100.0	752

PERIOD: (OVER-ALL) 1949-1971 TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

PERIOD (SEC)	<1	1-2	3-4	5-6	7	8-9	10-11	12	13-16	17-19	20-22	23-25	26-32	33-40	41-48	49-60	61-70	71-86	87+	TOTAL	MEAN HGT
<6	2.9	18.0	21.3	8.7	2.5	.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	1080	3
6-7	.1	1.4	6.8	9.9	4.5	1.2	.5	.1	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	488	5
8-9	.0	.6	1.0	2.5	2.0	.8	.4	.2	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	145	6
10-11	.0	.7	.2	.8	.8	.3	.2	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	59	5
12-13	.0	.0	.4	.2	.1	.2	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	19	6
>13	.0	.0	.0	.2	.1	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	7	6
INDEY	3.7	1.6	2.7	1.3	.5	.3	.1	.0	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	201	2
TOTAL	131	442	644	471	207	68	23	6	6	1	0	0	0	0	0	0	0	0	0	1999	4
PCT	6.6	22.1	32.2	23.6	10.4	3.4	1.2	.3	.3	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	100.0	

MAY

PERIOD: (PRIMARY) 1950-1971
(OVER-ALL) 1878-1971

AREA MONA PASSAGE
17.9N 67.9W

TABLE 1

PERCENTAGE FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

WND DIR	RAIN	RAIN SHWR	PRECIPITATION TYPE DRZL	FRZG PCPN	SNOW	OTHER FRZN PCPN	HAIL	PCT FREQ PCPN AT OB TIME	TOTAL PCPN OBS	THDR LTNG	OTHER WEATHER PHENOMENA FOG WO PCPN	SMOKE HAZE	DUST BLWG DUST SNOW	NO SIG WEA	TOTAL OBS
N	.1	*	.0	.0	.0	.0	.0	.1		*	.0	*	.0	1.4	
NE	.4	.2	.1	.0	.0	.0	.0	.7		.5	.1	*	.0	13.9	
E	.9	1.3	.2	.0	.0	.0	.0	2.4		1.1	.1	.1	.0	50.7	
SE	.2	.5	.1	.0	.0	.0	.0	.9		.4	.2	.2	.0	20.7	
S	*	.2	.1	.0	.0	.0	.0	.3		.2	.0	*	*	3.8	
SW	.0	*	.0	.0	.0	.0	.0	*		.0	.0	.0	.0	.3	
W	.0	*	.0	.0	.0	.0	.0	*		*	.0	.0	.0	.4	
NW	.0	.0	.0	.0	.0	.0	.0	.0		*	.0	*	.0	.3	
VAR	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	
CALM	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	.0	.0	1.0	
TOT OBS									120						2734
TOT PCT	1.6	2.3	.5	.0	.0	.0	.0	4.4		2.4	.4	.5	*	92.5	

TABLE 2

PERCENTAGE FREQUENCY OF WEATHER OCCURRENCE BY HOUR

HOUR (GMT)	RAIN	RAIN SHWR	PRECIPITATION TYPE DRZL	FRZG PCPN	SNOW	OTHER FRZN PCPN	HAIL	PCT FREQ PCPN AT OB TIME	TOTAL PCPN OBS	THDR LTNG	OTHER WEATHER PHENOMENA FOG WO PCPN	SMOKE HAZE	DUST BLWG DUST SNOW	NO SIG WEA	TOTAL OBS
00&03	2.4	4.0	.5	.0	.0	.0	.0	6.8		4.4	.5	.5	.0	88.2	
06&09	1.2	3.0	.5	.0	.0	.0	.0	4.7		5.4	.2	.6	.0	89.4	
12&15	1.7	1.4	.6	.0	.0	.0	.0	3.5		.3	.1	.0	.0	96.2	
18&21	1.4	1.4	.5	.0	.0	.0	.0	3.4		.0	.6	.8	.1	95.1	
TOT									124						2761
PCT	1.7	2.4	.5	.0	.0	.0	.0	4.5		2.4	.4	.5	*	92.5	

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

WND DIR	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	34-47	48+	TOTAL OBS	PCT FREQ	MEAN SPD	HOUR (GMT) 00	03	06	09	12	15	18	21
N	.1	.9	.4	*	.0	.0		1.5	9.3	3.5	2.7	.9	.0	1.0	.8	.8	1.7
NE	.7	7.1	7.8	.6	.0	.0		16.2	11.8	18.0	16.3	17.1	20.0	13.8	24.2	14.5	20.2
E	1.0	21.0	30.1	1.4	*	.0		53.5	12.3	50.4	55.3	53.3	55.5	56.3	50.0	54.4	44.9
SE	1.2	10.3	10.5	.3	.0	.0		22.3	11.1	21.2	19.7	20.3	19.5	22.8	21.8	24.9	23.9
S	.2	2.2	1.5	.1	.0	.0		4.1	10.5	4.5	.0	4.8	1.8	4.0	1.6	3.7	5.9
SW	.1	.3	*	.0	.0	.0		.4	7.4	.3	.0	.5	.0	.5	.0	.5	.0
W	.0	.4	.0	.0	.0	.0		.4	6.4	.2	1.5	.6	.0	.5	.0	.3	1.1
NW	.1	.2	.1	.0	.0	.0		.4	6.8	.8	.0	.2	.0	.3	.0	.4	.0
VAR	.0	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
CALM	1.3							1.3	.0	1.1	4.5	2.3	3.2	.7	1.6	.5	2.2
TOT OBS	144	1329	1573	76	1	0	3123		11.6	650	66	650	95	748	63	762	89
TOT PCT	4.6	42.6	50.4	2.4	*	.0		100.0		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 3A

WND DIR	WIND SPEED (KNOTS) 0-6	7-16	17-27	28-40	41+	TOTAL OBS	PCT FREQ	MEAN SPD	HOUR (GMT) 00 03	06 09	12 15	18 21
N	.5	.9	.1	.0	.0		1.5	9.3	3.5	.8	1.0	.9
NE	2.5	10.6	3.0	.1	.0		16.2	11.8	17.9	17.5	14.6	15.1
E	5.9	38.0	9.5	.1	.0		53.5	12.3	50.8	53.6	55.8	53.4
SE	4.3	15.0	2.9	*	.0		22.3	11.1	21.1	20.2	22.7	24.8
S	1.0	2.6	.4	*	.0		4.1	10.5	4.1	4.4	3.8	4.0
SW	.2	.3	.0	.0	.0		.4	7.4	.3	.5	.5	.5
W	.2	.2	.0	.0	.0		.4	6.4	.3	.5	.5	.4
NW	.2	.1	.0	.0	.0		.4	6.8	.8	.2	.2	.4
VAR	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	.0
CALM	1.3						1.3	.0	1.4	2.4	.7	.7
TOT OBS	505	2113	497	8	0	3123		11.6	716	745	811	851
TOT PCT	16.2	67.7	15.9	.3	.0		100.0		100.0	100.0	100.0	100.0

MAY

PERIOD: (PRIMARY) 1950-1971
(OVER-ALL) 1878-1971

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TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

HOUR	CALM	1-3	4-10	11-21	22-33	34-47	48+	MEAN	PCT FREQ	TOTAL OBS
				WIND SPEED (KNOTS)						
00&03	1.4	4.6	44.8	46.9	2.1	.1	.0	11.2	100.0	716
06&09	2.4	2.4	47.2	45.5	2.4	.0	.0	11.1	100.0	745
12&15	.7	2.7	40.3	53.8	2.5	.0	.0	12.0	100.0	811
18&21	.7	3.6	38.7	54.3	2.7	.0	.0	12.0	100.0	851
TOT	40	104	1329	1573	76	1	0	11.6		3123
PCT	1.3	3.3	42.6	50.4	2.4	*	.0		100.0	

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS) BY WIND DIRECTION

WND DIR	0-2	3-4	5-7	8 & OBSCD	TOTAL OBS	MEAN CLOUD COVER
N	.5	.2	.6	.3		4.7
NE	4.0	4.3	5.4	1.8		4.3
E	15.2	15.5	17.8	5.7		4.2
SE	6.2	7.7	6.5	1.9		3.9
S	1.2	1.5	1.1	.6		4.0
SW	.1	.1	.1	*		4.0
W	*	.1	.2	*		3.2
NW	*	.1	.2	.1		3.5
VAR	.0	.0	.0	.0		.0
CALM	.5	.1	.2	.2		3.6
TOT OBS	655	699	756	253	2363	4.1
TOT PCT	27.7	29.6	32.0	10.7	100.0	

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT,NH >4/8) AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

WND DIR	000 149	150 299	300 599	600 999	1000 1999	2000 3499	3500 4999	5000 6499	6500 7999	8000+	NH <5/8 ANY HGT	TOTAL OBS
N	.0	.0	*	.2	.2	*	.0	.0	*	*	.9	
NE	*	*	.1	.5	1.9	1.0	.1	*	.1	.1	11.6	
E	.2	.1	.5	2.3	4.5	2.3	1.0	.5	.1	.1	42.7	
SE	.1	*	.4	.9	1.8	.6	.4	.1	.1	.0	17.9	
S	*	.0	.0	.2	.4	.2	.1	.0	.0	.0	3.5	
SW	.0	.0	.0	.0	.1	*	.0	.0	.0	.0	.3	
W	.0	.0	*	*	*	*	.0	.0	.0	.0	.2	
NW	.0	.0	*	.0	*	.0	*	.0	*	.0	.3	
VAR	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
CALM	.0	.0	.0	*	.0	.0	.0	.0	.0	.0	.9	
TOT OBS	9	3	27	100	210	99	39	14	7	4	1851	2363
TOT PCT	.4	.1	1.1	4.2	8.9	4.2	1.7	.6	.3	.2	78.3	100.0

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

CEILING (FEET)	VSBY (NM) * OR >10	* OR >5	* OR >2	* OR >1	* OR >1/2	* OR >1/4	* OR >50YD	* OR >0
* OR >6500	.4	.5	.5	.5	.5	.5	.5	.5
* OR >5000	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1
* OR >3500	2.4	2.7	2.7	2.7	2.7	2.7	2.7	2.7
* OR >2000	5.9	6.8	6.8	6.8	6.8	6.8	6.8	6.8
* OR >1000	13.0	15.7	15.8	15.8	15.8	15.8	15.8	15.8
* OR >600	16.2	19.8	20.0	20.0	20.0	20.0	20.0	20.0
* OR >300	16.8	20.7	21.0	21.1	21.1	21.2	21.2	21.2
* OR >150	16.8	20.8	21.1	21.3	21.3	21.3	21.3	21.3
* OR > 0	17.0	21.1	21.4	21.6	21.6	21.7	21.7	21.7
TOTAL	403	500	509	513	514	515	515	515

TOTAL NUMBER OF OBS: 2375 PCT FREQ NH <5/8: 78.3

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

0	1	2	3	4	5	6	7	8	OBSCD	TOTAL OBS
6.0	14.8	24.3	19.4	13.3	6.7	6.9	3.4	5.1	.2	2526

MAY

PERIOD: (PRIMARY) 1950-1971
(OVER-ALL) 1878-1971

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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF PRECIPITATION WITH VARYING VALUES OF VISIBILITY

VSBY (NM)		N	NE	E	SE	S	SW	W	NW	VAR	CALM	PCT	TOTAL OBS
<1/2	PCP	.0	.0	.0	*	.0	.0	.0	.0	.0	.0	*	
	NO PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	TOT %	.0	.0	.0	*	.0	.0	.0	.0	.0	.0	*	
1/2<1	PCP	.0	.0	*	.0	.0	.0	.0	.0	.0	.0	*	
	NO PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	TOT %	.0	.0	*	.0	.0	.0	.0	.0	.0	.0	*	
1<2	PCP	*	.0	.1	*	.0	.0	.0	.0	.0	.0	.1	
	NO PCP	*	*	.0	*	.0	.0	.0	.0	.0	.0	.1	
	TOT %	.1	*	.1	.1	.0	.0	.0	.0	.0	.0	.2	
2<5	PCP	.0	.0	.2	.1	.1	.0	*	.0	.0	.0	.4	
	NO PCP	.0	.0	.1	*	.0	.0	.0	.0	.0	.0	.2	
	TOT %	.0	.0	.4	.1	.1	.0	*	.0	.0	.0	.6	
5<10	PCP	.1	.3	1.0	.2	.1	.0	.0	.0	.0	.0	1.6	
	NO PCP	.2	1.4	3.7	1.9	.5	*	.2	.1	.0	.0	7.9	
	TOT %	.3	1.6	4.7	2.1	.6	*	.2	.1	.0	.0	9.5	
10+	PCP	.0	.4	1.1	.5	.1	*	.0	.0	.0	.0	2.1	
	NO PCP	1.2	13.2	48.0	19.6	3.6	.3	.2	.3	.0	1.0	87.5	
	TOT %	1.2	13.6	49.1	20.1	3.7	.3	.2	.3	.0	1.0	89.6	
	TOT OBS												2723
	TOT PCT	1.6	15.3	54.2	22.4	4.4	.3	.4	.4	.0	1.0	100.0	

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED WITH VARYING VALUES OF VISIBILITY

VSBY (NM)	SPD KTS	N	NE	E	SE	S	SW	W	NW	VAR	CALM	PCT	TOTAL OBS
<1/2	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.0	.0	.0	*	.0	.0	.0	.0	.0		*	
	11-21	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	.0	.0	.0	*	.0	.0	.0	.0	.0	.0	*	
1/2<1	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	11-21	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	22+	.0	.0	*	.0	.0	.0	.0	.0	.0		*	
	TOT %	.0	.0	*	.0	.0	.0	.0	.0	.0	.0	*	
1<2	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.1	*	.0	.0	.0	.0	.0	.0	.0		.1	
	11-21	.0	.0	.1	.1	.0	.0	.0	.0	.0		.1	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	.1	*	.1	.1	.0	.0	.0	.0	.0	.0	.2	
2<5	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.0	*	.1	.1	.1	*	*	.0	.0		.3	
	11-21	.0	.0	.2	*	.0	.0	.0	.0	.0		.3	
	22+	.0	.0	*	.0	*	.0	.0	.0	.0		.1	
	TOT %	.0	*	.4	.1	.1	*	*	.0	.0	.0	.7	
5<10	0-3	.0	.1	.1	.1	.1	.0	.0	*	.0	.1	.4	
	4-10	.2	.8	1.9	.9	.2	*	.2	*	.0		4.2	
	11-21	.1	.7	2.6	1.1	.2	.0	.0	.0	.0		4.7	
	22+	.0	.2	.1	.1	*	.0	.0	.0	.0		.4	
	TOT %	.2	1.8	4.7	2.1	.6	*	.2	.1	.0	.1	9.7	
10+	0-3	.1	.6	.9	1.0	.1	.1	.0	*	.0	1.0	3.8	
	4-10	.6	6.3	19.5	9.1	2.0	.3	.2	.2	.0		38.2	
	11-21	.4	7.0	27.1	9.4	1.3	*	.0	.1	.0		45.4	
	22+	*	.4	1.2	.2	.1	.0	.0	.0	.0		1.9	
	TOT %	1.2	14.3	48.7	19.7	3.5	.4	.2	.3	.0	1.0	89.3	
	TOT OBS												2998
	TOT PCT	1.5	16.1	53.9	22.0	4.1	.4	.4	.4	.0	1.1	100.0	

MAY

PERIOD: (PRIMARY) 1950-1971
(OVER-ALL) 1878-1971

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TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET,NH >4/8) AND OCCURRENCE OF NH <5/8 BY HOUR

HOUR (GMT)	000 149	150 299	300 599	600 999	1000 1999	2000 3499	3500 4999	5000 6499	6500 7999	8000+	TOTAL	NH <5/8 ANY HGT	TOTAL OBS
00&03	.9	.4	2.2	5.9	11.9	5.8	1.3	.2	.2	.2	29.0	71.0	538
06&09	.2	.0	1.0	3.3	7.3	2.8	1.9	.5	.0	.3	17.3	82.7	579
12&15	.3	.2	.8	3.8	7.5	3.8	1.4	1.1	.8	.2	19.7	80.3	654
18&21	.1	.0	.6	3.5	8.1	4.1	1.7	.4	.1	.0	18.7	81.3	712
TOT	9	3	27	101	213	101	39	14	7	4	518	1965	2483
PCT	.4	.1	1.1	4.1	8.6	4.1	1.6	.6	.3	.2	20.9	79.1	100.0

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

HOUR (GMT)	<1/2	1/2<1	1<2	2<5	5<10	10+	TOTAL OBS
00&03	.0	.1	.3	1.4	13.6	84.5	691
06&09	.0	.0	.0	.8	10.4	88.8	729
12&15	.1	.0	.0	.4	8.1	91.4	776
18&21	.0	.0	.5	.2	7.5	91.8	829
TOT	1	1	6	21	295	2701	3025
PCT	*	*	.2	.7	9.8	89.3	100.0

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR CEILING HGT (FEET,NH >4/8),BY HOUR

HOUR (GMT)	<150 <50YD	<600 <1	<1000 <5	1000+ AND5+	NH <5/8 AND 5+	TOTAL OBS
00&03	1.0	3.7	10.5	19.8	69.8	516
06&09	.2	1.3	5.2	12.9	81.9	557
12&15	.3	1.3	5.3	15.6	79.1	617
18&21	.1	.7	4.5	15.0	80.4	685
TOT	9	39	147	373	1855	2375
PCT	.4	1.6	6.2	15.7	78.1	100.0

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

TEMP F	0-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100	TOTAL OBS	PCT FREQ
90/94	.0	.0	.0	*	.2	.2	.0	.0	10	.5
85/89	.0	.0	.0	.1	1.3	3.2	.9	.5	133	6.0
80/84	.0	.0	.0	.2	3.7	28.2	24.2	6.4	1384	62.6
75/79	.0	.0	.0	.0	.4	8.6	15.4	6.2	673	30.5
70/74	.0	.0	.0	.0	.0	.0	.1	.4	10	.5
TOTAL	0	0	0	8	123	887	896	296	2210	100.0
PCT	.0	.0	.0	.4	5.6	40.1	40.5	13.4		

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

N	NE	E	SE	S	SW	W	NW	VAR	CALM
.0	.1	.2	.1	.0	.0	.0	.0	.0	.0
*	.7	3.0	1.8	.2	.1	.1	.1	.0	.0
1.0	7.6	35.4	14.6	2.9	.2	.2	.3	.0	.5
.6	7.3	15.8	4.9	1.1	.1	.1	.1	.0	.5
.1	.1	.2	*	.0	.0	.0	.0	.0	.0
1.7	16.0	54.4	21.4	4.2	.4	.5	.4	.0	1.0

TABLE 15

MEANS,EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

HOUR (GMT)	MAX	99%	95%	50%	5%	1%	MIN	MEAN	TOTAL OBS
00&03	88	84	83	80	76	74	71	80.0	716
06&09	84	83	82	79	77	75	72	79.3	750
12&15	92	86	84	80	77	76	75	80.6	809
18&21	91	90	87	82	79	76	73	82.8	855
TOT	92	88	85	80	77	75	71	80.7	3130

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

HOUR (GMT)	0-29	30-59	60-69	70-79	80-89	90-100	MEAN	TOTAL OBS
00&03	.0	.4	1.6	33.6	46.8	17.7	83	509
06&09	.0	.0	1.9	31.3	47.9	19.0	84	537
12&15	.0	.3	4.9	41.5	42.9	10.3	81	574
18&21	.0	.7	12.5	51.8	26.4	8.6	78	614
TOT	0	8	123	895	903	305	81	2234

MAY

PERIOD: (PRIMARY) 1950-1971
(OVER-ALL) 1878-1971

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

AIR-SEA TMP DIF	69 72	73 76	77 80	81 84	85 88	89 92	TOT	W FOG	WO FOG
11/13	.0	.0	.0	.0	*	.1	3	.0	.1
9/10	.0	.0	.0	.2	*	.1	7	.0	.3
7/8	.0	.0	.1	.1	.5	.2	23	*	.9
6	.0	.0	*	.3	.4	.2	24	.0	.9
5	.0	.0	.1	.4	1.1	.1	43	.0	1.7
4	.0	.0	.2	1.2	1.1	.0	64	.0	2.5
3	.0	.0	.1	2.3	1.4	.1	98	.0	3.9
2	.0	.0	.7	5.2	.9	*	176	.0	6.9
1	.0	.0	2.0	7.3	.4	.0	248	.2	9.6
0	.0	.1	7.9	9.4	.3	*	451	.2	17.6
-1	.0	.1	10.4	7.3	.1	.0	455	*	17.9
-2	.0	.3	10.2	4.1	.2	.0	377	.0	14.8
-3	.0	.3	6.9	2.3	*	.0	242	.0	9.5
-4	.0	.6	4.8	.7	.0	.0	155	.0	6.1
-5	*	.4	2.2	.3	.1	.0	78	.0	3.1
-6	.0	.6	.8	.1	.0	.0	38	.0	1.5
-7/-8	*	.3	.9	.1	.0	.0	36	.0	1.4
-9/-10	*	.3	.3	*	.0	.0	16	.0	.6
-11/-13	*	.2	.1	.0	.0	.0	7	.0	.3
TOTAL	4		1216		169			10	2531
		79		1052		21	2541		
PCT	.2	3.1	47.9	41.4	6.7	.8	100.0	.4	99.6

PERIOD: (OVER-ALL) 1963-1971

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

N

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.0	.3	.0	.0	.0	.0	.3
1-2	.0	.4	.1	.0	.0	.0	.5
3-4	.0	.1	.3	.0	.0	.0	.4
5-6	.0	.0	.1	.1	.0	.0	.2
7	.0	.0	.0	.0	.0	.0	.0
8-9	.0	.0	.0	.0	.0	.0	.0
10-11	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.0	.8	.5	.1	.0	.0	1.4

NE

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.3	.4	.0	.0	.0	.0	.7
1-2	.1	2.9	1.5	.0	.0	.0	4.5
3-4	.2	2.4	4.2	.4	.0	.0	7.2
5-6	.0	.9	3.2	.3	.0	.0	4.4
7	.0	.1	1.3	.0	.0	.0	1.4
8-9	.0	.0	.3	.1	.0	.0	.4
10-11	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.6	6.7	10.5	.8	.0	.0	18.6

E

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.1	1.8	.0	.0	.0	.0	1.9
1-2	.3	6.3	6.4	.0	.0	.0	13.0
3-4	.5	7.7	11.8	.6	.0	.0	20.5
5-6	.0	2.5	10.1	.6	.0	.0	13.2
7	.0	.3	3.7	.2	.0	.0	4.3
8-9	.0	.0	.5	.1	.0	.0	.6
10-11	.0	.0	.1	.3	.0	.0	.4
12	.0	.0	.1	.1	.0	.0	.3
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.8	18.7	32.7	1.9	.0	.0	54.1

SE

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.1	.8	.0	.0	.0	.0	.9
1-2	.1	3.2	2.7	.0	.0	.0	6.0
3-4	.0	2.9	4.4	.2	.0	.0	7.5
5-6	.0	.5	3.5	.0	.0	.0	4.0
7	.0	*	.9	.1	.0	.0	1.0
8-9	.0	.1	.1	.3	.0	.0	.4
10-11	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.3	7.6	11.6	.5	.0	.0	19.9

PERIOD: (OVER-ALL) 1963-1971

MAY

TABLE 18 (CONT)

AREA MONA PASSAGE 17.9N 67.9W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

	S							SW						
HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.0	.3	.0	.0	.0	.0	.3	.0	.0	.0	.0	.0	.0	.0
1-2	.0	1.2	.1	.0	.0	.0	1.4	.1	.2	.0	.0	.0	.0	.3
3-4	.0	1.0	.6	.0	.0	.0	1.6	.0	.2	.0	.0	.0	.0	.2
5-6	.0	.0	.1	.1	.0	.0	.3	.0	.0	.0	.0	.0	.0	.0
7	.0	.0	.3	.1	.0	.0	.3	.0	.0	.0	.0	.0	.0	.0
8-9	.0	.0	.1	.1	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0
10-11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0	.1	.4	.0	.0	.0	.0	.5
TOT PCT	.0	2.6	1.2	.3	.0	.0	4.1							

	W							NW							TOTAL
HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT	1-3	4-10	11-21	22-33	34-47	48+	PCT	PCT
<1	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.1	
1-2	.0	.3	.0	.0	.0	.0	.3	.0	.1	.0	.0	.0	.0	.1	
3-4	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
5-6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
8-9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
10-11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
13-16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
17-19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
20-22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
23-25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
26-32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
33-40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
41-48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
49-60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
61-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
71-86	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
87+	.0	.0	.0	.0	.0	.0	.0	.0	.3	.0	.0	.0	.0	.3	99.2
TOT PCT	.0	.3	.0	.0	.0	.0	.3								

WIND SPEED (KTS) VS SEA HEIGHT (FT)

HGT	0-3	4-10	11-21	22-33	34-47	48+	PCT	TOT OBS
<1	1.5	3.9	.0	.0	.0	.0	5.4	
1-2	.6	14.9	10.8	.0	.0	.0	26.3	
3-4	.6	14.3	21.2	1.1	.0	.0	37.2	
5-6	.0	3.9	16.9	1.1	.0	.0	21.9	
7	.0	.5	6.1	.4	.0	.0	7.0	
8-9	.0	.1	.9	.6	.0	.0	1.6	
10-11	.0	.0	.1	.3	.0	.0	.4	
12	.0	.0	.1	.1	.0	.0	.3	
13-16	.0	.0	.0	.0	.0	.0	.0	
17-19	.0	.0	.0	.0	.0	.0	.0	
20-22	.0	.0	.0	.0	.0	.0	.0	
23-25	.0	.0	.0	.0	.0	.0	.0	
26-32	.0	.0	.0	.0	.0	.0	.0	
33-40	.0	.0	.0	.0	.0	.0	.0	
41-48	.0	.0	.0	.0	.0	.0	.0	
49-60	.0	.0	.0	.0	.0	.0	.0	
61-70	.0	.0	.0	.0	.0	.0	.0	
71-86	.0	.0	.0	.0	.0	.0	.0	
87+	.0	.0	.0	.0	.0	.0	.0	
TOT PCT	2.8	37.5	56.1	3.6	.0	.0	100.0	799

PERIOD: (OVER-ALL) 1949-1971

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

PERIOD (SEC)	<1	1-2	3-4	5-6	7	8-9	10-11	12	13-16	17-19	20-22	23-25	26-32	33-40	41-48	49-60	61-70	71-86	87+	TOTAL	MEAN HGT
<6	2.4	13.9	24.4	10.4	1.6	.6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	1125	3
6-7	.0	1.4	7.8	11.1	4.9	1.2	.4	.1	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	569	5
8-9	*	.5	1.3	2.7	2.4	.7	.4	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	174	6
10-11	.0	.3	.4	.4	.6	.3	.3	.1	*	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	53	6
12-13	.0	.0	.3	*	.1	*	*	.0	.0	.0	*	.0	.0	.0	.0	.0	.0	.0	.0	13	6
>13	.0	.0	.0	.3	*	.1	.0	.0	.0	.0	*	.0	.0	.0	.0	.0	.0	.0	.0	10	7
INDET	2.5	2.1	1.8	1.0	.5	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	170	2
TOTAL	104	386	761	547	213	63	24	8	5	1	2	0	0	0	0	0	0	0	0	2114	4
PCT	4.9	18.3	36.0	25.9	10.1	3.0	1.1	.4	.2	*	.1	.0	.0	.0	.0	.0	.0	.0	.0	100.0	

JUNE

PERIOD: (PRIMARY) 1950-1971
(OVER-ALL) 1863-1971

AREA MONA PASSAGE 17.9N 67.9W

TABLE 1

PERCENTAGE FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

WND DIR	RAIN	RAIN SHWR	DRZL	PRECIPITATION TYPE FRZG PCPN	SNOW	OTHER FRZN PCPN	HAIL	PCT FREQ PCPN AT OB TIME	TOTAL PCPN OBS	THDR LTNG	OTHER WEATHER PHENOMENA FOG WO PCPN	SMOKE HAZE	DUST BLWG BLWG	DUST SNOW	NO SIG WEA	TOTAL OBS
N	.0	*	.0	.0	.0	.0	.0	*		.1	.0	.1		.0	.5	
NE	.2	.3	.1	.0	.0	.0	.0	.5		.5	.1	*		*	10.0	
E	.5	1.0	.2	.0	.0	.0	.0	1.6		2.5	.1	.6		.1	58.5	
SE	.1	.5	.1	.0	.0	.0	.0	.7		.4	.2	.2		*	19.9	
S	.0	*	.0	.0	.0	.0	.0	*		.2	.0	.1		.0	2.6	
SW	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	*		.0	.1	
W	.0	.0	.1	.0	.0	.0	.0	.1		.0	.0	.0		.0	.1	
NW	.0	.0	.0	.0	.0	.0	.0	.0		*	.0	*		.0	*	
VAR	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	.0		.0	.0	
CALM	.0	*	.0	.0	.0	.0	.0	*		.0	.0	.0		.0	.3	
TOT OBS									87							2900
TOT PCT	.9	1.8	.3	.0	.0	.0	.0	3.0		3.6	.4	1.1		.2	92.1	

TABLE 2

PERCENTAGE FREQUENCY OF WEATHER OCCURRENCE BY HOUR

HOUR (GMT)	RAIN	RAIN SHWR	DRZL	PRECIPITATION TYPE FRZG PCPN	SNOW	OTHER FRZN PCPN	HAIL	PCT FREQ PCPN AT OB TIME	TOTAL PCPN OBS	THDR LTNG	OTHER WEATHER PHENOMENA FOG WO PCPN	SMOKE HAZE	DUST BLWG BLWG	DUST SNOW	NO SIG WEA	TOTAL OBS
00&03	1.5	2.7	.3	.0	.0	.0	.0	4.3		7.1	.4	.4		.0	88.8	
06&09	.7	2.0	.6	.0	.0	.0	.0	3.2		7.6	.4	.7		.3	88.1	
12&15	.4	1.4	.3	.0	.0	.0	.0	2.1		.0	.3	1.0		.4	96.2	
18&21	.9	1.5	.2	.0	.0	.0	.0	2.6		.4	.5	2.0		.1	94.7	
TOT									88							2910
PCT	.9	1.9	.3	.0	.0	.0	.0	3.0		3.6	.4	1.1		.2	92.1	

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

WND DIR	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	34-47	48+	TOTAL OBS	PCT FREQ	MEAN SPD	HOUR (GMT) 00	03	06	09	12	15	18	21
N	.1	.4	.1	.0	.0	.0		.6	8.8	1.4	1.0	.2	.0	.5	.0	.4	1.1
NE	.2	5.1	6.1	.5	.0	.0		11.9	12.2	13.6	15.1	9.4	15.8	9.4	19.7	13.5	13.5
E	.8	20.2	39.3	2.2	*	.0		62.5	13.1	61.0	67.5	65.5	66.5	64.1	59.1	59.4	59.6
SE	.3	8.5	11.6	.6	*	.0		21.1	12.2	18.7	13.0	20.6	12.6	23.3	19.7	23.2	24.7
S	.2	1.3	1.3	*	.0	.0		2.9	10.5	4.1	.7	3.0	3.2	2.1	.0	3.3	1.1
SW	*	.1	*	.0	.0	.0		.2	8.4	.2	.0	.4	.0	.1	.0	.1	.0
W	.0	.0	.1	.0	.0	.0		.1	14.0	.0	.0	.2	1.0	.1	.0	.0	.0
NW	.0	*	*	.0	.0	.0		*	10.2	.1	.0	*	.0	.0	.0	*	.0
VAR	.0	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
CALM	.6							.6	.0	1.0	2.7	.7	1.0	.4	1.5	.1	.0
TOT OBS	78	1198	1968	112	2	0	3358		12.6	715	73	734	103	756	66	822	89
TOT PCT	2.3	35.7	58.6	3.3	.1	.0		100.0		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 3A

