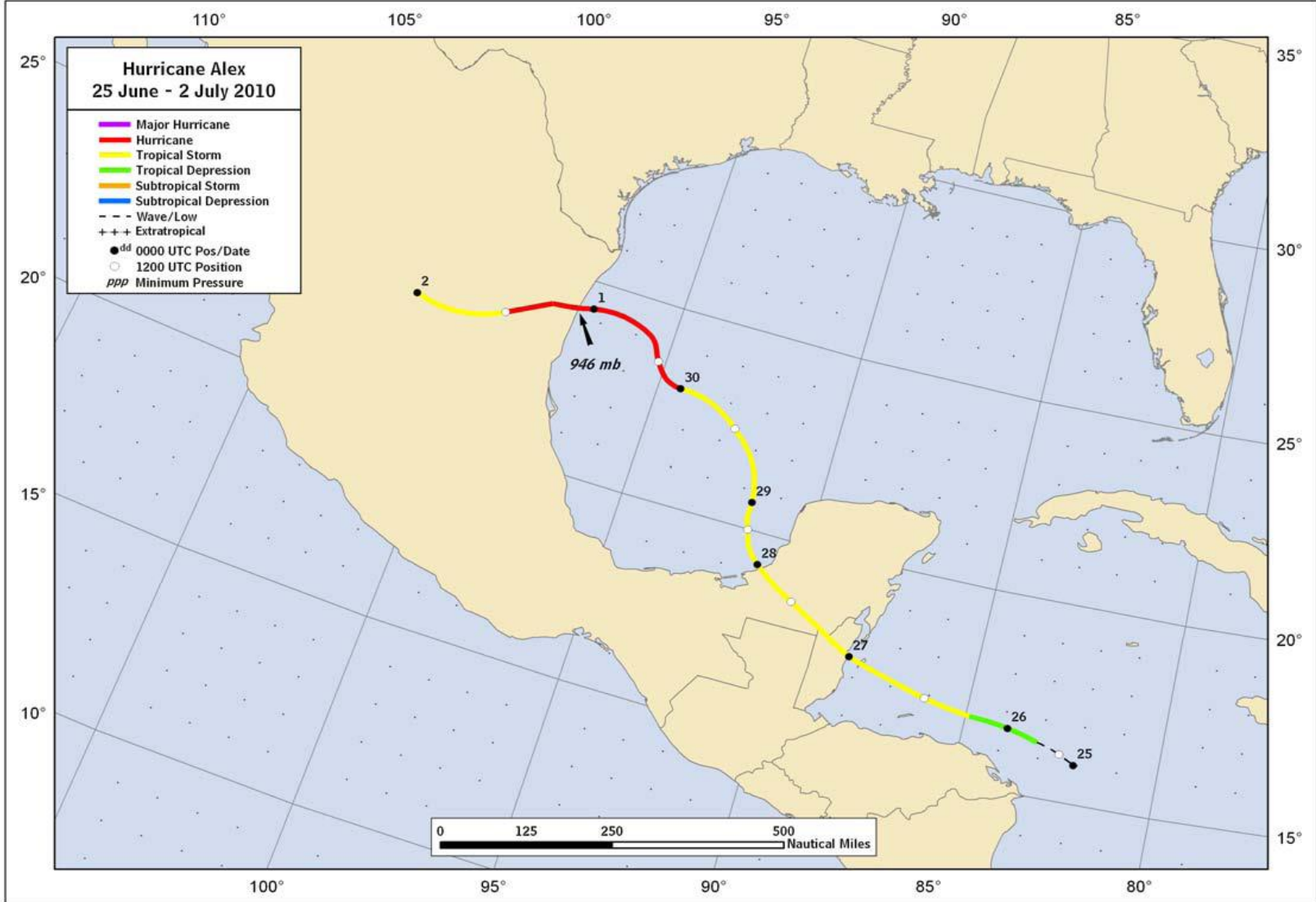


Tropical Storm Alex
25th to 26th June 2010





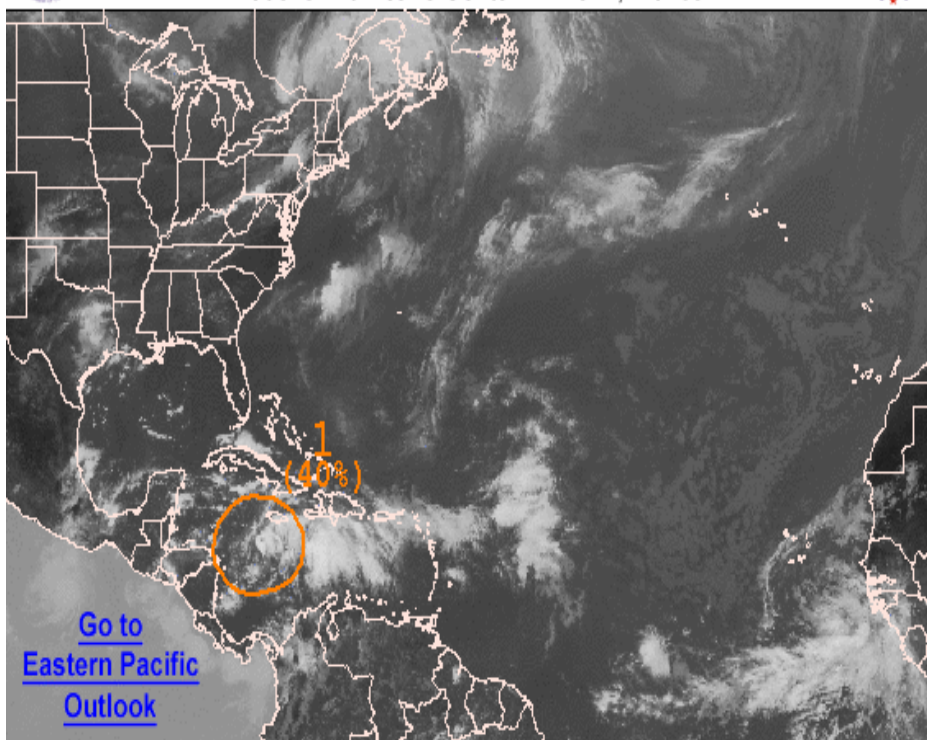
Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida

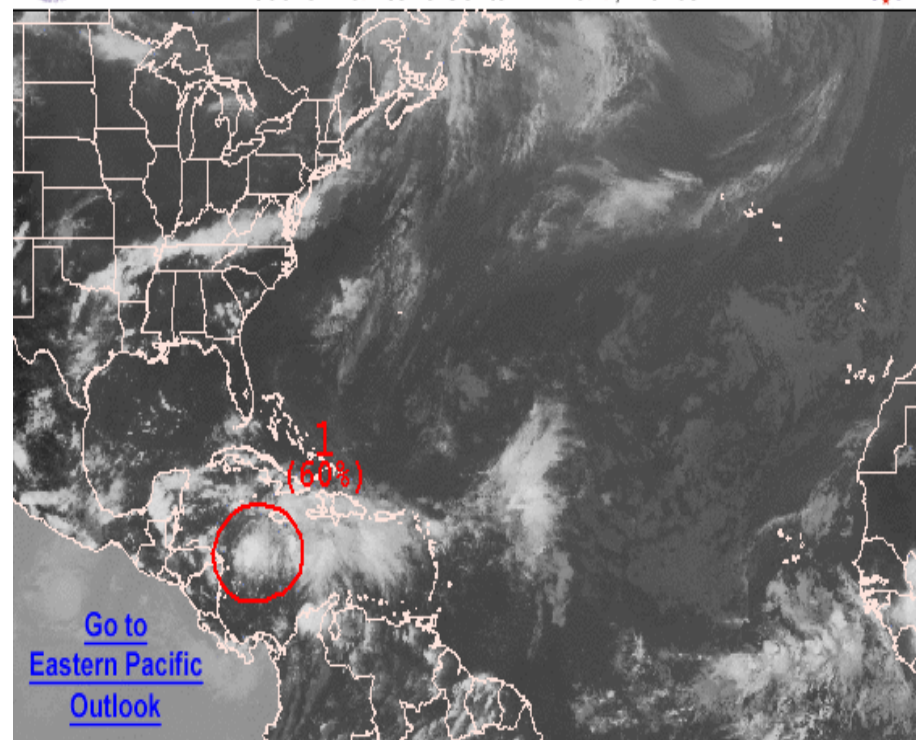


200 PM EDT THU JUN 24 2010

Satellite Image: 1252 PM EDT

Outlined areas denote current position of systems discussed in the Tropical Weather Outlook. Color indicates probability of tropical cyclone formation within 48 hours.

