

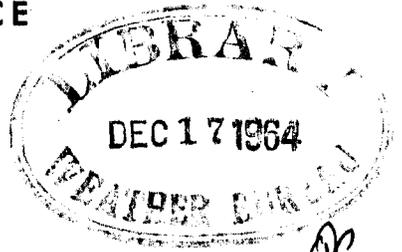
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1964

U.S. Weather Bureau.

Hurricane Ethel, September 11-16, 1961;  
preliminary report with advisories and bulletins  
issued.

U.S. DEPARTMENT OF COMMERCE

U.S. WEATHER BUREAU

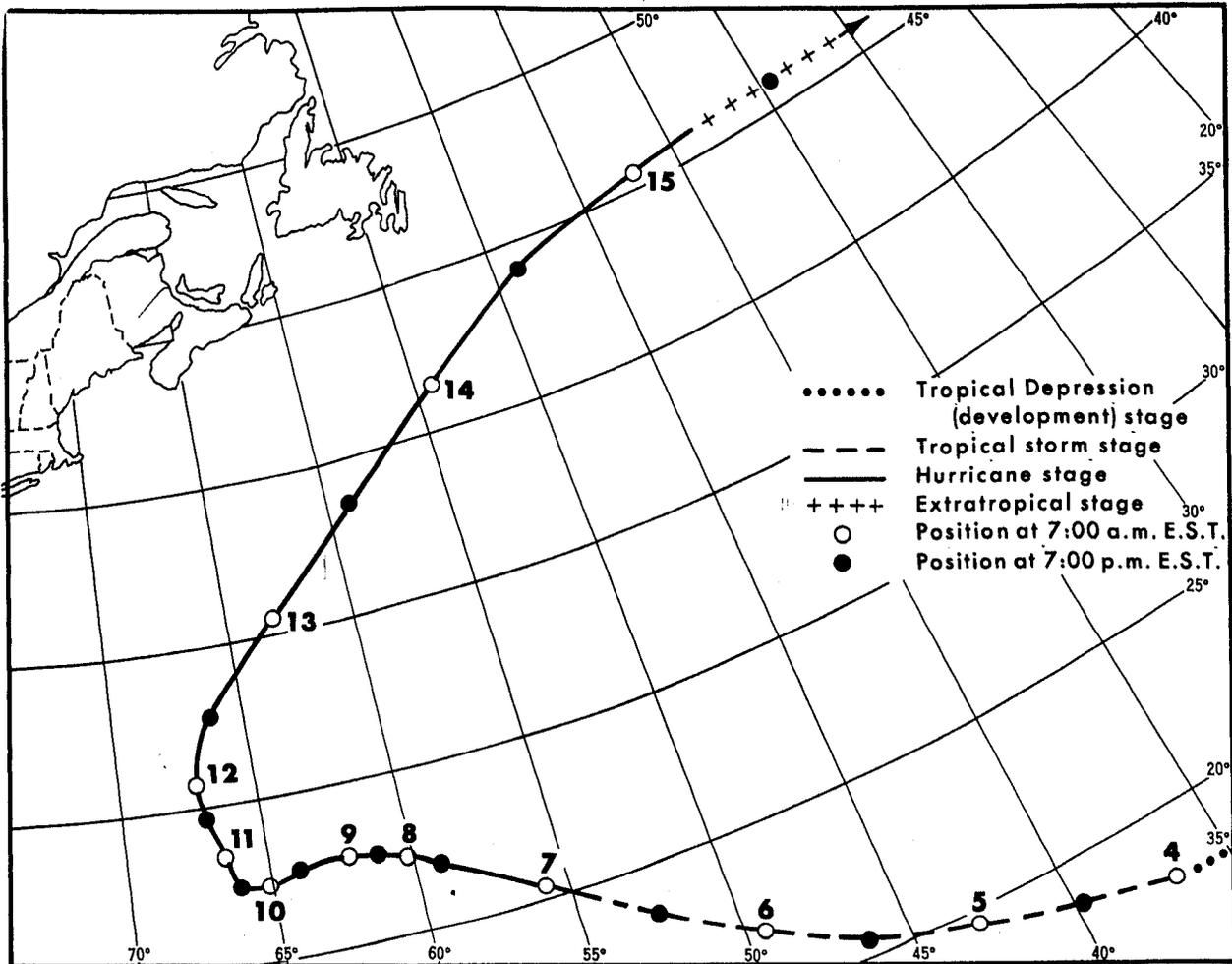


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1964

# HURRICANE ETHEL

## SEPTEMBER 4 - 16, 1964

### Preliminary Report with Advisories and Bulletins Issued



130 088

# **National Oceanic and Atmospheric Administration Weather Bureau Hurricane Series**

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HURRICANE ETHEL  
September 4-16, 1964

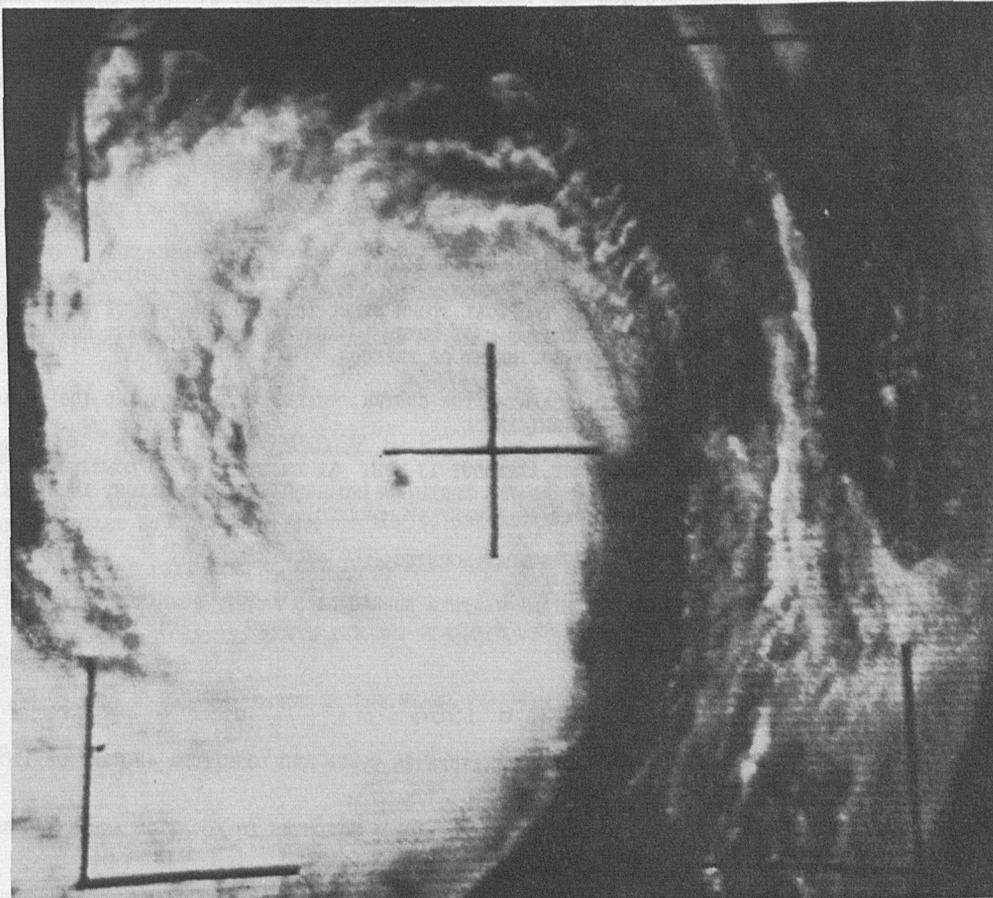
(A Preliminary Report)

Ethel...the third hurricane of the 1964 season maintained hurricane intensity for nine days. The storm did not seriously affect any land areas of the United States, passing 460 miles eastsoutheast of Hatteras, N. C., on September 12. High seas were the only effects of Ethel which were reported along the United States coastline. Bermuda experienced heavy surf, heavy rains and winds in excess of 70 MPH as Ethel passed within 100 miles to the northwest of the island on September 12th. There were no reports of deaths, injuries, or extensive property damage in connection with Hurricane Ethel.

On September 4, the first evidence of tropical storm Ethel was observed by a TIROS Satellite near latitude 18N and longitude 37W or about 1600 miles east of Puerto Rico. Reconnaissance aircraft reports indicated that Ethel moved west northwestward for the next two days with slight intensification. By noon September 7 when Ethel was located 600 miles southeast of Bermuda, she was reported by aircraft reconnaissance to have attained hurricane strength. Highest winds were reported to be 80 MPH near the center with gales extending 200 miles to the northeast and 85 miles to the southwest. Ethel continued to intensify as she slowed down and began a more westward journey for the next two days.