WND DIR	WIND SPEED (KNOTS) 0-6	7-16	17-27	28-40	41+	TOTAL OBS	PCT FREQ	MEAN SPD	HOUR (GMT) 00 03	06 09	12 15	18 21
N	.2	.4	.0	.0	.0		.6	8.8	1.4	.1	.5	.5
NE	1.6	8.0	2.3	*	.0		11.9	12.2	13.7	10.2	10.2	13.5
E	5.1	43.7	13.6	.2	.0		62.5	13.1	61.6	65.7	63.7	59.4
SE	2.4	15.2	3.4	.1	.0		21.1	12.2	18.1	19.6	23.0	23.4
S	.6	2.0	.3	.0	.0		2.9	10.5	3.7	3.0	1.9	3.0
SW	*	.1	.0	.0	.0		.2	8.4	.2	.3	.1	.1
W	.0	.1	.0	.0	.0		.1	14.0	.0	.3	.1	.0
NW	*	*	.0	.0	.0		*	10.2	.1	*	.0	*
VAR	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	.0
CALM	.6						.6	.0	1.1	.7	.5	.1
TOT OBS	354	2338	656	10	0	3358		12.6	788	837	822	911
TOT PCT	10.5	69.6	19.5	.3	.0		100.0		100.0	100.0	100.0	100.0

JUNE

PERIOD: (PRIMARY) 1950-1971
(OVER-ALL) 1863-1971

AREA MONA PASSAGE
17.9N 67.9W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

HOUR	CALM	WIND SPEED (KNOTS) 1-3	4-10	11-21	22-33	34-47	48+	MEAN	PCT FREQ	TOTAL OBS
00&03	1.1	2.5	37.3	55.2	3.8	.0	.0	12.3	100.0	788
06&09	.7	1.7	39.9	55.1	2.6	.0	.0	12.1	100.0	837
12&15	.5	1.0	36.0	59.4	3.0	.1	.0	12.7	100.0	822
18&21	.1	1.8	30.1	64.1	3.8	.1	.0	13.2	100.0	911
TOT	20	58	1198	1968	112	2	0	12.6		3358
PCT	.6	1.7	35.7	58.6	3.3	.1	.0		100.0	

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS) BY WIND DIRECTION

WND DIR	0-2	3-4	5-7	8 & OBSCD	TOTAL OBS	MEAN CLOUD COVER
N	.1	.3	.2	.1		4.7
NE	3.1	3.1	3.4	1.3		4.2
E	16.7	21.2	20.1	5.8		4.1
SE	6.3	6.7	6.7	1.7		4.0
S	.8	.8	.8	.4		4.3
SW	.1	*	*	*		3.1
W	*	.0	.0	*		5.3
NW	.0	*	.0	*		4.7
VAR	.0	.0	.0	.0		.0
CALM	.1	.1	.2	*		4.6
TOT OBS	717	850	830	249	2646	4.1
TOT PCT	27.1	32.1	31.4	9.4	100.0	

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT,NH >4/8) AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

WND DIR	000 149	150 299	300 599	600 999	1000 1999	2000 3499	3500 4999	5000 6499	6500 7999	8000+	NH <5/8 ANY HGT	TOTAL OBS
N	.0	.0	*	.0	.1	.1	.0	.0	.0	.0	.4	
NE	.0	.0	.2	.9	.7	.5	.2	.0	*	.0	8.4	
E	.1	.1	.3	2.5	5.0	2.3	.6	.3	.2	.1	52.2	
SE	.1	*	.2	.8	1.6	.6	.3	.1	.1	.0	17.5	
S	.0	.0	*	.2	.1	.2	.0	*	.0	*	2.3	
SW	.0	.0	.0	.0	.0	*	.0	*	.0	.0	.1	
W	.0	.0	.0	*	.0	.0	.0	.0	.0	.0	*	
NW	.0	*	.0	.0	*	.0	.0	.0	.0	.0	*	
VAR	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
CALM	.0	.0	.0	.1	.1	.0	.0	.0	.0	.0	.2	
TOT OBS	5	3	19	118	200	98	30	13	8	3	2149	2646
TOT PCT	.2	.1	.7	4.5	7.6	3.7	1.1	.5	.3	.1	81.2	100.0

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

CEILING (FEET)	VSBY (NM) * OR >10	* OR >5	* OR >2	* OR >1	* OR >1/2	* OR >1/4	* OR >50YD	* OR >0
* OR >6500	.4	.4	.4	.4	.4	.4	.4	.4
* OR >5000	.7	.9	.9	.9	.9	.9	.9	.9
* OR >3500	1.7	2.1	2.1	2.1	2.1	2.1	2.1	2.1
* OR >2000	4.8	5.6	5.7	5.7	5.7	5.7	5.7	5.7
* OR >1000	10.9	13.0	13.3	13.3	13.3	13.3	13.3	13.3
* OR >600	14.3	17.2	17.7	17.7	17.7	17.7	17.7	17.7
* OR >300	14.7	17.9	18.3	18.4	18.5	18.5	18.5	18.5
* OR >150	14.7	18.0	18.4	18.5	18.6	18.6	18.6	18.6
* OR > 0	14.9	18.1	18.6	18.7	18.8	18.8	18.8	18.8
TOTAL	393	480	492	494	496	496	496	496

TOTAL NUMBER OF OBS: 2645 PCT FREQ NH <5/8: 81.2

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

0	1	2	3	4	5	6	7	8	OBSCD	TOTAL OBS
6.8	14.6	25.9	21.7	12.1	6.5	5.6	3.3	3.4	*	2717

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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF PRECIPITATION WITH VARYING VALUES OF VISIBILITY

VSBY (NM)		N	NE	E	SE	S	SW	W	NW	VAR	CALM	PCT	TOTAL OBS
<1/2	PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	NO PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	TOT %	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
1/2<1	PCP	.0	.0	*	.0	.0	.0	.0	.0	.0	.0	*	
	NO PCP	.0	.0	.1	*	.0	.0	.0	.0	.0	.0	.1	
	TOT %	.0	.0	.1	*	.0	.0	.0	.0	.0	.0	.1	
1<2	PCP	.0	.0	.0	*	.0	.0	.0	.0	.0	.0	*	
	NO PCP	.0	.0	*	.0	.0	.0	.0	.0	.0	.0	*	
	TOT %	.0	.0	*	*	.0	.0	.0	.0	.0	.0	.1	
2<5	PCP	*	.1	.2	*	.0	.0	.0	.0	.0	.0	.3	
	NO PCP	.0	*	.2	*	*	.0	.0	.0	.0	*	.4	
	TOT %	*	.1	.4	.1	*	.0	.0	.0	.0	*	.7	
5<10	PCP	.0	.3	.7	.3	.0	.0	.1	.0	.0	.0	1.3	
	NO PCP	.1	1.0	5.7	1.6	.2	.1	*	*	.0	.0	8.7	
	TOT %	.1	1.3	6.4	1.8	.2	.1	.1	*	.0	.0	10.0	
10+	PCP	.0	.1	.7	.4	*	.0	.0	.0	.0	*	1.2	
	NO PCP	.5	9.7	55.6	19.0	2.7	.1	*	*	.0	.3	87.8	
	TOT %	.5	9.8	56.3	19.4	2.7	.1	*	*	.0	.3	89.1	
	TOT OBS												2895
	TOT PCT	.7	11.2	63.2	21.4	2.9	.2	.1	*	.0	.3	100.0	

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED WITH VARYING VALUES OF VISIBILITY

VSBY (NM)	SPD KTS	N	NE	E	SE	S	SW	W	NW	VAR	CALM	PCT	TOTAL OBS
<1/2	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	11-21	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
1/2<1	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.0	.0	*	*	.0	.0	.0	.0	.0		.1	
	11-21	.0	.0	.1	.0	.0	.0	.0	.0	.0		.1	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	.0	.0	.1	*	.0	.0	.0	.0	.0	.0	.1	
1<2	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.0	.0	.1	.0	.0	.0	.0	.0	.0		.1	
	11-21	.0	.0	.0	*	.0	.0	.0	.0	.0		*	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	.0	.0	.1	*	.0	.0	.0	.0	.0	.0	.1	
2<5	0-3	.0	*	.0	.0	.0	.0	.0	.0	.0	*	.1	
	4-10	.0	*	.2	*	*	.0	.0	.0	.0		.3	
	11-21	*	.1	.1	.1	.0	.0	.0	.0	.0		.3	
	22+	.0	.0	*	.0	.0	.0	.0	.0	.0		*	
	TOT %	*	.1	.4	.1	*	.0	.0	.0	.0	*	.7	
5<10	0-3	.0	*	.1	.0	.0	.0	.0	.0	.0	*	.2	
	4-10	.1	.6	1.9	1.0	.1	*	.0	*	.0		3.7	
	11-21	.0	.8	4.1	.9	*	*	.1	.0	.0		5.9	
	22+	.0	*	.6	.1	.0	.0	.0	.0	.0		.7	
	TOT %	.1	1.4	6.6	2.0	.2	.1	.1	*	.0	*	10.5	
10+	0-3	.1	.1	.7	.4	.3	*	.0	.0	.0	.5	2.0	
	4-10	.3	4.4	17.9	7.6	1.1	.1	.0	*	.0		31.3	
	11-21	.1	5.0	35.4	10.9	1.2	*	*	*	.0		52.6	
	22+	.0	.5	1.6	.5	*	.0	.0	.0	.0		2.6	
	TOT %	.5	10.1	55.5	19.3	2.6	.1	*	*	.0	.5	88.5	
	TOT OBS												3209
	TOT PCT	.6	11.6	62.7	21.4	2.8	.2	.1	*	.0	.5	100.0	

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TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET, NH >4/8) AND OCCURRENCE OF NH <5/8 BY HOUR

HOUR (GMT)	000 149	150 299	300 599	600 999	1000 1999	2000 3499	3500 4999	5000 6499	6500 7999	8000+	TOTAL	NH <5/8 ANY HGT	TOTAL OBS
00&03	.2	.3	.8	7.3	9.8	4.6	1.5	.7	.2	.2	25.4	74.6	613
06&09	.0	.0	.5	3.6	7.0	2.5	.9	.0	.2	.0	14.6	85.4	646
12&15	.0	.2	.5	3.9	5.2	2.7	.8	.3	.5	.2	14.1	85.9	660
18&21	.5	.0	1.1	3.1	7.9	4.6	1.4	.9	.4	.1	20.0	80.0	786
TOT	5	3	20	118	201	98	31	13	8	3	500	2205	2705
PCT	.2	.1	.7	4.4	7.4	3.6	1.1	.5	.3	.1	18.5	81.5	100.0

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

HOUR (GMT)	<1/2	1/2<1	1<2	2<5	5<10	10+	TOTAL OBS
00&03	.0	.4	.0	1.2	14.1	84.3	758
06&09	.0	.0	.1	.4	9.8	89.7	797
12&15	.0	.0	.1	1.0	8.3	90.5	780
18&21	.0	.1	.2	.6	9.8	89.3	884
TOT	0	4	4	25	337	2849	3219
PCT	.0	.1	.1	.8	10.5	88.5	100.0

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR CEILING HGT (FEET, NH >4/8), BY HOUR

HOUR (GMT)	<150 <50YD	<600 <1	<1000 <5	1000+ AND5+	NH <5/8 AND 5+	TOTAL OBS
00&03	.2	1.7	9.6	16.6	73.8	604
06&09	.0	.5	4.5	10.6	84.8	620
12&15	.0	.6	5.2	9.4	85.4	649
18&21	.4	1.7	4.8	15.2	80.1	772
TOT	4	30	157	344	2144	2645
PCT	.2	1.1	5.9	13.0	81.1	100.0

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

TEMP F	0-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100	TOTAL OBS	PCT FREQ
90/94	.0	.0	.0	.1	.2	.1	.0	.0	9	.4
85/89	.0	.0	.0	*	1.9	5.2	2.1	.6	214	9.8
80/84	.0	.0	.0	*	3.2	32.9	34.6	9.5	1755	80.3
75/79	.0	.0	.0	.0	.1	1.1	5.0	3.1	202	9.2
70/74	.0	.0	.0	.0	.0	.0	.0	.2	5	.2
TOTAL	0	0	0	4	118	859	911	293	2185	100.0
PCT	.0	.0	.0	.2	5.4	39.3	41.7	13.4		

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

N	NE	E	SE	S	SW	W	NW	VAR	CALM
.0	.0	.3	.1	*	.0	.0	.0	.0	.0
.1	1.1	6.0	2.2	.3	.0	.0	*	.0	.0
.5	9.4	49.8	18.2	2.1	.1	.0	*	.0	.2
.1	1.1	6.2	1.3	.3	*	*	.0	.0	.1
.0	*	.1	*	.0	.0	.0	.0	.0	.0
.7	11.6	62.4	22.0	2.8	.2	*	*	.0	.3

TABLE 15

MEANS, EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

HOUR (GMT)	MAX	99%	95%	50%	5%	1%	MIN	MEAN	TOTAL OBS
00&03	88	86	84	81	79	76	74	81.3	785
06&09	87	84	83	81	78	76	70	80.6	837
12&15	90	87	85	82	79	77	74	81.8	811
18&21	95	90	88	84	80	77	74	83.7	903
TOT	95	88	86	82	79	77	70	81.9	3336

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

HOUR (GMT)	0-29	30-59	60-69	70-79	80-89	90-100	MEAN	TOTAL OBS
00&03	.0	.0	1.8	31.0	49.2	18.0	83	494
06&09	.0	.0	2.9	29.1	51.4	16.6	83	549
12&15	.0	.0	3.4	43.9	41.3	11.4	81	554
18&21	.0	.7	12.9	51.0	26.7	8.7	77	596
TOT	0	4	121	860	913	295	81	2193

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION) VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

AIR-SEA TMP DIF	69 72	73 76	77 80	81 84	85 88	89 92	>92	TOT	W FOG	WO FOG
11/13	.0	.0	.0	.0	*	.0	.1	3	.0	.1
9/10	.0	.0	.0	.0	.1	.1	*	7	.0	.3
7/8	.0	.0	.0	.1	.3	.3	.0	19	.0	.7
6	.0	.0	.0	.1	.8	.1	.0	30	*	1.1
5	.0	.0	.0	.1	1.0	.1	.0	34	.0	1.3
4	.0	.0	*	1.0	1.8	.0	.0	77	.0	2.9
3	.0	.0	.1	1.9	1.9	*	.0	106	.0	3.9
2	.0	.0	.1	5.7	1.7	.0	.0	202	*	7.5
1	.0	.0	.3	9.7	1.5	*	.0	308	*	11.4
0	.0	.0	2.2	16.9	.5	.0	.0	528	.1	19.5
-1	.0	.0	4.4	13.7	.2	.0	.0	492	.1	18.2
-2	.0	.0	7.2	7.3	.0	.0	.0	388	*	14.4
-3	.0	*	4.6	4.2	.0	.0	.0	238	.0	8.9
-4	.0	.0	2.5	1.9	*	.0	.0	118	.0	4.4
-5	.0	.2	1.5	.9	.0	.0	.0	69	.0	2.6
-6	.0	.1	.7	.5	.0	.0	.0	36	.0	1.3
-7/-8	.0	.2	.4	.1	.0	.0	.0	22	.0	.8
-9/-10	.0	.2	.1	.1	.0	.0	.0	9	.0	.3
-11/-13	*	.0	*	.0	.0	.0	.0	2	.0	.1
TOTAL	1	21	649	1729	264	21	3	2688	11	2677
PCT	*	.8	24.1	64.3	9.8	.8	.1	100.0	.4	99.6

PERIOD: (OVER-ALL) 1963-1971

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

N

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.0	.0	.0	.0	.0	.0	.0
1-2	.0	.4	.0	.0	.0	.0	.4
3-4	.0	.3	.2	.0	.0	.0	.5
5-6	.0	.0	.0	.0	.0	.0	.0
7	.0	.0	.0	.0	.0	.0	.0
8-9	.0	.0	.0	.0	.0	.0	.0
10-11	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.0	.7	.2	.0	.0	.0	.9

NE

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.0	.5	.0	.0	.0	.0	.5
1-2	.2	1.0	1.5	.0	.0	.0	2.7
3-4	.0	2.1	2.7	.1	.0	.0	4.8
5-6	.0	.5	1.4	*	.0	.0	1.9
7	.0	.2	1.3	.1	.0	.0	1.5
8-9	.0	.0	.1	*	.0	.0	.2
10-11	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.2	4.2	6.9	.2	.0	.0	11.6

E

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.1	.9	.0	.0	.0	.0	1.0
1-2	.1	9.0	6.3	.0	.0	.0	15.4
3-4	.1	6.8	16.9	.3	.0	.0	24.1
5-6	.0	1.6	12.9	.3	.0	.0	14.8
7	.0	.5	5.4	.6	.0	.0	6.5
8-9	.0	.0	1.0	.5	.0	.0	1.5
10-11	.0	.1	.1	.1	.0	.0	.3
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.2	.0	.0	.0	.2
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.3	18.9	42.9	1.8	.0	.0	63.9

SE

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.3	.5	.0	.0	.0	.0	.8
1-2	.2	4.1	2.7	.0	.0	.0	6.9
3-4	.0	2.4	4.9	.2	.0	.0	7.4
5-6	.0	1.0	3.2	.4	.0	.0	4.6
7	.0	.0	.9	.2	.0	.0	1.1
8-9	.0	.0	.1	.0	.0	.0	.1
10-11	.0	.0	.1	.3	.0	.0	.4
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.4	8.0	11.9	1.0	.0	.0	21.3

PERIOD: (OVER-ALL) 1963-1971

JUNE

TABLE 18 (CONT)

AREA MONA PASSAGE 17.9N 67.9W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

	S							SW						
HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.0	.1	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
1-2	.1	.9	.2	.0	.0	.0	1.2	.0	*	.0	.0	.0	.0	*
3-4	.0	.2	.2	.0	.0	.0	.4	.0	.0	*	.0	.0	.0	*
5-6	.0	.0	.2	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0
7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8-9	.0	.0	.1	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
10-11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.1	1.2	.7	.0	.0	.0	2.0	.0	*	*	.0	.0	.0	.1

	W							NW							TOTAL
HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT	1-3	4-10	11-21	22-33	34-47	48+	PCT	PCT
<1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
1-2	.0	.0	.0	.0	.0	.0	.0	.0	*	.0	.0	.0	.0	*	
3-4	.0	.0	.0	.0	.0	.0	.0	.0	*	.0	.0	.0	.0	*	
5-6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
8-9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
10-11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
13-16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
17-19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
20-22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
23-25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
26-32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
33-40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
41-48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
49-60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
61-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
71-86	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
87+	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
TOT PCT	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.1	99.9

WIND SPEED (KTS) VS SEA HEIGHT (FT)

HGT	0-3	4-10	11-21	22-33	34-47	48+	PCT	TOT OBS
<1	.7	2.1	.0	.0	.0	.0	2.8	
1-2	.6	15.5	10.6	.0	.0	.0	26.7	
3-4	.1	11.7	24.8	.6	.0	.0	37.2	
5-6	.0	3.1	17.6	.7	.0	.0	21.5	
7	.0	.6	7.6	.8	.0	.0	9.1	
8-9	.0	.0	1.3	.5	.0	.0	1.8	
10-11	.0	.1	.2	.4	.0	.0	.7	
12	.0	.0	.0	.0	.0	.0	.0	
13-16	.0	.0	.2	.0	.0	.0	.2	
17-19	.0	.0	.0	.0	.0	.0	.0	
20-22	.0	.0	.0	.0	.0	.0	.0	
23-25	.0	.0	.0	.0	.0	.0	.0	
26-32	.0	.0	.0	.0	.0	.0	.0	
33-40	.0	.0	.0	.0	.0	.0	.0	
41-48	.0	.0	.0	.0	.0	.0	.0	
49-60	.0	.0	.0	.0	.0	.0	.0	
61-70	.0	.0	.0	.0	.0	.0	.0	
71-86	.0	.0	.0	.0	.0	.0	.0	
87+	.0	.0	.0	.0	.0	.0	.0	
TOT PCT	1.4	33.1	62.4	3.0	.0	.0	100.0	828

PERIOD: (OVER-ALL) 1949-1971

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

PERIOD (SEC)	<1	1-2	3-4	5-6	7	8-9	10-11	12	13-16	17-19	20-22	23-25	26-32	33-40	41-48	49-60	61-70	71-86	87+	TOTAL	MEAN HGT
<6	1.5	11.4	22.7	11.4	3.3	.8	.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	1186	4
6-7	*	1.1	9.4	13.0	4.7	1.9	.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	712	5
8-9	.0	.3	1.4	2.9	3.0	.7	.3	.2	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	205	6
10-11	.0	.2	.2	.3	.4	.4	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	37	6
12-13	.0	.0	.6	.1	.2	.1	*	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	27	5
>13	.0	.0	.0	.2	*	.0	.1	*	*	.0	.0	*	*	.0	.0	.0	.0	.0	.0	12	11
INDET	.9	1.2	1.7	.9	.6	.3	.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	137	4
TOTAL	57	326	832	666	285	99	38	8	3	0	0	1	1	0	0	0	0	0	0	2316	4
PCT	2.5	14.1	35.9	28.8	12.3	4.3	1.6	.3	.1	.0	.0	*	*	.0	.0	.0	.0	.0	.0	100.0	

JULY

PERIOD: (PRIMARY) 1950-1970
(OVER-ALL) 1856-1970

AREA MONA PASSAGE
17.9N 67.9W

TABLE 1

PERCENTAGE FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

WND DIR	RAIN	RAIN SHWR	DRZL	PRECIPITATION TYPE FRZG PCPN	SNOW	OTHER FRZN PCPN	HAIL	PCT FREQ PCPN AT OB TIME	TOTAL PCPN OBS	THDR LTNG	OTHER WEATHER PHENOMENA FOG WD PCPN	SMOKE HAZE	DUST BLWG BLWG	DUST SNOW	NO SIG WEA	TOTAL OBS
N	*	.0	.0	.0	.0	.0	.0	*		.1	.0	.0		.0	.5	
NE	.2	.4	*	.0	.0	.0	.0	.6		.6	*	.1		*	16.0	
E	.7	1.5	.2	.0	.0	.0	*	2.4		2.3	.0	1.0		*	63.1	
SE	.2	.3	.1	.0	.0	.0	.0	.5		.3	.0	.2		.0	11.5	
S	.0	*	.0	.0	.0	.0	.0	*		.1	.0	.1		.0	.6	
SW	.0	.0	.0	.0	.0	.0	.0	.0		*	.0	.0		.0	*	
W	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	.0		.0	*	
NW	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	.0		.0	*	
VAR	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	.0		.0	.0	
CALM	.0	*	.0	.0	.0	.0	.0	*		.0	.0	.0		.0	.2	
TOT OBS									110							3050
TOT PCT	1.1	2.2	.3	.0	.0	.0	*	3.6		3.4	*	1.3		*	91.9	

TABLE 2

PERCENTAGE FREQUENCY OF WEATHER OCCURRENCE BY HOUR

HOUR (GMT)	RAIN	RAIN SHWR	DRZL	PRECIPITATION TYPE FRZG PCPN	SNOW	OTHER FRZN PCPN	HAIL	PCT FREQ PCPN AT OB TIME	TOTAL PCPN OBS	THDR LTNG	OTHER WEATHER PHENOMENA FOG WD PCPN	SMOKE HAZE	DUST BLWG BLWG	DUST SNOW	NO SIG WEA	TOTAL OBS
00&03	.7	2.3	.4	.0	.0	.0	.1	3.5		5.2	.3	1.6		.0	89.8	
06&09	1.6	3.3	.4	.0	.0	.0	.0	5.3		8.1	.0	.7		.1	86.0	
12&15	.9	1.6	.1	.0	.0	.0	.0	2.6		.7	.0	1.4		.0	95.7	
18&21	1.2	1.8	.4	.0	.0	.0	.0	3.2		.5	.0	1.5		.0	95.1	
TOT									111							3055
PCT	1.1	2.2	.3	.0	.0	.0	*	3.6		3.4	.1	1.3		*	91.8	

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

WND DIR	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	34-47	48+	TOTAL OBS	PCT FREQ	MEAN SPD	HOUR (GMT) 00	03	06	09	12	15	18	21
N	.1	.3	.2	*	.0	.0		.6	8.9	.9	.0	.6	.0	.0	1.0	.7	1.1
NE	.3	5.9	11.5	.9	.0	.0		18.5	13.2	19.5	30.3	15.5	23.3	17.6	24.5	18.6	27.0
E	.6	20.9	42.0	3.7	*	.0		67.2	13.6	66.1	60.1	71.3	54.7	69.3	64.9	65.4	59.9
SE	.5	5.1	6.7	.3	.0	.0		12.6	11.8	12.3	9.6	11.7	21.9	12.5	9.6	13.3	10.8
S	.0	.4	.3	*	.0	.0		.8	11.1	.9	.0	.5	.0	.4	.0	1.4	.0
SW	.0	.1	.0	.0	.0	.0		.1	6.2	*	.0	.1	.0	.0	.0	.1	.0
W	*	*	.0	.0	.0	.0		*	5.3	.0	.0	.0	.0	.0	.0	.1	.6
NW	*	*	.0	.0	.0	.0		.1	4.0	.0	.0	.0	.0	.1	.0	.1	.6
VAR	.0	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
CALM	.2							.2	.0	.3	.0	.3	.0	.0	.0	.2	.0
TOT OBS	61	1131	2102	168	1	0	3463		13.2	758	57	738	90	805	52	875	88
TOT PCT	1.8	32.7	60.7	4.9	*	.0		100.0		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 3A

WND DIR	WIND SPEED (KNOTS) 0-6	7-16	17-27	28-40	41+	TOTAL OBS	PCT FREQ	MEAN SPD	HOUR (GMT) 00 03	06 09	12 15	18 21
N	.2	.3	*	*	.0		.6	8.9	.8	.6	.1	.8
NE	1.5	12.5	4.4	.1	.0		18.5	13.2	20.3	16.4	18.1	19.3
E	4.5	45.8	16.5	.4	.0		67.2	13.6	65.7	69.5	69.1	64.9
SE	1.8	8.9	1.8	.1	.0		12.6	11.8	12.1	12.8	12.3	13.1
S	.1	.6	.1	*	.0		.8	11.1	.8	.5	.4	1.3
SW	*	*	.0	.0	.0		.1	6.2	*	.1	.0	.1
W	*	*	.0	.0	.0		*	5.3	.0	.0	.0	.2
NW	*	*	.0	.0	.0		.1	4.0	.0	.0	.1	.2
VAR	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	.0
CALM	.2						.2	.0	.2	.2	.0	.2
TOT OBS	291	2361	790	21	0	3463		13.2	815	828	857	963
TOT PCT	8.4	68.2	22.8	.6	.0		100.0		100.0	100.0	100.0	100.0

JULY

PERIOD: (PRIMARY) 1950-1970
(OVER-ALL) 1856-1970

AREA MONA PASSAGE
17.9N 67.9W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

HOUR	CALM	1-3	4-10	WIND SPEED (KNOTS) 11-21	22-33	34-47	48+	MEAN	PCT FREQ	TOTAL OBS
00&03	.2	1.8	35.8	56.4	5.5	.1	.0	13.0	100.0	815
06&09	.2	1.3	37.8	57.4	3.3	.0	.0	12.4	100.0	828
12&15	.0	1.2	29.8	64.8	4.3	.0	.0	13.4	100.0	857
18&21	.2	2.0	28.1	63.6	6.1	.0.	.0	13.8	100.0	963
TOT	6	55	1131	2102	168	1	0	13.2		3463
PCT	.2	1.6	32.7	60.7	4.9	*	.0		100.0	

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS) BY WIND DIRECTION

WND DIR	0-2	3-4	5-7	8 & OBSCD	TOTAL OBS	MEAN CLOUD COVER
N	.2	.2	.2	.1		4.0
NE	6.0	4.4	4.5	1.8		3.8
E	22.1	22.2	18.6	6.2		3.8
SE	3.9	3.5	3.7	1.4		4.0
S	.2	.2	.2	.1		4.1
SW	.0	*	.0	*		7.0
W	*	.0	.0	.0		2.0
NW	*	.0	.0	.0		2.0
VAR	.0	.0	.0	.0		.0
CALM	.1	.0	.1	*		4.6
TOT OBS	896	840	748	264	2748	3.8
TOT PCT	32.6	30.6	27.2	9.6	100.0	

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT,NH >4/8) AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

WND DIR	000 149	150 299	300 599	600 999	1000 1999	2000 3499	3500 4999	5000 6499	6500 7999	8000+	NH <5/8 ANY HGT	TOTAL OBS
N	.0	*	.0	.0	.1	.0	.0	.0	.0	.0	.4	
NE	*	.0	.2	.8	.9	.6	.3	.1	.1	.0	13.6	
E	.1	.1	.7	3.5	5.0	2.4	.8	.1	.1	.1	56.1	
SE	.0	*	.1	.7	.9	.6	.3	*	*	*	10.0	
S	.0	.0	.0	*	.1	.1	*	.0	.0	.0	.5	
SW	.0	.0	*	.0	.0	.0	.0	.0	.0	.0	*	
W	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	*	
NW	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	*	
VAR	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
CALM	.0	.0	.0	*	.0	.1	.0	.0	.0	.0	.1	
TOT OBS	3	4	28	139	193	102	39	8	6	3	2223	2748
TOT PCT	.1	.1	1.0	5.1	7.0	3.7	1.4	.3	.2	.1	80.9	100.0

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

CEILING (FEET)	VSBY (NM) * OR >10	* OR >5	* OR >2	* OR >1	* OR >1/2	* OR >1/4	* OR >50YD	* OR >0
* OR >6500	.3	.3	.3	.3	.3	.3	.3	.3
* OR >5000	.5	.5	.6	.6	.6	.6	.6	.6
* OR >3500	1.8	1.9	2.0	2.0	2.0	2.0	2.0	2.0
* OR >2000	4.7	5.6	5.7	5.7	5.7	5.7	5.7	5.7
* OR >1000	10.4	12.6	12.7	12.7	12.7	12.7	12.7	12.7
* OR >600	14.1	17.6	17.7	17.8	17.8	17.8	17.8	17.8
* OR >300	14.8	18.5	18.7	18.8	18.8	18.8	18.8	18.8
* OR >150	14.8	18.6	18.8	19.0	19.0	19.0	19.0	19.0
* OR > 0	14.8	18.7	18.9	19.1	19.1	19.1	19.1	19.1
TOTAL	407	513	520	524	524	524	524	524

TOTAL NUMBER OF OBS: 2746 PCT FREQ NH <5/8: 80.9

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

0	1	2	3	4	5	6	7	8	OBSCD	TOTAL OBS
7.5	17.0	25.5	20.0	10.7	6.8	5.2	3.3	3.8	.1	2858

JULY

PERIOD: (PRIMARY) 1950-1970
(OVER-ALL) 1856-1970

AREA MONA PASSAGE 17.9N 67.9W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF PRECIPITATION WITH VARYING VALUES OF VISIBILITY