Low <30%
 Medium 30-50%
 High >50%



800 PM EDT THU JUN 24 2010

Satellite Image: 0652 PM EDT

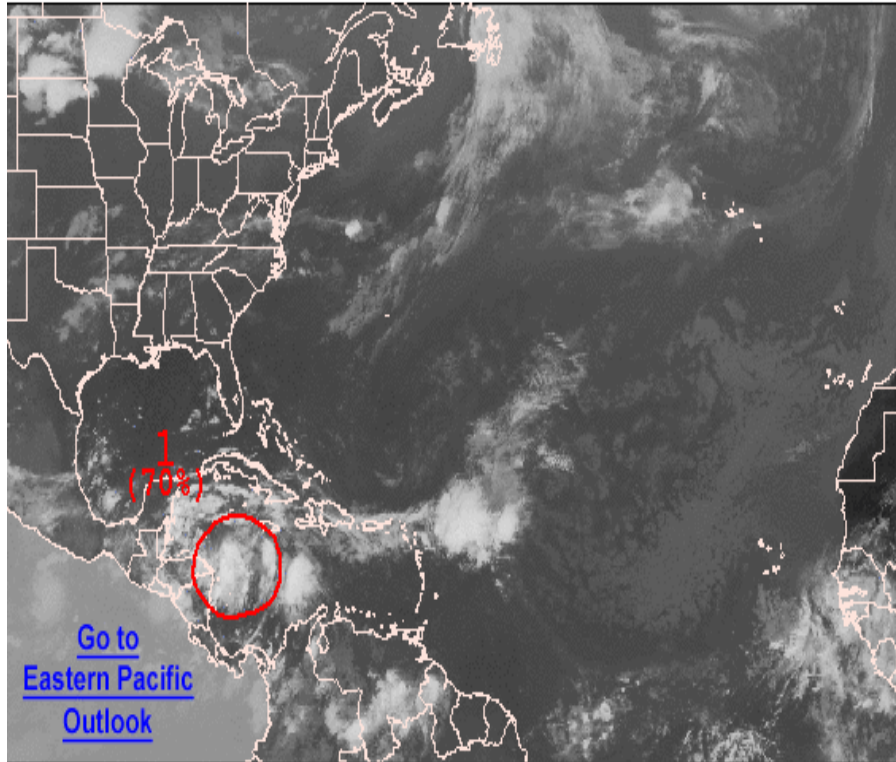
Outlined areas denote current position of systems discussed in the Tropical Weather Outlook. Color indicates probability of tropical cyclone formation within 48 hours.

Low <30%
 Medium 30-50%
 High >50%



Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



800 AM EDT FRI JUN 25 2010

Satellite Image: 0722 AM EDT

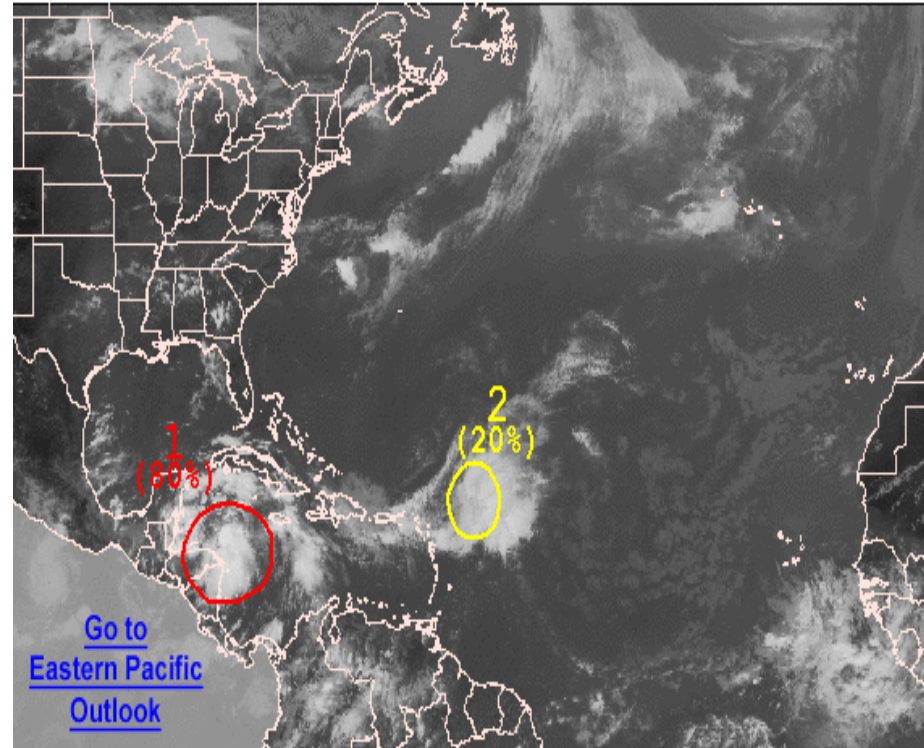
Outlined areas denote current position of systems discussed in the Tropical Weather Outlook. Color indicates probability of tropical cyclone formation within 48 hours.