By September 10th, Ethel had slowed to an erratic, westward course when she was located 350 miles south southwest of Bermuda. Highest winds were 95 MPH near the center. Early on the 11th, Ethel turned toward the north and began to accelerate as she passed within 100 miles of Bermuda, the period of greatest intensity. Highest winds were 100 MPH near the center while gales extended outward 150 - 200 miles. Lowest sea level pressure was 28.82 inches.

After passing Bermuda, Ethel moved rapidly northeastward and maintained hurricane force until September 15th when she was located 1300 miles northeast of Bermuda.



TIROS PHOTO OF HURRICANE ETHEL  
"Eye" located 100 miles west of Bermuda when Ethel was near maximum intensity.

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0587-hur  
Ethel  
1964  
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## ADVISORIES AND BULLETINS

MIAMI

NUMBER 1 1 PM EST SATURDAY SEPTEMBER 5 1964

SATELLITE AND AIRCRAFT DATA INDICATE THAT A TROPICAL STORM HAS FORMED IN THE ATLANTIC AND WAS CENTERED AT 1 PM EST...1800Z...NEAR LATITUDE 22.0 NORTH LONGITUDE 45.0 WEST. THIS POSITION IS APPROXIMATELY 1400 MILES EAST NORTHEAST OF PUERTO RICO AND THE SAME DISTANCE EAST SOUTHEAST OF BERMUDA.

HIGHEST WINDS ARE ESTIMATED 70 MPH OVER A SMALL AREA NEAR THE CENTER. GALES EXTEND OUT 100 MILES IN THE NORTHERN SEMICIRCLE AND 50 MILES TO THE SOUTH OF THE CENTER.

THE STORM IS MOVING TOWARD THE NORTHWEST AT ABOUT 17 MPH. IT IS EXPECTED TO CONTINUE ON THIS COURSE FOR THE NEXT 12 TO 24 HOURS GRADUALLY TURNING MORE TO THE NORTH WITH A SLIGHT INCREASE IN RATE OF FORWARD MOTION. AN INCREASE TO HURRICANE INTENSITY IS LIKELY DURING THE NEXT 12 HOURS.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 5 PM EST.

MOORE

NUMBER 2 5 PM EST SATURDAY SEPTEMBER 5 1964

SATELLITE AND AIRCRAFT DATA LOCATE TROPICAL STORM ETHEL AT 5 PM EST...2200Z...NEAR LATITUDE 22.5 NORTH LONGITUDE 45.8 WEST OR ABOUT 1360 MILES EAST NORTHEAST OF SAN JUAN PUERTO RICO.

HIGHEST WINDS ARE ESTIMATED 70 MPH OVER A SMALL AREA NEAR THE CENTER. GALES EXTEND OUTWARD 100 MILES IN THE NORTHERN SEMICIRCLE AND 50 MILES IN THE SOUTHERN SEMICIRCLE.

THE STORM IS MOVING TOWARD THE NORTHWEST AT ABOUT 15 MPH. IT IS EXPECTED TO CONTINUE ON THIS COURSE FOR THE NEXT 12 TO 24 HOURS GRADUALLY TURNING MORE TO THE NORTH WITH A SLIGHT INCREASE IN RATE OF FORWARD MOTION. INTENSIFICATION TO HURRICANE STRENGTH IS LIKELY TONIGHT.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 11 PM EST.

MOORE

NUMBER 3 11 PM EST SATURDAY SEPTEMBER 5 1964

NO REPORTS HAVE BEEN RECEIVED FROM THE VICINITY OF TROPICAL STORM ETHEL THIS EVENING BUT IT IS ESTIMATED AT 11 PM EST...0400Z...NEAR LATITUDE 23.4 N LONGITUDE 46.9 WEST WHICH IS ABOUT 1300 MILES EAST NORTHEAST OF SAN JUAN PUERTO RICO AND ABOUT THE SAME DISTANCE EAST SOUTHEAST OF BERMUDA.

HIGHEST WINDS ARE ESTIMATED 70 MPH OVER A SMALL AREA NEAR THE CENTER. GALES EXTEND OUTWARD 100 MILES IN THE NORTHERN SEMICIRCLE AND 50 MILES IN THE SOUTHERN SEMICIRCLE.

THE STORM IS APPARENTLY MOVING TOWARD THE NORTHWEST AT ABOUT 15 MPH. IT IS EXPECTED TO CONTINUE ON THIS COURSE FOR THE NEXT 12 HOURS GRADUALLY TURNING TOWARD THE NORTH DURING SUNDAY WITH A SLIGHT INCREASE IN RATE OF MOVEMENT. INTENSIFICATION TO HURRICANE STRENGTH IS LIKELY BY MORNING.

RECONNAISSANCE AIRCRAFT WILL CHECK THE STORM AGAIN SUNDAY MORNING.

THE NEXT ADVISORY ON ETHEL WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 5 AM EST SUNDAY.

DUNN

NUMBER 4 5 AM EST SUNDAY SEPTEMBER 6 1964

AT 5 AM EST TROPICAL STORM ETHEL WAS ESTIMATED AROUND LATITUDE 24 NORTH AND LONGITUDE 48 WEST OR 1200 OR SO MILES EAST NORTHEAST OF SAN JUAN.

NAVY RECONNAISSANCE WILL SEARCH THE AREA TODAY AND MORE EXACT INFORMATION AS TO LOCATION AND INTENSITY WILL BE FOUND IN ADVISORIES LATER TODAY.

INDICATIONS ARE THAT ETHEL SHOULD MOVE TOWARD THE WEST NORTHWEST 15 MPH.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 11 AM EST.

KRAFT

MIAMI

NUMBER 5 11 AM EST SUNDAY SEPTEMBER 6 1964

TROPICAL STORM ETHEL WAS RELOCATED BY RECONNAISSANCE AIRCRAFT DURING THE MORNING WITH THE CENTER AT 11 AM EST...1600Z...NEAR LATITUDE 23.0 NORTH LONGITUDE 51.0 WEST OR A LITTLE OVER 1000 MILES EAST SOUTHEAST OF BERMUDA. THE STORM IS MOVING TOWARDS THE WEST NORTHWEST ABOUT 17 MPH AND IS EXPECTED TO CONTINUE ON THIS SAME COURSE WITH THE SAME FORWARD MOTION DURING THE NEXT 12 TO 18 HOURS.

HIGHEST WINDS ARE 50 MPH IN SQUALLS OVER A SMALL AREA NEAR THE CENTER WITH GALE WINDS EXTENDING OUT 200 MILES IN THE NORTHEAST SEMICIRCLE AND 60 MILES TO THE SOUTHWEST. ETHEL IS BEING INFLUENCED TO SOME EXTENT BY HURRICANE DORA AND NO FURTHER INCREASE IN SIZE OR INTENSITY IS EXPECTED DURING THE NEXT 12 TO 18 HOURS.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 5 PM EST.

CLARK

NUMBER 6 5 PM EST SUNDAY SEPTEMBER 6 1964

AT 5 PM EST...2200Z...RECONNAISSANCE AIRCRAFT LOCATED TROPICAL STORM ETHEL NEAR LATITUDE 24.5 NORTH LONGITUDE 54.0 WEST OR ABOUT 900 MILES EAST NORTHEAST OF SAN JUAN PUERTO RICO. THE STORM IS MOVING TOWARD THE WEST NORTHWEST ABOUT 20 MPH AND IS EXPECTED TO CONTINUE THIS SAME COURSE AND RATE OF FORWARD MOTION DURING THE NEXT 12 TO 18 HOURS.

HIGHEST WINDS ARE 50 MPH IN SQUALLS OVER A SMALL AREA NEAR THE CENTER WITH GALE FORCE WINDS EXTENDING OUT 200 MILES IN THE NORTHEAST SEMICIRCLE AND 60 MILES TO THE SOUTHWEST. ETHEL CONTINUES TO BE INFLUENCED BY HURRICANE DORA AND NO FURTHER INCREASE IN SIZE OR INTENSITY IS EXPECTED.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 11 PM EST.

CLARK

NUMBER 7 11 PM EST SUNDAY SEPTEMBER 6 1964

AT 11 PM EST...0400Z...TROPICAL STORM ETHEL WAS LOCATED NEAR LATITUDE 25.0 NORTH LONGITUDE 55.5 WEST OR ABOUT 740 MILES SOUTHEAST OF BERMUDA MOVING WEST NORTHWESTWARD ABOUT 20 MPH. LITTLE CHANGE IN THIS COURSE IS INDICATED DURING THE NEXT 12 HOURS.

HIGHEST WINDS ARE 50 MPH IN SQUALLS OVER A SMALL AREA NEAR THE CENTER WITH GALE WINDS EXTENDING OUTWARD 200 MILES IN THE NORTHEAST SEMICIRCLE AND 60 MILES TO THE SOUTHWEST. IT IS EXPECTED THAT ETHEL WILL LOSE INTENSITY DURING MONDAY AND PERHAPS BECOME ABSORBED BY HURRICANE DORA.