VSBY (NM)		N	NE	E	SE	S	SW	W	NW	VAR	CALM	PCT	TOTAL OBS
<1/2	PCP	.0	.0	*	*	.0	.0	.0	.0	.0	.0	.1	
	NO PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	TOT %	.0	.0	*	*	.0	.0	.0	.0	.0	.0	.1	
1/2<1	PCP	.0	.0	*	.0	.0	.0	.0	.0	.0	.0	*	
	NO PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	TOT %	.0	.0	*	.0	.0	.0	.0	.0	.0	.0	*	
1<2	PCP	.0	.0	.1	.1	.0	.0	.0	.0	.0	.0	.2	
	NO PCP	.0	.0	*	*	.0	.0	.0	.0	.0	.0	.1	
	TOT %	.0	.0	.1	.1	.0	.0	.0	.0	.0	.0	.2	
2<5	PCP	.0	.1	.2	.0	.0	.0	.0	.0	.0	.0	.3	
	NO PCP	.0	.1	.1	.0	.0	.0	.0	.0	.0	.0	.2	
	TOT %	.0	.1	.3	.0	.0	.0	.0	.0	.0	.0	.5	
5<10	PCP	*	.3	.8	.2	*	.0	.0	.0	.0	*	1.4	
	NO PCP	*	2.2	6.3	1.1	.1	.0	.0	.0	.0	.0	9.8	
	TOT %	.1	2.5	7.1	1.3	.2	.0	.0	.0	.0	*	11.2	
10+	PCP	.0	.3	1.2	.2	.0	.0	.0	.0	.0	.0	1.7	
	NO PCP	.5	14.5	59.7	10.8	.6	*	*	*	.0	.2	86.4	
	TOT %	.5	14.7	60.9	11.1	.6	*	*	*	.0	.2	88.0	
	TOT OBS												3048
	TOT PCT	.5	17.3	68.5	12.5	.8	*	*	*	.0	.2	100.0	

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED WITH VARYING VALUES OF VISIBILITY

VSBY (NM)	SPD KTS	N	NE	E	SE	S	SW	W	NW	VAR	CALM	PCT	TOTAL OBS
<1/2	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	11-21	.0	.0	*	*	.0	.0	.0	.0	.0		.1	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	.0	.0	*	*	.0	.0	.0	.0	.0	.0	.1	
1/2<1	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.0	.0	*	.0	.0	.0	.0	.0	.0		*	
	11-21	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	22+	.0	*	.0	.0	.0	.0	.0	.0	.0		*	
	TOT %	.0	*	*	.0	.0	.0	.0	.0	.0	.0	.1	
1<2	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.0	.0	.1	*	.0	.0	.0	.0	.0		.1	
	11-21	.0	.0	.0	.1	.0	.0	.0	.0	.0		.1	
	22+	.0	.0	*	.0	.0	.0	.0	.0	.0		*	
	TOT %	.0	.0	.1	.1	.0	.0	.0	.0	.0	.0	.2	
2<5	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.0	.1	.2	*	.0	.0	.0	.0	.0		.2	
	11-21	.0	.1	.3	.0	.0	.0	.0	.0	.0		.4	
	22+	.0	.0	*	.0	.0	.0	.0	.0	.0		*	
	TOT %	.0	.2	.4	*	.0	.0	.0	.0	.0	.0	.7	
5<10	0-3	*	*	*	*	.0	.0	.0	.0	.0	*	.2	
	4-10	*	.8	2.0	.4	.1	.0	.0	.0	.0		3.3	
	11-21	.0	1.7	4.3	.8	.1	.0	.0	.0	.0		7.0	
	22+	.0	.2	.7	.1	*	.0	.0	.0	.0		1.0	
	TOT %	.1	2.7	7.1	1.4	.2	.0	.0	.0	.0	*	11.5	
10+	0-3	.1	.2	.6	.4	.0	.0	*	*	.0	.1	1.5	
	4-10	.2	5.1	18.2	4.6	.4	.1	*	*	.0		28.6	
	11-21	.1	9.7	37.8	5.8	.2	.0	.0	.0	.0		53.7	
	22+	.0	.6	2.8	.2	*	.0	.0	.0	.0		3.7	
	TOT %	.5	15.7	59.4	11.0	.6	.1	*	.1	.0	.1	87.5	
	TOT OBS												3335
	TOT PCT	.5	18.6	67.2	12.5	.8	.1	*	.1	.0	.2	100.0	

JULY

PERIOD: (PRIMARY) 1950-1970
(OVER-ALL) 1856-1970

AREA MONA PASSAGE
17.9N 67.9W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET,NH >4/8) AND OCCURRENCE OF NH <5/8 BY HOUR

HOUR (GMT)	000 149	150 299	300 599	600 999	1000 1999	2000 3499	3500 4999	5000 6499	6500 7999	8000+	TOTAL	NH <5/8 ANY HGT	TOTAL OBS
00&03	.2	.2	1.4	7.9	9.3	5.5	2.3	.3	.3	.2	27.3	72.7	659
06&09	.3	.1	1.2	3.4	5.5	3.6	.7	.1	.3	.0	15.3	84.7	674
12&15	.0	.0	.6	4.2	5.9	2.5	.8	.1	.0	.1	14.3	85.7	715
18&21	.0	.3	.9	4.3	6.9	3.1	1.7	.5	.3	.1	17.9	82.1	786
TOT	3	4	28	139	194	102	39	8	6	3	526	2308	2834
PCT	.1	.1	1.0	4.9	6.8	3.6	1.4	.3	.2	.1	18.6	81.4	100.0

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

HOUR (GMT)	<1/2	1/2<1	1<2	2<5	5<10	10+	TOTAL OBS
00&03	.0	.0	.1	1.4	15.9	82.6	780
06&09	.0	.0	.1	.6	7.9	91.4	801
12&15	.1	.2	.2	.2	9.6	89.6	836
18&21	.1	.0	.4	.4	12.7	86.3	923
TOT	2	2	8	22	384	2922	3340
PCT	.1	.1	.2	.7	11.5	87.5	100.0

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR CEILING HGT (FEET,NH >4/8),BY HOUR

HOUR (GMT)	<150 <30YD	<600 <1	<1000 <5	1000+ AND5+	NH <5/8 AND 5+	TOTAL OBS
00&03	.2	1.7	10.0	18.1	71.9	648
06&09	.3	1.7	5.6	10.4	84.0	643
12&15	.0	.6	4.9	9.7	85.4	693
18&21	.0	1.3	6.4	12.3	81.2	762
TOT	3	36	184	345	2217	2746
PCT	.1	1.3	6.7	12.6	80.7	100.0

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

TEMP F	0-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100	TOTAL OBS	PCT FREQ
90/94	.0	.0	.0	.1	.4	.2	.1	.0	18	.7
85/89	.0	.0	.0	*	2.4	6.8	2.0	.6	286	11.8
80/84	.0	.0	.0	.1	3.1	31.9	38.6	8.8	1999	82.5
75/79	.0	.0	.0	.0	.0	.5	2.1	2.3	119	4.9
70/74	.0	.0	.0	.0	.0	.0	.0	*	1	*
TOTAL	0	0	0	5	141	956	1037	284	2423	100.0
PCT	.0	.0	.0	.2	5.8	39.5	42.8	11.7		

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

N	NE	E	SE	S	SW	W	NW	VAR	CALM
.0	.1	.5	.1	.0	.0	.0	.0	.0	.0
.1	2.1	7.8	1.6	.1	.0	*	.0	.0	*
.4	14.6	56.5	10.3	.5	.0	.0	*	.0	.2
*	1.0	3.2	.7	.0	.0	.0	.0	.0	.0
.0	.0	.0	*	.0	.0	.0	.0	.0	.0
.6	17.8	68.0	12.7	.6	.0	*	*	.0	.2

TABLE 15

MEANS,EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

HOUR (GMT)	MAX	99%	95%	50%	5%	1%	MIN	MEAN	TOTAL OBS
00&03	88	86	84	82	79	78	76	81.8	808
06&09	88	84	83	81	79	77	75	80.9	827
12&15	90	88	84	82	80	78	75	82.0	854
18&21	94	91	88	84	80	77	74	84.0	957
TOT	94	89	86	82	79	77	74	82.3	3446

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

HOUR (GMT)	0-29	30-59	60-69	70-79	80-89	90-100	MEAN	TOTAL OBS
00&03	.0	.2	3.2	31.5	51.4	13.6	82	558
06&09	.0	.2	1.5	33.9	51.2	13.3	82	602
12&15	.0	.0	4.8	40.7	42.2	12.3	81	600
18&21	.0	.4	12.7	50.0	28.6	8.2	77	668
TOT	0	5	141	958	1039	285	81	2428

JULY

PERIOD: (PRIMARY) 1950-1970
(OVER-ALL) 1856-1970

TABLE 17

AREA MONA PASSAGE
17.9N 67.9W

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

AIR-SEA TMP DIF	73 76	77 80	81 84	85 88	89 92	>92	TOT	W FOG	WO FOG
9/10	.0	.0	.0	*	.2	.0	6	.0	.2
7/8	.0	.0	.0	.1	.5	.0	17	.0	.6
6	.0	.0	.1	.6	.3	.0	29	.0	1.0
5	.0	*	.1	.8	.1	*	31	.0	1.1
4	.0	.0	.5	2.3	.1	.0	82	.0	2.9
3	.0	*	1.1	2.8	*	.0	112	.0	4.0
2	.0	*	4.7	2.2	.0	.0	194	.0	6.9
1	.0	*	9.6	1.6	*	.0	314	.0	11.2
0	.0	.9	19.7	.8	.0	.0	597	*	21.3
-1	.0	1.6	15.2	.3	.0	.0	479	.0	17.1
-2	.0	3.9	10.7	.0	.0	.0	409	*	14.6
-3	.0	3.5	5.3	*	.0	.0	247	.0	8.8
-4	.1	3.2	2.2	*	.0	.0	153	.0	5.5
-5	.0	1.6	.9	.0	.0	.0	68	.0	2.4
-6	.0	.9	.6	.0	.0	.0	40	.0	1.4
-7/-8	.2	.3	.2	.0	.0	.0	18	.0	.6
-9/-10	*	.0	.1	.0	.0	.0	3	.0	.1
-11/-13	.0	*	.0	.0	.0	.0	1	.0	*
TOTAL	9		1986		34			2	2798
		447		323		1	2800		
PCT	.3	16.0	70.9	11.5	1.2	*	100.0	.1	99.9

PERIOD: (OVER-ALL) 1963-1970

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

N

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.1	.1	.0	.0	.0	.0	.2
1-2	.0	.1	.0	.0	.0	.0	.1
3-4	.1	.2	.0	.0	.0	.0	.3
5-6	.0	.1	.3	.0	.0	.0	.4
7	.0	.0	.0	.0	.0	.0	.0
8-9	.0	.0	.0	.0	.0	.0	.0
10-11	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.2	.5	.3	.0	.0	.0	1.0

NE

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.1	*	*	.0	.0	.0	.2
1-2	.0	2.3	1.7	.0	.0	.0	4.0
3-4	.0	1.1	4.8	.0	.0	.0	5.8
5-6	.0	.8	4.5	.1	.0	.0	5.4
7	.0	.0	1.7	.5	.0	.0	2.2
8-9	.0	.0	.3	.5	.0	.0	.8
10-11	.0	.1	.0	*	.0	.0	.1
12	.0	.0	.0	*	.0	.0	*
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.1	4.3	13.0	1.1	.0	.0	18.6

E

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.0	.9	.1	.0	.0	.0	1.0
1-2	.1	6.2	4.9	.0	.0	.0	11.2
3-4	.0	7.2	16.2	.3	.0	.0	23.7
5-6	.1	3.5	14.8	1.0	.0	.0	19.4
7	.0	.4	6.8	1.5	.0	.0	8.7
8-9	.0	.2	1.6	1.0	.0	.0	2.8
10-11	.0	.0	.1	.3	.0	.0	.4
12	.0	.0	.0	.1	.0	.0	.1
13-16	.0	.0	.2	.0	.0	.0	.2
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.2	18.4	44.8	4.2	.0	.0	67.6

SE

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.0	.1	.0	.0	.0	.0	.1
1-2	.1	2.4	.8	.0	.0	.0	3.3
3-4	.0	1.1	3.3	*	.0	.0	4.4
5-6	*	.5	2.1	*	.0	.0	2.6
7	.0	.1	.9	.1	.0	.0	1.0
8-9	.0	.0	.1	.0	.0	.0	.1
10-11	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.1	4.1	7.2	.2	.0	.0	11.5

PERIOD: (OVER-ALL) 1963-1970 JULY AREA MONA PASSAGE 17.9N 67.9W

TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

	S							SW						
HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.0	.1	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
1-2	.0	.0	.1	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
3-4	.0	.3	.3	.0	.0	.0	.5	.0	.0	.0	.0	.0	.0	.0
5-6	.0	.1	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8-9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10-11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.0	.5	.4	.0	.0	.0	.9	.0	.0	.0	.0	.0	.0	.0

	W							NW							TOTAL
HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT	1-3	4-10	11-21	22-33	34-47	48+	PCT	PCT
<1	.0	.1	.0	.0	.0	.0	.1	.0	.1	.0	.0	.0	.0	.1	
1-2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
3-4	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
5-6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
8-9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
10-11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
13-16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
17-19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
20-22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
23-25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
26-32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
33-40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
41-48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
49-60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
61-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
71-86	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
87+	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
TOT PCT	.0	.1	.0	.0	.0	.0	.1	.0	.1	.0	.0	.0	.0	.1	99.8

WIND SPEED (KTS) VS SEA HEIGHT (FT)

HGT	0-3	4-10	11-21	22-33	34-47	48+	PCT	TOT OBS
<1	.3	1.4	.1	.0	.0	.0	1.8	
1-2	.2	11.1	7.5	.0	.0	.0	18.8	
3-4	.2	9.8	24.5	.3	.0	.0	34.9	
5-6	.1	5.0	21.7	1.1	.0	.0	27.9	
7	.0	.5	9.4	2.1	.0	.0	11.9	
8-9	.0	.2	2.1	1.5	.0	.0	3.8	
10-11	.0	.1	.1	.3	.0	.0	.6	
12	.0	.0	.0	.1	.0	.0	.1	
13-16	.0	.0	.2	.0	.0	.0	.2	
17-19	.0	.0	.0	.0	.0	.0	.0	
20-22	.0	.0	.0	.0	.0	.0	.0	
23-25	.0	.0	.0	.0	.0	.0	.0	
26-32	.0	.0	.0	.0	.0	.0	.0	
33-40	.0	.0	.0	.0	.0	.0	.0	
41-48	.0	.0	.0	.0	.0	.0	.0	
49-60	.0	.0	.0	.0	.0	.0	.0	
61-70	.0	.0	.0	.0	.0	.0	.0	
71-86	.0	.0	.0	.0	.0	.0	.0	
87+	.0	.0	.0	.0	.0	.0	.0	
TOT PCT	.9	28.1	65.6	5.5	.0	.0	100.0	877

PERIOD: (OVER-ALL) 1949-1970 TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

PERIOD (SEC)	<1	1-2	3-4	5-6	7	8-9	10-11	12	13-16	17-19	20-22	23-25	26-32	33-40	41-48	49-60	61-70	71-86	87+	TOTAL	MEAN HGT
<6	.9	8.8	19.2	9.8	3.2	1.2	.2	.1	.1	*	.1	.0	.0	.0	.0	.0	.0	.0	.0	1046	4
6-7	.0	1.4	7.9	15.4	6.8	2.4	.7	.2	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	836	5
8-9	.0	.3	1.8	2.9	4.5	1.3	.4	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	274	6
10-11	.0	.3	.3	.3	.7	.7	.3	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	66	6
12-13	.0	.0	.3	.2	*	*	.0	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	16	5
>13	.0	.0	.0	.1	.2	.1	.1	*	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	13	8
INDET	.8	1.3	1.5	1.3	1.0	.2	.1	.0	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	151	4
TOTAL	41	291	743	719	394	145	44	15	7	1	2	0	0	0	0	0	0	0	0	2402	5
PCT	1.7	12.1	30.9	29.9	16.4	6.0	1.8	.6	.3	*	.1	.0	.0	.0	.0	.0	.0	.0	.0	100.0	

AUGUST

PERIOD: (PRIMARY) 1950-1970
(OVER-ALL) 1859-1970

AREA MONA PASSAGE 17.9N 67.9W

TABLE 1

PERCENTAGE FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

WND DIR	RAIN	RAIN SHWR	PRECIPITATION TYPE DRZL	FRZG PCPN	SNOW	OTHER FRZN PCPN	HAIL	PCT FREQ PCPN AT OB TIME	TOTAL PCPN OBS	OTHER WEATHER PHENOMENA THDR LTNG	FOG WO PCPN	SMOKE HAZE	DUST BLWG BLWG	DUST SNOW	NO SIG WEA	TOTAL OBS
N	.0	.1	.0	.0	.0	.0	.0	.1		*	.0	.0		.0	1.5	
NE	.2	.3	*	.0	.0	.0	*	.4		.4	.0	.2		*	17.5	
E	.4	1.0	.2	.0	.0	.0	*	1.6		2.4	.1	.5		*	57.3	
SE	.2	.4	.1	.0	.0	.0	.0	.7		.6	*	.2		.0	12.8	
S	.1	.0	.0	.0	.0	.0	.0	.1		.1	.0	.0		.0	1.8	
SW	.0	.0	.0	.0	.0	.0	.0	.0		*	.0	.0		.0	.5	
W	*	.0	.0	.0	.0	.0	.0	*		.1	.0	.0		.0	.3	
NW	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	.0		.0	.3	
VAR	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	.0		.0	.0	
CALM	.0	.0	.0	.0	.0	.0	.0	.0		*	.0	.0		.0	.6	
TOT OBS									87							3075
TOT PCT	.9	1.7	.3	.0	.0	.0	*	2.8		3.6	.1	.9		*	92.6	

TABLE 2

PERCENTAGE FREQUENCY OF WEATHER OCCURRENCE BY HOUR

HOUR (GMT)	RAIN	RAIN SHWR	PRECIPITATION TYPE DRZL	FRZG PCPN	SNOW	OTHER FRZN PCPN	HAIL	PCT FREQ PCPN AT OB TIME	TOTAL PCPN OBS	OTHER WEATHER PHENOMENA THDR LTNG	FOG WO PCPN	SMOKE HAZE	DUST BLWG BLWG	DUST SNOW	NO SIG WEA	TOTAL OBS
00&03	1.3	2.6	.1	.0	.0	.0	.1	4.2		6.1	.1	1.1		.0	88.8	
06&09	.7	1.3	.3	.0	.0	.0	.0	2.3		8.5	.0	.3		.0	89.1	
12&15	.6	1.8	.3	.0	.0	.0	.0	2.6		.3	.3	1.0		.0	95.8	
18&21	1.1	1.2	.4	.0	.0	.0	.0	2.6		.2	.2	1.4		.1	95.6	
TOT									90							3097
PCT	.9	1.7	.3	.0	.0	.0	*	2.9		3.6	.2	.9		*	92.4	

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

WND DIR	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	34-47	48+	TOTAL OBS	PCT FREQ	MEAN SPD	HOUR (GMT) 00	03	06	09	12	15	18	21
N	.2	.8	.5	.0	.0	.0		1.5	9.5	2.5	.7	1.9	1.6	.9	.0	.9	2.8
NE	.7	8.2	10.9	.5	.0	.0		20.3	11.9	20.5	27.9	15.6	24.8	20.3	28.2	20.9	33.3
E	1.0	23.8	34.3	1.5	.0	.0		60.6	12.3	58.8	58.3	64.2	58.9	62.6	50.8	59.8	46.5
SE	.5	6.6	6.3	.4	.0	.0		13.7	11.3	13.2	8.7	15.0	7.9	13.4	11.3	15.0	11.8
S	.2	1.0	.7	*	.0	.0		1.9	9.1	2.6	2.9	1.5	2.3	1.6	3.2	1.7	1.9
SW	.1	.3	.1	*	.0	.0		.5	7.4	.6	.0	.2	.5	.5	3.2	.4	.9
W	*	.2	.1	.0	*	.0		.4	10.8	.2	1.4	.4	.9	.3	1.6	.3	.5
NW	.1	.1	*	*	*	.0		.3	12.5	.4	.0	.3	.2	.2	.0	.2	.5
VAR	.0	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
CALM	.8							.8	.0	1.1	.0	.9	2.8	.1	1.6	.9	1.9
TOT OBS	127	1456	1882	89	2	0	3556		11.8	783	69	762	107	843	62	822	108
TOT PCT	3.6	40.9	52.9	2.5	.1	.0		100.0		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 3A

WND DIR	WIND SPEED (KNOTS) 0-6	7-16	17-27	28-40	41+	TOTAL OBS	PCT FREQ	MEAN SPD	HOUR (GMT) 00 03	06 09	12 15	18 21
N	.5	.8	.2	.0	.0		1.5	9.5	2.4	1.9	.8	1.1
NE	2.8	13.9	3.5	.1	.0		20.3	11.9	21.1	16.7	20.9	22.4
E	6.8	42.7	10.9	.2	.0		60.6	12.3	58.8	63.5	61.8	58.2
SE	2.6	9.2	1.9	*	.0		13.7	11.3	12.9	14.1	13.3	14.6
S	.8	.9	.1	.0	.0		1.9	9.1	2.6	1.6	1.7	1.7
SW	.3	.2	*	.0	.0		.5	7.4	.5	.2	.7	.4
W	.1	.2	*	*	.0		.4	10.8	.3	.5	.4	.3
NW	.1	.1	*	.1	.0		.3	12.5	.4	.3	.2	.2
VAR	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	.0
CALM	.8						.8	.0	1.1	1.2	.2	1.0
TOT OBS	533	2417	594	12	0	3556		11.8	892	869	905	930
TOT PCT	15.0	68.0	16.7	.3	.0		100.0		100.0	100.0	100.0	100.0

AUGUST

PERIOD: (PRIMARY) 1950-1970
(OVER-ALL) 1859-1970

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TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

HOUR	CALM	1-3	4-10	WIND SPEED (KNOTS) 11-21	22-33	34-47	48+	MEAN	PCT FREQ	TOTAL OBS
00&03	1.1	2.8	40.4	53.4	2.3	.0	.0	11.8	100.0	852
06&09	1.2	3.0	44.2	49.9	1.6	.1	.0	11.3	100.0	869
12&15	.2	3.0	42.8	51.8	2.1	.1	.0	11.9	100.0	905
18&21	1.0	2.2	36.7	56.3	3.9	.0	.0	12.3	100.0	930
TOT	30	97	1456	1882	89	2	0	11.8		3556
PCT	.8	2.7	40.9	52.9	2.5	.1	.0		100.0	

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS) BY WIND DIRECTION

WND DIR	0-2	3-4	5-7	8 & OBSCD	TOTAL OBS	MEAN CLOUD COVER
N	.4	.4	.6	.1		4.3
NE	7.0	5.4	4.7	1.1		3.5
E	22.7	21.5	14.3	3.8		3.5
SE	5.1	4.7	3.0	1.5		3.6
S	.6	.5	.7	.3		4.3
SW	.2	.1	.2	*		4.1
W	.1	.0	.1	.1		5.5
NW	.0	.0	.2	*		6.3
VAR	.0	.0	.0	.0		.0
CALM	.3	.2	*	.1		3.1
TOT OBS	1001	903	661	197	2762	3.5
TOT PCT	36.2	32.7	23.9	7.1	100.0	

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT,NH >4/8) AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

WND DIR	000 149	150 299	300 599	600 999	1000 1999	2000 3499	3500 4999	5000 6499	6500 7999	8000+	NH <5/8 ANY HGT	TOTAL OBS
N	.0	.0	.0	.1	.1	.1	.0	.0	.0	.0	1.3	
NE	.1	*	.2	.6	1.1	.7	.1	.2	.0	.0	15.3	
E	.1	.1	.5	1.5	3.5	1.7	.9	.2	.1	*	53.6	
SE	*	.0	.2	.8	.7	.4	.2	.0	.0	*	12.1	
S	.0	.0	.1	.1	.1	.1	*	.0	.0	.0	1.6	
SW	.0	.0	.0	*	*	.0	.0	.0	.0	.0	.4	
W	.0	.0	*	.0	.1	.0	.0	.0	.0	.0	.2	
NW	.0	.0	*	.0	*	.0	*	.0	.0	.0	.2	
VAR	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
CALM	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.5	
TOT OBS	4	3	30	84	155	84	36	10	2	1	2353	2762
TOT PCT	.1	.1	1.1	3.0	5.6	3.0	1.3	.4	.1	*	85.2	100.0

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

CEILING (FEET)	VSBY (NM) = OR >10	= OR >5	= OR >2	= OR >1	= OR >1/2	= OR >1/4	= OR >50YD	= OR >0
= OR >6500	.1	.1	.1	.1	.1	.1	.1	.1
= OR >5000	.4	.5	.5	.5	.5	.5	.5	.5
= OR >3500	1.4	1.7	1.8	1.8	1.8	1.8	1.8	1.8
= OR >2000	4.0	4.7	4.8	4.8	4.8	4.8	4.8	4.8
= OR >1000	8.7	10.4	10.5	10.5	10.5	10.5	10.5	10.5
= OR >600	11.0	13.3	13.5	13.6	13.6	13.6	13.6	13.6
= OR >300	11.7	14.3	14.6	14.7	14.7	14.7	14.7	14.7
= OR >150	11.8	14.3	14.7	14.7	14.7	14.7	14.7	14.7
= OR > 0	11.8	14.4	14.8	14.9	14.9	14.9	14.9	14.9
TOTAL	327	399	410	412	412	412	412	412

TOTAL NUMBER OF OBS: 2769 PCT FREQ NH <5/8: 85.1

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

0	1	2	3	4	5	6	7	8	OBSCD	TOTAL OBS
7.7	18.8	26.7	21.3	10.5	5.2	4.4	2.6	2.7	.1	2880

AUGUST

PERIOD: (PRIMARY) 1950-1970
(OVER-ALL) 1859-1970

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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF PRECIPITATION WITH VARYING VALUES OF VISIBILITY

VSBY (NM)		N	NE	E	SE	S	SW	W	NW	VAR	CALM	PCT	TOTAL OBS
	PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
<1/2	NO PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	TOT %	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
1/2<1	NO PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	TOT %	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	PCP	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.1	
1<2	NO PCP	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.1	
	TOT %	.0	.1	.0	.1	.0	.0	.0	.0	.0	.0	.2	
	PCP	.0	*	.2	.1	.0	.0	.0	.0	.0	.0	.3	
2<5	NO PCP	.0	*	.1	.1	.0	.0	.0	.0	.0	.0	.2	
	TOT %	.0	.1	.2	.2	.0	.0	.0	.0	.0	.0	.5	
	PCP	*	.1	.7	.2	.0	.0	*	.0	.0	.0	1.2	
5<10	NO PCP	.2	1.5	3.9	1.3	.1	.0	.1	*	.0	.1	7.2	
	TOT %	.2	1.6	4.7	1.6	.1	.0	.1	*	.0	.1	8.3	
	PCP	*	.3	.7	.2	.1	.0	.0	.0	.0	.0	1.3	
10+	NO PCP	1.4	16.4	56.3	12.3	1.7	.5	.3	.2	.0	.6	89.7	
	TOT %	1.4	16.7	57.0	12.5	1.8	.5	.3	.2	.0	.6	91.0	
	TOT OBS												3066
	TOT PCT	1.6	18.5	61.9	14.3	1.9	.5	.4	.3	.0	.7	100.0	

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED WITH VARYING VALUES OF VISIBILITY

VSBY (NM)	SPD KTS	N	NE	E	SE	S	SW	W	NW	VAR	CALM	PCT	TOTAL OBS
	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
<1/2	4-10	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	11-21	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
1/2<1	4-10	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	11-21	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
1<2	4-10	.0	*	.0	.0	.0	.0	.0	.0	.0		*	
	11-21	.0	.1	*	*	.0	.0	.0	.0	.0		.1	
	22+	.0	.0	.0	*	.0	.0	.0	.0	.0		*	
	TOT %	.0	.1	*	.1	.0	.0	.0	.0	.0	.0	.2	
	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
2<5	4-10	.0	.1	.1	.1	.0	.0	.0	.0	.0		.2	
	11-21	.0	.1	.1	.2	.0	.0	.0	.0	.0		.4	
	22+	.0	.0	*	.0	.0	.0	.0	*	.0		.1	
	TOT %	.0	.1	.2	.2	.0	.0	.0	*	.0	.0	.6	
	0-3	.0	.1	.1	*	.0	.0	.0	*	.0	.1	.2	
5<10	4-10	.1	.5	1.5	.6	*	.0	*	*	.0		2.8	
	11-21	.1	1.0	2.8	1.0	.1	.0	.1	.0	.0		4.9	
	22+	.0	.1	.1	.1	.0	.0	.0	.0	.0		.3	
	TOT %	.2	1.6	4.5	1.7	.1	.0	.1	*	.0	.1	8.3	
	0-3	.2	.6	.9	.5	.2	.1	*	*	.0	.7	3.2	
10+	4-10	.7	7.1	21.7	6.0	1.0	.3	.2	.1	.0		37.2	
	11-21	.5	9.7	32.1	5.4	.6	.1	.1	*	.0		48.5	
	22+	.0	.5	1.3	.2	*	*	*	*	.0		2.1	
	TOT %	1.4	17.9	56.0	12.2	1.9	.4	.3	.2	.0	.7	90.9	
	TOT OBS												3378
	TOT PCT	1.5	19.7	60.8	14.2	2.0	.4	.4	.3	.0	.7	100.0	

AUGUST

PERIOD: (PRIMARY) 1950-1970
(OVER-ALL) 1859-1970

AREA MONA PASSAGE 17.9N 67.9W

TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET,NH >4/8) AND OCCURRENCE OF NH <5/8 BY HOUR

HOUR (GMT)	000 149	150 299	300 599	600 999	1000 1999	2000 3499	3500 4999	5000 6499	6500 7999	8000+	TOTAL	NH <5/8 ANY HGT	TOTAL OBS
00&03	.3	.1	2.5	6.1	6.7	4.0	1.5	.6	.1	.1	22.1	77.9	674
06&09	.3	.1	.6	1.6	4.1	2.3	1.4	.0	.0	.0	10.4	89.6	691
12&15	.0	.0	.6	1.9	6.3	2.5	1.2	.3	.1	.0	12.9	87.1	727
18&21	.0	.1	.7	2.5	5.1	3.0	1.0	.5	.0	.0	12.9	87.1	769
TOT	4	3	30	85	158	84	37	10	2	1	414	2447	2861
PCT	.1	.1	1.0	3.0	5.5	2.9	1.3	.3	.1	*	14.5	85.5	100.0

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

HOUR (GMT)	<1/2	1/2<1	1<2	2<5	5<10	10+	TOTAL OBS
00&03	.0	.0	.1	1.1	11.8	87.0	820
06&09	.0	.0	.0	.6	7.5	91.9	832
12&15	.0	.0	.1	.7	7.0	92.2	870
18&21	.0	.0	.5	.1	7.7	91.7	878
TOT	0	0	6	21	288	3085	3400
PCT	.0	.0	.2	.6	8.5	90.7	100.0