Low <30%
 Medium 30-50%
 High >50%



Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



200 PM EDT FRI JUN 25 2010

Satellite Image: 0122 PM EDT

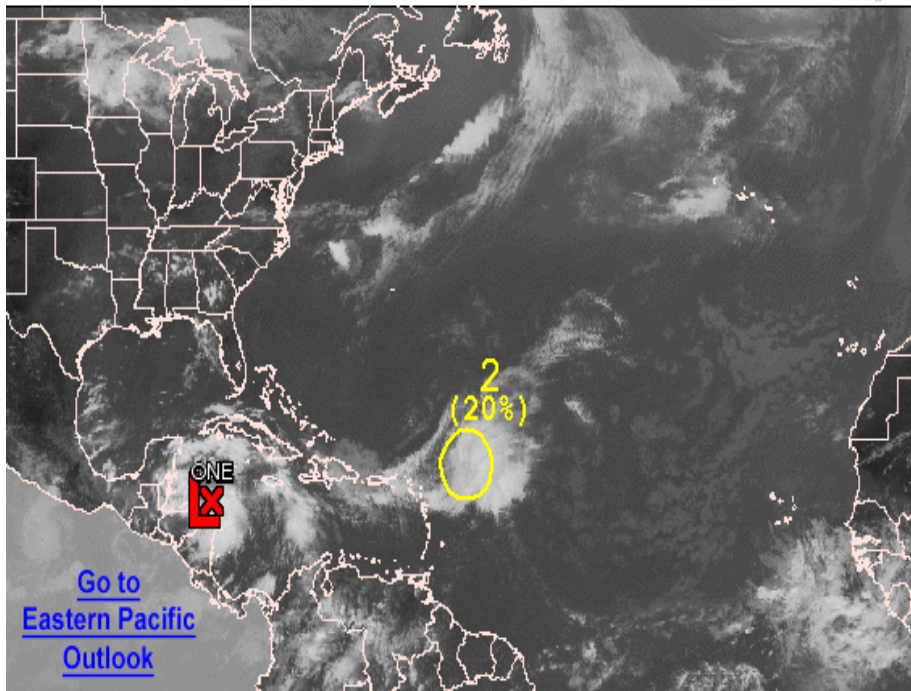
Outlined areas denote current position of systems discussed in the Tropical Weather Outlook. Color indicates probability of tropical cyclone formation within 48 hours.

Low <30%
 Medium 30-50%
 High >50%



Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



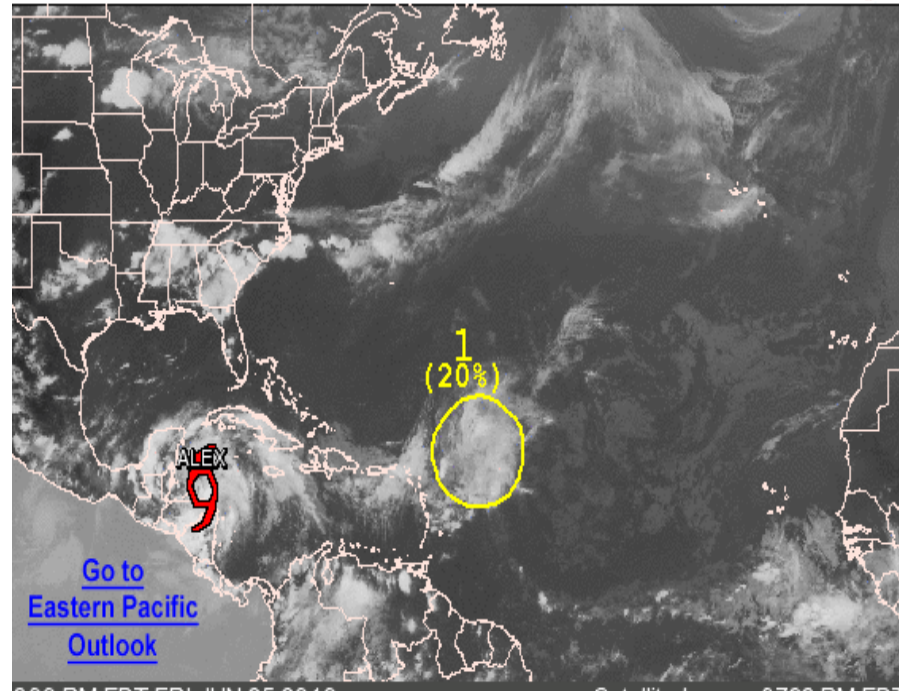
Outlined areas denote current position of systems discussed in the Tropical Weather Outlook. Color indicates probability of tropical cyclone formation within 48 hours.