THE NEXT ADVISORY ON ETHEL WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 5 AM MONDAY.

DUNN

NUMBER 8 5 AM EST MONDAY SEPTEMBER 7 1964

AT 5 AM EST...1000Z...TROPICAL STORM ETHEL WAS ESTIMATED AROUND LATITUDE 26.0 NORTH LONGITUDE 57.0 WEST OR AROUND 600 MILES SOUTHEAST OF BERMUDA MOVING TOWARD THE WEST NORTHWEST 20 MPH.

HIGHEST WINDS ARE ESTIMATED 45 MPH IN SQUALLS NEAR THE CENTER AND SOME GALES IN SQUALLS EXTEND OUT 200 MILES TO THE NORTHEAST.

ETHEL IS EXPECTED TO CONTINUE ITS PRESENT MOVEMENT AND LIKELY BECOME ABSORBED BY HURRICANE DORA WITHIN 24 HOURS.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 11 AM EST.

KRAFT

MIAMI

NUMBER 9 11 AM EST MONDAY SEPTEMBER 7 1964

AIRCRAFT RECONNAISSANCE INDICATE THAT ETHEL HAS NOW BECOME A HURRICANE AND AT 11 AM EST...1600Z...WAS CENTERED NEAR LATITUDE 26.1 NORTH LONGITUDE 57.1 WEST OR ABOUT 600 MILES SOUTHEAST OF BERMUDA. THE HURRICANE IS MOVING TOWARDS THE WEST NORTHWEST ABOUT 14 MPH. DURING THE NEXT 12 TO 18 HOURS ETHEL IS EXPECTED TO CONTINUE ABOUT THE SAME RATE OF FORWARD MOTION GRADUALLY CURVING MORE TO THE NORTHWEST.

HIGHEST WINDS ARE NOW ABOUT 80 MPH OVER A SMALL AREA NEAR THE CENTER WITH GALES EXTENDING OUT 200 MILES IN THE NORTHEAST SEMICIRCLE AND 85 MILES TO THE SOUTHWEST. SOME FURTHER INTENSIFICATION IS EXPECTED DURING THE NEXT 12 TO 18 HOURS.

IT NOW APPEARS THAT HURRICANES DORA AND ETHEL WILL REMAIN SEPARATE IDENTITIES.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 5 PM EST.

CLARK

NUMBER 10 5 PM EST MONDAY SEPTEMBER 7 1964

AT 5 PM EST...2200Z...RECONNAISSANCE AIRCRAFT LOCATED HURRICANE ETHEL NEAR LATITUDE 27.0 NORTH LONGITUDE 59.0 WEST OR ABOUT 500 MILES SOUTHEAST OF BERMUDA. ETHEL CONTINUES ON A WEST NORTHWEST COURSE BUT AT A SOMEWHAT FASTER RATE OF 20 MPH AND IS EXPECTED TO CONTINUE THIS SAME MOVEMENT DURING THE NEXT 12 TO 18 HOURS.

HIGHEST WINDS ARE 80 MPH OVER A SMALL AREA NEAR THE CENTER WITH GALES EXTENDING OUT 200 MILES IN THE NORTHEAST SEMICIRCLE AND 85 MILES TO THE SOUTHWEST. SOME FURTHER INTENSIFICATION IS EXPECTED DURING THE NEXT 12 HOURS.

THE PRESENT COURSE OF HURRICANE ETHEL WILL LIKELY BRING GALE WINDS INTO THE BERMUDA AREA SOMETIME TUESDAY AND INTERESTS THERE SHOULD KEEP IN TOUCH WITH LATEST ADVISORIES. SMALL CRAFT AROUND BERMUDA SHOULD REMAIN IN PORT.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 11 PM EST.

CLARK

NUMBER 11 11 PM EST MONDAY SEPTEMBER 7 1964

RECONNAISSANCE AIRCRAFT CENTERED HURRICANE ETHEL NEAR LATITUDE 27.3 NORTH LONGITUDE 59.8 WEST OR ABOUT 440 MILES SOUTHEAST OF BERMUDA AT 11 PM EST...0400Z...THE RATE OF FORWARD MOTION HAS DECREASED SLIGHTLY AND ETHEL IS NOW MOVING TOWARD THE WEST NORTHWEST AT ABOUT 14 MPH. IT IS EXPECTED TO CONTINUE THE SAME COURSE AND SPEED FOR THE NEXT 12 TO 18 HOURS.

HIGHEST WINDS ARE 80 MPH OVER A SMALL AREA NEAR THE CENTER AND GALES EXTEND OUT 200 MILES IN THE NORTHEAST SEMICIRCLE AND 85 MILES TO THE SOUTHWEST.

THE PRESENT COURSE OF ETHEL WILL LIKELY RESULT IN GALE WINDS IN THE BERMUDA AREA TUESDAY AFTERNOON OR TUESDAY NIGHT. INTERESTS THERE SHOULD KEEP IN TOUCH WITH LATEST ADVISORIES AND SMALL CRAFT SHOULD REMAIN IN SAFE HARBOR.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 5 AM EST.

MOORE

NUMBER 12 5 AM EST TUESDAY SEPTEMBER 8 1964

ETHEL WAS NEAR LATITUDE 27.5 NORTH LONGITUDE 60.5 WEST AT 5 AM EST..1000Z..THIS POSITION IS ABOUT 400 MILES SOUTH SOUTHEAST OF BERMUDA. IT IS MOVING TOWARD THE WEST NORTHWEST 12 MPH AND SHOULD PASS SOUTH OF BERMUDA TONIGHT.

ETHEL IS A SMALL AFFAIR WITH WIND GUSTS OF HURRICANE FORCE IN SQUALLS NEAR THE CENTER AND SOME GALES IN SQUALLS EXTEND OUT 100 TO 200 MILES FROM THE CENTER.

INTERESTS IN BERMUDA SHOULD KEEP IN TOUCH WITH ADVISORIES AND SMALL CRAFT THERE REMAIN IN PORT.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 11 AM EST.

KRAFT

MIAMI

NUMBER 13 11 AM EST TUESDAY SEPTEMBER 8 1964

ETHEL WAS NEAR LATITUDE 27.6 NORTH LONGITUDE 60.7 WEST AT 11 AM EST...1600Z... THIS POSITION IS ABOUT 360 MILES SOUTH SOUTHEAST OF BERMUDA. THE STORM IS MOVING TOWARD THE WEST NORTHWEST AT 8 MPH WHICH IS SLOWER THAN IT HAD BEEN MOVING.

ETHEL HAS WINDS ONLY SLIGHTLY ABOVE HURRICANE FORCE IN SQUALLS AND GALES EXTEND OUT ABOUT 200 MILES NORTHEAST OF THE CENTER AND 90 MILES SOUTHWEST OF THE CENTER. LITTLE CHANGE IN INTENSITY OR MOVEMENT IS EXPECTED NEXT 12 HOURS.

INTERESTS IN BERMUDA SHOULD KEEP IN TOUCH WITH ADVISORIES AND SMALL CRAFT THERE SHOULD REMAIN IN PORT.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 5 PM EST.

GENTRY

NUMBER 14 5 PM EST TUESDAY SEPTEMBER 8 1964

HURRICANE ETHEL WAS CENTERED NEAR LATITUDE 27.9 NORTH LONGITUDE 61.2 WEST AT 5 PM EST...2200Z...WHICH IS ABOUT 350 MILES SOUTH SOUTHEAST OF BERMUDA. THE STORM HAS CONTINUED TO MOVE SLOWLY TOWARDS THE WEST NORTHWEST AT 7 MPH.

THE GALE WINDS ASSOCIATED WITH ETHEL NOW COVER A LARGER AREA AND EXTEND OUT ABOUT 200 MILES NORTHEAST OF THE CENTER AND 110 MILES SOUTHWEST OF THE CENTER. LITTLE CHANGE IN INTENSITY OR MOVEMENT IS EXPECTED DURING THE NEXT 12 HOURS. MAXIMUM WINDS ARE ABOUT 80 MILES PER HOUR IN SQUALLS.

INTERESTS IN BERMUDA SHOULD KEEP IN TOUCH WITH ADVISORIES AND SMALL CRAFT THERE SHOULD REMAIN IN PORT.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 11 PM EST.

GENTRY

NUMBER 15 11 PM EST TUESDAY SEPTEMBER 8 1964

BASED ON LATE AFTERNOON RECONNAISSANCE AIRCRAFT REPORTS HURRICANE ETHEL WAS CENTERED AT 11 PM EST...0400Z... NEAR LATITUDE 28.0 NORTH LONGITUDE 61.7 WEST OR ABOUT 340 MILES SOUTH SOUTHEAST OF BERMUDA. THE HURRICANE IS MOVING WEST NORTHWEST ABOUT 7 MPH AND IS EXPECTED TO CONTINUE THIS MOVEMENT DURING THE NEXT 12 TO 18 HOURS.