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR CEILING HGT (FEET,NH >4/8),BY HOUR

HOUR (GMT)	<150 <50YD	<600 <1	<1000 <5	1000+ AND5+	NH <5/8 AND 5+	TOTAL OBS
00&03	.3	2.9	9.5	13.1	77.4	655
06&09	.3	1.1	2.9	8.0	89.2	664
12&15	.0	.6	3.1	10.7	86.2	704
18&21	.0	.8	3.5	9.8	86.7	746
TOT	4	36	129	287	2353	2769
PCT	.1	1.3	4.7	10.4	85.0	100.0

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

TEMP F	0-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100	TOTAL OBS	PCT FREQ
90/94	.0	.0	.0	.1	.8	.3	*	.0	32	1.3
85/89	.0	.0	.0	.2	3.0	8.4	3.1	.7	376	15.3
80/84	.0	.0	*	*	2.5	30.4	38.5	8.6	1964	80.2
75/79	.0	.0	.0	.0	.0	.2	1.4	1.4	74	3.0
70/74	.0	.0	.0	.0	.0	.0	.1	*	3	.1
65/69	.0	.0	.0	.0	.0	.0	.0	*	1	*
TOTAL	0	0	1	9	153	964	1056	265	2450	100.0
PCT	.0	.0	*	.4	6.3	39.3	43.1	10.8		

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

	N	NE	E	SE	S	SW	W	NW	VAR	CALM
	.1	.3	.4	.4	.1	*	.0	.0	.0	.1
	.2	3.5	8.4	2.7	.3	.1	.1	.1	.0	.1
	1.2	14.4	51.4	10.5	1.2	.3	.2	.3	.0	.6
	.1	.5	1.5	.7	.1	*	.1	.0	.0	.0
	.0	.0	.1	*	.0	.0	.0	.0	.0	.0
	.0	*	*	.0	.0	.0	.0	.0	.0	.0
PCT	1.5	18.7	61.8	14.3	1.7	.4	.5	.3	.0	.8

TABLE 15

MEANS,EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

HOUR (GMT)	MAX	99%	95%	50%	5%	1%	MIN	MEAN	TOTAL OBS
00&03	92	86	85	82	80	77	71	82.2	856
06&09	90	85	83	82	80	78	78	81.6	867
12&15	91	88	85	82	80	78	71	82.6	900
18&21	95	91	89	85	81	78	69	84.7	913
TOT	95	90	87	82	80	78	69	82.8	3536

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

HOUR (GMT)	0-29	30-59	60-69	70-79	80-89	90-100	MEAN	TOTAL OBS
00&03	.0	.2	3.3	34.5	51.1	10.9	81	579
06&09	.0	.0	2.1	26.3	57.4	14.2	83	634
12&15	.0	.2	3.7	43.3	41.8	11.1	80	624
18&21	.0	1.3	16.0	53.0	22.5	7.1	76	630
TOT	0	10	156	971	1063	267	80	2467

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PERIOD: (PRIMARY) 1950-1970
(OVER-ALL) 1859-1970

AREA MONA PASSAGE
17.9N 67.9W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

AIR-SEA TMP DIF	73 76	77 80	81 84	85 88	89 92	>92	TOT	W FOG	WO FOG
11/13	.0	.0	.0	.0	.0	*	1	.0	*
9/10	.0	.0	.0	*	.1	*	5	.0	.2
7/8	.0	.0	.0	*	.5	.1	17	.0	.6
6	.0	*	.1	.1	.5	.0	21	.0	.7
5	.0	.0	.2	.7	.6	.0	42	.0	1.5
4	.0	.0	.4	1.8	*	.0	64	.0	2.3
3	.0	*	.7	3.1	*	.0	109	.0	3.9
2	.0	*	2.8	3.5	*	.0	178	.0	6.3
1	.0	*	7.3	3.7	.0	.0	311	*	11.0
0	.0	.4	15.0	1.7	*	.0	482	*	17.1
-1	.0	.5	18.0	.7	.0	.0	541	*	19.1
-2	.0	1.5	14.8	.2	.0	.0	464	*	16.4
-3	.0	2.0	7.3	.2	.0	.0	271	.0	9.6
-4	*	2.3	3.4	.1	.0	.0	165	.0	5.8
-5	.0	1.5	1.1	*	.0	.0	76	.0	2.7
-6	.0	1.3	.4	.0	.0	.0	46	*	1.6
-7/-8	*	.5	.3	.0	.0	.0	22	.0	.8
-9/-10	.1	.1	.0	.0	.0	.0	6	.0	.2
TOTAL	4		2027		51			5	2816
		287		447		5	2821		
PCT	.1	10.2	71.9	15.8	1.8	.2	100.0	.2	99.8

PERIOD: (OVER-ALL) 1963-1970

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

N

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.1	.2	.0	.0	.0	.0	.3
1-2	.1	.4	.1	.0	.0	.0	.5
3-4	.0	.2	.0	.0	.0	.0	.2
5-6	.0	.0	.1	.0	.0	.0	.1
7	.0	.0	.0	.0	.0	.0	.0
8-9	.0	.0	.0	.0	.0	.0	.0
10-11	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.2	.8	.2	.0	.0	.0	1.1

NE

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	*	.7	.2	.0	.0	.0	1.0
1-2	.1	3.9	1.1	.0	.0	.0	5.2
3-4	.0	2.3	5.0	.1	.0	.0	7.4
5-6	.0	.6	3.0	.4	.0	.0	4.0
7	.0	.0	.6	.2	.0	.0	.8
8-9	.0	.0	.4	.0	.0	.0	.4
10-11	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.2	7.5	10.4	.7	.0	.0	18.7

E

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.0	1.5	.1	.0	.0	.0	1.6
1-2	.3	9.6	6.4	.0	.0	.0	16.3
3-4	.1	9.8	15.5	.7	.0	.0	26.2
5-6	.0	1.9	12.7	.8	.0	.0	15.4
7	.0	.2	3.3	.5	.0	.0	4.1
8-9	.0	.1	.8	.1	.0	.0	1.0
10-11	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.1	.0	.0	.0	.1
13-16	.0	.0	.0	.1	.0	.0	.1
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.4	23.1	38.9	2.2	.0	.0	64.7

SE

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.2	.2	.1	.0	.0	.0	.6
1-2	.3	2.1	.6	.0	.0	.0	3.0
3-4	.0	2.6	2.5	.0	.0	.0	5.1
5-6	.0	.6	1.9	.3	.0	.0	2.8
7	.0	.0	.3	.1	.0	.0	.5
8-9	.0	.0	*	.0	.0	.0	*
10-11	.0	.0	.0	.1	.0	.0	.1
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	*	.0	.0	*
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.5	5.5	5.5	.6	.0	.0	12.1

PERIOD: (OVER-ALL) 1963-1970

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TABLE 18 (CONT)

AREA MONA PASSAGE 17.9N 67.9W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

	S							SW						
HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.0	.2	.0	.0	.0	.0	.2	.0	.1	.0	.0	.0	.0	.1
1-2	.1	.1	.0	.0	.0	.0	.2	.0	.0	.1	.0	.0	.0	.1
3-4	.0	.4	.4	.0	.0	.0	.8	.1	*	.1	.0	.0	.0	.2
5-6	.0	.0	.4	.0	.0	.0	.4	.0	.0	.0	.0	.0	.0	.0
7	.0	.0	.1	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
8-9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10-11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.1	.7	.9	.0	.0	.0	1.7	.1	.1	.2	.0	.0	.0	.5

	W							NW							TOTAL
HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT	1-3	4-10	11-21	22-33	34-47	48+	PCT	PCT
<1	.1	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	
1-2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
3-4	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
5-6	.0	.1	.1	.0	.0	.0	.2	.0	.0	.1	.0	.0	.0	.1	
7	.0	.0	.1	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	
8-9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
10-11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
13-16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
17-19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
20-22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
23-25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
26-32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
33-40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
41-48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
49-60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
61-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
71-86	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
87+	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
TOT PCT	.1	.1	.2	.0	.0	.0	.4	.0	.0	.1	.0	.0	.0	.1	99.3

WIND SPEED (KTS) VS SEA HEIGHT (FT)

HGT	0-3	4-10	11-21	22-33	34-47	48+	PCT	TOT OBS
<1	1.1	2.9	.4	.0	.0	.0	4.5	
1-2	.9	16.2	8.3	.0	.0	.0	25.4	
3-4	.2	15.4	23.6	.8	.0	.0	39.9	
5-6	.0	3.2	18.2	1.5	.0	.0	22.9	
7	.0	.2	4.5	.9	.0	.0	5.6	
8-9	.0	.1	1.2	.1	.0	.0	1.4	
10-11	.0	.0	.0	.1	.0	.0	.1	
12	.0	.0	.1	.0	.0	.0	.1	
13-16	.0	.0	.0	.1	.0	.0	.1	
17-19	.0	.0	.0	.0	.0	.0	.0	
20-22	.0	.0	.0	.0	.0	.0	.0	
23-25	.0	.0	.0	.0	.0	.0	.0	
26-32	.0	.0	.0	.0	.0	.0	.0	
33-40	.0	.0	.0	.0	.0	.0	.0	
41-48	.0	.0	.0	.0	.0	.0	.0	
49-60	.0	.0	.0	.0	.0	.0	.0	
61-70	.0	.0	.0	.0	.0	.0	.0	
71-86	.0	.0	.0	.0	.0	.0	.0	
87+	.0	.0	.0	.0	.0	.0	.0	
TOT PCT	2.2	38.1	56.3	3.5	.0	.0	100.0	917

PERIOD: (OVER-ALL) 1949-1970

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

PERIOD (SEC)	<1	1-2	3-4	5-6	7	8-9	10-11	12	13-16	17-19	20-22	23-25	26-32	33-40	41-48	49-60	61-70	71-86	87+	TOTAL	MEAN HGT
<6	2.5	12.0	22.9	9.8	2.1	.5	*	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	1218	3
6-7	.1	1.8	10.1	12.7	3.7	1.8	.3	.2	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	752	5
8-9	.0	.2	1.2	3.4	2.7	.8	.2	.1	.1	.0	.0	*	.0	.0	.0	.0	.0	.0	.0	212	6
10-11	.0	.1	.2	.6	.5	.3	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	42	6
12-13	.0	.0	.2	.2	.2	*	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	15	6
>13	.0	.0	.0	.1	.1	.1	*	.0	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	10	8
INDET	1.8	1.3	2.3	1.4	.5	.3	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	189	3
TOTAL	107	374	901	687	237	94	22	11	4	0	0	1	0	0	0	0	0	0	0	2438	4
PCT	4.4	15.3	37.0	28.2	9.7	3.9	.9	.5	.2	.0	.0	*	.0	.0	.0	.0	.0	.0	.0	100.0	

SEPTEMBER

PERIOD: (PRIMARY) 1950-1970
(OVER-ALL) 1860-1970

AREA MONA PASSAGE
17.9N 67.9W

TABLE 1

PERCENTAGE FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

WND DIR	RAIN	RAIN SHWR	DRZL	PRECIPITATION TYPE FRZG PCPN	SNOW	OTHER FRZN PCPN	HAIL	PCT FREQ PCPN AT OB TIME	TOTAL PCPN OBS	THDR LTNG	OTHER WEATHER PHENOMENA FOG WD PCPN	SMOKE HAZE	DUST BLWG BLWG DUST SNOW	NO SIG WEA	TOTAL OBS
N	.0	.0	.0	.0	.0	.0	.0	.0		.1	.0	.0	.0	1.8	
NE	.2	.4	*	.0	.0	.0	.0	.6		.8	*	.1	.0	15.1	
E	.5	.9	.1	.0	.0	.0	*	1.6		3.2	.2	.4	*	49.0	
SE	.3	.4	.1	.0	.0	.0	.0	.8		1.2	.0	.1	.0	17.1	
S	.0	.1	.0	.0	.0	.0	.0	.1		.1	.0	.0	.0	3.8	
SW	.0	*	.0	.0	.0	.0	.0	*		*	.0	.0	.0	1.0	
W	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	.0	.0	.6	
NW	.0	*	.0	.0	.0	.0	.0	*		.1	.0	.0	.0	.3	
VAR	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	
CALM	*	.0	.0	.0	.0	.0	.0	*		.1	.0	.0	.0	1.7	
TOT OBS									86						2687
TOT PCT	1.1	1.9	.2	.0	.0	.0	*	3.2		5.8	.3	.6	*	90.4	

TABLE 2

PERCENTAGE FREQUENCY OF WEATHER OCCURRENCE BY HOUR

HOUR (GMT)	RAIN	RAIN SHWR	DRZL	PRECIPITATION TYPE FRZG PCPN	SNOW	OTHER FRZN PCPN	HAIL	PCT FREQ PCPN AT OB TIME	TOTAL PCPN OBS	THDR LTNG	OTHER WEATHER PHENOMENA FOG WD PCPN	SMOKE HAZE	DUST BLWG BLWG DUST SNOW	NO SIG WEA	TOTAL OBS
00&03	1.3	1.7	.3	.0	.0	.0	.2	3.3		11.4	.2	.6	.0	84.9	
06&09	1.6	1.9	.3	.0	.0	.0	.0	3.8		11.5	.4	.3	.0	84.1	
12&15	.7	1.9	.1	.0	.0	.0	.0	2.8		.1	.6	.3	.0	96.2	
18&21	1.0	2.1	.1	.0	.0	.0	.0	3.2		.8	.1	1.0	.1	95.2	
TOT									89						2715
PCT	1.1	1.9	.2	.0	.0	.0	*	3.3		5.8	.3	.6	*	90.2	

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

WND DIR	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	34-47	48+	TOTAL OBS	PCT FREQ	MEAN SPD	HOUR (GMT) 00	03	06	09	12	15	18	21
N	.3	1.0	.6	.0	*	.0		2.0	9.1	1.9	2.7	1.5	3.0	2.0	3.1	2.0	2.6
NE	1.1	8.4	7.7	.4	.1	.0		17.7	11.0	19.5	26.4	16.0	21.1	16.3	26.6	16.2	24.7
E	2.2	25.6	24.4	.9	.1	.0		53.2	11.2	49.3	55.5	58.1	47.0	54.4	48.8	53.4	43.6
SE	.9	10.2	7.0	.3	*	.0		18.5	10.4	19.9	9.1	17.2	15.1	19.0	10.5	20.1	16.3
S	.4	2.6	1.3	.1	.0	.0		4.4	9.5	4.9	4.5	2.2	5.4	4.4	3.9	5.8	3.6
SW	.1	.7	.4	*	.0	.0		1.2	9.0	1.2	.0	1.7	2.4	1.0	2.3	.8	1.0
W	.1	.5	*	*	.0	.0		.6	7.8	.5	.0	.4	.0	1.2	.0	.2	.8
NW	.1	.2	*	*	.0	.0		.4	7.6	.5	.0	.5	1.2	.2	3.1	.0	.3
VAR	.0	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
CALM	2.1							2.1	.0	2.1	1.8	2.3	4.8	1.4	1.6	1.4	7.1
TOT OBS	223	1524	1285	57	7	0	3096		10.6	682	55	680	83	707	64	727	98
TOT PCT	7.2	49.2	41.5	1.8	.2	.0		100.0		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 3A

WND DIR	WIND SPEED (KNOTS) 0-6	7-16	17-27	28-40	41+	TOTAL OBS	PCT FREQ	MEAN SPD	HOUR (GMT) 00 03	06 09	12 15	18 21
N	.8	1.0	.1	*	.0		2.0	9.1	2.0	1.7	2.1	2.1
NE	3.9	11.2	2.5	.1	*		17.7	11.0	20.0	16.6	17.2	17.2
E	9.1	37.7	6.1	.3	.0		53.2	11.2	49.8	56.8	54.0	52.2
SE	4.2	12.5	1.7	.1	.0		18.5	10.4	19.1	16.9	18.3	19.6
S	1.5	2.3	.6	*	.0		4.4	9.5	4.9	2.5	4.4	5.6
SW	.4	.8	*	*	.0		1.2	9.0	1.2	1.7	1.1	.8
W	.3	.2	.0	*	.0		.6	7.8	.5	.3	1.1	.3
NW	.3	.1	.0	*	.0		.4	7.6	.5	.6	.5	*
VAR	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	.0
CALM	2.1						2.1	.0	2.0	2.8	1.4	2.1
TOT OBS	699	2038	341	17	1	3096		10.6	737	763	771	825
TOT PCT	22.6	65.8	11.0	.5	*		100.0		100.0	100.0	100.0	100.0

SEPTEMBER

PERIOD: (PRIMARY) 1950-1970
(OVER-ALL) 1860-1970

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TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

HOUR	CALM	1-3	4-10	WIND SPEED (KNOTS) 11-21	22-33	34-47	48+	MEAN	PCT FREQ	TOTAL OBS
00&03	2.0	5.4	51.4	39.2	1.6	.3	.0	10.3	100.0	737
06&09	2.8	4.6	49.7	41.4	1.6	.0	.0	10.4	100.0	763
12&15	1.4	7.1	48.9	40.3	1.8	.4	.0	10.6	100.0	771
18&21	2.1	3.5	47.2	44.7	2.3	.2	.0	11.0	100.0	825
TOT	64	159	1524	1285	57	7	0	10.6		3096
PCT	2.1	5.1	49.2	41.5	1.8	.2	.0		100.0	

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS) BY WIND DIRECTION

WND DIR	0-2	3-4	5-7	8 & OBSCD	TOTAL OBS	MEAN CLOUD COVER
N	.6	.7	.3	.1		3.4
NE	5.4	5.6	4.3	.6		3.6
E	17.6	20.0	13.5	3.7		3.7
SE	6.3	5.9	5.2	1.6		3.8
S	1.1	1.5	1.0	.7		4.3
SW	.4	.4	.3	.1		3.7
W	.1	.1	.2	.1		4.9
NW	.2	.1	.2	*		3.8
VAR	.0	.0	.0	.0		.0
CALM	.9	.4	.4	*		2.9
TOT OBS	784	832	613	169	2398	3.7
TOT PCT	32.7	34.7	25.6	7.0	100.0	

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT,NH >4/8) AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

WND DIR	000 149	150 299	300 599	600 999	1000 1999	2000 3499	3500 4999	5000 6499	6500 7999	8000+	NH <5/8 ANY HGT	TOTAL OBS
N	.0	.0	*	.1	*	.0	.1	.0	.0	.0	1.6	
NE	.1	.1	.1	.3	1.0	.6	.4	.1	.0	.0	13.5	
E	.1	.2	.5	1.9	3.2	1.3	.7	.1	.1	.0	46.8	
SE	.0	.0	.3	.9	1.1	.6	.4	.0	.1	.0	15.8	
S	.0	.0	.1	.4	.2	*	.1	.0	.0	.0	3.5	
SW	.0	.0	.0	*	.2	*	.0	.0	.0	.0	1.0	
W	.0	.0	.0	.1	.0	*	*	.1	.0	.0	.4	
NW	.0	.0	.0	*	*	*	.1	*	.0	.0	.3	
VAR	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
CALM	*	.0	.0	*	*	*	.0	.0	.0	.0	1.5	
TOT OBS	5	5	24	90	138	63	40	5	4	0	2024	2398
TOT PCT	.2	.2	1.0	3.8	5.8	2.6	1.7	.2	.2	.0	84.4	100.0

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

CEILING (FEET)	VSBY (NM) = OR >10	= OR >5	= OR >2	= OR >1	= OR >1/2	= OR >1/4	= OR >50YD	= OR >0
= OR >6500	.2	.2	.2	.2	.2	.2	.2	.2
= OR >5000	.4	.4	.4	.4	.4	.4	.4	.4
= OR >3500	1.7	2.0	2.0	2.0	2.0	2.0	2.0	2.0
= OR >2000	3.7	4.5	4.6	4.6	4.6	4.6	4.6	4.6
= OR >1000	8.5	10.1	10.3	10.4	10.4	10.4	10.4	10.4
= OR >600	11.1	13.8	14.0	14.1	14.2	14.2	14.2	14.2
= OR >300	11.8	14.6	14.9	15.0	15.1	15.1	15.1	15.1
= OR >150	11.9	14.8	15.1	15.3	15.3	15.3	15.3	15.3
= OR > 0	12.0	14.9	15.3	15.4	15.5	15.5	15.5	15.5
TOTAL	288	358	367	370	372	373	373	373

TOTAL NUMBER OF OBS: 2399 PCT FREQ NH <5/8: 84.5

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

0	1	2	3	4	5	6	7	8	OBSCD	TOTAL OBS
6.1	18.1	28.1	20.1	11.3	5.5	5.0	2.4	3.3	*	2523

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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF PRECIPITATION WITH VARYING VALUES OF VISIBILITY

VSBY (NM)		N	NE	E	SE	S	SW	W	NW	VAR	CALM	PCT	TOTAL OBS
<1/2	PCP	.0	.0	*	.0	.0	.0	.0	.0	.0	.0	*	
	NO PCP	.0	.0	.0	*	.0	.0	.0	.0	.0	.0	*	
	TOT %	.0	.0	*	*	.0	.0	.0	.0	.0	.0	.1	
1/2<1	PCP	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.1	
	NO PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	TOT %	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.1	
1<2	PCP	.0	*	.1	*	.0	.0	.0	.0	.0	.0	.1	
	NO PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	TOT %	.0	*	.1	*	.0	.0	.0	.0	.0	.0	.1	
2<5	PCP	.0	.1	.1	*	.0	.0	.0	.0	.0	.0	.2	
	NO PCP	.0	*	.2	.1	*	.0	.0	.0	.0	.0	.3	
	TOT %	.0	.1	.3	.1	*	.0	.0	.0	.0	.0	.5	
5<10	PCP	.0	.1	.8	.4	.0	*	.0	*	.0	.0	1.3	
	NO PCP	.2	1.1	3.1	1.4	.4	.1	.1	.0	.0	.2	6.7	
	TOT %	.2	1.2	3.9	1.8	.4	.2	.1	*	.0	.2	8.0	
10+	PCP	.0	.3	.7	.4	.1	.0	.0	.0	.0	*	1.5	
	NO PCP	1.7	14.8	49.5	16.8	3.6	.9	.5	.4	.0	1.6	89.8	
	TOT %	1.7	15.1	50.1	17.2	3.6	.9	.5	.4	.0	1.7	91.3	
	TOT OBS												2676
	TOT PCT	1.8	16.6	54.3	19.1	4.1	1.1	.6	.4	.0	1.9	100.0	

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED WITH VARYING VALUES OF VISIBILITY

VSBY (NM)	SPD KTS	N	NE	E	SE	S	SW	W	NW	VAR	CALM	PCT	TOTAL OBS
<1/2	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.0	.0	.0	*	.0	.0	.0	.0	.0		*	
	11-21	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	22+	.0	.0	*	.0	.0	.0	.0	.0	.0		*	
	TOT %	.0	.0	*	*	.0	.0	.0	.0	.0	.0	.1	
1/2<1	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	11-21	.0	*	.0	.0	.0	.0	.0	.0	.0		*	
	22+	.0	*	.0	.0	.0	.0	.0	.0	.0		*	
	TOT %	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.1	
1<2	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	11-21	.0	*	.1	*	.0	.0	.0	.0	.0		.1	
	22+	.0	*	*	.0	.0	.0	.0	.0	.0		*	
	TOT %	.0	*	.1	*	.0	.0	.0	.0	.0	.0	.2	
2<5	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.0	.1	.2	.1	.0	.0	.0	.0	.0		.3	
	11-21	.0	.1	.1	*	*	.0	.0	.0	.0		.2	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	.0	.1	.3	.1	*	.0	.0	.0	.0	.0	.5	
5<10	0-3	.0	.2	.1	*	.1	.0	.0	.0	.0	.2	.6	
	4-10	.1	.6	1.5	1.1	.1	.1	*	.0	.0		3.6	
	11-21	*	.5	2.1	.7	.3	*	*	.0	.0		3.7	
	22+	*	.1	.2	.1	*	*	*	*	.0		.5	
	TOT %	.2	1.4	3.9	1.9	.5	.2	.1	*	.0	.2	8.3	
10+	0-3	.3	.9	1.9	.8	.3	.1	.1	.1	.0	1.8	6.4	
	4-10	.9	7.7	24.0	9.3	2.3	.5	.4	.2	.0		45.3	
	11-21	.6	7.0	22.8	6.3	.9	.3	.0	*	.0		37.9	
	22+	.0	.3	.7	.3	.1	.0	.0	.0	.0		1.4	
	TOT %	1.8	15.9	49.4	16.7	3.6	.9	.5	.4	.0	1.8	90.9	
	TOT OBS												2926
	TOT PCT	2.0	17.6	53.7	18.7	4.0	1.1	.6	.4	.0	2.0	100.0	

SEPTEMBER

PERIOD: (PRIMARY) 1950-1970
(OVER-ALL) 1860-1970

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TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET,NH >4/8) AND OCCURRENCE OF NH <5/8 BY HOUR

HOUR (GMT)	000 149	150 299	300 599	600 999	1000 1999	2000 3499	3500 4999	5000 6499	6500 7999	8000+	TOTAL	NH <5/8 ANY HGT	TOTAL OBS
00&03	.4	.0	1.1	4.0	5.7	3.1	1.8	.7	.4	.0	17.2	82.8	548
06&09	.0	.5	.6	3.7	5.7	2.3	1.0	.2	.0	.0	13.9	86.1	618
12&15	.3	.2	1.0	3.7	4.6	2.1	1.9	.0	.0	.0	13.7	86.3	629
18&21	.1	.1	1.2	3.3	6.2	2.7	1.7	.0	.3	.0	15.8	84.2	692
TOT	5	5	24	91	138	63	40	5	4	0	375	2112	2487
PCT	.2	.2	1.0	3.7	5.5	2.5	1.6	.2	.2	.0	15.1	84.9	100.0

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

HOUR (GMT)	<1/2	1/2<1	1<2	2<5	5<10	10+	TOTAL OBS
00&03	.0	.1	.3	.4	10.6	88.6	701
06&09	.0	.1	.0	.4	8.6	90.9	735
12&15	.1	.1	.4	.4	6.9	92.0	728
18&21	.1	.0	.0	.6	8.0	91.3	790
TOT	2	3	5	14	250	2680	2954
PCT	.1	.1	.2	.5	8.5	90.7	100.0

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR CEILING HGT (FEET,NH >4/8),BY HOUR

HOUR (GMT)	<150 <50YD	<600 <1	<1000 <5	1000+ AND5+	NH <5/8 AND 5+	TOTAL OBS
00&03	.4	1.7	5.9	12.0	82.1	525
06&09	.0	1.2	5.2	9.2	85.6	598
12&15	.3	1.7	6.0	8.6	85.4	602
18&21	.1	1.3	5.3	10.8	83.8	674
TOT	5	35	134	243	2022	2399
PCT	.2	1.5	5.6	10.1	84.3	100.0

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

TEMP F	0-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100	TOTAL OBS	PCT FREQ
95/99	.0	.0	.0	.0	*	.0	.0	.0	1	*
90/94	.0	.0	.0	.1	1.0	.4	*	.0	33	1.5
85/89	.0	.0	*	.1	3.4	9.8	2.7	1.0	368	17.0
80/84	.0	.0	.0	*	3.4	33.2	35.0	7.0	1702	78.7
75/79	.0	.0	.0	.0	*	.3	.8	1.3	54	2.5
70/74	.0	.0	.0	.0	.0	.0	.2	.1	6	.3
TOTAL	0	0	1	6	171	943	839	204	2164	100.0
PCT	.0	.0	*	.3	7.9	43.6	38.8	9.4		

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

N	NE	E	SE	S	SW	W	NW	VAR	CALM
.0	.0	.0	.0	*	.0	.0	.0	.0	.0
.0	.2	.7	.3	*	*	*	.0	.0	.2
.3	2.7	8.6	3.7	.9	.4	*	*	.0	.3
1.2	13.1	43.8	14.7	2.9	.8	.4	.3	.0	1.5
.1	.3	1.2	.7	.1	.1	.0	*	.0	.0
.0	.1	*	*	.0	.0	*	.0	.0	*
1.6	16.4	54.3	19.4	4.1	1.2	.5	.4	.0	2.1

TABLE 15

MEANS,EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

HOUR (GMT)	MAX	99%	95%	50%	5%	1%	MIN	MEAN	TOTAL OBS
00&03	90	87	85	82	80	77	71	82.4	739
06&09	90	85	84	82	80	77	70	81.8	764
12&15	92	88	86	83	80	77	70	82.8	776
18&21	95	92	89	85	81	77	74	84.9	820
TOT	95	90	87	83	80	77	70	83.0	3099

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

HOUR (GMT)	0-29	30-59	60-69	70-79	80-89	90-100	MEAN	TOTAL OBS
00&03	.0	.0	5.3	39.9	44.4	10.4	80	509
06&09	.0	.2	1.8	35.1	50.3	12.7	82	559
12&15	.0	.2	4.5	47.5	39.3	8.5	79	539
18&21	.0	.9	19.4	51.4	22.3	6.1	76	578
TOT	0	7	173	952	848	205	79	2185

SEPTEMBER

PERIOD: (PRIMARY) 1950-1970
(OVER-ALL) 1860-1970

AREA MONA PASSAGE 17.9N 67.9W

TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION) VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

AIR-SEA TMP DIF	73 76	77 80	81 84	85 88	89 92	>92	TOT	W FOG	WO FOG
11/13	.0	.0	.1	.0	.0	.0	2	.0	.1
9/10	.0	.0	.0	.1	.0	*	3	.0	.1
7/8	.0	.0	*	.2	.5	.1	20	.0	.8
6	.0	.0	.0	*	.6	.0	15	.0	.6
5	.0	.0	.2	.6	.7	.0	36	.0	1.5
4	.0	.0	.2	1.3	.6	.0	51	*	2.0
3	.0	.0	.6	2.6	.1	.0	81	.0	3.3
2	.0	.0	1.5	3.6	.1	.0	130	.0	5.2
1	.0	.1	4.3	4.2	*	.0	214	.0	8.6
0	.0	.2	14.6	2.5	*	.0	429	.1	17.2
-1	.0	.2	17.1	1.0	*	.0	456	.2	18.2
-2	.0	.8	15.7	.4	.0	.0	418	*	16.8
-3	.0	1.1	10.0	*	.0	.0	277	*	11.1
-4	*	2.2	4.8	.0	.0	.0	175	.0	7.1
-5	.0	1.7	2.1	.0	.0	.0	93	.0	3.8
-6	.1	.9	.7	.0	.0	.0	42	.0	1.7
-7/-8	.1	.7	.4	.0	.0	.0	28	.0	1.1
-9/-10	.1	.2	.0	.0	.0	.0	6	.0	.2
-11/-13	.1	.0	.0	.0	.0	.0	2	.0	.1
TOTAL	9		1794		66			9	2469
		198		407		4	2478		
PCT	.4	8.0	72.4	16.4	2.7	.2	100.0	.4	99.6

PERIOD: (OVER-ALL) 1963-1970

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

N

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.0	.1	.0	.0	.0	.0	.1
1-2	.1	.3	.1	.0	.0	.0	.6
3-4	.0	.3	.2	.0	.0	.0	.5
5-6	.0	.2	.3	.0	.0	.0	.5
7	.0	.1	.0	.0	.0	.0	.1
8-9	.0	.0	.0	.0	.0	.0	.0
10-11	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.1	1.1	.6	.0	.0	.0	1.8