HIGHEST WINDS ARE 80 MPH IN SQUALLS NEAR THE CENTER WITH GALE FORCE WINDS EXTENDING OUT 200 MILES IN THE NORTHEAST SEMICIRCLE AND 140 MILES TO THE SOUTHWEST. LITTLE CHANGE IN SIZE OR INTENSITY IS LIKELY DURING THE NEXT 12 HOURS.

INTERESTS IN BERMUDA SHOULD CONTINUE TO KEEP IN TOUCH WITH LATEST ADVISORIES AND SMALL CRAFT THERE SHOULD REMAIN IN PORT.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 5 AM EST WEDNESDAY.

CLARK

NUMBER 16 5 AM EST WEDNESDAY SEPTEMBER 9 1964

AT 5 AM EST...1000Z...ETHEL WAS CENTERED NEAR LATITUDE 27.8 NORTH LONGITUDE 61.8 WEST OR ABOUT 350 MILES SOUTH SOUTHEAST OF BERMUDA AND HAS REMAINED NEARLY STATIONARY DURING THE PAST 6 HOURS.

HIGHEST WINDS ARE 80 MPH IN SQUALLS NEAR THE CENTER WITH GALE FORCE WINDS IN SQUALLS EXTENDING OUT 200 MILES IN THE NORTHEAST SEMICIRCLE AND 140 MILES TO THE SOUTHWEST.

INDICATIONS ARE FOR LITTLE CHANGE IN SIZE AND INTENSITY WITH LITTLE MOVEMENT DURING THE NEXT 12 HOURS. INTERESTS IN BERMUDA SHOULD KEEP IN TOUCH WITH ADVISORIES AND SMALL CRAFT THERE SHOULD REMAIN IN PORT.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 11 AM EST.

KRAFT

MIAMI

NUMBER 17 11 AM EST WEDNESDAY SEPTEMBER 9 1964

HURRICANE ETHEL WAS CENTERED NEAR LATITUDE 27.8 NORTH LONGITUDE 62.6 WEST AT 11 AM EST...1600Z...OR ABOUT 340 MILES SOUTH SOUTHEAST OF BERMUDA. IT IS MOVING SLOWLY TOWARD THE WEST AT ABOUT 8 MILES PER HOUR.

MAXIMUM WINDS ARE ABOUT 90 MILES PER HOUR IN SQUALLS NEAR THE CENTER WITH GALE FORCE WINDS EXTENDING OUT 200 MILES IN THE NORTHERN SEMICIRCLE AND 140 MILES IN THE SOUTHERN.

LITTLE CHANGE IN INTENSITY OR MOVEMENT EXPECTED DURING THE NEXT 12 HOURS. INTERESTS IN BERMUDA SHOULD KEEP IN TOUCH WITH ADVISORIES AND SMALL CRAFT THERE SHOULD REMAIN IN PORT.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 5 PM EST.

GENTRY

NUMBER 18 5 PM EST WEDNESDAY SEPTEMBER 9 1964

HURRICANE ETHEL WAS NEAR LATITUDE 27.8 NORTH LONGITUDE 63.7 WEST AT 5 PM EST...2200Z...OR ABOUT 320 MILES SOUTH SOUTHEAST OF BERMUDA. IT CONTINUES TO MOVE SLOWLY TOWARDS THE WEST AND PRESENT SPEED IS 8 MPH.

MAXIMUM WINDS ARE ABOUT 90 MPH IN SQUALLS NEAR THE CENTER AND GALES EXTEND OUTWARD 200 MILES TO THE NORTH AND 140 MILES TO THE SOUTH.

LITTLE CHANGE IN INTENSITY OR MOVEMENT IS EXPECTED DURING THE NEXT 12 HOURS. INTERESTS IN BERMUDA SHOULD KEEP IN TOUCH WITH ADVISORIES AND SMALL CRAFT THERE SHOULD REMAIN IN PORT.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 11 PM EST.

GENTRY

NUMBER 19 11 PM EST WEDNESDAY SEPTEMBER 9 1964

RADAR REPORTS FROM RECONNAISSANCE AIRCRAFT LOCATED HURRICANE ETHEL AT 11 AM EST...0400Z...NEAR LATITUDE 27.5 NORTH LONGITUDE 64.7 WEST OR A LITTLE OVER 300 MILES SOUTH OF BERMUDA. ETHEL IS MOVING ON A COURSE SLIGHTLY SOUTH OF DUE WEST AT 9 MPH. A GENERAL WESTERLY COURSE AT ABOUT THE SAME RATE OF MOVEMENT IS EXPECTED DURING THE NEXT 12 HOURS.

MAXIMUM WINDS ARE 90 MPH OVER A SMALL AREA NEAR THE CENTER WITH GALES EXTENDING OUT 200 MILES IN THE NORTH SEMICIRCLE AND 140 MILES TO THE SOUTH.

SOME FURTHER INTENSIFICATION IS LIKELY DURING THE NEXT 12 HOURS WITH NO IMPORTANT CHANGE IN SIZE.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 5 AM EST THURSDAY.

CLARK

NUMBER 20 5 AM EST THURSDAY SEPTEMBER 10 1964

AT 5 AM...1000Z...HURRICANE ETHEL WAS NEAR LATITUDE 27.5 NORTH LONGITUDE 65.2 WEST OR A LITTLE OVER 300 MILES SOUTH OF BERMUDA. IT IS MOVING WESTWARD ABOUT 9 MILES PER HOUR.

HIGHEST WINDS ARE 90 MPH NEAR THE CENTER AND GALES EXTEND OUT ABOUT 100 MILES IN ALL DIRECTIONS.

LITTLE CHANGE IN SIZE INTENSITY OR MOVEMENT EXPECTED DURING THE NEXT 12 HOURS.

THE NEXT ADVISORY AT 11 AM EST.

KRAFT

MIAMI

NUMBER 21 11 AM EST THURSDAY SEPTEMBER 10 1964

HURRICANE ETHEL WAS NEAR LATITUDE 27.3 NORTH LONGITUDE 66.1 WEST OR ABOUT 350 MILES BETWEEN SOUTH AND SOUTH  
SOUTHWEST OF BERMUDA AT 11 AM EST...1600Z... IT IS MOVING WESTWARD AT 8 MPH.

MAXIMUM WINDS ARE 95 MPH NEAR THE CENTER AND GALES EXTEND OUTWARD 130 MILES IN ALL DIRECTIONS.

LITTLE CHANGE IN SIZE INTENSITY OR MOVEMENT IS EXPECTED DURING THE NEXT 12 HOURS.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 5 PM EST.

GENTRY

NUMBER 22 5 PM EST THURSDAY SEPTEMBER 10 1964

HURRICANE ETHEL HAS REMAINED NEARLY STATIONARY DURING THE PAST 6 HOURS. ON THE BASIS OF LATER RECONNAISSANCE  
REPORTS IT WAS RELOCATED AND WAS CENTERED NEAR LATITUDE 27.5 NORTH LONGITUDE 65.8 WEST. AT 5 PM EST...2200Z..  
OR 340 MILES SLIGHTLY WEST OF DUE SOUTH OF BERMUDA. FUTURE MOVEMENT IS UNCERTAIN BUT WILL PROBABLY BE SLOWLY  
TOWARDS THE WEST NORTHWEST AT ABOUT 5 MPH FOR THE NEXT 12 HOURS.

MAXIMUM WINDS ARE 95 MPH NEAR THE CENTER AND GALES EXTEND OUTWARD 130 MILES IN ALL DIRECTIONS. SLOW  
INTENSIFICATION IN MAXIMUM WINDS WITH LITTLE CHANGE IN AREA COVERED BY THE STORM IS EXPECTED DURING THE NEXT  
12 TO 24 HOURS. INTERESTS IN BERMUDA SHOULD KEEP IN TOUCH WITH LATER ADVISORIES.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 11 PM EST.

GENTRY

NUMBER 23 11 PM EST THURSDAY SEPTEMBER 10 1964

HURRICANE ETHEL IS MOVING WESTWARD AT ABOUT 7 MPH AND AT 11 PM EST ...0400Z... WAS CENTERED NEAR LATITUDE 27.5  
NORTH LONGITUDE 66.4 WEST. THIS POSITION IS APPROXIMATELY 350 MILES SOUTH SOUTHWEST OF BERMUDA.

HIGHEST WINDS ARE 95 MPH NEAR THE CENTER. GALES EXTEND OUT 150 MILES IN ALL DIRECTIONS.

ETHEL IS FORECAST TO CONTINUE MOVING TOWARD THE WEST AT ABOUT 7 MILES PER HOUR DURING THE NEXT 12 HOURS WITH  
A GRADUAL TREND TO WEST NORTHWEST AT A SLIGHTLY FASTER RATE THEREAFTER. SOME SLIGHT INCREASE IN MAXIMUM WINDS  
IS LIKELY BUT THE SIZE WILL REMAIN ABOUT THE SAME.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 5 AM EST.

MOORE

NUMBER 24 5 AM EST FRIDAY SEPTEMBER 11 1964

AT 5 AM ...1000Z... HURRICANE ETHEL WAS CENTERED ABOUT 350 MILES SOUTH SOUTHWEST OF BERMUDA NEAR LATITUDE 27.6  
NORTH LONGITUDE 66.6 WEST AND IT WAS DRIFTING WESTWARD ABOUT 5 MPH.

HIGHEST WINDS ARE 95 MPH NEAR THE CENTER. GALES EXTEND OUT 150 MILES IN ALL DIRECTIONS.

LITTLE CHANGE IN SIZE INTENSITY OR MOVEMENT IS EXPECTED DURING THE NEXT 12 HOURS.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 11 AM EST.

KRAFT

MIAMI

NUMBER 25 11 AM EST FRIDAY SEPTEMBER 11 1964

AT 11 AM EST...1600Z...HURRICANE ETHEL WAS CENTERED ABOUT 310 MILES SOUTH SOUTHWEST OF BERMUDA NEAR LATITUDE 28.2 NORTH LONGITUDE 66.6 WEST DRIFTING BETWEEN NORTHWEST AND WEST NORTHWEST AT ABOUT 5 MPH.

HIGHEST WINDS ARE 95 MPH NEAR THE CENTER. GALES EXTEND OUT 150 MILES IN ALL DIRECTIONS.

LITTLE CHANGE IN SIZE INTENSITY OR RATE AND DIRECTION OF MOVEMENT IS INDICATED DURING THE NEXT 18 HOURS.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 5 PM EST.

MOORE

NUMBER 26 5 PM EST FRIDAY SEPTEMBER 11 1964

RECONNAISSANCE AIRCRAFT INDICATE THAT HURRICANE ETHEL IS CHANGING COURSE AND IS NOW MOVING TOWARD THE NORTH NORTHWEST AT ABOUT 9 MPH. AT 5 PM EST...2200Z...IT WAS CENTERED NEAR LATITUDE 29.3 NORTH LONGITUDE 66.9 WEST OR ABOUT 235 MILES SOUTH SOUTHWEST OF BERMUDA.

THIS CHANGE IN COURSE REPRESENTS A THREAT TO BERMUDA AND PRECAUTIONS SHOULD BE TAKEN THERE AGAINST INCREASING WINDS POSSIBLY REACHING GALE FORCE BEFORE MIDNIGHT AND WITH HEAVY GALES LIKELY TO BEGIN DURING THE FORENOON SATURDAY.

HIGHEST WINDS NEAR THE CENTER OF ETHEL ARE ESTIMATED 95 MPH WHILE GALES EXTEND OUT 200 MILES TO THE NORTHEAST AND 150 MILES SOUTHWEST OF THE CENTER.

CHANGING STEERING CURRENTS MAKE FORECASTING OF THE COURSE DURING THE NEXT 12 TO 18 HOURS VERY DIFFICULT. HOWEVER THE HURRICANE IS EXPECTED TO TURN TO ALMOST A DUE NORTH COURSE AT ABOUT 10 MPH TONIGHT WITH THE CENTER PASSING TO THE WEST OF BERMUDA SATURDAY AFTERNOON. LITTLE CHANGE IN SIZE OR INTENSITY IS EXPECTED.

IT IS REEMPHASIZED THAT GALES MAY REACH BERMUDA BEFORE MIDNIGHT WITH HEAVY GALES BEGINNING SATURDAY MORNING ACCOMPANIED BY VERY HEAVY SURF. ALL SAFETY MEASURES SHOULD BE TAKEN IMMEDIATELY AND SMALL BOATS SHOULD REMAIN IN SAFE HARBOR.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 11 PM EST.

MOORE

NUMBER 27 11 PM EST FRIDAY SEPTEMBER 11 1964

GALE WINDS ARE EXPECTED AT BERMUDA PRIOR TO DAYBREAK WITH HURRICANE FORCE WINDS OVER THE ISLAND AROUND MIDDAY SATURDAY.

PRECAUTIONS SHOULD BE STARTED IMMEDIATELY IN BERMUDA AGAINST HURRICANE FORCE WINDS VERY HEAVY SURF AND HEAVY RAINS. SMALL CRAFT SHOULD REMAIN IN SAFE HARBOR.

HURRICANE ETHEL HAS TAKEN A MORE NORTHERLY COURSE AND AT 11 PM EST...0400Z...WAS CENTERED NEAR LATITUDE 30.0 NORTH LONGITUDE 66.5 WEST OR SLIGHTLY LESS THAN 200 MILES SOUTH SOUTHEAST OF BERMUDA. THIS POSITION IS BASED UPON LAND BASED RADAR AND AIR RECONNAISSANCE. HER FORWARD SPEED IS 9 MPH. ETHEL IS FORECAST TO MOVE ON A NORTH NORTHEAST COURSE AT 9 MPH INCREASING SLIGHTLY IN SPEED AND PASSING NEAR OR JUST TO THE WEST OF BERMUDA AROUND NOON OR EARLY AFTERNOON SATURDAY.

HIGHEST WINDS ARE ESTIMATED 95 MPH WITH GALES EXTENDING OUT 200 MILES TO THE NORTHEAST AND 150 MILES TO THE SOUTHWEST OF THE CENTER. NO CHANGE IN SIZE OR INTENSITY IS INDICATED.

THE NEXT REGULAR ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 5 AM EST WITH AN INTERMEDIATE BULLETIN AT 2 AM.

SUGG

2 AM EST SATURDAY SEPTEMBER 12 1964

GALES ARE NOW SPREADING INTO THE BERMUDA AREA IN ADVANCE OF HURRICANE ETHEL AND PRECAUTIONS SHOULD BE TAKEN AGAINST A CONTINUED INCREASE IN WINDS WITH HEAVY RAINS AND VERY HEAVY SURF. WINDS ARE EXPECTED TO REACH HURRICANE FORCE IN THE ISLANDS AROUND MID DAY SATURDAY. SMALL CRAFT SHOULD REMAIN IN SAFE HARBOR.

AT 2 AM EST...0700Z...HURRICANE ETHEL WAS CENTERED NEAR LATITUDE 30.5 NORTH LONGITUDE 66.4 WEST OR ABOUT 170 MILES SOUTH SOUTHWEST OF BERMUDA. IT IS FORECAST TO MOVE ON A NORTH NORTHEAST COURSE AT ABOUT 9 MPH GRADUALLY INCREASING ITS FORWARD SPEED WITH THE CENTER PASSING NEAR OR JUST TO THE WEST OF BERMUDA AROUND NOON OR EARLY AFTERNOON SATURDAY.

## MIAMI

HIGHEST WINDS ARE ESTIMATED 95 MPH WITH GALES EXTENDING OUT 200 MILES TO THE NORTHEAST AND 150 MILES SOUTHWEST OF THE CENTER. SIZE AND INTENSITY ARE FORECAST TO REMAIN ABOUT THE SAME.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 5 AM EST.

MOORE

### NUMBER 28 5 AM EST SATURDAY SEPTEMBER 12 1964

ALL PRECAUTIONS SHOULD BE CONTINUED AGAINST HURRICANE FORCE WINDS VERY HEAVY SURF AND HEAVY RAINS IN BERMUDA. SMALL CRAFT SHOULD REMAIN IN SAFE HARBOR.

HURRICANE ETHEL CONTINUES TO MOVE TOWARD THE NORTH NORTHEAST AT ABOUT 10 MPH AND AT 5 AM EST...1000Z...WAS CENTERED NEAR LATITUDE 31.0 NORTH LONGITUDE 66.3 WEST. THIS POSITION IS ABOUT 135 MILES SOUTHWEST OF BERMUDA.

HIGHEST WINDS ARE ESTIMATED 95 MPH WITH GALES EXTENDING OUT 200 MILES TO THE NORTHEAST AND 150 MILES TO THE SOUTHWEST OF THE CENTER.

ETHEL IS FORECAST TO CONTINUE TOWARD THE NORTH NORTHEAST AT 10 MPH FOR THE NEXT 12 HOURS WITH A GRADUAL INCREASE IN RATE OF FORWARD MOVEMENT LATE TODAY AND TONIGHT. SIZE AND INTENSITY ARE EXPECTED TO REMAIN ABOUT THE SAME.

WINDS WILL CONTINUE TO INCREASE IN THE BERMUDA AREA PROBABLY REACHING HURRICANE FORCE AROUND NOON TODAY. THE HURRICANE CENTER IS EXPECTED TO PASS NEAR OR JUST TO THE WEST OF THE ISLANDS DURING THE AFTERNOON.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 11 AM EST WITH AN INTERMEDIATE BULLETIN AT 8 AM EST.