NE

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.2	.9	.0	.0	.0	.0	1.1
1-2	.7	3.9	1.6	.0	.0	.0	6.2
3-4	.0	2.9	4.6	.0	.0	.0	7.6
5-6	.0	.4	2.6	.3	.0	.0	3.3
7	.0	*	.6	.3	.0	.0	.9
8-9	.0	.0	.1	*	.0	.0	.1
10-11	.0	.0	.3	.0	.0	.0	.3
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.1	.0	.1
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.8	8.2	9.8	.6	.1	.0	19.6

E

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.6	2.4	.3	.0	.0	.0	3.3
1-2	.3	10.2	4.7	.0	.0	.0	15.2
3-4	.1	10.3	11.0	.0	.0	.0	21.5
5-6	.0	2.9	7.3	.5	.0	.0	10.6
7	.0	.4	2.6	.0	.0	.0	3.0
8-9	.0	.0	.5	.2	.0	.0	.7
10-11	.0	.1	.1	.1	.0	.0	.4
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	1.1	26.3	26.4	.8	.0	.0	54.7

SE

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.4	1.9	.0	.0	.0	.0	2.3
1-2	.2	4.5	1.5	.0	.0	.0	6.1
3-4	.0	2.8	3.2	.1	.0	.0	6.1
5-6	.0	1.0	1.3	.1	.0	.0	2.4
7	.0	*	.4	.0	.0	.0	.4
8-9	.0	.0	.0	.0	.0	.0	.0
10-11	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.6	10.1	6.3	.3	.0	.0	17.3

PERIOD: (OVER-ALL) 1963-1970

SEPTEMBER

TABLE 18 (CONT)

AREA MONA PASSAGE 17.9N 67.9W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

	S							SW						
HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.1	.2	.0	.0	.0	.0	.4	.0	.0	.0	.0	.0	.0	.0
1-2	.3	.9	.0	.0	.0	.0	1.1	.0	.5	.4	.0	.0	.0	.9
3-4	.0	.6	.5	.0	.0	.0	1.1	.0	.1	.4	.0	.0	.0	.6
5-6	.0	.0	.2	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0
7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8-9	.0	.0	.1	.1	.0	.0	.3	.0	.0	.0	.0	.0	.0	.0
10-11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.4	1.7	.8	.1	.0	.0	3.0	.0	.6	.8	.0	.0	.0	1.5

	W							NW							TOTAL
HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT	1-3	4-10	11-21	22-33	34-47	48+	PCT	PCT
<1	.0	.1	.0	.0	.0	.0	.1	.0	*	.0	.0	.0	.0	*	
1-2	.1	.0	.0	.0	.0	.0	.1	.1	.4	.0	.0	.0	.0	.5	
3-4	.0	.1	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	
5-6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
8-9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
10-11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
13-16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
17-19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
20-22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
23-25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
26-32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
33-40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
41-48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
49-60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
61-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
71-86	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
87+	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
TOT PCT	.1	.2	.0	.0	.0	.0	.4	.1	.4	.0	.0	.0	.0	.6	98.7

WIND SPEED (KTS) VS SEA HEIGHT (FT)

HGT	0-3	4-10	11-21	22-33	34-47	48+	PCT	TOT OBS
<1	2.4	6.1	.3	.0	.0	.0	8.8	
1-2	1.9	20.7	8.2	.0	.0	.0	30.9	
3-4	.1	17.1	19.8	.1	.0	.0	37.2	
5-6	.0	4.4	11.6	.9	.0	.0	16.9	
7	.0	.5	3.6	.3	.0	.0	4.4	
8-9	.0	.0	.6	.4	.0	.0	1.0	
10-11	.0	.1	.4	.1	.0	.0	.6	
12	.0	.0	.0	.0	.0	.0	.0	
13-16	.0	.0	.0	.0	.1	.0	.1	
17-19	.0	.0	.0	.0	.0	.0	.0	
20-22	.0	.0	.0	.0	.0	.0	.0	
23-25	.0	.0	.0	.0	.0	.0	.0	
26-32	.0	.0	.0	.0	.0	.0	.0	
33-40	.0	.0	.0	.0	.0	.0	.0	
41-48	.0	.0	.0	.0	.0	.0	.0	
49-60	.0	.0	.0	.0	.0	.0	.0	
61-70	.0	.0	.0	.0	.0	.0	.0	
71-86	.0	.0	.0	.0	.0	.0	.0	
87+	.0	.0	.0	.0	.0	.0	.0	
TOT PCT	4.5	49.0	44.6	1.8	.1	.0	100.0	776

PERIOD: (OVER-ALL) 1949-1970

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

PERIOD (SEC)	<1	1-2	3-4	5-6	7	8-9	10-11	12	13-16	17-19	20-22	23-25	26-32	33-40	41-48	49-60	61-70	71-86	87+	TOTAL	MEAN HGT
<6	3.9	18.4	23.7	8.2	2.0	.2	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	1176	3
6-7	.1	1.8	7.9	8.8	3.6	.4	.4	*	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	478	5
8-9	*	.7	1.9	2.6	2.2	.7	.2	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	176	5
10-11	.0	.3	.2	.7	.5	.3	.1	.1	.0	.0	.0	*	.0	.0	.0	.0	.0	.0	.0	48	6
12-13	.0	.0	.2	*	*	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	12	6
>13	.0	.0	.0	.2	.1	.1	*	.0	*	*	*	.0	*	.0	.0	.0	.0	.0	.0	14	11
INDET	3.0	1.4	2.0	1.3	.4	.1	.0	.0	.0	.0	.0	*	.0	.0	.0	.0	.0	.0	.0	174	2
TOTAL	147	469	748	453	183	43	19	7	4	1	1	2	1	0	0	0	0	0	0	2078	4
PCT	7.1	22.6	36.0	21.8	8.8	2.1	.9	.3	.2	*	*	.1	*	.0	.0	.0	.0	.0	.0	100.0	

OCTOBER

PERIOD: (PRIMARY) 1950-1970
(OVER-ALL) 1885-1970

AREA MONA PASSAGE 17.9N 67.9W

TABLE 1

PERCENTAGE FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

WND DIR	RAIN	RAIN SHWR	DRZL	PRECIPITATION TYPE FRZG PCPN	SNOW	OTHER FRZN PCPN	HAIL	PCT FREQ PCPN AT OB TIME	TOTAL PCPN OBS	THDR LTNG	OTHER WEATHER PHENOMENA FOG WO PCPN	SMOKE HAZE	DUST BLWG BLWG	DUST SNOW	NO SIG WEA	TOTAL OBS
N	*	.0	.0	.0	.0	.0	.0	*		.1	.0	*		.0	1.7	
NE	.1	.4	.0	.0	.0	.0	.0	.5		.7	.0	*		*	13.6	
E	.6	.8	*	.0	.0	.0	.0	1.4		3.2	.1	.2		.0	46.7	
SE	.4	.2	.1	.0	.0	.0	.0	.7		1.1	*	.2		.0	19.1	
S	.2	.2	.1	.0	.0	.0	.0	.4		.4	*	*		.0	6.0	
SW	.1	*	*	.0	.0	.0	.0	.1		.1	.0	.0		.0	.8	
W	*	*	*	.0	.0	.0	.0	.1		.1	.0	.0		.0	.6	
NW	.0	.0	.0	.0	.0	.0	.0	.0		*	.0	.0		.0	.3	
VAR	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	.0		.0	.0	
CALM	.0	.0	.0	.0	.0	.0	.0	.0		.2	.0	.0		.0	1.8	
TOT OBS									90							2788
TOT PCT	1.4	1.6	.3	.0	.0	.0	.0	3.2		5.9	.1	.5		*	90.6	

TABLE 2

PERCENTAGE FREQUENCY OF WEATHER OCCURRENCE BY HOUR

HOUR (GMT)	RAIN	RAIN SHWR	DRZL	PRECIPITATION TYPE FRZG PCPN	SNOW	OTHER FRZN PCPN	HAIL	PCT FREQ PCPN AT OB TIME	TOTAL PCPN OBS	THDR LTNG	OTHER WEATHER PHENOMENA FOG WO PCPN	SMOKE HAZE	DUST BLWG BLWG	DUST SNOW	NO SIG WEA	TOTAL OBS
00&03	1.9	2.5	.4	.0	.0	.0	.0	4.9		11.9	.0	.3		.0	83.7	
06&09	.8	2.0	.1	.0	.0	.0	.0	3.0		11.0	.1	.0		.1	85.9	
12&15	1.3	1.0	.1	.0	.0	.0	.0	2.5		.6	.0	.4		.0	97.0	
18&21	1.6	1.2	.4	.0	.0	.0	.0	3.2		.7	.3	1.1		.0	95.0	
TOT									95							2821
PCT	1.4	1.7	.3	.0	.0	.0	.0	3.4		5.9	.1	.5		*	90.5	

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

WND DIR	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	34-47	48+	TOTAL OBS	PCT FREQ	MEAN SPD	HOUR (GMT) 00	03	06	09	12	15	18	21
N	.3	1.0	.5	.0	.0	.0		1.8	8.0	2.1	1.6	1.9	2.2	1.7	.9	1.5	2.3
NE	1.0	8.8	6.1	.2	.0	.0		16.1	10.0	15.9	25.4	14.5	18.7	15.8	30.0	15.2	22.7
E	2.3	28.0	19.1	.9	.0	.0		50.3	10.4	48.6	43.3	50.7	46.7	54.5	42.7	49.8	42.0
SE	1.3	11.7	7.4	.3	*	.0		20.8	10.0	21.0	16.3	22.0	24.2	19.8	18.2	20.9	20.5
S	.7	3.6	2.2	.2	.0	.0		6.7	9.5	7.2	6.3	5.7	4.4	4.7	4.5	9.6	6.3
SW	.2	.7	.3	*	.0	.0		1.2	8.0	1.5	.8	1.3	1.6	1.2	3.6	.5	1.1
W	.1	.6	*	*	.0	.0		.7	8.0	.9	.0	1.0	.0	.5	.0	.6	.6
NW	.1	.2	.1	.0	.0	.0		.4	7.8	.4	.0	.4	.0	.6	.0	.3	.0
VAR	.0	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
CALM	2.1							2.1	.0	2.5	6.3	2.5	2.2	1.3	.0	1.6	4.5
TOT OBS	255	1742	1141	51	1	0	3190		9.9	719	63	709	91	720	55	745	88
TOT PCT	8.0	54.6	35.8	1.6	*	.0		100.0		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 3A

WND DIR	WIND SPEED (KNOTS) 0-6	7-16	17-27	28-40	41+	TOTAL OBS	PCT FREQ	MEAN SPD	HOUR (GMT) 00 03	06 09	12 15	18 21
N	.8	1.0	*	.0	.0		1.8	8.0	2.1	1.9	1.6	1.6
NE	3.9	10.8	1.3	*	.0		16.1	10.0	16.6	14.9	16.8	16.0
E	11.2	34.2	4.8	.1	.0		50.3	10.4	48.1	50.3	53.7	49.0
SE	5.5	13.6	1.7	*	.0		20.8	10.0	20.6	22.3	19.7	20.8
S	2.4	3.6	.6	.1	.0		6.7	9.5	7.1	5.6	4.6	9.2
SW	.6	.5	*	*	.0		1.2	8.0	1.4	1.4	1.4	.6
W	.3	.3	.0	*	.0		.7	8.0	.8	.8	.4	.6
NW	.2	.2	.0	.0	.0		.4	7.8	.4	.3	.5	.2
VAR	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	.0
CALM	2.1						2.1	.0	2.8	2.5	1.2	1.9
TOT OBS	861	2051	271	7	0	3190		9.9	762	800	775	833
TOT PCT	27.0	64.3	8.5	.2	.0		100.0		100.0	100.0	100.0	100.0

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TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

HOUR	CALM	1-3	4-10	11-21	22-33	34-47	48+	MEAN	PCT FREQ	TOTAL OBS
				WIND SPEED (KNOTS)						
00&03	2.8	5.1	56.5	34.1	1.4	.0	.0	9.6	100.0	782
06&09	2.5	6.0	58.0	32.0	1.4	.1	.0	9.6	100.0	800
12&15	1.2	5.5	53.4	37.7	2.2	.0	.0	10.3	100.0	775
18&21	1.9	6.8	50.7	39.1	1.4	.0	.0	10.2	100.0	833
TOT	67	188	1742	1141	51	1	0	9.9		3190
PCT	2.1	5.9	54.6	35.8	1.6	*	.0		100.0	

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS) BY WIND DIRECTION

WND DIR	0-2	3-4	5-7	8 & OBSCD	TOTAL OBS	MEAN CLOUD COVER
N	.6	.5	.4	.2		3.8
NE	5.2	5.3	3.6	.5		3.4
E	17.6	18.0	12.7	3.2		3.6
SE	6.1	7.9	4.9	2.4		3.9
S	1.7	2.2	1.9	.9		4.3
SW	.2	.4	.3	*		4.0
W	.2	.3	.2	*		3.6
NW	.1	.1	.1	.1		4.5
VAR	.0	.0	.0	.0		.0
CALM	1.5	.2	.1	.1		1.9
TOT OBS	832	878	608	190	2508	3.7
TOT PCT	33.2	35.0	24.2	7.6	100.0	

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT,NH >4/8) AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

WND DIR	000 149	150 299	300 599	600 999	1000 1999	2000 3499	3500 4999	5000 6499	6500 7999	8000+	NH <5/8 ANY HGT	TOTAL OBS
N	.0	.0	*	.1	*	*	*	*	.0	.0	1.5	
NE	.0	.0	.1	.4	.7	.3	.4	.0	.0	.0	12.8	
E	.1	*	.6	1.7	3.2	1.3	.8	.1	.1	*	43.7	
SE	.2	.0	.3	.9	1.5	.6	.1	*	.1	.0	17.5	
S	.0	.0	.0	.5	.4	.2	*	*	.1	.0	5.5	
SW	.0	.0	*	*	.1	.1	*	.0	.0	.0	.6	
W	.0	.0	.0	*	.1	*	.0	.0	.0	.0	.6	
NW	.0	.0	.0	.0	.0	.0	.0	*	.0	.0	.4	
VAR	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
CALM	.0	.0	.0	.0	.0	.0	.0	.0	*	.0	1.8	
TOT OBS	8	1	27	92	151	63	36	5	8	1	2116	2508
TOT PCT	.3	*	1.1	3.7	6.0	2.5	1.4	.2	.3	*	84.4	100.0

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

CEILING (FEET)	= OR >10	= OR >5	= OR >2	= OR >1	= OR >1/2	= OR >1/4	= OR >50YD	= OR >0
				VSBY (NM)				
= OR >6500	.4	.4	.4	.4	.4	.4	.4	.4
= OR >5000	.6	.6	.6	.6	.6	.6	.6	.6
= OR >3500	1.8	1.9	2.0	2.0	2.0	2.0	2.0	2.0
= OR >2000	3.9	4.5	4.5	4.5	4.5	4.5	4.5	4.5
= OR >1000	8.9	10.3	10.5	10.5	10.5	10.5	10.5	10.5
= OR >600	11.6	13.7	14.0	14.1	14.1	14.1	14.2	14.2
= OR >300	12.3	14.7	15.1	15.2	15.2	15.2	15.3	15.3
= OR >150	12.4	14.8	15.2	15.2	15.2	15.3	15.3	15.3
= OR > 0	12.6	15.0	15.4	15.5	15.5	15.6	15.6	15.6
TOTAL	318	378	390	391	392	394	395	395

TOTAL NUMBER OF OBS: 2528 PCT FREQ NH <5/8: 84.4

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

0	1	2	3	4	5	6	7	8 OBSCD		TOTAL OBS
6.3	17.6	28.0	19.9	12.1	5.9	4.7	2.5	2.9	.2	2630

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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF PRECIPITATION WITH VARYING VALUES OF VISIBILITY

VSBY (NM)		N	NE	E	SE	S	SW	W	NW	VAR	CALM	PCT	TOTAL OBS
<1/2	PCP	.0	*	.1	.0	.0	.0	.0	.0	.0	.0	.1	
	NO PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	TOT %	.0	*	.1	.0	.0	.0	.0	.0	.0	.0	.1	
1/2<1	PCP	.0	.0	.0	*	.0	.0	.0	.0	.0	.0	*	
	NO PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	TOT %	.0	.0	.0	*	.0	.0	.0	.0	.0	.0	*	
1<2	PCP	.0	*	*	.0	.0	.0	.0	.0	.0	.0	.1	
	NO PCP	.0	*	*	.0	.0	.0	.0	.0	.0	.0	*	
	TOT %	.0	*	.1	.0	.0	.0	.0	.0	.0	.0	.1	
2<5	PCP	.0	.0	.1	.1	.1	.0	.0	.0	.0	.0	.3	
	NO PCP	.0	*	.2	.1	.1	*	.0	.0	.0	.0	.5	
	TOT %	.0	*	.3	.3	.1	*	.0	.0	.0	.0	.7	
5<10	PCP	*	.3	.3	.3	.2	.1	.1	.0	.0	.0	1.2	
	NO PCP	.1	1.1	2.7	1.3	.8	.1	.0	*	.0	.2	6.2	
	TOT %	.2	1.4	3.0	1.6	.9	.1	.1	*	.0	.2	7.5	
10+	PCP	.0	.2	.9	.3	.2	*	*	.0	.0	.0	1.6	
	NO PCP	1.7	13.2	47.0	19.0	5.6	.8	.6	.4	.0	1.8	90.0	
	TOT %	1.7	13.4	47.8	19.3	5.8	.8	.7	.4	.0	1.8	91.6	
	TOT OBS												2785
	TOT PCT	1.8	14.8	51.3	21.2	6.8	1.0	.7	.4	.0	2.0	100.0	

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED WITH VARYING VALUES OF VISIBILITY

VSBY (NM)	SPD KTS	N	NE	E	SE	S	SW	W	NW	VAR	CALM	PCT	TOTAL OBS
<1/2	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.0	.0	*	.0	.0	.0	.0	.0	.0		*	
	11-21	.0	*	*	.0	.0	.0	.0	.0	.0		*	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	.0	*	.1	.0	.0	.0	.0	.0	.0	.0	.1	
1/2<1	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.0	.0	.0	.1	.0	.0	.0	.0	.0		.1	
	11-21	.0	*	.0	.0	.0	.0	.0	.0	.0		*	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	.0	*	.0	.1	.0	.0	.0	.0	.0	.0	.1	
1<2	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	*	*	.0	.0	*	*	.0	.0	.0		.1	
	11-21	.0	*	.1	.0	.0	.0	.0	.0	.0		.1	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	*	*	.1	.0	*	*	.0	.0	.0	.0	.2	
2<5	0-3	.0	.0	*	.0	.0	.0	.0	.0	.0	.0	*	
	4-10	.0	.0	.1	*	.1	*	.0	.0	.0		.3	
	11-21	.0	*	.1	.2	*	.0	.0	.0	.0		.3	
	22+	.0	.0	.1	.0	.0	.0	.0	.0	.0		.1	
	TOT %	.0	*	.3	.3	.2	*	.0	.0	.0	.0	.8	
5<10	0-3	*	.1	.1	.2	*	.0	.0	*	.0	.2	.7	
	4-10	.1	.7	1.5	.6	.4	.1	*	*	.0		3.4	
	11-21	*	.6	1.4	.7	.3	*	.0	.0	.0		3.0	
	22+	.0	.1	.2	*	*	*	*	.0	.0		.5	
	TOT %	.2	1.4	3.2	1.6	.9	.1	.1	.1	.0	.2	7.6	
10+	0-3	.3	.9	2.1	1.1	.5	.1	.1	*	.0	2.0	7.2	
	4-10	.8	8.1	26.4	10.8	3.0	.5	.6	.2	.0		50.4	
	11-21	.5	5.5	18.0	6.6	1.8	.2	*	.1	.0		32.7	
	22+	.0	.1	.3	.3	.1	.0	.0	.0	.0		1.0	
	TOT %	1.6	14.6	47.0	18.8	5.5	.8	.6	.3	.0	2.0	91.3	
	TOT OBS												3050
	TOT PCT	1.8	16.1	50.6	20.7	6.5	1.0	.7	.4	.0	2.2	100.0	

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TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET,NH >4/8) AND OCCURRENCE OF NH <5/8 BY HOUR

HOUR (GMT)	000 149	150 299	300 599	600 999	1000 1999	2000 3499	3500 4999	5000 6499	6500 7999	8000+	TOTAL	NH <5/8 ANY HGT	TOTAL OBS
00&03	.3	.0	1.3	4.2	6.9	2.8	1.3	.2	.3	.0	17.3	82.7	613
06&09	.0	.2	.9	3.9	6.0	1.9	1.1	.2	.3	.0	14.4	85.6	648
12&15	.5	.0	.9	2.5	5.4	2.2	1.8	.5	.5	.0	14.1	85.9	651
18&21	.4	.0	1.2	3.8	5.2	3.0	1.3	.0	.1	.1	15.2	84.8	691
TOT	8	1	28	93	152	64	36	5	8	1	396	2207	2603
PCT	.3	*	1.1	3.6	5.8	2.5	1.4	.2	.3	*	15.2	84.8	100.0

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

HOUR (GMT)	<1/2	1/2<1	1<2	2<5	5<10	10+	TOTAL OBS
00&03	.1	.0	.1	.9	10.9	87.9	754
06&09	.0	.1	.0	.8	7.8	91.3	780
12&15	.3	.1	.3	.7	5.7	93.0	742
18&21	.0	.1	.2	.7	6.6	92.3	807
TOT	3	3	5	24	238	2810	3083
PCT	.1	.1	.2	.8	7.7	91.1	100.0

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR CEILING HGT (FEET,NH >4/8),BY HOUR

HOUR (GMT)	<150 <50YD	<600 <1	<1000 <5	1000+ AND5+	NH <5/8 AND 5+	TOTAL OBS
00&03	.3	1.9	6.4	11.5	82.1	592
06&09	.0	1.1	5.4	9.5	85.1	630
12&15	.5	1.6	3.9	10.4	85.7	635
18&21	.4	1.6	6.0	9.8	84.2	671
TOT	8	39	137	260	2131	2528
PCT	.3	1.5	5.4	10.3	84.3	100.0

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

TEMP F	0-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100	TOTAL OBS	PCT FREQ
95/99	.0	.0	.0	*	*	.0	.0	.0	2	.1
90/94	.0	.0	.0	.3	.6	.5	.0	*	32	1.5
85/89	.0	.0	.1	.2	2.8	7.0	2.5	.8	290	13.4
80/84	.0	.0	.0	.0	4.2	35.6	32.0	7.5	1715	79.3
75/79	.0	.0	.0	.0	*	.6	2.7	2.2	120	5.6
70/74	.0	.0	.0	.0	.0	.0	*	.1	3	.1
TOTAL	0	0	2	12	167	946	804	231	2162	100.0
PCT	.0	.0	.1	.6	7.7	43.8	37.2	10.7		

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

N	NE	E	SE	S	SW	W	NW	VAR	CALM
.0	*	.1	.0	.0	.0	.0	.0	.0	.0
.0	.3	.6	.4	.1	.0	.0	.0	.0	.1
.3	1.9	6.2	3.0	1.3	.1	.1	*	.0	.3
1.2	11.7	41.5	17.1	4.6	.8	.5	.3	.0	1.7
.2	.8	2.4	1.1	.8	*	.1	.1	.0	.1
.0	.0	.1	.0	*	.0	.0	.0	.0	.0
1.7	14.7	51.0	21.6	6.8	.9	.7	.4	.0	2.2

TABLE 15

MEANS,EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

HOUR (GMT)	MAX	99%	95%	50%	5%	1%	MIN	MEAN	TOTAL OBS
00&03	95	86	84	82	79	76	73	82.0	787
06&09	88	85	83	81	79	76	73	81.3	809
12&15	90	88	86	82	79	77	73	82.4	775
18&21	95	94	90	84	80	77	75	84.7	824
TOT	95	90	87	82	79	77	73	82.6	3195

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

HOUR (GMT)	0-29	30-59	60-69	70-79	80-89	90-100	MEAN	TOTAL OBS
00&03	.0	.2	3.7	40.0	44.7	11.4	81	537
06&09	.0	.0	2.8	37.8	44.8	14.6	82	574
12&15	.0	.6	6.1	43.8	39.7	9.8	80	521
18&21	.0	1.8	17.8	53.2	20.3	6.8	75	556
TOT	0	14	167	956	817	234	79	2188

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION) VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

AIR-SEA TMP DIF	73 76	77 80	81 84	85 88	89 92	>92	TOT	W FOG	WO FOG
11/13	.0	.0	.0	.0	.0	.2	5	.0	.2
9/10	.0	.0	*	.0	.2	.2	11	.0	.4
7/8	.0	.0	*	.2	.6	*	22	.0	.9
6	.0	.0	.1	.3	.4	.0	20	.0	.8
5	.0	.0	.1	.3	.7	*	28	.0	1.1
4	.0	.0	.2	1.5	.2	.0	49	.0	1.9
3	.0	.0	.5	1.9	.1	.0	62	.0	2.4
2	.0	.0	1.7	3.4	.1	.0	132	.0	5.2
1	.0	.0	4.1	3.4	.0	.0	191	.0	7.5
0	.0	.3	12.4	1.5	.0	.0	362	*	14.2
-1	.0	.3	14.8	.7	.0	.0	401	.1	15.7
-2	*	1.5	15.8	.2	.0	.0	446	.0	17.6
-3	.0	2.2	10.2	.1	.0	.0	318	.0	12.5
-4	.0	3.7	5.9	.1	.0	.0	246	.0	9.7
-5	.1	2.7	2.2	*	.0	.0	129	.0	5.1
-6	.0	1.3	.6	.0	.0	.0	48	.0	1.9
-7/-8	.4	1.1	.6	.0	.0	.0	53	.0	2.1
-9/-10	.2	*	.1	.0	.0	.0	8	.0	.3
-11/-13	.2	.0	.0	.0	.0	.0	5	.0	.2
TOTAL	22	337	1761	347	56	13	2536	3	2533
PCT	.9	13.3	69.4	13.7	2.2	.5	100.0	.1	99.9

PERIOD: (OVER-ALL) 1963-1970

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

N

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.1	.1	.0	.0	.0	.0	.2
1-2	.1	.2	.0	.0	.0	.0	.4
3-4	.0	.2	.1	.0	.0	.0	.3
5-6	.0	.0	.2	.0	.0	.0	.2
7	.0	.0	.0	.0	.0	.0	.0
8-9	.0	.0	.0	.0	.0	.0	.0
10-11	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.3	.5	.3	.0	.0	.0	1.1

NE

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.2	.7	.1	.0	.0	.0	1.0
1-2	.4	3.3	1.4	.0	.0	.0	5.0
3-4	.0	2.7	2.1	.0	.0	.0	4.8
5-6	.0	.9	1.0	.0	.0	.0	1.9
7	.0	.0	.4	.0	.0	.0	.4
8-9	.0	*	.1	*	.0	.0	.2
10-11	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.1	.0	.0	.0	.1
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.5	7.6	5.3	*	.0	.0	13.5

E

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.6	3.5	.0	.0	.0	.0	4.1
1-2	.9	12.8	5.5	.0	.0	.0	19.2
3-4	.3	9.8	9.0	.0	.0	.0	19.0
5-6	.0	2.4	6.3	.3	.0	.0	8.9
7	.0	.2	2.2	.3	.0	.0	2.6
8-9	.0	.1	.4	.2	.0	.0	.7
10-11	.0	.1	.1	.0	.0	.0	.2
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	1.7	28.8	23.4	.7	.0	.0	54.7

SE

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.4	1.2	.3	.0	.0	.0	1.9
1-2	1.0	6.9	1.2	.0	.0	.0	9.1
3-4	.0	3.7	3.3	.2	.0	.0	7.1
5-6	.0	.4	1.5	.1	.0	.0	2.0
7	.0	.3	.5	.2	.0	.0	1.0
8-9	.0	.0	*	.0	.0	.0	*
10-11	.0	.0	*	.0	.0	.0	*
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	1.4	12.6	6.8	.4	.0	.0	21.1

PERIOD: (OVER-ALL) 1963-1970

OCTOBER

TABLE 18 (CONT)

AREA MONA PASSAGE 17.9N 67.9W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

	S							SW						
HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.1	.9	.0	.0	.0	.0	1.1	.0	*	.0	.0	.0	.0	*
1-2	.1	1.2	.4	.0	.0	.0	1.8	.0	.3	.0	.0	.0	.0	.3
3-4	.0	.7	.6	.1	.0	.0	1.5	.0	*	.2	.0	.0	.0	.2
5-6	.0	.2	.4	.1	.0	.0	.8	.0	.0	*	.0	.0	.0	*
7	.0	.0	.0	.1	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
8-9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10-11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	*	.0	.0	*
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.2	3.1	1.5	.3	.0	.0	5.1	.0	.4	.2	*	.0	.0	.6

	W							NW							TOTAL
HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT	1-3	4-10	11-21	22-33	34-47	48+	PCT	PCT
<1	.0	.4	.0	.0	.0	.0	.4	.0	.1	.0	.0	.0	.0	.1	
1-2	.1	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	
3-4	.0	.4	.0	.0	.0	.0	.4	.0	.0	.0	.0	.0	.0	.0	
5-6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
8-9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
10-11	.0	.0	.0	.1	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
13-16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
17-19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
20-22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
23-25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
26-32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
33-40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
41-48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
49-60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
61-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
71-86	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
87+	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
TOT PCT	.1	.7	.0	.1	.0	.0	1.0	.0	.1	.0	.0	.0	.0	.1	97.2

WIND SPEED (KTS) VS SEA HEIGHT (FT)

HGT	0-3	4-10	11-21	22-33	34-47	48+	PCT	TOT OBS
<1	4.2	7.5	.4	.0	.0	.0	12.0	
1-2	2.8	24.5	8.5	.0	.0	.0	35.8	
3-4	.4	17.3	15.2	.3	.0	.0	33.1	
5-6	.0	3.8	9.4	.5	.0	.0	13.7	
7	.0	.5	3.0	.5	.0	.0	4.0	
8-9	.0	.1	.5	.3	.0	.0	.9	
10-11	.0	.1	.1	.1	.0	.0	.4	
12	.0	.0	.1	.0	.0	.0	.1	
13-16	.0	.0	.0	.0	.0	.0	.0	
17-19	.0	.0	.0	.0	.0	.0	.0	
20-22	.0	.0	.0	.0	.0	.0	.0	
23-25	.0	.0	.0	.0	.0	.0	.0	
26-32	.0	.0	.0	.0	.0	.0	.0	
33-40	.0	.0	.0	.0	.0	.0	.0	
41-48	.0	.0	.0	.0	.0	.0	.0	
49-60	.0	.0	.0	.0	.0	.0	.0	
61-70	.0	.0	.0	.0	.0	.0	.0	
71-86	.0	.0	.0	.0	.0	.0	.0	
87+	.0	.0	.0	.0	.0	.0	.0	
TOT PCT	7.3	53.9	37.2	1.6	.0	.0	100.0	791