MOORE

### 8 AM EST SATURDAY SEPTEMBER 12 1964

ALL PRECAUTIONS SHOULD BE CONTINUED IN THE BERMUDA AREA FOR DANGEROUS WINDS VERY HEAVY SURF AND HEAVY RAINS. SMALL CRAFT SHOULD REMAIN IN SAFE HARBOR.

AT 8 AM EST HURRICANE ETHEL WAS CENTERED NEAR LATITUDE 31.2 NORTH LONGITUDE 67.1 WEST OR ABOUT 165 MILES SOUTHWEST OF BERMUDA. THE HURRICANE IS NOW UNDER SURVEILLANCE OF BOTH LAND BASED RADAR AT BERMUDA AND RECONNAISSANCE AIRCRAFT AND THIS POSITION IS CONSIDERED MORE ACCURATE THAN THAT GIVEN IN THE LAST ADVISORY.

ETHEL IS MOVING TOWARD THE NORTH NORTHEAST AT ABOUT 8 MPH. HIGHEST WINDS ARE ESTIMATED 95 MPH NEAR THE CENTER WITH GALES EXTENDING OUT 200 MILES TO THE NORTHEAST AND 150 MILES SOUTHWEST OF THE CENTER.

THE HURRICANE IS FORECAST TO CONTINUE TOWARD THE NORTH NORTHEAST AT ABOUT THE SAME RATE TODAY WITH LITTLE CHANGE IN SIZE OR INTENSITY.

GALES HAVE BEEN OCCURRING IN THE BERMUDA AREA DURING THE NIGHT AND A FURTHER INCREASE IS FORECAST TODAY. THE PRESENT POSITION AND COURSE WOULD RESULT IN THE CENTER PASSING SLIGHTLY FARTHER WEST OF BERMUDA THAN ANTICIPATED EARLIER. HOWEVER ALL PRECAUTIONS SHOULD BE CONTINUED AGAINST THE POSSIBILITY OF WINDS REACHING HURRICANE FORCE BY OR SHORTLY AFTER NOON WITH THE HURRICANE CENTER PASSING TO THE WEST DURING THE AFTERNOON.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 11 AM EST.

MOORE

### NUMBER 29 11 AM EST SATURDAY SEPTEMBER 12 1964

ALL PRECAUTIONS SHOULD BE CONTINUED AGAINST DANGEROUS WINDS VERY HEAVY SURF AND HEAVY RAINS IN BERMUDA. SMALL CRAFT SHOULD REMAIN IN SAFE HARBOR.

HURRICANE ETHEL IS MOVING TOWARDS THE NORTH AT 9 MPH AT 11 AM EST...1600Z...WAS CENTERED NEAR LATITUDE 31.6 NORTH LONGITUDE 67.2 WEST OR 150 MILES WEST SOUTHWEST OF BERMUDA. AS WAS STATED IN THE 8 AM EST BULLETIN THIS POSITION IS BELIEVED TO BE MORE ACCURATE THAN THE ONE GIVEN IN ADVISORY NUMBER 28. THE STORM IS PRESENTLY BEING TRACKED BOTH BY RECONNAISSANCE AIRCRAFT AND BY RADAR FROM BERMUDA.

HIGHEST WINDS ARE ABOUT 100 MPH AND GALES EXTEND OUT 200 MILES TO THE NORTHEAST AND 150 MILES TO THE SOUTHWEST OF THE CENTER.

ETHEL SHOULD CONTINUE TO MOVE TOWARDS THE NORTH AT ABOUT 9 MPH DURING THE NEXT 12 HOURS WITH A SLOW TURN TOWARDS A NORTH NORTHEAST DIRECTION. SIZE AND INTENSITY ARE EXPECTED TO REMAIN ABOUT THE SAME.

SQUALLS ARE ALREADY OCCURRING IN BERMUDA AND SHOULD CONTINUE TO INCREASE. THE HURRICANE IS EXPECTED TO PASS TO THE WEST OF THE ISLAND THIS AFTERNOON BUT JUST A SMALL DEVIATION FROM THE FORECASTED TRACK COULD BRING THE

## MIAMI

STORM VERY NEAR BERMUDA. THEREFORE ALL PRECAUTIONS SHOULD BE CONTINUED FOR DANGEROUS WINDS.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 5 PM EST WITH AN INTERMEDIATE BULLETIN AT 2 PM EST.

GENTRY

### 2 PM EST SATURDAY SEPTEMBER 12 1964

ALL PRECAUTIONS SHOULD BE CONTINUED IN THE BERMUDA AREA FOR DANGEROUS WINDS VERY HEAVY SURF AND RAINS. SMALL CRAFT SHOULD REMAIN IN SAFE HARBOR.

ETHEL IS STILL MOVING NORTHWARD AT 9 MPH AND AT 2 PM EST WAS CENTERED AT LATITUDE 32.1 NORTH LONGITUDE 67.2 WEST. THIS IS 150 MILES IN A DIRECTION SLIGHTLY SOUTH OF DUE WEST FROM THE ISLANDS. THE HURRICANE IS FORECAST TO CONTINUE MOVING IN A GENERAL NORTHERLY DIRECTION BUT WITH A SLOW TURN TOWARDS THE NORTH NORTHEAST.

GALES HAVE CONTINUED TO OCCUR AT BERMUDA AND GUSTS THERE THIS MORNING WERE AS HIGH AS 60 MPH. THE STORM SHOULD PASS TO THE WEST OF THE ISLANDS THIS AFTERNOON ON ITS NORTHWARD TRACK BUT THE GALES EXTEND ABOUT 150 MILES FROM THE CENTER TO THE SOUTH AND SOUTHEAST AND MAY CONTINUE AT BERMUDA ON INTO THE NIGHT.

HIGHEST WINDS IN THE STORM ARE ABOUT 100 MPH OVER A SMALL AREA NEAR THE CENTER. THESE STRONGEST WINDS ARE PRESENTLY PREDICTED TO BYPASS BERMUDA BUT ONLY A SLIGHT DEVIATION FROM THE FORECASTED TRACK WOULD BRING THIS AREA NEAR OR OVER BERMUDA. THEREFORE ALL PRECAUTIONS SHOULD BE CONTINUED UNTIL THE STORM IS SAFELY PASSED.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 5 PM EST.

GENTRY

### NUMBER 30 5 PM EST SATURDAY SEPTEMBER 12 1964

ALL PRECAUTIONS SHOULD BE CONTINUED AGAINST DANGEROUS WINDS VERY HEAVY SURF AND HEAVY RAINS IN BERMUDA. SMALL CRAFT SHOULD REMAIN IN SAFE HARBOR.

WINDS IN BERMUDA HAVE BEEN AS HIGH AS 70 MPH IN GUSTS AND MAY INCREASE A LITTLE MORE IN THE NEXT 3 HOURS WHILE ETHEL IS PASSING TO THE NORTHWEST. THE STORM WAS CENTERED AT 5 PM EST...2200Z...NEAR LATITUDE 32.5 NORTH LONGITUDE 66.6 WEST OR 100 MILES WEST OF BERMUDA. IT IS MOVING IN A GENERAL NORTH NORTHEAST DIRECTION AT 10 MPH BUT ITS COURSE IS OSCILLATING ABOUT THIS MEAN TRACK AND WHEN THE CENTER COMES CLOSEST TO THE ISLANDS THE EDGE OF THE HURRICANE FORCE WINDS SHOULD BE JUST OFF SHORE. THUS EVEN A MINOR DEVIATION FROM THE PREDICTED HURRICANE TRACK COULD BRING THE STRONGEST WINDS INTO BERMUDA. MAXIMUM WINDS ARE ABOUT 100 MPH OVER A SMALL AREA NEAR THE CENTER AND GALES EXTEND OUTWARD 200 MILES TO THE NORTHEAST AND 150 MILES TO SOUTHWEST.

ETHEL IS EXPECTED TO CONTINUE TO MOVE TOWARDS THE NORTH NORTHEAST FOR THE NEXT 12 HOURS WITH SLOW ACCELERATION IN SPEED BUT WITH A SLOW TREND TOWARD A MORE NORTHEASTERLY DIRECTION. LITTLE CHANGE IN SIZE OR INTENSITY IS EXPECTED DURING THE NEXT 12 HOURS.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 11 PM EST WITH AN INTERMEDIATE BULLETIN AT 8 PM EST.