PERIOD: (OVER-ALL) 1949-1970

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

PERIOD (SEC)	<1	1-2	3-4	5-6	7	8-9	10-11	12	13-16	17-19	20-22	23-25	26-32	33-40	41-48	49-60	61-70	71-86	87+	TOTAL	MEAN HGT
<6	4.4	20.4	22.6	7.9	1.4	.2	.2	.0	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	1241	3
6-7	.2	1.7	7.6	7.7	2.9	.7	.2	.0	.0	*	*	.0	.0	.0	.0	.0	.0	.0	.0	458	4
8-9	.0	.9	1.3	2.1	1.9	.4	.4	.2	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	158	5
10-11	.0	.6	.8	.5	.8	.5	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	75	5
12-13	.0	.0	.6	.2	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	21	4
>13	.0	.0	.0	.1	*	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	7	7
INDET	4.6	1.7	1.9	.9	.4	.0	*	.0	.0	.0	*	.0	.0	.0	.0	.0	.0	.0	.0	209	2
TOTAL	200	548	757	424	161	42	22	9	3	1	2	0	0	0	0	0	0	0	0	2169	3
PCT	9.2	25.3	34.9	19.5	7.4	1.9	1.0	.4	.1	*	.1	.0	.0	.0	.0	.0	.0	.0	.0	100.0	

NOVEMBER

PERIOD: (PRIMARY) 1950-1970
(OVER-ALL) 1859-1970

AREA MONA PASSAGE
17.9N 67.9W

TABLE 1

PERCENTAGE FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

WND DIR	RAIN	RAIN SHWR	PRECIPITATION TYPE DRZL	FRZG PCPN	SNOW	OTHER FRZN PCPN	HAIL	PCT FREQ PCPN AT OB TIME	TOTAL PCPN OBS	THDR LTNG	OTHER WEATHER PHENOMENA FOG WD PCPN	SMOKE HAZE	DUST BLWG BLWG	DUST SNOW	NO SIG WEA	TOTAL OBS
N	.1	.2	*	.0	.0	.0	.0	.3		.2	.0	.0		.0	7.0	
NE	.2	.7	*	.0	.0	.0	.0	1.0		.7	.1	.0		*	28.7	
E	.4	1.1	*	.0	.0	.0	.0	1.5		1.4	.1	.0		.1	40.8	
SE	.3	.4	*	.0	.0	.0	.0	.7		.5	*	.0		*	9.1	
S	.1	.1	*	.0	.0	.0	.0	.3		.1	.0	.0		.0	2.7	
SW	.0	.1	.0	.0	.0	.0	.0	.1		*	.0	.0		.0	.8	
W	.0	.1	.0	.0	.0	.0	.0	.1		*	.0	.0		.0	.5	
NW	.0	*	.0	.0	.0	.0	.0	*		*	.0	.0		.0	.8	
VAR	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	.0		.0	.0	
CALM	*	.0	.0	.0	.0	.0	.0	*		.1	.0	.0		.0	2.1	
TOT OBS									105							2548
TOT PCT	1.3	2.7	.2	.0	.0	.0	.0	4.1		3.1	.2	.0		.1	92.5	

TABLE 2

PERCENTAGE FREQUENCY OF WEATHER OCCURRENCE BY HOUR

HOUR (GMT)	RAIN	RAIN SHWR	PRECIPITATION TYPE DRZL	FRZG PCPN	SNOW	OTHER FRZN PCPN	HAIL	PCT FREQ PCPN AT OB TIME	TOTAL PCPN OBS	THDR LTNG	OTHER WEATHER PHENOMENA FOG WD PCPN	SMOKE HAZE	DUST BLWG BLWG	DUST SNOW	NO SIG WEA	TOTAL OBS
00E03	1.8	2.8	.0	.0	.0	.0	.0	4.6		7.8	.3	.0		.0	87.4	
06E09	1.4	3.5	.4	.0	.0	.0	.0	5.3		4.3	.1	.0		.1	90.0	
12E15	1.3	3.3	.2	.0	.0	.0	.0	4.8		.3	.2	.0		.2	94.6	
18E21	.7	1.5	.0	.0	.0	.0	.0	2.2		.0	.1	.0		.1	97.5	
TOT									109							2584
PCT	1.3	2.7	.2	.0	.0	.0	.0	4.2		3.1	.2	.0		.1	92.4	

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

WND DIR	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	34-47	48+	TOTAL OBS	PCT FREQ	MEAN SPD	HOUR (GMT) 00	03	06	09	12	15	18	21
N	.5	3.2	3.1	.3	.0	.0		7.0	11.3	9.4	3.6	6.5	1.3	6.5	5.2	7.0	6.9
NE	1.0	13.2	15.8	1.2	.0	.0		31.2	12.1	33.2	37.5	28.2	37.8	32.7	38.1	29.2	31.1
E	1.5	21.1	19.7	1.1	.0	.0		43.4	11.3	39.1	40.6	45.6	35.9	46.3	35.8	45.1	38.6
SE	1.0	6.1	3.2	.2	*	.0		10.5	9.4	9.9	5.7	11.0	11.8	9.0	12.3	11.6	13.6
S	.5	2.0	.7	.0	*	.0		3.2	8.3	4.6	4.2	3.3	5.3	2.3	1.1	2.5	2.8
SW	.1	.5	.4	.0	.0	.0		1.0	9.1	.8	.0	.8	.0	1.0	5.2	.7	2.8
W	.1	.4	.1	.0	.0	.0		.6	6.4	.5	.0	1.1	.0	.3	.7	.3	1.4
NW	.1	.4	.3	*	.0	.0		.9	10.7	1.0	4.2	.6	1.3	.7	.0	1.0	1.7
VAR	.0	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
CALM	2.2							2.2	.0	1.5	4.2	2.9	6.6	1.3	1.5	2.7	1.1
TOT OBS	203	1381	1269	83	1	0	2937		11.0	652	48	712	76	635	67	657	90
TOT PCT	6.9	47.0	43.2	2.8	*	.0		100.0		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 3A

WND DIR	WIND SPEED (KNOTS) 0-6	7-16	17-27	28-40	41+	TOTAL OBS	PCT FREQ	MEAN SPD	HOUR (GMT) 00 03	06 09	12 15	18 21
N	1.3	4.7	1.0	.1	.0		7.0	11.3	9.0	6.0	6.3	7.0
NE	4.6	20.2	6.4	.1	.0		31.2	12.1	33.5	29.2	33.2	29.5
E	7.9	29.3	5.9	.2	.0		43.4	11.3	39.2	44.7	45.3	44.3
SE	3.1	6.7	.6	*	.0		10.5	9.4	9.6	11.0	9.3	11.8
S	1.5	1.6	.1	*	.0		3.2	8.3	4.5	3.5	2.2	2.5
SW	.4	.6	*	.0	.0		1.0	9.1	.8	.7	1.4	1.0
W	.3	.2	.0	.0	.0		.6	6.4	.5	1.0	.3	.4
NW	.2	.5	.2	.0	.0		.9	10.7	1.2	.6	.6	1.0
VAR	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	.0
CALM	2.2						2.2	.0	1.7	3.3	1.3	2.5
TOT OBS	632	1875	418	12	0	2937		11.0	700	788	702	747
TOT PCT	21.5	63.8	14.2	.4	.0		100.0		100.0	100.0	100.0	100.0

NOVEMBER

PERIOD: (PRIMARY) 1950-1970
(OVER-ALL) 1859-1970

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TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

HOUR	CALM	1-3	4-10	WIND SPEED (KNOTS) 11-21	22-33	34-47	48+	MEAN	PCT FREQ	TOTAL OBS
00&03	1.7	4.6	48.9	41.9	3.0	.0	.0	10.9	100.0	700
06&09	3.3	4.1	48.9	41.5	2.3	.0	.0	10.6	100.0	788
12&15	1.3	4.0	47.2	44.4	3.1	.0	.0	11.3	100.0	702
18&21	2.5	6.0	43.2	45.1	2.9	.1	.0	11.2	100.0	747
TOT	66	137	1381	1269	83	1	0	11.0		2937
PCT	2.2	4.7	47.0	43.2	2.8	*	.0		100.0	

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS) BY WIND DIRECTION

WND DIR	0-2	3-4	5-7	8 & OBSCD	TOTAL OBS	MEAN CLOUD COVER
N	3.2	1.9	2.1	.6		3.5
NE	13.1	8.7	7.3	1.4		3.3
E	16.2	15.1	10.4	2.6		3.5
SE	4.0	3.1	2.4	.7		3.5
S	1.2	.7	.7	.3		3.6
SW	.4	.2	.3	.0		3.2
W	.2	.2	.2	*		3.9
NW	.2	.3	.3	.1		4.1
VAR	.0	.0	.0	.0		.0
CALM	1.1	.7	.3	.0		2.3
TOT OBS	901	702	546	129	2278	3.4
TOT PCT	39.6	30.8	24.0	5.7	100.0	

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT,NH >4/8) AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

WND DIR	000 149	150 299	300 599	600 999	1000 1999	2000 3499	3500 4999	5000 6499	6500 7999	8000+	NH <5/8 ANY HGT	TOTAL OBS
N	.1	.0	.2	.3	.4	.3	.1	*	.0	.0	6.4	
NE	*	.0	.4	.6	1.6	.6	.5	.1	*	*	26.6	
E	.0	.1	.4	1.4	2.9	1.2	.2	.3	*	.1	37.6	
SE	*	.0	.1	.4	.7	.5	.1	.0	.0	.0	8.4	
S	*	*	*	.1	.2	.0	*	.0	.0	.0	2.3	
SW	.0	.0	.0	.1	.0	.0	*	.0	.0	.0	.8	
W	.0	.0	.0	.1	.0	.0	*	.0	.0	.0	.5	
NW	.0	.0	.0	*	.1	*	.1	.0	.0	.0	.7	
VAR	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
CALM	.0	.0	.0	*	*	.0	*	.0	.0	.0	2.0	
TOT OBS	3	3	24	68	135	59	26	11	1	3	1945	2278
TOT PCT	.1	.1	1.1	3.0	5.9	2.6	1.1	.5	*	.1	85.4	100.0

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

CEILING (FEET)	VSBY (NM) * OR >10	* OR >5	* OR >2	* OR >1	* OR >1/2	* OR >1/4	* OR >50YD	* OR >0
* OR >6500	.2	.2	.2	.2	.2	.2	.2	.2
* OR >5000	.5	.7	.7	.7	.7	.7	.7	.7
* OR >3500	1.5	1.7	1.7	1.7	1.8	1.8	1.8	1.8
* OR >2000	3.8	4.3	4.3	4.3	4.4	4.4	4.4	4.4
* OR >1000	8.7	10.2	10.3	10.4	10.5	10.5	10.5	10.5
* OR >600	10.8	12.9	13.3	13.3	13.4	13.4	13.4	13.4
* OR >300	11.5	13.9	14.4	14.4	14.5	14.5	14.5	14.5
* OR >150	11.6	14.0	14.5	14.6	14.7	14.7	14.7	14.7
* OR > 0	11.6	14.0	14.6	14.7	14.8	14.8	14.8	14.8
TOTAL	267	322	335	337	339	339	339	339

TOTAL NUMBER OF OBS: 2293 PCT FREQ NH <5/8: 85.2

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

0	1	2	3	4	5	6	7	8	OBSCD	TOTAL OBS
7.2	18.1	28.3	20.6	10.8	5.5	4.6	2.2	2.5	.1	2387

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PERIOD: (PRIMARY) 1950-1970
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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF PRECIPITATION WITH VARYING VALUES OF VISIBILITY

VSBY (NM)		N	NE	E	SE	S	SW	W	NW	VAR	CALM	PCT	TOTAL OBS
<1/2	PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	NO PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	TOT %	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
1/2<1	PCP	.0	*	*	*	.0	.0	.0	.0	.0	.0	.1	
	NO PCP	.0	.0	*	.0	.0	.0	.0	.0	.0	.0	*	
	TOT %	.0	*	.1	*	.0	.0	.0	.0	.0	.0	.1	
1<2	PCP	.1	.1	.0	.0	.0	.0	*	*	.0	.0	.2	
	NO PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	TOT %	.1	.1	.0	.0	.0	.0	*	*	.0	.0	.2	
2<5	PCP	.0	.1	.1	.1	.1	.0	.0	.0	.0	*	.4	
	NO PCP	*	.2	.1	*	.0	.0	.0	.0	.0	.0	.4	
	TOT %	*	.2	.2	.1	.1	.0	.0	.0	.0	*	.7	
5<10	PCP	.1	.3	.6	.3	.1	.1	*	.0	.0	.0	1.6	
	NO PCP	.5	2.7	2.9	.5	.1	*	.1	.0	.0	.1	6.9	
	TOT %	.6	3.0	3.5	.7	.2	.1	.1	.0	.0	.1	8.5	
10+	PCP	.1	.5	.8	.3	.1	*	.1	.0	.0	.0	1.9	
	NO PCP	6.7	26.6	39.2	9.2	2.7	.9	.4	.8	.0	2.1	88.6	
	TOT %	6.8	27.2	40.0	9.5	2.8	.9	.5	.8	.0	2.1	90.6	
	TOT OBS												2543
	TOT PCT	7.5	30.5	43.7	10.4	3.1	1.0	.6	.9	.0	2.2	100.0	

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED WITH VARYING VALUES OF VISIBILITY

VSBY (NM)	SPD KTS	N	NE	E	SE	S	SW	W	NW	VAR	CALM	PCT	TOTAL OBS
<1/2	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	11-21	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
1/2<1	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.0	.0	.1	*	.0	.0	.0	.0	.0		.1	
	11-21	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	22+	.0	*	.0	.0	.0	.0	.0	.0	.0		*	
	TOT %	.0	*	.1	*	.0	.0	.0	.0	.0	.0	.1	
1<2	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	*	*	.0	.0	.0	.0	*	*	.0		.1	
	11-21	*	*	.0	.0	.0	.0	.0	.0	.0		.1	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	.1	.1	.0	.0	.0	.0	*	*	.0	.0	.1	
2<5	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	*	*	
	4-10	.0	*	*	.0	.0	.0	.0	.0	.0		.1	
	11-21	*	.2	.2	.1	*	.0	.0	.0	.0		.5	
	22+	.0	.1	.0	*	*	.0	.0	.0	.0		.1	
	TOT %	*	.3	.2	.1	.1	.0	.0	.0	.0	*	.7	
5<10	0-3	*	.1	*	*	.0	*	*	*	.0	.1	.4	
	4-10	.3	.9	1.4	.4	.1	.1	*	*	.0		3.3	
	11-21	.1	1.7	1.9	.3	.1	*	*	.0	.0		4.1	
	22+	.1	.3	.2	.1	.0	.0	.0	.0	.0		.6	
	TOT %	.6	3.0	3.5	.8	.2	.1	.1	.1	.0	.1	8.5	
10+	0-3	.5	.9	1.4	1.0	.5	*	*	.1	.0	2.1	6.6	
	4-10	2.9	12.0	19.4	5.6	1.9	.5	.4	.4	.0		42.9	
	11-21	2.8	13.7	18.2	2.9	.6	.4	*	.3	.0		38.9	
	22+	.2	.9	.9	.1	.0	.0	.0	*	.0		2.1	
	TOT %	6.4	27.5	39.9	9.6	2.9	.9	.4	.8	.0	2.1	90.6	
	TOT OBS												2797
	TOT PCT	7.0	30.9	43.7	10.5	3.2	1.0	.5	.9	.0	2.3	100.0	

NOVEMBER

PERIOD: (PRIMARY) 1950-1970
(OVER-ALL) 1859-1970

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TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET,NH >4/8) AND OCCURRENCE OF NH <5/8 BY HOUR

HOUR (GMT)	000 149	150 299	300 599	600 999	1000 1999	2000 3499	3500 4999	5000 6499	6500 7999	8000+	TOTAL	NH <5/8 ANY HGT	TOTAL OBS
00&03	.2	.2	1.8	2.7	6.9	2.4	1.3	.5	.2	.0	16.2	83.8	549
06&09	.2	.2	.5	3.6	6.3	2.7	1.0	.5	.0	.3	15.2	84.8	631
12&15	.0	.0	1.4	3.2	5.5	2.3	1.1	.2	.0	.0	13.7	86.3	561
18&21	.2	.2	.6	1.9	4.8	2.7	1.1	.6	.0	.3	12.4	87.6	628
TOT	3	3	25	68	139	60	26	11	1	4	340	2029	2369
PCT	.1	.1	1.1	2.9	5.9	2.5	1.1	.5	*	.2	14.4	85.6	100.0

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

HOUR (GMT)	<1/2	1/2<1	1<2	2<5	5<10	10+	TOTAL OBS
00&03	.0	.3	.1	1.0	10.1	88.4	675
06&09	.0	.0	.3	.5	9.7	89.5	755
12&15	.0	.0	.0	.9	7.6	91.5	674
18&21	.0	.1	.1	.5	7.1	92.0	729
TOT	0	3	4	21	244	2561	2833
PCT	.0	.1	.1	.7	8.6	90.4	100.0

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR CEILING HGT (FEET,NH >4/8),BY HOUR

HOUR (GMT)	<150 <50YD	<600 <1	<1000 <5	1000+ AND5+	NH <5/8 AND 5+	TOTAL OBS
00&03	.2	2.5	5.7	11.6	82.8	528
06&09	.2	.8	4.9	10.8	84.3	618
12&15	.0	1.5	4.8	9.3	85.8	537
18&21	.2	1.1	3.6	9.2	87.2	610
TOT	3	33	108	234	1951	2293
PCT	.1	1.4	4.7	10.2	85.1	100.0

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

TEMP F	0-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100	TOTAL OBS	PCT FREQ
95/99	.0	.0	.1	.0	.0	.0	.0	.0	2	.1
90/94	.0	.0	*	*	.3	.2	*	.0	14	.7
85/89	.0	.0	.0	.3	2.0	3.6	1.1	.5	154	7.6
80/84	.0	.0	*	.8	9.1	38.3	20.6	5.5	1497	74.3
75/79	.0	.0	.0	.2	1.2	4.6	7.8	3.2	344	17.1
70/74	.0	.0	.0	.0	.0	.0	.0	.2	4	.2
TOTAL	0	0	4	28	255	942	597	189	2015	100.0
PCT	.0	.0	.2	1.4	12.7	46.7	29.6	9.4		

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

N	NE	E	SE	S	SW	W	NW	VAR	CALM
.0	.0	*	.0	.0	.0	.0	.0	.0	*
*	.2	.4	.0	.0	.0	.0	.0	.0	*
.5	1.7	3.7	1.0	.3	.1	.0	*	.0	.3
5.2	22.6	32.9	7.9	2.2	.9	.3	.7	.0	1.6
1.5	6.0	6.5	1.6	.5	.1	.2	.1	.0	.4
*	.1	*	.0	.0	.0	.0	.0	.0	.0
7.3	30.7	43.6	10.5	3.1	1.1	.5	.8	.0	2.5

TABLE 15

MEANS,EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

HOUR (GMT)	MAX	99%	95%	50%	5%	1%	MIN	MEAN	TOTAL OBS
00&03	89	85	84	81	78	76	74	80.9	707
06&09	90	84	82	80	77	76	72	80.0	792
12&15	91	88	84	81	78	76	72	81.1	703
18&21	95	92	88	83	79	76	73	83.3	752
TOT	95	89	86	81	78	76	72	81.3	2954

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

HOUR (GMT)	0-29	30-59	60-69	70-79	80-89	90-100	MEAN	TOTAL OBS
00&03	.0	.4	9.0	45.5	34.0	11.1	79	488
06&09	.0	.7	6.3	44.8	36.1	12.2	80	543
12&15	.0	1.2	10.1	47.5	33.3	7.8	78	486
18&21	.0	4.0	24.8	48.8	15.8	6.7	74	525
TOT	0	33	257	952	607	193	78	2042

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(OVER-ALL) 1859-1970

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION) VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

AIR-SEA TMP DIF	69 72	73 76	77 80	81 84	85 88	89 92	>92	TOT	W FOG	WO FOG
17/19	.0	.0	.0	.0	*	.0	.0	1	.0	*
14/16	.0	.0	.0	.0	*	.0	.0	1	.0	*
11/13	.0	.0	.0	.1	.0	.0	.1	4	.0	.2
9/10	.0	.0	.0	.2	.0	.0	.2	10	.0	.4
7/8	.0	.0	.0	.1	.1	.6	*	19	.0	.8
6	.0	.0	.0	.1	.6	.1	.0	18	.0	.8
5	.0	.0	.0	.1	.2	.3	.0	14	.0	.6
4	.0	.0	*	.3	1.1	.1	.0	34	.0	1.5
3	.0	.0	*	.9	1.5	*	.0	57	.0	2.4
2	.0	.0	.2	2.3	2.0	.0	.0	105	.0	4.5
1	.0	.0	.4	3.8	1.1	.0	.0	125	.0	5.3
0	.0	.0	1.5	10.2	.6	.0	.0	288	*	12.3
-1	.0	.0	3.0	13.7	.3	.0	.0	398	.1	16.9
-2	.0	*	6.2	9.7	.1	.0	.0	375	*	16.0
-3	.0	.0	7.9	6.5	.0	.0	.0	336	.0	14.4
-4	.0	.1	7.7	3.0	.0	.0	.0	250	.0	10.7
-5	.0	.1	5.3	1.3	*	.0	.0	158	.0	6.8
-6	.0	.5	2.6	.4	.0	.0	.0	82	.0	3.5
-7/-8	.0	.5	1.2	.4	.0	.0	.0	48	.0	2.1
-9/-10	*	.2	.3	*	.0	.0	.0	14	.0	.6
-11/-13	.0	.0	*	.0	.0	.0	.0	1	.0	*
TOTAL	1		853		179		8		5	2333
		33		1238		26		2338		
PCT	*	1.4	36.5	53.0	7.7	1.1	.3	100.0	.2	99.8

PERIOD: (OVER-ALL) 1963-1970

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

N

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.0	.5	.0	.0	.0	.0	.5
1-2	.0	1.9	.7	.0	.0	.0	2.6
3-4	.1	1.2	1.1	.1	.0	.0	2.5
5-6	.0	.1	1.2	.0	.0	.0	1.3
7	.0	.0	.6	.0	.0	.0	.6
8-9	.0	.0	.0	.0	.0	.0	.0
10-11	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.1	.0	.0	.1
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.1	3.7	3.6	.2	.0	.0	7.7

NE

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.8	1.1	*	.0	.0	.0	1.9
1-2	.5	5.2	2.7	.0	.0	.0	8.3
3-4	*	4.2	6.5	.2	.0	.0	10.9
5-6	.1	1.3	5.4	.6	.0	.0	7.4
7	.0	.7	2.9	.1	.0	.0	3.7
8-9	.0	.1	.7	.6	.0	.0	1.4
10-11	.0	.3	.5	.1	.0	.0	.9
12	.0	.0	.0	.2	.0	.0	.2
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	1.4	12.9	18.7	1.8	.0	.0	34.8

E

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.5	2.4	.2	.0	.0	.0	3.1
1-2	.4	9.5	2.3	.0	.0	.0	12.2
3-4	.1	6.0	7.5	.2	.0	.0	13.9
5-6	.0	1.3	6.7	.5	.0	.0	8.4
7	.0	.1	2.1	.5	.0	.0	2.7
8-9	.0	.0	.0	.2	.0	.0	.2
10-11	.0	.0	.1	.0	.0	.0	.1
12	.0	.0	.0	.1	.0	.0	.1
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	1.0	19.4	18.9	1.3	.0	.0	40.8

SE

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.3	.8	.0	.0	.0	.0	1.1
1-2	.1	2.6	1.2	.0	.0	.0	4.0
3-4	.0	2.2	2.0	.0	.0	.0	4.2
5-6	.0	.4	.5	*	.0	.0	.9
7	.0	.0	*	.0	.0	.0	*
8-9	.0	.1	.0	*	.0	.0	.2
10-11	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.5	6.2	3.7	.1	.0	.0	10.4

PERIOD: (OVER-ALL) 1963-1970

NOVEMBER

TABLE 18 (CONT)

AREA MONA PASSAGE 17.9N 67.9W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

	S							SW						
HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.3	.4	.0	.0	.0	.0	.6	.0	.0	.0	.0	.0	.0	.0
1-2	.1	.7	.2	.0	.0	.0	1.1	*	.2	.1	.0	.0	.0	.3
3-4	.0	.2	.1	.0	.0	.0	.4	.0	.2	.0	.0	.0	.0	.2
5-6	.1	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8-9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10-11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.5	1.3	.4	.0	.0	.0	2.2	*	.4	.1	.0	.0	.0	.5

	W							NW							TOTAL
HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT	1-3	4-10	11-21	22-33	34-47	48+	PCT	PCT
<1	.0	.1	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	
1-2	.0	.4	.0	.0	.0	.0	.4	.0	.5	.1	.0	.0	.0	.7	
3-4	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	*	.0	.0	*	
5-6	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.1	
7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
8-9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
10-11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
13-16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
17-19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
20-22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
23-25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
26-32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
33-40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
41-48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
49-60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
61-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
71-86	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
87+	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
TOT PCT	.0	.5	.0	.0	.0	.0	.5	.0	.7	.1	*	.0	.0	.8	97.7

WIND SPEED (KTS) VS SEA HEIGHT (FT)

HGT	0-3	4-10	11-21	22-33	34-47	48+	PCT	TOT OBS
<1	4.2	5.3	.3	.0	.0	.0	9.8	
1-2	1.4	21.0	7.3	.0	.0	.0	29.7	
3-4	.4	13.9	17.1	.6	.0	.0	32.0	
5-6	.3	3.2	13.6	1.1	.0	.0	18.2	
7	.0	.8	5.6	.6	.0	.0	7.0	
8-9	.0	.3	.7	.8	.0	.0	1.8	
10-11	.0	.3	.6	.1	.0	.0	1.0	
12	.0	.0	.0	.4	.0	.0	.4	
13-16	.0	.0	.0	.0	.0	.0	.0	
17-19	.0	.0	.0	.0	.0	.0	.0	
20-22	.0	.0	.0	.0	.0	.0	.0	
23-25	.0	.0	.0	.0	.0	.0	.0	
26-32	.0	.0	.0	.0	.0	.0	.0	
33-40	.0	.0	.0	.0	.0	.0	.0	
41-48	.0	.0	.0	.0	.0	.0	.0	
49-60	.0	.0	.0	.0	.0	.0	.0	
61-70	.0	.0	.0	.0	.0	.0	.0	
71-86	.0	.0	.0	.0	.0	.0	.0	
87+	.0	.0	.0	.0	.0	.0	.0	
TOT PCT	6.3	44.9	45.2	3.6	.0	.0	100.0	713

PERIOD: (OVER-ALL) 1949-1970

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

PERIOD (SEC)	<1	1-2	3-4	5-6	7	8-9	10-11	12	13-16	17-19	20-22	23-25	26-32	33-40	41-48	49-60	61-70	71-86	87+	TOTAL	MEAN HGT
<6	3.1	16.9	20.4	8.6	1.9	.4	.1	.1	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	1021	3
6-7	.1	1.5	8.0	9.9	3.8	1.5	.6	.1	.2	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	508	5
8-9	.1	.3	1.5	2.6	1.8	1.3	.3	.1	.1	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	136	6
10-11	.0	.2	.4	.8	.6	.9	.2	.1	.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	65	7
12-13	.0	.0	.2	.1	.0	.1	.1	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	9	6
>13	.0	.0	.0	.1	.1	.0	.1	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	6	9
INDET	3.4	2.9	2.1	1.5	1.0	.3	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	223	3
TOTAL	131	431	646	468	178	86	26	7	12	1	2	0	0	0	0	0	0	0	0	1988	4
PCT	6.6	21.7	32.5	23.5	9.0	4.3	1.3	.4	.6	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	100.0	

DECEMBER

PERIOD: (PRIMARY) 1949-1970
(OVER-ALL) 1859-1970

AREA MONA PASSAGE
17.9N 67.9W

TABLE 1

PERCENTAGE FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

WND DIR	RAIN	RAIN SHWR	PRECIPITATION TYPE DRZL	FRZG PCPN	SNOW	OTHER FRZN PCPN	HAIL	PCT FREQ PCPN AT OB TIME	TOTAL PCPN OBS	THDR LTNG	OTHER WEATHER PHENOMENA FOG WO PCPN	SMOKE HAZE	DUST BLWG DUST BLWG SNOW	NO SIG WEA	TOTAL OBS
N	*	.3	.1	.0	.0	.0	.0	.4		.1	.0	*	.0	5.6	
NE	.3	.5	.2	.0	.0	.0	.0	1.0		.3	*	*	.0	33.1	
E	.5	1.0	.1	.0	.0	.0	.0	1.6		.4	.3	*	.0	43.6	
SE	.1	.2	.0	.0	.0	.0	.0	.2		*	*	*	.0	8.8	
S	.0	*	.0	.0	.0	.0	.0	*		*	.0	.0	.0	1.3	
SW	*	*	.0	.0	.0	.0	.0	.1		.0	.0	.0	.0	.3	
W	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	.0	.0	.5	
NW	.0	*	.0	.0	.0	.0	.0	*		.0	.0	.0	.0	.8	
VAR	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	
CALM	.0	.0	.0	.0	.0	.0	*	*		.2	.0	.0	.0	1.2	
TOT OBS									85						2523
TOT PCT	1.0	2.0	.4	.0	.0	.0	*	3.4		1.0	.4	.2	.0	95.2	

TABLE 2

PERCENTAGE FREQUENCY OF WEATHER OCCURRENCE BY HOUR

HOUR (GMT)	RAIN	RAIN SHWR	PRECIPITATION TYPE DRZL	FRZG PCPN	SNOW	OTHER FRZN PCPN	HAIL	PCT FREQ PCPN AT OB TIME	TOTAL PCPN OBS	THDR LTNG	OTHER WEATHER PHENOMENA FOG WO PCPN	SMOKE HAZE	DUST BLWG DUST BLWG SNOW	NO SIG WEA	TOTAL OBS
00&03	1.1	2.3	.4	.0	.0	.0	.0	3.7		2.5	.7	.4	.0	93.1	
06&09	1.0	2.4	.8	.0	.0	.0	.2	4.2		1.8	.2	.2	.0	93.9	
12&15	.6	2.0	.5	.0	.0	.0	.0	3.1		.0	.2	.0	.0	96.7	
18&21	1.1	1.6	.1	.0	.0	.0	.0	2.8		.0	.6	.1	.0	96.5	
TOT									87						2541
PCT	.9	2.0	.4	.0	.0	.0	*	3.4		1.0	.4	.2	.0	95.2	

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

WND DIR	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	34-47	48+	TOTAL OBS	PCT FREQ	MEAN SPD	HOUR (GMT) 00	03	06	09	12	15	18	21
N	.2	2.7	3.0	.5	.0	.0		6.4	12.3	6.3	13.6	6.5	13.4	5.9	6.0	5.2	8.3
NE	.6	13.0	20.4	2.4	*	.0		36.4	13.1	37.3	45.9	34.6	43.0	36.3	46.8	33.3	45.3
E	1.1	18.8	23.2	1.6	.0	.0		44.7	12.1	41.7	37.7	43.8	36.3	47.8	38.5	47.9	40.9
SE	.5	5.1	2.9	.1	.0	.0		8.5	9.9	9.5	.9	9.7	5.1	7.3	5.6	9.8	3.9
S	.2	.9	.2	.0	.0	.0		1.3	7.2	1.5	.0	1.5	.5	.9	.8	1.7	.5
SW	.1	.2	.1	.0	.0	.0		.3	7.1	.3	.0	.5	.0	.1	.8	.4	.0
W	.0	.3	.1	.0	.0	.0		.4	8.9	.7	.0	.4	.0	.4	.0	.3	.0
NW	*	.5	.2	*	*	.0		.7	10.3	.7	1.8	.5	.5	.9	1.6	.5	1.0
VAR	.0	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
CALM	1.2							1.2	.0	1.9	.0	2.4	1.1	.4	.0	.9	.0
TOT OBS	116	1230	1488	137	2	0	2973		12.0	621	55	637	93	697	63	705	102
TOT PCT	3.9	41.4	50.1	4.6	.1	.0		100.0		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 3A