GENTRY

### 8 PM EST SATURDAY SEPTEMBER 12 1964

THE CENTER OF HURRICANE ETHEL IS PASSING ABOUT 90 MILES TO THE WESTNORTHWEST OF BERMUDA AT 8 PM EST. INDICATIONS ARE THAT THIS MAY BE ABOUT AS CLOSE AS ETHEL MAY COME TO THE ISLAND HOWEVER PRECAUTIONS SHOULD BE CONTINUED AGAINST DANGEROUS WINDS VERY HEAVY SURF AND HEAVY RAINS FOR THE NEXT 4 TO 6 HOURS AFTER WHICH THE GALE WINDS WILL SLOWLY DIMINISH DURING SUNDAY MORNING. SMALL CRAFT SHOULD REMAIN IN SAFE HARBOR.

THE COORDINATES FOR THE CENTER OF ETHEL AT 8 PM EST ARE LATITUDE 32.9N LONGITUDE 66.3W. THE HURRICANE IS MOVING ON A COURSE TOWARD THE NORTH NORTHEAST AT 10 MPH. HIGHEST WINDS ARE NEAR 100 MPH AND GALES EXTEND OUT 200 MILES TO THE NORTHEAST AND 150 MILES SOUTHEAST OF THE CENTER.

THE NEXT REGULAR ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 11 PM EST.

SUGG

MIAMI

NUMBER 31 11 PM EST SATURDAY SEPTEMBER 12 1964

PRECAUTIONS SHOULD BE CONTINUED IN BERMUDA AGAINST DANGEROUS WINDS AND VERY HEAVY SURF AND HEAVY RAINS.

AT 11 PM EST...0400Z...HURRICANE ETHEL WAS CENTERED ABOUT 90 MILES NORTHWEST OF BERMUDA NEAR LATITUDE 33.4 NORTH LONGITUDE 65.7 WEST. IT IS MOVING TOWARD THE NORTH NORTHEAST AT ABOUT 11 MPH.

HIGHEST WINDS ARE 100 MPH NEAR THE CENTER AND GALES EXTEND OUT 200 MILES TO THE NORTHEAST AND 150 MILES TO THE SOUTHWEST OF THE CENTER. WINDS HAVE BEEN GUSTING TO ABOUT 70 MPH AT BERMUDA DURING THE PAST FEW HOURS.

THE HURRICANE IS EXPECTED TO MOVE ON A COURSE TOWARD THE NORTHEAST GRADUALLY INCREASING IN RATE OF FORWARD SPEED TO 15 MPH OR MORE BY SUNDAY AFTERNOON.

GALES WILL CONTINUE AT BERMUDA DURING THE NIGHT GRADUALLY DIMINISHING ON SUNDAY. ALL PRECAUTIONS SHOULD BE CONTINUED.

THE NEXT ADVISORY WILL BE ISSUED BY THE MIAMI WEATHER BUREAU AT 5 AM EST SUNDAY.

MOORE

NUMBER 32 5 AM EST SUNDAY SEPTEMBER 13 1964

RECONNAISSANCE AIRCRAFT AND LAND BASED RADAR CENTER HURRICANE ETHEL IN LATITUDE 35.0 NORTH LONGITUDE 64.0 WEST OR 185 MILES NORTH NORTHEAST OF BERMUDA AT 5 AM EST...1000Z. THE HURRICANE HAS BEGUN TO MOVE NORTH-EASTWARD AT A MUCH MORE RAPID RATE OF ABOUT 23 MPH.

HIGHEST WINDS ARE 100 MPH NEAR THE CENTER WHILE GALES EXTEND OUT 200 MILES TO THE NORTHEAST AND 150 MILES SOUTHWEST OF THE CENTER. GALES HAVE CONTINUED AT BERMUDA DURING THE NIGHT BUT WINDS THERE WILL BE SLOWLY DIMINISHING TODAY. HOWEVER SMALL CRAFT SHOULD REMAIN IN SAFE HARBOR.

ETHEL IS FORECAST TO CONTINUE TOWARD THE NORTHEAST AT ABOUT THE SAME RATE DURING THE NEXT 12 TO 18 HOURS WITH LITTLE CHANGE IN SIZE OR INTENSITY.

SHIPPING IN THE PROJECTED PATH SHOULD EXERCISE CAUTION.

THE NEXT ADVISORY WILL BE ISSUED BY THE WASHINGTON WEATHER BUREAU AT 11 AM EST.

MOORE

WASHINGTON

NUMBER 33 11 AM EST SUNDAY SEPTEMBER 13 1964

AT 11 AM EST 1600Z HURRICANE ETHEL WAS CENTERED NEAR LATITUDE 36.3 NORTH LONGITUDE 62.2 WEST OR ABOUT 300 MILES NORTH NORTHEAST OF BERMUDA. THE HURRICANE HAS CONTINUED TO MOVE TOWARDS THE NORTHEAST ABOUT 23 MPH.

HIGHEST WINDS ARE 100 MPH NEAR THE CENTER AND GALES EXTEND OUTWARD ABOUT 225 MILES TO THE NORTHEAST AND 150 MILES TO THE SOUTHWEST OF THE CENTER. WINDS AT BERMUDA HAVE DIMINISHED TO 25 TO 30 MPH.

ETHEL IS FORECAST TO CONTINUE MOVING TOWARDS THE NORTHEAST AT ABOUT THE SAME RATE DURING THE NEXT 12 TO 18 HOURS WITH LITTLE CHANGE IN SIZE OR INTENSITY.

THE NEXT ADVISORY WILL BE ISSUED BY THE WASHINGTON WEATHER BUREAU AT 5 PM EST.

SCHMIDT

NUMBER 34 5 PM EST SUNDAY SEPTEMBER 13 1964

AT 5 PM EST...2200Z...HURRICANE ETHEL WAS POSITIONED NEAR LATITUDE 38.1 NORTH LONGITUDE 60.3 WEST ON THE BASIS OF REPORTS FROM RECONNAISSANCE AIRCRAFT. THIS IS ABOUT 400 MILES SOUTH OF SABLE ISLAND NOVA SCOTIA. ETHEL IS NOW MOVING TOWARDS THE NORTHEAST ABOUT 25 MPH.

HIGHEST WINDS ARE 100 MPH NEAR THE CENTER AND GALES EXTEND OUTWARD ABOUT 250 MILES TO THE EAST AND 150 MILES TO THE WEST OF THE CENTER.

HURRICANE ETHEL IS FORECAST TO CONTINUE MOVING TOWARDS THE NORTHEAST ABOUT 25 MPH DURING THE NEXT 12 TO 18 HOURS. LITTLE CHANGE IN SIZE OR INTENSITY IS INDICATED DURING TONIGHT BUT AREA OF GALES IS EXPECTED TO EXPAND TOMORROW.

THE NEXT ADVISORY WILL BE ISSUED BY THE WASHINGTON WEATHER BUREAU AT 11 PM EST.

SCHMIDT

WASHINGTON

NUMBER 35 11 PM EST SUNDAY SEPTEMBER 13 1964

AT 11 PM EST...0400Z...HURRICANE ETHEL WAS POSITIONED NEAR LATITUDE 39.6 NORTH LONGITUDE 58.0 WEST BASED ON REPORTS FROM RECONNAISSANCE AIRCRAFT. THIS IS ABOUT 350 MILES SOUTH SOUTHEAST OF SABLE ISLAND NOVA SCOTIA. ETHEL IS MOVING TOWARDS THE NORTHEAST AT A SPEED OF ABOUT 25 MPH.

HIGHEST WINDS ARE 100 MPH NEAR THE CENTER AND GALE WINDS EXTEND OUTWARD ABOUT 250 MILES TO THE EAST AND 150 MILES TO THE WEST OF THE CENTER.

CONTINUED MOVEMENT TOWARD THE NORTHEAST WITH A SPEED OF ABOUT 25 MPH IS EXPECTED DURING THE NEXT 12 TO 18 HOURS THEN PROBABLY MOVING AROUND 30 MPH BY THE END OF 24 HOURS. THE AREA COVERED BY GALE WINDS IS EXPECTED TO EXPAND TOMORROW OTHERWISE LITTLE CHANGE IN SIZE OR INTENSITY IS INDICATED.

THE NEXT ADVISORY WILL BE ISSUED BY THE WASHINGTON WEATHER BUREAU AT 5 AM EST.

NORQUEST

NUMBER 36 5 AM EST MONDAY SEPTEMBER 14 1964

AT 5 AM EST...1000Z...HURRICANE ETHEL WAS POSITIONED NEAR LATITUDE 41.0 NORTH LONGITUDE 56.0 WEST. THIS IS ABOUT 400 MILES SOUTH SOUTHWEST OF CAPE RACE, NEWFOUNDLAND. ETHEL IS MOVING TOWARD THE NORTHEAST AT ABOUT 25 MPH.

HIGHEST WINDS ARE ESTIMATED AT 100 MPH NEAR THE CENTER AND GALE WINDS EXTEND OUTWARD 300 MILES IN THE SOUTH-EAST SEMICIRCLE AND 200 MILES ELSEWHERE.