WND DIR	WIND SPEED (KNOTS) 0-6	7-16	17-27	28-40	41+	TOTAL OBS	PCT FREQ	MEAN SPD	HOUR (GMT) 00 03	06 09	12 15	18 21
N	1.2	3.7	1.3	.1	.0		6.4	12.3	6.9	7.4	5.9	5.6
NE	3.9	22.9	9.4	.2	.0		36.4	13.1	38.0	35.7	37.2	34.8
E	6.2	30.5	7.9	.1	.0		44.7	12.1	41.4	42.8	47.0	47.0
SE	2.2	5.6	.7	.0	.0		8.5	9.9	8.8	9.1	7.1	9.1
S	.7	.6	*	.0	.0		1.3	7.2	1.4	1.4	.9	1.6
SW	.2	.1	.0	.0	.0		.3	7.1	.3	.5	.2	.4
W	.2	.2	*	.0	.0		.4	8.9	.7	.3	.3	.2
NW	.2	.4	.1	*	.0		.7	10.3	.8	.5	1.0	.6
VAR	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	.0
CALM	1.2						1.2	.0	1.8	2.2	.4	.7
TOT OBS	480	1900	580	13	0	2973		12.0	676	730	760	807
TOT PCT	16.1	63.9	19.5	.4	.0		100.0		100.0	100.0	100.0	100.0

DECEMBER

PERIOD: (PRIMARY) 1949-1970
(OVER-ALL) 1859-1970

AREA MONA PASSAGE
17.9N 67.9W

TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

HOUR	CALM	1-3	4-10	WIND SPEED (KNOTS) 11-21	22-33	34-47	48+	MEAN	PCT FREQ	TOTAL OBS
00&03	1.8	3.4	42.6	47.6	4.4	.1	.0	11.5	100.0	676
06&09	2.2	1.4	41.8	51.0	3.7	.0	.0	12.0	100.0	730
12&15	.4	2.5	41.6	49.5	6.1	.0	.0	12.3	100.0	760
18&21	.7	3.3	39.8	51.8	4.2	.1	.0	12.2	100.0	807
TOT	37	79	1230	1488	137	2	0	12.0		2973
PCT	1.2	2.7	41.4	50.1	4.6	.1	.0		100.0	

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS) BY WIND DIRECTION

WND DIR	0-2	3-4	5-7	8 & OBSCD	TOTAL OBS	MEAN CLOUD COVER
N	2.2	1.4	1.5	.6		3.8
NE	13.8	11.3	7.5	1.9		3.3
E	17.7	14.7	11.7	2.2		3.4
SE	4.1	2.8	1.9	.4		3.1
S	.8	.3	.3	.2		3.1
SW	.1	.1	.2	.1		5.1
W	.1	.0	.3	.1		5.6
NW	.2	.2	.2	.1		4.3
VAR	.0	.0	.0	.0		.0
CALM	.8	.2	.2	.1		2.3
TOT OBS	896	700	533	127	2256	3.4
TOT PCT	39.7	31.0	23.6	5.6	100.0	

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT, NH >4/8) AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

WND DIR	000 149	150 299	300 599	600 999	1000 1999	2000 3499	3500 4999	5000 6499	6500 7999	8000+	NH <5/8 ANY HGT	TOTAL OBS
N	.0	.1	.1	.3	.5	.1	*	*	*	.0	4.5	
NE	*	*	.3	1.2	2.5	.8	.7	.1	*	*	28.8	
E	.1	*	.2	1.4	3.1	1.8	.5	.2	.0	*	38.9	
SE	.0	.0	.1	.3	.4	.4	.1	.1	*	.0	7.8	
S	*	.0	.0	.1	.1	*	*	.0	.0	.0	1.3	
SW	.0	.0	.0	.0	.1	*	.0	.0	*	.0	.2	
W	.0	.0	.0	.0	.0	.2	.0	*	.0	*	.2	
NW	.0	.0	.0	.1	*	.1	.0	.0	.0	.0	.5	
VAR	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
CALM	.0	.0	*	.1	.1	.0	.0	.0	.0	.0	1.1	
TOT OBS	5	3	16	81	153	78	30	9	4	2	1875	2256
TOT PCT	.2	.1	.7	3.6	6.8	3.5	1.3	.4	.2	.1	83.1	100.0

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

CEILING (FEET)	VSBY (NM) = OR >10	= OR >5	= OR >2	= OR >1	= OR >1/2	= OR >1/4	= OR >50YD	= OR >0
= OR >6500	.2	.3	.3	.3	.3	.3	.3	.3
= OR >5000	.6	.7	.7	.7	.7	.7	.7	.7
= OR >3500	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9
= OR >2000	4.8	5.3	5.3	5.3	5.3	5.3	5.3	5.3
= OR >1000	10.9	11.9	12.1	12.1	12.1	12.1	12.1	12.1
= OR >600	13.6	15.5	15.8	15.8	15.8	15.8	15.8	15.8
= OR >300	14.0	16.1	16.4	16.5	16.5	16.5	16.5	16.5
= OR >150	14.1	16.2	16.6	16.6	16.6	16.6	16.6	16.6
= OR > 0	14.2	16.3	16.7	16.8	16.8	16.8	16.8	16.8
TOTAL	322	370	379	380	381	381	381	381

TOTAL NUMBER OF OBS: 2265 PCT FREQ NH <5/8: 83.2

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

0	1	2	3	4	5	6	7	8	OBSCD	TOTAL OBS
8.5	18.5	25.7	18.4	11.9	6.6	4.7	2.8	2.8	.1	2356

DECEMBER

PERIOD: (PRIMARY) 1949-1970
(OVER-ALL) 1859-1970

AREA MONA PASSAGE 17.9N 67.9W

TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF PRECIPITATION WITH VARYING VALUES OF VISIBILITY

VSBY (NM)		N	NE	E	SE	S	SW	W	NW	VAR	CALM	PCT	TOTAL OBS
<1/2	PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	NO PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	TOT %	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
1/2<1	PCP	.0	*	*	.0	.0	.0	.0	.0	.0	.0	*	
	NO PCP	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	TOT %	.0	*	*	.0	.0	.0	.0	.0	.0	.0	*	
1<2	PCP	.0	.0	.0	*	.0	.0	.0	.0	.0	.0	*	
	NO PCP	.0	*	*	.0	.0	.0	.0	.0	.0	.0	*	
	TOT %	.0	*	*	*	.0	.0	.0	.0	.0	.0	.1	
2<5	PCP	*	.1	.2	.0	.0	.0	.0	.0	.0	*	.4	
	NO PCP	*	*	.1	*	.0	.0	.0	.0	.0	.0	.2	
	TOT %	.1	.2	.2	*	.0	.0	.0	.0	.0	*	.5	
5<10	PCP	.1	.4	.5	.0	*	.0	.0	*	.0	.0	1.1	
	NO PCP	.8	1.8	2.7	.5	.1	*	.1	.1	.0	.0	6.0	
	TOT %	.9	2.2	3.2	.5	.1	*	.1	.2	.0	.0	7.1	
10+	PCP	.2	.5	.9	.2	.0	.1	.0	.0	.0	.0	1.9	
	NO PCP	4.9	31.5	41.6	8.3	1.3	.3	.4	.7	.0	1.3	90.4	
	TOT %	5.2	32.0	42.5	8.5	1.3	.3	.4	.7	.0	1.3	92.3	
	TOT OBS												2519
	TOT PCT	6.1	34.4	46.0	9.1	1.4	.4	.5	.8	.0	1.4	100.0	

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED WITH VARYING VALUES OF VISIBILITY

VSBY (NM)	SPD KTS	N	NE	E	SE	S	SW	W	NW	VAR	CALM	PCT	TOTAL OBS
<1/2	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	11-21	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
1/2<1	0-3	.0	.0	.0	*	.0	.0	.0	.0	.0	.0	*	
	4-10	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	11-21	.0	*	*	.0	.0	.0	.0	.0	.0		*	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	.0	*	*	*	.0	.0	.0	.0	.0	.0	.1	
1<2	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.0	.0	.0	*	.0	.0	.0	.0	.0		*	
	11-21	.0	*	*	.0	.0	.0	.0	.0	.0		*	
	22+	.0	.0	.0	.0	.0	.0	.0	.0	.0		.0	
	TOT %	.0	*	*	*	.0	.0	.0	.0	.0	.0	.1	
2<5	0-3	*	.0	.0	.0	.0	.0	.0	.0	.0	*	.1	
	4-10	.0	.1	.1	.0	.0	.0	.0	.0	.0		.2	
	11-21	*	.1	.1	*	.0	.0	.0	.0	.0		.3	
	22+	.0	*	*	.0	.0	.0	.0	.0	.0		.1	
	TOT %	.1	.3	.2	*	.0	.0	.0	.0	.0	*	.6	
5<10	0-3	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	*	
	4-10	.2	.9	1.2	.3	.1	*	.1	*	.0		2.7	
	11-21	.5	1.3	1.7	.2	.0	.0	.0	.1	.0		3.9	
	22+	.1	.4	.2	*	.0	.0	.0	.0	.0		.7	
	TOT %	.9	2.6	3.1	.5	.1	*	.1	.1	.0	.0	7.3	
10+	0-3	.2	.6	1.1	.5	.2	.1	.0	*	.0	1.3	3.9	
	4-10	2.3	11.5	17.7	4.8	.8	.2	.3	.4	.0		38.0	
	11-21	2.4	18.7	21.7	2.8	.3	.1	.1	.1	.0		46.1	
	22+	.4	2.0	1.4	*	.0	.0	.0	*	.0		3.9	
	TOT %	5.2	32.8	41.9	8.2	1.3	.3	.4	.6	.0	1.3	91.9	
	TOT OBS												2819
	TOT PCT	6.1	35.7	45.3	8.8	1.3	.3	.4	.7	.0	1.3	100.0	

DECEMBER

PERIOD: (PRIMARY) 1949-1970
(OVER-ALL) 1859-1970

AREA MONA PASSAGE
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TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET,NH >4/8) AND OCCURRENCE OF NH <5/8 BY HOUR

HOUR (GMT)	000 149	150 299	300 599	600 999	1000 1999	2000 3499	3500 4999	5000 6499	6500 7999	8000+	TOTAL	NH <5/8 ANY HGT	TOTAL OBS
00&03	.4	.2	.8	5.3	7.0	2.7	1.4	.6	.0	.0	18.3	81.7	513
06&09	.5	.2	.5	2.3	5.2	2.9	1.6	.4	.0	.0	13.5	86.5	561
12&15	.0	.2	.8	3.6	7.6	3.6	1.7	.3	.0	.0	17.9	82.1	603
18&21	.0	.0	.6	3.0	6.6	3.9	.6	.3	.6	.3	16.0	84.0	662
TOT	5	3	16	82	155	78	30	9	4	2	384	1955	2339
PCT	.2	.1	.7	3.5	6.6	3.3	1.3	.4	.2	.1	16.4	83.6	100.0

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

HOUR (GMT)	<1/2	1/2<1	1<2	2<5	5<10	10+	TOTAL OBS
00&03	.0	.3	.0	.5	9.4	89.8	640
06&09	.0	.0	.1	.9	7.3	91.7	696
12&15	.0	.0	.0	.3	6.3	93.4	729
18&21	.0	.0	.1	.9	6.7	92.2	772
TOT	0	2	2	18	209	2606	2837
PCT	.0	.1	.1	.6	7.4	91.9	100.0

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR CEILING HGT (FEET,NH >4/8),BY HOUR

HOUR (GMT)	<150 <50YD	<600 <1	<1000 <5	1000+ AND5+	NH <5/8 AND 5+	TOTAL OBS
00&03	.4	1.4	7.0	12.1	80.9	486
06&09	.5	1.3	4.0	9.9	86.1	547
12&15	.0	1.0	4.9	13.4	81.7	591
18&21	.0	.6	4.4	12.2	83.5	641
TOT	5	24	113	270	1882	2265
PCT	.2	1.1	5.0	11.9	83.1	100.0

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

TEMP F	0-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100	TOTAL OBS	PCT FREQ
90/94	.0	.0	.0	*	*	*	.0	.0	3	.1
85/89	.0	.0	.0	.3	1.1	1.2	.2	.3	63	3.1
80/84	.0	.0	.0	.8	7.6	21.1	9.8	4.0	882	43.3
75/79	.0	.0	.0	.9	4.9	21.9	18.6	5.9	1064	52.2
70/74	.0	.0	.0	.0	.1	.1	.4	.5	25	1.2
TOTAL	0	0	0	42	279	905	592	219	2037	100.0
PCT	.0	.0	.0	2.1	13.7	44.4	29.1	10.8		

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

N	NE	E	SE	S	SW	W	NW	VAR	CALM
.0	.0	.1	*	.0	.0	.0	.0	.0	.0
.2	1.0	1.6	.2	*	.0	.0	.0	.0	*
1.7	12.6	21.6	5.1	.9	.1	.3	.4	.0	.6
4.0	21.5	20.9	3.9	.5	.3	.2	.3	.0	.6
.1	.4	.6	.1	*	.0	.0	.0	.0	.0
6.0	35.5	44.9	9.3	1.5	.4	.4	.7	.0	1.3

TABLE 15

MEANS,EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

HOUR (GMT)	MAX	99%	95%	50%	5%	1%	MIN	MEAN	TOTAL OBS
00&03	87	84	82	79	76	73	71	79.0	675
06&09	89	82	81	78	75	74	71	78.3	733
12&15	87	84	82	79	76	74	72	79.0	761
18&21	93	88	86	81	78	76	74	81.4	806
TOT	93	87	84	79	76	74	71	79.5	2975

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

HOUR (GMT)	0-29	30-59	60-69	70-79	80-89	90-100	MEAN	TOTAL OBS
00&03	.0	1.0	8.4	45.1	32.4	13.2	80	479
06&09	.0	1.4	8.7	41.5	35.2	13.2	80	508
12&15	.0	1.0	12.8	44.2	30.9	11.2	79	525
18&21	.0	4.6	24.8	46.0	19.0	5.5	74	541
TOT	0	42	285	908	599	219	78	2053

DECEMBER

PERIOD: (PRIMARY) 1949-1970
(OVER-ALL) 1859-1970

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION)
VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

AIR-SEA TMP DIF	69 72	73 76	77 80	81 84	85 88	89 92	TOT	W FOG	WO FOG
14/16	.0	.0	.0	*	.0	.0	1	.0	*
11/13	.0	.0	.1	*	*	.0	5	.0	.2
9/10	.0	.0	*	*	.0	.1	4	.0	.2
7/8	.0	.0	.1	.0	.3	.2	14	.0	.6
6	.0	.0	*	.1	.3	*	13	.0	.6
5	.0	*	.1	.2	.5	.0	21	.0	.9
4	.0	.0	.3	.5	.8	.0	37	.0	1.6
3	.0	*	.3	1.0	.7	.0	47	.0	2.0
2	.0	.0	.5	2.7	.3	.0	84	*	3.6
1	.0	*	1.6	4.5	.1	.0	146	*	6.2
0	.0	.1	5.4	6.1	.2	.0	276	.1	11.7
-1	.0	*	10.3	4.2	*	.0	342	.1	14.6
-2	.0	.3	15.8	2.4	.0	.0	431	.1	18.4
-3	.0	.4	12.4	.8	.0	.0	317	*	13.6
-4	.0	1.1	9.0	.6	.0	.0	251	.0	10.8
-5	.0	1.6	5.3	.1	.0	.0	163	.0	7.0
-6	.0	1.5	2.1	.0	.0	.0	84	.0	3.6
-7/-8	.1	1.5	1.4	*	.0	.0	70	.0	3.0
-9/-10	.2	.5	.3	.0	.0	.0	22	.0	.9
-11/-13	.0	*	.1	.0	.0	.0	4	.0	.2
TOTAL	7		1522		77			10	2322
		166		552		8	2332		
PCT	.3	7.1	65.3	23.7	3.3	.3	100.0	.4	99.6

PERIOD: (OVER-ALL) 1963-1970

TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

N

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.0	.5	.0	.0	.0	.0	.5
1-2	.0	1.2	1.0	.0	.0	.0	2.2
3-4	.0	.3	1.5	.0	.0	.0	1.8
5-6	.0	.1	.6	.0	.0	.0	.7
7	.0	.0	.9	.3	.0	.0	1.2
8-9	.0	.0	.0	.0	.0	.0	.0
10-11	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.0	2.1	4.0	.3	.0	.0	6.5

NE

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.6	1.3	*	.0	.0	.0	1.9
1-2	.2	6.0	3.5	.0	.0	.0	9.7
3-4	.0	3.7	11.0	.6	.0	.0	15.3
5-6	.0	1.5	7.1	1.0	.0	.0	9.6
7	.0	.0	3.1	1.1	.0	.0	4.2
8-9	.0	.0	.6	.7	.0	.0	1.3
10-11	.0	.0	.0	.1	.1	.0	.3
12	.0	.0	.0	*	.0	.0	*
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.7	12.5	25.3	3.5	.1	.0	42.2

E

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.5	1.8	.1	.0	.0	.0	2.4
1-2	.2	7.3	2.9	.0	.0	.0	10.4
3-4	.0	5.9	9.2	.1	.0	.0	15.3
5-6	.0	1.2	6.7	.4	.0	.0	8.3
7	.0	.0	2.5	.7	.0	.0	3.2
8-9	.0	.0	.7	.1	.0	.0	.9
10-11	.0	.0	.3	.0	.0	.0	.3
12	.0	.0	.3	.1	.0	.0	.4
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.8	16.2	22.7	1.4	.0	.0	41.0

SE

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	*	.6	.0	.0	.0	.0	.6
1-2	.3	2.3	1.0	.0	.0	.0	3.6
3-4	.0	1.2	.2	.1	.0	.0	1.6
5-6	.0	.1	.8	.0	.0	.0	.9
7	.0	.1	.1	.0	.0	.0	.3
8-9	.0	.0	*	.0	.0	.0	*
10-11	.0	.0	.1	.0	.0	.0	.1
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.3	4.4	2.3	.1	.0	.0	7.1

PERIOD: (OVER-ALL) 1963-1970

DECEMBER

TABLE 18 (CONT)

AREA MONA PASSAGE 17.9N 67.9W

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

	S							SW						
HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
1-2	.0	.1	.1	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0
3-4	.0	.0	.1	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
5-6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.1
7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8-9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10-11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.0	.1	.2	.0	.0	.0	.3	.0	.0	.1	.0	.0	.0	.1

	W							NW							TOTAL
HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT	1-3	4-10	11-21	22-33	34-47	48+	PCT	PCT
<1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
1-2	.0	.1	.0	.0	.0	.0	.1	.0	.1	.0	.0	.0	.0	.1	
3-4	.0	.1	.0	.0	.0	.0	.1	.0	.2	.2	.0	.0	.0	.4	
5-6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
8-9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
10-11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
13-16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
17-19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
20-22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
23-25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
26-32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
33-40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
41-48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
49-60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
61-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
71-86	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
87+	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
TOT PCT	.0	.3	.0	.0	.0	.0	.3	.0	.3	.2	.0	.0	.0	.5	98.1

WIND SPEED (KTS) VS SEA HEIGHT (FT)

HGT	0-3	4-10	11-21	22-33	34-47	48+	PCT	TOT OBS
<1	3.0	4.3	.1	.0	.0	.0	7.4	
1-2	1.1	17.1	8.4	.0	.0	.0	26.6	
3-4	.0	11.4	22.2	.8	.0	.0	34.4	
5-6	.0	2.9	15.2	1.4	.0	.0	19.4	
7	.0	.1	6.6	2.1	.0	.0	8.8	
8-9	.0	.0	1.4	.8	.0	.0	2.2	
10-11	.0	.0	.4	.1	.1	.0	.7	
12	.0	.0	.3	.1	.0	.0	.4	
13-16	.0	.0	.0	.0	.0	.0	.0	
17-19	.0	.0	.0	.0	.0	.0	.0	
20-22	.0	.0	.0	.0	.0	.0	.0	
23-25	.0	.0	.0	.0	.0	.0	.0	
26-32	.0	.0	.0	.0	.0	.0	.0	
33-40	.0	.0	.0	.0	.0	.0	.0	
41-48	.0	.0	.0	.0	.0	.0	.0	
49-60	.0	.0	.0	.0	.0	.0	.0	
61-70	.0	.0	.0	.0	.0	.0	.0	
71-86	.0	.0	.0	.0	.0	.0	.0	
87+	.0	.0	.0	.0	.0	.0	.0	
								726
TOT PCT	4.1	35.8	54.5	5.4	.1	.0	100.0	

PERIOD: (OVER-ALL) 1949-1970

TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

PERIOD (SEC)	<1	1-2	3-4	5-6	7	8-9	10-11	12	13-16	17-19	20-22	23-25	26-32	33-40	41-48	49-60	61-70	71-86	87+	TOTAL	MEAN HGT
<6	2.2	14.3	21.3	8.6	2.3	.7	.1	.1	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	971	3
6-7	.1	1.5	8.0	11.3	4.5	1.7	.6	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	545	5
8-9	.0	.2	1.5	2.8	3.0	1.3	.4	.2	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	183	6
10-11	.0	.3	.2	.4	1.2	.4	.2	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	52	6
12-13	.0	.0	.6	.2	.2	.2	.0	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	23	5
>13	.0	.0	.0	.1	.1	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	5	7
INDET	2.2	2.0	2.4	1.2	.9	.5	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	184	3
TOTAL	89	337	668	479	237	94	28	7	3	1	0	0	0	0	0	0	0	0	0	1963	4
PCT	4.5	18.2	34.0	24.4	12.1	4.8	1.4	.4	.2	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	100.0	

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PERIOD: (PRIMARY) 1949-1971
(OVER-ALL) 1856-1971

AREA MONA PASSAGE 17.9N 67.9W

TABLE 1

PERCENTAGE FREQUENCY OF WEATHER OCCURRENCE BY WIND DIRECTION

WND DIR	RAIN	RAIN SHWR	DRZL	PRECIPITATION TYPE FRZG PCPN	SNOW	OTHER FRZN PCPN	HAIL	PCT FREQ PCPN AT OB TIME	TOTAL PCPN OBS	THDR LTNG	OTHER WEATHER PHENOMENA FOG WD PCPN	SMOKE HAZE	DUST BLWG BLWG	DUST SNOW	NO SIG WEA	TOTAL OBS
N	.1	.1	*	.0	.0	.0	.0	.2		.1	*	*		.0	3.3	
NE	.2	.4	.1	.0	.0	.0	*	.7		.4	.1	.1		*	21.1	
E	.4	.9	.1	.0	.0	.0	*	1.5		1.4	.1	.3		*	49.7	
SE	.2	.3	.1	.0	.0	.0	.0	.5		.4	.1	.1		*	14.1	
S	*	.1	*	.0	.0	.0	.0	.1		.1	*	*		*	2.9	
SW	*	*	*	.0	.0	.0	.0	*		*	.0	*		.0	.5	
W	*	*	*	.0	.0	.0	.0	*		*	.0	.0		.0	.4	
NW	*	*	.0	.0	.0	.0	.0	*		*	.0	*		.0	.5	
VAR	.0	.0	.0	.0	.0	.0	.0	.0		.0	.0	.0		.0	.0	
CALM	*	*	*	.0	.0	.0	*	*		.1	.0	*		.0	1.1	
TOT OBS									1026							33201
TOT PCT	1.0	1.9	.3	.0	.0	.0	*	3.1		2.5	.3	.5		.1	93.7	

TABLE 2

PERCENTAGE FREQUENCY OF WEATHER OCCURRENCE BY HOUR

HOUR (GMT)	RAIN	RAIN SHWR	DRZL	PRECIPITATION TYPE FRZG PCPN	SNOW	OTHER FRZN PCPN	HAIL	PCT FREQ PCPN AT OB TIME	TOTAL PCPN OBS	THDR LTNG	OTHER WEATHER PHENOMENA FOG WD PCPN	SMOKE HAZE	DUST BLWG BLWG	DUST SNOW	NO SIG WEA	TOTAL OBS
00&03	1.3	2.3	.3	.0	.0	.0	*	3.8		4.9	.4	.5		*	90.8	
06&09	1.0	2.1	.4	.0	.0	.0	*	3.5		5.0	.3	.3		.1	91.0	
12&15	.8	1.7	.2	.0	.0	.0	.0	2.7		.2	.2	.5		.1	96.4	
18&21	.9	1.6	.3	.0	.0	.0	*	2.7		.2	.3	.7		.1	96.0	
TOT									1053							33490
PCT	1.0	1.9	.3	.0	.0	.0	*	3.2		2.5	.3	.5		.1	93.6	

TABLE 3

PERCENTAGE FREQUENCY OF WIND DIRECTION BY SPEED AND BY HOUR

WND DIR	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	34-47	48+	TOTAL OBS	PCT FREQ	MEAN SPD	HOUR (GMT) 00	03	06	09	12	15	18	21
N	.3	1.5	1.4	.2	*	.0		3.4	10.3	4.2	3.5	3.1	2.8	3.2	2.8	3.1	3.4
NE	.7	8.8	12.6	1.3	*	.0		23.5	12.4	24.4	30.2	21.6	27.5	22.8	30.0	22.5	30.2
E	1.2	21.1	28.1	1.9	*	.0		52.3	12.2	50.0	51.1	54.1	50.9	54.5	48.2	52.1	45.3
SE	.8	7.6	6.3	.3	*	.0		14.9	10.6	14.8	9.5	15.0	13.1	14.8	13.0	16.0	14.3
S	.3	1.7	1.0	.1	*	.0		3.1	9.3	3.7	2.4	2.8	2.2	2.5	1.9	3.7	2.8
SW	.1	.4	.2	*	.0	.0		.6	8.0	.7	.2	.7	.5	.5	1.4	.5	.6
W	*	.3	.1	*	*	.0		.4	8.4	.3	.3	.5	.3	.4	.4	.3	.7
NW	.1	.3	.2	*	*	.0		.6	8.9	.6	.7	.5	.6	.5	1.3	.5	.7
VAR	.0	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
CALM	1.3							1.3	.0	1.4	2.1	1.7	2.0	.8	1.1	1.1	2.0
TOT OBS							38374		11.8	8268	843	8343	1198	8701	853	8948	1220
TOT PCT	4.8	41.7	49.8	3.6	.1	.0		100.0		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 3A

WND DIR	WIND SPEED (KNOTS) 0-6	7-16	17-27	28-40	41+	TOTAL OBS	PCT FREQ	MEAN SPD	HOUR (GMT) 00 03	06 09	12 15	18 21
N	.8	2.0	.5	*	.0		3.4	10.3	4.1	3.1	3.2	3.2
NE	3.3	14.9	5.2	.2	*		23.5	12.4	24.9	22.3	23.4	23.5
E	6.6	35.9	9.6	.2	.0		52.3	12.2	50.1	53.8	54.0	51.3
SE	3.2	10.0	1.6	*	.0		14.9	10.6	14.3	14.8	14.7	15.8
S	1.1	1.7	.3	*	.0		3.1	9.3	3.5	2.7	2.5	3.6
SW	.3	.3	*	*	.0		.6	8.0	.6	.6	.6	.6
W	.2	.2	*	*	.0		.4	8.4	.3	.5	.4	.3
NW	.2	.3	*	*	.0		.6	8.9	.6	.5	.6	.6
VAR	.0	.0	.0	.0	.0		.0	.0	.0	.0	.0	.0
CALM	1.3						1.3	.0	1.5	1.7	.8	1.2
TOT OBS						38374		11.8	9111	9541	9554	10168
TOT PCT	17.0	65.3	17.3	.5	*		100.0		100.0	100.0	100.0	100.0

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TABLE 4

PERCENTAGE FREQUENCY OF WIND SPEED BY HOUR (GMT)

HOUR	CALM	1-3	4-10	WIND SPEED (KNOTS) 11-21	22-33	34-47	48+	MEAN	PCT FREQ	TOTAL OBS
00&03	1.5	3.8	43.0	47.8	3.8	.1	.0	11.6	100.0	9111
06&09	1.7	3.1	44.6	47.4	3.1	.1	.0	11.4	100.0	9541
12&15	.8	3.4	41.2	50.9	3.6	.1	.0	11.9	100.0	9554
18&21	1.2	3.6	38.4	52.7	4.0	.1	.0	12.1	100.0	10168
TOT								11.8		38374
PCT	1.3	3.5	41.7	49.8	3.6	.1	.0		100.0	

TABLE 5

PCT FREQ OF TOTAL CLOUD AMOUNT (EIGHTHS) BY WIND DIRECTION

WND DIR	0-2	3-4	5-7	8 & OBSCD	TOTAL OBS	MEAN CLOUD COVER
N	1.3	.9	1.0	.4		3.9
NE	8.8	6.6	5.4	1.3		3.5
E	19.6	17.5	13.0	3.3		3.5
SE	5.6	4.9	3.6	1.1		3.5
S	1.2	.9	.8	.3		3.6
SW	.2	.2	.2	*		3.9
W	.1	.1	.1	*		3.9
NW	.2	.1	.2	.1		4.0
VAR	.0	.0	.0	.0		.0
CALM	.7	.2	.2	.1		2.9
TOT OBS					29278	3.5
TOT PCT	37.6	31.5	24.3	6.6	100.0	

TABLE 6

PERCENTAGE FREQUENCY OF CEILING HEIGHTS (FT,NH >4/8) AND OCCURRENCE OF NH <5/8 BY WIND DIRECTION

	000 149	150 299	300 599	600 999	1000 1999	2000 3499	3500 4999	5000 6499	6500 7999	8000+	NH <5/8 ANY HGT	TOTAL OBS
N	*	*	.1	.2	.3	.2	.1	*	*	*	2.7	
NE	*	*	.2	.7	1.4	.8	.4	.1	*	*	18.3	
E	.1	.1	.4	1.8	3.3	1.7	.7	.2	.1	.1	45.0	
SE	*	*	.2	.6	.9	.4	.2	*	*	*	12.8	
S	*	*	*	.2	.2	.1	*	*	*	*	2.7	
SW	*	.0	*	*	*	*	*	*	*	*	.5	
W	.0	.0	*	*	*	*	*	*	.0	*	.3	
NW	.0	.0	*	*	*	*	*	*	*	.0	.4	
VAR	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
CALM	*	*	*	*	*	*	*	.0	*	.0	1.1	
TOT OBS												29278
TOT PCT	.2	.1	.9	3.6	6.2	3.3	1.4	.4	.2	.1	83.7	100.0

TABLE 7

CUMULATIVE PCT FREQ OF SIMULTANEOUS OCCURRENCE OF CEILING HEIGHT (NH >4/8) AND VSBY (NM)

CEILING (FEET)	VSBY (NM) = OR >10	= OR >5	= OR >2	= OR >1	= OR >1/2	= OR >1/4	= OR >50YD	= OR >0
= OR >6500	.3	.3	.3	.3	.3	.3	.3	.3
= OR >5000	.6	.7	.7	.7	.7	.7	.7	.7
= OR >3500	1.8	2.0	2.1	2.1	2.1	2.1	2.1	2.1
= OR >2000	4.5	5.2	5.3	5.3	5.3	5.3	5.3	5.3
= OR >1000	9.7	11.4	11.5	11.6	11.6	11.6	11.6	11.6
= OR >600	12.4	14.8	15.1	15.1	15.1	15.1	15.1	15.1
= OR >300	13.0	15.6	15.9	16.0	16.0	16.0	16.0	16.0
= OR >150	13.1	15.7	16.0	16.1	16.1	16.1	16.2	16.2
= OR > 0	13.2	15.9	16.2	16.3	16.3	16.3	16.3	16.3

TOTAL NUMBER OF OBS: 29376 PCT FREQ NH <5/8: 83.6

TABLE 7A

PERCENTAGE FREQ OF LOW CLOUDS (EIGHTHS)

0	1	2	3	4	5	6	7	8 OBSCD		TOTAL OBS
8.9	18.2	25.7	19.5	11.1	5.7	5.0	2.8	3.0	.1	30773

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TABLE 8

PERCENT FREQ OF WIND DIRECTION VS OCCURRENCE OR NON-OCCURRENCE OF PRECIPITATION WITH VARYING VALUES OF VISIBILITY

VSBY (NM)		N	NE	E	SE	S	SW	W	NW	VAR	CALM	PCT	TOTAL OBS
<1/2	PCP	.0	*	*	*	.0	.0	.0	.0	.0	.0	*	
	NO PCP	.0	*	*	*	.0	.0	.0	.0	.0	.0	*	
	TOT %	.0	*	*	*	.0	.0	.0	.0	.0	.0	*	
1/2<1	PCP	.0	*	*	*	.0	.0	.0	.0	.0	.0	*	
	NO PCP	.0	*	*	*	.0	.0	.0	.0	.0	.0	*	
	TOT %	.0	*	*	*	.0	.0	.0	.0	.0	.0	*	
1<2	PCP	*	*	*	*	*	*	*	*	.0	*	.1	
	NO PCP	*	*	*	*	.0	.0	.0	.0	.0	.0	*	
	TOT %	*	*	*	*	*	*	*	*	.0	*	.1	
2<5	PCP	*	.1	.1	*	*	*	*	.0	.0	*	.3	
	NO PCP	*	.1	.1	*	*	*	.0	*	.0	*	.2	
	TOT %	*	.1	.2	.1	*	*	*	*	.0	*	.5	
5<10	PCP	.1	.3	.6	.2	*	*	*	*	.0	*	1.2	
	NO PCP	.3	1.8	3.8	1.0	.2	*	.1	.1	.0	.1	7.5	
	TOT %	.4	2.1	4.3	1.2	.3	.1	.1	.1	.0	.1	8.7	
10+	PCP	.1	.3	.8	.2	*	*	*	*	.0	*	1.5	
	NO PCP	3.0	19.7	47.5	13.6	2.8	.5	.3	.5	.0	1.1	89.1	
	TOT %	3.1	20.1	48.3	13.8	2.8	.5	.3	.5	.0	1.1	90.6	
	TOT OBS												33109
	TOT PCT	3.6	22.3	52.9	15.2	3.2	.6	.4	.6	.0	1.2	100.0	

TABLE 9

PERCENT FREQ OF WIND DIRECTION VS WIND SPEED WITH VARYING VALUES OF VISIBILITY

VSBY (NM)	SPD KTS	N	NE	E	SE	S	SW	W	NW	VAR	CALM	PCT	TOTAL OBS
<1/2	0-3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	4-10	.0	*	*	*	.0	.0	.0	.0	.0		*	
	11-21	.0	*	*	*	.0	.0	.0	.0	.0		*	
	22+	.0	.0	*	.0	.0	.0	.0	.0	.0		*	
	TOT %	.0	*	*	*	.0	.0	.0	.0	.0	.0	*	
1/2<1	0-3	.0	.0	.0	*	.0	.0	.0	.0	.0	.0	*	
	4-10	.0	*	*	*	.0	.0	.0	.0	.0		*	
	11-21	.0	*	*	*	.0	.0	.0	.0	.0		*	
	22+	.0	*	*	.0	.0	.0	.0	.0	.0		*	
	TOT %	.0	*	*	*	.0	.0	.0	.0	.0	.0	.1	
1<2	0-3	*	.0	.0	.0	.0	.0	.0	.0	.0	*	*	
	4-10	*	*	*	*	*	*	*	*	.0		*	
	11-21	*	*	*	*	*	*	.0	.0	.0		.1	
	22+	*	*	*	*	.0	.0	.0	.0	.0		*	
	TOT %	*	*	*	*	*	*	*	*	.0	*	.1	
2<5	0-3	*	*	*	.0	.0	.0	.0	.0	.0	*	*	
	4-10	*	*	.1	*	*	*	*	.0	.0		.2	
	11-21	*	.1	.1	.1	*	*	.0	*	.0		.3	
	22+	.0	*	*	*	*	.0	.0	*	.0		.1	
	TOT %	*	.2	.3	.1	*	*	*	*	.0	*	.6	
5<10	0-3	*	.1	.1	.1	*	*	*	*	.0	.1	.4	
	4-10	.2	.7	1.5	.6	.1	*	*	*	.0		3.2	
	11-21	.2	1.2	2.5	.6	.1	*	*	*	.0		4.6	
	22+	*	.2	.3	.1	*	*	*	*	.0		.6	
	TOT %	.4	2.2	4.4	1.3	.3	.1	.1	.1	.0	.1	8.8	
10+	0-3	.2	.6	1.1	.7	.3	.1	*	.1	.0	1.2	4.2	
	4-10	1.3	7.9	19.4	7.0	1.6	.3	.2	.3	.0		38.0	
	11-21	1.3	11.2	25.8	5.7	.9	.1	*	.1	.0		45.1	
	22+	.1	1.0	1.5	.2	*	*	*	*	.0		3.0	
	TOT %	3.0	20.8	47.8	13.6	2.8	.5	.3	.5	.0	1.2	90.4	
	TOT OBS												36566
	TOT PCT	3.4	23.2	52.5	15.0	3.1	.6	.4	.6	.0	1.3	100.0	

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TABLE 10

PERCENT FREQUENCY OF CEILING HEIGHTS (FEET>NH >4/8) AND OCCURRENCE OF NH <5/8 BY HOUR

HOUR (GMT)	000 149	150 299	300 599	600 999	1000 1999	2000 3499	3500 4999	5000 6499	6500 7999	8000+	TOTAL	NH <5/8 ANY HGT	TOTAL OBS
00&03	.3	.2	1.3	4.9	7.1	3.9	1.6	.5	.2	.1	20.0	80.0	6963
06&09	.2	.1	.7	3.1	5.7	2.6	1.2	.2	.1	.1	14.0	86.0	7497
12&15	.1	.1	.8	3.1	5.8	3.0	1.3	.4	.2	.1	14.9	85.1	7621
18&21	.2	.1	.7	2.9	5.7	3.1	1.3	.5	.2	.1	14.7	85.3	8414
TOT													30495
PCT	.2	.1	.9	3.5	6.1	3.1	1.3	.4	.2	.1	15.8	84.2	100.0

TABLE 11

PERCENT FREQUENCY VSBY (NM) BY HOUR

HOUR (GMT)	<1/2	1/2<1	1<2	2<5	5<10	10+	TOTAL OBS
00&03	*	.1	.1	.8	11.2	87.7	8718
06&09	*	*	.1	.6	8.8	90.5	9184
12&15	.1	.1	.2	.6	7.7	91.4	9166
18&21	*	*	.2	.5	7.9	91.3	9789
TOT							36857
PCT	*	.1	.1	.6	8.9	90.3	100.0

TABLE 12

CUMULATIVE PCT FREQ OF RANGES OF VSBY (NM) AND/OR CEILING HGT (FEET>NH >4/8)>BY HOUR

HOUR (GMT)	<150 <50YD	<600 <1	<1000 <5	1000+ AND5+	NH <5/8 AND 5+	TOTAL OBS
00&03	.3	1.9	7.2	13.7	79.2	6705
06&09	.2	1.0	4.5	10.1	85.3	7212
12&15	.1	1.1	4.5	11.0	84.5	7331
18&21	.1	1.0	4.4	10.9	84.8	8128
TOT						29376
PCT	.2	1.2	5.1	11.4	83.5	100.0

TABLE 13

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY TEMP

TEMP F	0-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100	TOTAL OBS	PCT FREQ
95/99	.0	.0	*	*	*	.0	.0	.0		*
90/94	.0	.0	*	.1	.3	.2	*	*		.6
85/89	.0	*	*	.2	1.7	4.0	1.3	.5		7.6
80/84	.0	.0	*	.4	5.0	24.8	21.0	5.5		56.8
75/79	.0	.0	*	.4	2.7	13.9	11.4	4.8		33.2
70/74	.0	.0	.0	*	.3	.4	.5	.5		1.7
65/69	.0	.0	.0	.0	.0	*	*	*		*
TOTAL									26407	100.0
PCT	.0	*	.1	1.1	10.0	43.3	34.3	11.2		

TABLE 14

PERCENT FREQUENCY OF WIND DIRECTION BY TEMP

	N	NE	E	SE	S	SW	W	NW	VAR	CALM
	.0	*	*	.0	*	.0	.0	.0	.0	*
	*	.1	.3	.1	*	*	*	*	.0	*
	.2	1.3	4.1	1.4	.3	.1	*	*	.0	.1
	1.3	10.5	31.9	9.7	1.9	.3	.2	.2	.0	.7
	1.7	10.0	15.8	3.8	.8	.2	.1	.3	.0	.4
	.2	.7	.5	.1	*	*	*	*	.0	*
	*	*	*	.0	.0	.0	.0	*	.0	.0
PCT	3.5	22.7	52.7	15.2	3.1	.6	.4	.6	.0	1.3

TABLE 15

MEANS,EXTREMES AND PERCENTILES OF TEMP (DEG F) BY HOUR

HOUR (GMT)	MAX	99%	95%	50%	5%	1%	MIN	MEAN	TOTAL OBS
00&03	95	85	83	80	77	75	69	80.1	9123
06&09	90	83	82	79	77	75	66	79.3	9368
12&15	92	86	84	80	77	75	66	80.3	9540
18&21	95	90	87	82	79	76	68	82.6	10116
TOT	95	88	85	80	77	75	66	80.6	38147

TABLE 16

PERCENT FREQUENCY OF RELATIVE HUMIDITY BY HOUR

HOUR (GMT)	0-29	30-59	60-69	70-79	80-89	90-100	MEAN	TOTAL OBS
00&03	.0	.5	6.2	40.9	39.8	12.6	80	6242
06&09	.0	.6	4.4	37.5	43.0	14.4	81	6761
12&15	.0	.9	8.2	45.0	35.0	10.9	79	6652
18&21	.0	2.8	20.7	48.8	20.4	7.4	76	6985
TOT	0	318	2644	11486	9196	2996	79	26640

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TABLE 17

PCT FREQ OF AIR TEMPERATURE (DEG F) AND THE OCCURRENCE OF FOG (WITHOUT PRECIPITATION) VS AIR-SEA TEMPERATURE DIFFERENCE (DEG F)

AIR-SEA TMP DIF	65 68	69 72	73 76	77 80	81 84	85 88	89 92	>92	TOT	W FOG	WO FOG
17/19	.0	.0	.0	.0	.0	*	.0	.0	1	.0	*
14/16	.0	.0	.0	.0	*	*	.0	.0	3	.0	*
11/13	.0	.0	.0	*	*	*	*	*	35	.0	.1
9/10	.0	.0	.0	*	*	*	.1	*	80	.0	.3
7/8	.0	.0	*	*	.1	.2	.3	*	215	*	.7
6	.0	.0	.0	.1	.1	.4	.2	.0	240	*	.8
5	.0	.0	*	.1	.3	.5	.2	*	360	*	1.2
4	.0	.0	*	.2	.8	1.1	.1	.0	656	*	2.1
3	.0	.0	*	.3	1.4	1.4	*	.0	972	*	3.1
2	.0	.0	.1	.9	3.1	1.5	*	.0	1707	*	5.5
1	.0	.0	.1	1.9	5.1	1.4	*	.0	2626	.1	8.5
0	.0	.0	.3	5.3	9.5	.7	*	.0	4854	.1	15.7
-1	.0	*	.7	7.1	9.1	.3	*	.0	5260	.1	17.1
-2	.0	*	1.6	7.9	6.9	.1	.0	.0	5005	*	16.4
-3	.0	*	1.5	5.8	4.0	*	.0	.0	3423	*	11.4
-4	.0	*	1.7	4.3	1.9	*	.0	.0	2399	*	8.0
-5	.0	*	1.1	2.5	.8	*	.0	.0	1322	.0	4.4
-6	.0	*	.8	1.1	.3	.0	.0	.0	657	*	2.2
-7/-8	.0	.1	.6	.7	.2	.0	.0	.0	462	.0	1.6
-9/-10	*	.1	.2	.1	*	.0	.0	.0	140	.0	.5
-11/-13	*	*	*	*	.0	.0	.0	.0	32	.0	.1
-14/-16	*	.0	.0	.0	.0	.0	.0	.0	1	.0	*
TOTAL									30430		
PCT	*	.3	8.9	38.3	43.7	7.7	1.0	.1	100.0	.3	99.7

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TABLE 18

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

N

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	*	.2	.0	.0	.0	.0	.3
1-2	*	.8	.3	.0	.0	.0	1.2
3-4	*	.5	.7	.1	.0	.0	1.2
5-6	.0	.1	.5	*	*	.0	.6
7	.0	*	.2	*	.0	.0	.3
8-9	.0	*	*	*	*	.0	.1
10-11	.0	.0	*	.0	.0	.0	*
12	.0	.0	.0	*	.0	.0	*
13-16	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.1	1.7	1.8	.2	*	.0	3.7

NE

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.2	.9	.1	.0	.0	.0	1.2
1-2	.3	3.8	2.3	.0	.0	.0	6.3
3-4	*	2.8	5.6	.3	.0	.0	8.7
5-6	*	.7	4.4	.5	*	.0	5.7
7	.0	.1	1.9	.3	.0	.0	2.4
8-9	.0	*	.5	.3	.0	.0	.8
10-11	.0	*	.2	.2	*	.0	.4
12	.0	.0	*	*	.0	.0	.1
13-16	.0	.0	*	*	*	.0	*
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.6	8.4	14.9	1.7	*	.0	25.6

E

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.2	1.7	.1	.0	.0	.0	2.1
1-2	.4	8.4	4.7	.0	.0	.0	13.5
3-4	.1	7.2	11.1	.4	.0	.0	18.7
5-6	*	2.0	9.2	.6	.0	.0	11.8
7	*	.3	3.3	.5	.0	.0	4.1
8-9	.0	*	.6	.3	.0	.0	1.0
10-11	.0	*	.2	.1	.0	.0	.4
12	.0	.0	.1	*	.0	.0	.1
13-16	.0	.0	.1	*	.0	.0	.1
17-19	.0	.0	*	.0	.0	.0	*
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.8	19.7	29.3	1.9	.0	.0	51.7

SE

HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.2	.8	*	.0	.0	.0	1.0
1-2	.3	3.4	1.3	.0	.0	.0	5.0
3-4	*	2.0	2.6	.1	.0	.0	4.8
5-6	*	.6	1.6	.1	.0	.0	2.3
7	.0	.1	.5	.1	.0	.0	.6
8-9	.0	*	*	*	.0	.0	.1
10-11	.0	*	*	*	.0	.0	.1
12	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	*	.0	.0	*
17-19	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.5	6.9	6.1	.3	.0	.0	13.8

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TABLE 18 (CONT)

PCT FREQ OF WIND SPEED (KTS) AND DIRECTION VERSUS SEA HEIGHTS (FT)

	S							SW						
HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT	1-3	4-10	11-21	22-33	34-47	48+	PCT
<1	.1	.3	*	.0	.0	.0	.4	*	*	.0	.0	.0	.0	*
1-2	.1	.7	.2	.0	.0	.0	.9	*	.2	*	.0	.0	.0	.2
3-4	*	.4	.4	*	.0	.0	.8	*	*	.1	.0	.0	.0	.1
5-6	*	.1	.2	*	.0	.0	.3	.0	.0	*	.0	.0	.0	*
7	.0	.0	*	*	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
8-9	.0	.0	*	*	.0	.0	*	.0	.0	.0	.0	.0	.0	.0
10-11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	*	.0	.0	*
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13-16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17-19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
20-22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
23-25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
26-32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
33-40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
41-48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
49-60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
61-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
71-86	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
87+	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOT PCT	.1	1.5	.8	.1	.0	.0	2.5	*	.2	.1	*	.0	.0	.4

	W							NW							TOTAL
HGT	1-3	4-10	11-21	22-33	34-47	48+	PCT	1-3	4-10	11-21	22-33	34-47	48+	PCT	PCT
<1	*	.1	.0	.0	.0	.0	.1	*	.1	.0	.0	.0	.0	.1	
1-2	*	.1	*	.0	.0	.0	.1	*	.2	.1	.0	.0	.0	.3	
3-4	.0	.1	.0	.0	.0	.0	.1	.0	*	.1	*	.0	.0	.1	
5-6	.0	*	*	.0	.0	.0	*	.0	*	*	.0	.0	.0	*	
7	.0	.0	*	.0	.0	.0	*	.0	.0	.0	.0	.0	.0	.0	
8-9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
10-11	.0	.0	.0	*	.0	.0	*	.0	.0	.0	.0	.0	.0	.0	
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
13-16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
17-19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
20-22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
23-25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
26-32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
33-40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
41-48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
49-60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
61-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
71-86	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
87+	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
TOT PCT	*	.3	*	*	.0	.0	.3	*	.3	.2	*	.0	.0	.6	98.5

WIND SPEED (KTS) VS SEA HEIGHT (FT)

HGT	0-3	4-10	11-21	22-33	34-47	48+	PCT	TOT OBS
<1	2.4	4.2	.2	.0	.0	.0	6.8	
1-2	1.2	17.6	8.9	.0	.0	.0	27.7	
3-4	.3	12.9	20.3	.8	.0	.0	34.3	
5-6	.1	3.5	15.7	1.2	*	.0	20.6	
7	*	.5	5.9	.9	.0	.0	7.4	
8-9	.0	.1	1.2	.7	*	.0	2.1	
10-11	.0	.1	.4	.3	*	.0	.8	
12	.0	.0	.1	.1	.0	.0	.2	
13-16	.0	.0	.1	.1	*	.0	.1	
17-19	.0	.0	*	.0	.0	.0	*	
20-22	.0	.0	.0	.0	.0	.0	.0	
23-25	.0	.0	.0	.0	.0	.0	.0	
26-32	.0	.0	.0	.0	.0	.0	.0	
33-40	.0	.0	.0	.0	.0	.0	.0	
41-48	.0	.0	.0	.0	.0	.0	.0	
49-60	.0	.0	.0	.0	.0	.0	.0	
61-70	.0	.0	.0	.0	.0	.0	.0	
71-86	.0	.0	.0	.0	.0	.0	.0	
87+	.0	.0	.0	.0	.0	.0	.0	
TOT PCT	4.0	39.0	52.8	4.2	*	.0	100.0	9298

PERIOD: (OVER-ALL) 1949-1970 TABLE 19

PERCENT FREQUENCY OF WAVE HEIGHT (FT) VS WAVE PERIOD (SECONDS)

PERIOD (SEC)	<1	1-2	3-4	5-6	7	8-9	10-11	12	13-16	17-19	20-22	23-25	26-32	33-40	41-48	49-60	61-70	71-86	87+	TOTAL	MEAN HGT
<6	2.6	14.6	21.7	9.2	2.3	.6	.2	*	*	*	*	.0	.0	.0	.0	.0	.0	.0	.0	12961	3
6-7	.1	1.4	7.8	11.1	4.5	1.5	.5	.1	.1	*	*	.0	.0	.0	.0	.0	.0	.0	.0	6902	5
8-9	*	.4	1.4	2.6	2.8	1.0	.4	.2	.1	.0	*	*	.0	.0	.0	.0	.0	.0	.0	2272	6
10-11	.0	.3	.4	.3	.6	.5	.2	.1	*	*	*	*	.0	.0	.0	.0	.0	.0	.0	680	6
12-13	.0	.0	.3	.2	.1	.1	.1	.1	*	.0	*	.0	.0	.0	.0	.0	.0	.0	.0	212	6
>13	.0	.0	.0	.2	.1	.1	*	*	*	*	*	*	*	.0	.0	.0	.0	.0	.0	104	8
INDET	2.4	1.8	2.0	1.3	.7	.2	.1	*	*	*	*	*	.0	.0	.0	.0	.0	.0	.0	2155	3
TOTAL																				25286	0
PCT	5.1	18.6	33.7	25.1	11.1	4.0	1.5	.5	.3	*	*	*	*	.0	.0	.0	.0	.0	.0	100.0	

PERIOD: (PRIMARY) 1949-1971
(OVER-ALL) 1856-1971

AREA MONA PASSAGE 17.9N 67.9W

TABLE 20

PERCENT FREQUENCY OF OCCURRENCE OF SEA TEMP (DEG F) BY MONTH

SEA TMP DEG F	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN	PCT
96+	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	0	.0
95/96	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	0	.0
93/94	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	0	.0
91/92	.0	.0	.0	.0	.0	.1	.0	.0	.0	.1	.1	.0	6	*
89/90	.0	.0	.0	.0	.3	.2	.3	.4	.6	.3	.2	.0	67	.2
87/88	.1	*	.1	.4	.8	1.0	1.3	2.3	3.5	3.3	1.9	.4	451	1.3
85/86	.8	.6	.3	1.1	5.0	7.3	7.8	16.8	26.3	23.4	11.7	2.3	3081	8.7
83/84	5.0	2.8	2.8	5.9	16.3	29.2	40.5	51.2	52.4	52.0	43.0	14.8	9456	26.6
81/82	24.5	14.4	16.8	24.0	43.0	48.5	44.0	25.9	15.2	18.6	35.4	46.6	10584	29.8
79/80	42.6	39.2	38.3	44.3	28.0	12.5	5.5	2.9	1.8	2.1	6.2	29.5	7363	20.7
77/78	21.4	33.3	33.6	19.2	5.3	.9	.6	.4	.2	.2	1.0	4.4	3543	10.0
75/76	3.9	8.4	6.7	3.9	1.0	.3	.1	.1	.1	.0	.3	1.2	757	2.1
73/74	1.1	.8	1.0	.8	.3	.0	.0	*	.1	.1	.1	.2	128	.4
71/72	.3	.4	.4	.1	.1	.0	.0	.0	.0	.0	.1	.2	46	.1
69/70	*	*	.1	.2	*	.0	.0	.0	.0	.0	.1	.1	17	*
67/68	.2	.0	*	.1	.0	.0	.0	.0	.0	.0	.0	.1	11	*
65/66	*	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	4	*
63/64	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	0	.0
61/62	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	0	.0
59/60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	0	.0
57/58	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	0	.0
55/56	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	0	.0
53/54	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	0	.0
51/52	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	0	.0
49/50	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	0	.0
47/48	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	0	.0
45/46	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	0	.0
43/44	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	0	.0
41/42	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	0	.0
39/40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	0	.0
37/38	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	0	.0
35/36	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	0	.0
33/34	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	0	.0
31/32	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	0	.0
29/30	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	0	.0
27/28	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	0	.0
<27	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	0	.0
TOTAL	2704	2755	3335	2875	2923	3136	3206	3293	2868	2932	2714	2773	35514	100.0
MEAN	79.6	78.9	79.0	79.7	81.3	82.2	82.6	83.3	83.9	83.7	82.8	81.0	81.5	

TABLE 21

PRESSURE (MB)

AVERAGE BY HOUR (GMT)

MO	0000	0300	0600	0900	1200	1500	1800	2100	MEAN	TOTAL OBS
JAN	1016	1017	1016	1015	1017	1018	1016	1016	1016	2602
FEB	1016	1017	1016	1016	1017	1018	1016	1016	1016	2658
MAR	1016	1017	1016	1015	1017	1018	1016	1016	1016	3233
APR	1015	1016	1015	1014	1016	1017	1015	1014	1015	2892
MAY	1015	1015	1015	1014	1015	1016	1015	1014	1015	2868
JUN	1016	1017	1016	1015	1016	1016	1016	1015	1016	3013
JUL	1016	1017	1016	1016	1016	1017	1017	1015	1016	3173
AUG	1015	1016	1015	1014	1015	1016	1015	1014	1015	3208
SEP	1013	1014	1013	1012	1014	1014	1014	1012	1014	2819
OCT	1013	1014	1013	1012	1014	1014	1013	1012	1013	2912
NOV	1013	1014	1013	1012	1014	1014	1013	1011	1013	2679
DEC	1015	1015	1015	1014	1015	1016	1015	1014	1015	2647
ANN	1015	1016	1015	1014	1016	1016	1015	1014	1015	34704
OBS	7621	538	7987	682	8021	549	8557	749		

PERCENTILES

MO	MIN	1%	5%	25%	50%	75%	95%	99%	MAX
JAN	1001	1007	1011	1015	1016	1018	1020	1022	1024
FEB	996	1008	1012	1015	1016	1018	1020	1022	1025
MAR	1001	1008	1012	1015	1016	1018	1020	1022	1026
APR	1001	1008	1012	1014	1015	1017	1019	1020	1025
MAY	1004	1008	1011	1014	1015	1016	1018	1020	1023
JUN	1001	1008	1013	1015	1016	1017	1019	1021	1024
JUL	1001	1008	1013	1015	1016	1018	1019	1021	1026
AUG	1001	1006	1011	1014	1015	1016	1018	1019	1023
SEP	1000	1006	1010	1012	1014	1015	1017	1018	1024
OCT	997	1006	1009	1012	1013	1014	1016	1018	1021
NOV	998	1005	1009	1012	1013	1015	1017	1019	1023
DEC	1002	1008	1011	1013	1015	1016	1019	1020	1023

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GLOSSARY

An understanding of the following concepts is essential to comprehension of most of the discussions in this text.

The North Atlantic High is one of the semi-permanent oceanic anticyclones making up the two subtropical high-pressure belts that circumvent the globe, in the mean, near 30°N and 30°S latitudes. This high is known, respectively, as the Bermuda High and the Azores High when displaced westward in summer and eastward in winter.

The Equatorial Trough is a quasi-continuous belt of low pressure forming an atmospheric equator between the subtropical high-pressure belts of the two hemispheres. The region, one of very homogeneous air with humidity so high that slight variations in stability cause major variations in weather, migrates about 20° latitude into or toward the summer hemisphere, and influences the seasonal march of cloudiness and rainfall and the formation of tropical storms.

The Trade Winds is a wind system, occupying most of the tropics, which blows from the oceanic subtropical highs toward the equatorial trough with a great constancy in easterly direction and, to a lesser degree, speed - the most consistent wind system on earth.

An Easterly Wave is a migratory wave-like disturbance within the broad tropical trades moving from east to west, generally more slowly than the current in which it is imbedded. To the west of its weak trough of low pressure, there is generally found exceptionally fine weather; and to the east, cloudiness and heavy rain showers prevail. Easterly waves occasionally intensify into tropical cyclones.

A Tropical Cyclone is an atmospheric cyclonic circulation that originates over the tropical oceans. They are classified according to their intensity, as follows:

(a) Tropical Depression, with winds up to 33 knots;
(b) Tropical Storm, with winds of 34 to 63 knots; and
(c) Hurricane or Typhoon, with winds of 64 knots or higher.

An Extratropical Cyclone is an atmospheric cyclonic circulation having a core of low surface air pressure and originates in the middle and high latitudes. It is generally associated with a Front (a transition zone separating air masses of different temperatures) and is followed by an atmospheric Anticyclonic Circulation having a core of relatively high air pressure.

A Norther is a strong cold wind varying from northeast to northwest. It may occur over the Gulf of Mexico and the Greater Antilles between November and April. It is a cold air outbreak associated with the southward movement of a cold anticyclone. This cold air mass is

usually preceded by a warm and cloudy or rainy spell with southerly winds. The two air masses are separated by a well defined cold front extending from an extratropical cyclone. From one to six northers are likely to occur over the area during individual years. Northers generally last about a day and a half, but severe storms may endure for three or four days.

Sustained Winds are those averaged over a period of about a minute. Peak Gusts are relatively high wind speeds having a duration less than a minute. In general a sustained wind may be multiplied by a factor of about 1.4 to estimate the peak gust during gusty weather. Unless otherwise specified, sustained winds are described in this report. Most marine wind observations are estimated on the basis of sea conditions, spray, etc.

A Storm Surge (or Storm Tide) is a rise above normal water level on the open coast due to the action of wind stress on the water surface. Storm surge resulting from a hurricane (Hurricane Surge) or other intense storm also includes a sudden rise in level due to atmospheric pressure reduction as well as wind stress. A storm surge is more severe when it occurs in conjunction with a high tide.

Tide is the periodic rising and falling of the ocean caused by the gravitational forces of the moon and sun. There are three types: Diurnal Tide - one high and one low water per tidal day (24 hours, 50 minutes); Semi-Diurnal Tide - two high and two low waters per tidal day; Mixed Tide - successive high and low water stands differ appreciably.

Spring Tides are the high tides that occur about every two weeks, when the moon is full or new. Neap Tides occur about when the moon is in its first or last quarter. The range of these tides is the Spring Range and Neap Range, respectively.

An Ocean Current is movement of ocean water characterized by regularity, either of a cyclic nature or more commonly as a continuous stream flowing along a definable path. Three general classes, by cause, may be distinguished: (1) currents related to sea water density gradients; (2) currents directly produced by the stress exerted by the wind upon the surface and; (3) currents produced by long-wave motions, principally Tidal Currents - periodic horizontal movements of the water associated with the rise and fall of the tide.

Fair-Weather Bias is a condition introduced into climatological summaries of ships weather observations because of the tendency of ships to avoid bad weather. It means that extremely high winds, high waves and low air pressures may not be apparent from an inspection of ship reports alone. Also, since ships reports are distributed in a fairly random fashion (both in time and location), it is unlikely that a ship report will coincide with an actual extreme of any parameter. Because

of these characteristics, both qualitative and quantitative adjustments must be made to the data in order to estimate extremes.

Waves may be separated into two broad catergories; Sea and Swell. Sea Waves, also called Wind Waves are generated by the local winds in the area of the observations. Fetch is an area of the sea surface over which sea waves are generated by a wind having a constant direction and speed. Duration is the length of time the wind blows in essentially the same direction over the fetch. Wave Direction will generally closely follow wind direction for open sea areas. This is particularly true for sea wave direction. Swell Waves are those which have moved beyond their area of origin. Rollers are large waves breaking on exposed coasts formed by swell coming from a storm a great distance away.

The higher of sea or swell was used in this summary. Observers note the Significant Waves on their observational forms. This is the average height of the highest one-third of all waves present. Higher waves may also exist. These are called Extreme Waves and they may be estimated by multiplying the significant wave height by 1.8. Unless otherwise specified, this report deals with significant waves. It must be kept in mind that water depth is a limiting factor for wave heights. Since point source data are rarely available in the marine environment, data must be summarized for fairly large areas. Extreme heights may have to be adjusted depending on the actual water depth at the point of interest. Maximum wave heights will approach 80 percent of this depth (except in the case of tsunami waves or during certain storm surge conditions).

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