ETHEL IS FORECAST TO CONTINUE MOVING IN A NORTHEAST DIRECTION POSSIBLY TURNING A LITTLE MORE TOWARD THE EAST NORTHEAST DURING THE NEXT 24 HOURS. THE FORWARD SPEED SHOULD INCREASE TO ABOUT 40 MPH TONIGHT.

THE HIGHEST WINDS ARE EXPECTED TO DIMINISH BUT THE AREA OF GALES IS EXPECTED TO EXPAND OUTWARD SOME DURING THE NEXT 24 HOURS.

THE NEXT ADVISORY WILL BE ISSUED BY THE WASHINGTON WEATHER BUREAU AT 11 AM EST.

E. HOOVER

NUMBER 37 11 AM EST MONDAY SEPTEMBER 14 1964

AT 11 AM EST...1600Z...HURRICANE ETHEL WAS ESTIMATED NEAR LATITUDE 42.5 NORTH LONGITUDE 53.5 WEST ON THE BASIS OF VESSEL REPORTS. THIS IS ABOUT 285 MILES SOUTH OF CAPE RACE NEWFOUNDLAND. ETHEL IS MOVING TOWARDS THE NORTHEAST ABOUT 28 MPH.

HIGHEST WINDS ARE ESTIMATED AT 85 MPH NEAR THE CENTER AND GALES EXTEND OUTWARD ABOUT 200 MILES TO THE EAST AND 150 MILES TO THE WEST.

ETHEL IS FORECAST TO CONTINUE MOVING TOWARDS THE NORTHEAST AT ABOUT THE SAME FORWARD SPEED DURING THE NEXT 12 TO 24 HOURS AND BEGIN LOSING TROPICAL CHARACTERISTICS TONIGHT. THE HIGHEST WINDS ARE EXPECTED TO GRADUALLY DIMINISH TONIGHT AND TUESDAY.

THE NEXT ADVISORY WILL BE ISSUED BY THE WASHINGTON WEATHER BUREAU AT 5 PM EST.

SCHMIDT

NUMBER 38 5 PM EST MONDAY SEPTEMBER 14 1964

AT 5 PM EST...2200Z...HURRICANE ETHEL WAS POSITIONED NEAR LATITUDE 43.4 NORTH LONGITUDE 50.1 WEST BASED ON REPORTS FROM RECONNAISSANCE AIRCRAFT. THIS IS ABOUT 265 MILES SOUTHEAST OF CAPE RACE NEWFOUNDLAND. ETHEL IS MOVING TOWARDS THE NORTHEAST ABOUT 28 MPH.

HIGHEST WINDS ARE ESTIMATED AT 85 MPH NEAR THE CENTER AND GALES EXTEND OUTWARD ABOUT 200 MILES TO THE EAST AND 150 MILES TO THE WEST.

ETHEL IS FORECAST TO CONTINUE MOVING TOWARDS THE NORTHEAST AT ABOUT THE SAME SPEED DURING THE NEXT 12 HOURS AND THEN GRADUALLY INCREASE IN FORWARD SPEED. THE HIGHEST WINDS ARE EXPECTED TO GRADUALLY DECREASE TONIGHT AND TUESDAY BUT AREA OF GALES WILL PROBABLY EXPAND. ETHEL IS EXPECTED TO BEGIN LOSING TROPICAL CHARACTERISTICS TONIGHT AS THE STORM CONTINUES TO MOVE OVER COLDER WATER.

THE NEXT ADVISORY WILL BE ISSUED BY THE WASHINGTON WEATHER BUREAU AT 11 PM EST.

SCHMIDT

WASHINGTON

NUMBER 39 11 PM EST MONDAY SEPTEMBER 14 1964

AT 11 PM EST...0400Z...HURRICANE ETHEL WAS POSITIONED NEAR LATITUDE 45.0 NORTH LONGITUDE 47.0 WEST OR ABOUT 325 MILES EAST SOUTHEAST OF CAPE RACE NEWFOUNDLAND. ETHEL IS MOVING TOWARDS THE NORTHEAST OR EAST NORTHEAST AT AROUND 30 MPH.

ETHEL SHOULD CONTINUE MOVING TOWARD THE NORTHEAST OR EAST NORTHEAST AT AROUND 30 MPH FOR THE NEXT 12 TO 18 HOURS BUT SHOULD LOSE ITS HURRICANE CHARACTERISTICS AFTER 12 HOURS.

HIGHEST WINDS ARE ESTIMATED AROUND 85 MPH OVER A SMALL AREA AROUND THE CENTER AND GALES EXTEND OUTWARD ABOUT 200 MILES TO THE EAST AND 150 MILES TO THE WEST. THE HIGHEST WINDS GRADUALLY DIMINISHING TO LESS THAN 60 MPH AFTER 12 HOURS BUT THE AREA OF GALE WINDS MAY EXPAND SOMEWHAT.

THE NEXT ADVISORY WILL BE ISSUED BY THE WASHINGTON WEATHER BUREAU AT 5 AM EST.

NORQUEST

NUMBER 40 5 AM EST TUESDAY SEPTEMBER 15 1964

AT 5 AM EST...1000Z...SHIP REPORTS WERE USED AS A BASIS FOR ESTIMATING THE POSITION OF HURRICANE ETHEL NEAR LATITUDE 45 NORTH LONGITUDE 43 WEST OR ABOUT 500 MILES EAST SOUTHEAST OF CAPE RACE NEWFOUNDLAND. ETHEL HAS BEEN MOVING TOWARD THE EAST NORTHEAST AT ABOUT 35 MPH.

HIGHEST WINDS ARE ESTIMATED AROUND 85 MPH OVER A SMALL AREA NEAR THE CENTER AND GALES EXTEND OUTWARD ABOUT 150 MILES TO THE NORTH AND 300 MILES TO THE SOUTH OF THE CENTER.

HURRICANE ETHEL IS FORECAST TO TURN EASTWARD AND INCREASE ITS FORWARD MOTION TO 40 MPH OR MORE DURING THE NEXT 18 HOURS. SINCE THE FORECAST MOTION IS EASTWARD ETHEL MAY RETAIN SOME OF HER TROPICAL CHARACTERISTICS TODAY BUT SOME DECREASE IN THE HIGHEST WINDS IS EXPECTED. THE AREA OF GALE WINDS IS FORECAST TO BECOME FURTHER DISTORTED AS ETHEL APPROACHES A LARGE LOW PRESSURE AREA OVER THE NORTHEASTERN ATLANTIC DURING THE NEXT 24 HOURS. THE AREA OF GALES REFLECTING THE CIRCULATION AROUND ETHEL WILL DECREASE IN THE NORTHERN SEMI-CIRCLE AND MAY EXPAND IN THE SOUTHERN SEMICIRCLE. AN EXTENSIVE VIGOROUS NORTH ATLANTIC STORM IS EXPECTED TO RESULT FROM THE MERGER OF ETHEL WITH THE LOW NOW OVER THE NORTHEASTERN ATLANTIC.

THE NEXT ADVISORY WILL BE ISSUED BY THE WASHINGTON WEATHER BUREAU AT 11 AM EST.

E. HOOVER

NUMBER 41 11 AM EST TUESDAY SEPTEMBER 15 1964

AT 11 AM EST...1600Z...HURRICANE ETHEL WAS ESTIMATED TO BE NEAR LATITUDE 45.6 NORTH LONGITUDE 38.5 WEST ON THE BASIS OF VESSEL REPORTS. THIS IS ABOUT 700 MILES EAST SOUTHEAST OF CAPE RACE NEWFOUNDLAND. ETHEL IS MOVING BETWEEN EAST AND EAST NORTHEAST ABOUT 35 MPH.

HIGHEST WINDS ARE ESTIMATED AROUND 80 MPH OVER A SMALL AREA NEAR THE CENTER AND GALES EXTEND OUTWARD ABOUT 150 MILES TO THE NORTH AND 300 MILES TO THE SOUTH.

ETHEL IS FORECAST TO CONTINUE ON HER PRESENT COURSE DURING THE NEXT 18 HOURS AND INCREASE HER FORWARD MOTION TO ABOUT 40 MPH TONIGHT. SINCE THE STORM IS MOVING OVER COLDER WATER IT IS EXPECTED TO LOSE MOST OF ITS TROPICAL CHARACTERISTICS THIS AFTERNOON. THE HIGHEST WINDS ARE EXPECTED TO BE ABOUT 70 MPH AFTER 12 HOURS BUT AREA OF GALE WINDS MAY EXPAND IN THE SOUTHERN SEMICIRCLE.

THIS IS THE LAST PUBLIC ADVISORY ON ETHEL. FURTHER FORECASTS ON THIS STORM WILL CONTINUE TO BE CARRIED EVERY SIX HOURS IN THE MARINE BULLETINS ISSUED FROM WASHINGTON FOR BROADCAST OVER NSS.

SCHMIDT

USCOMM-WB-DC