Low <30%
 Medium 30-50%
 High >50%



Graphical Tropical Weather Outlook

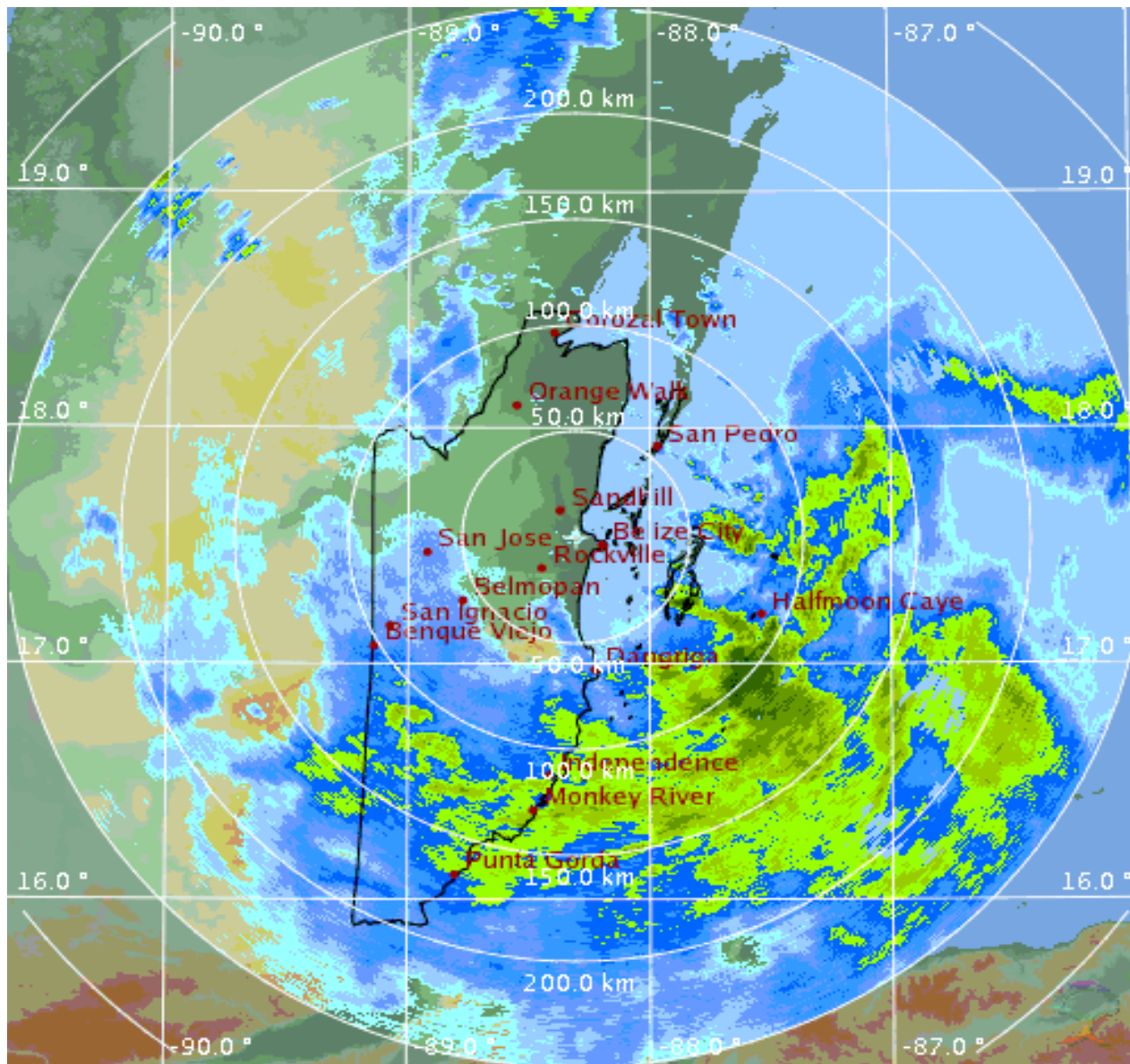
National Hurricane Center Miami, Florida



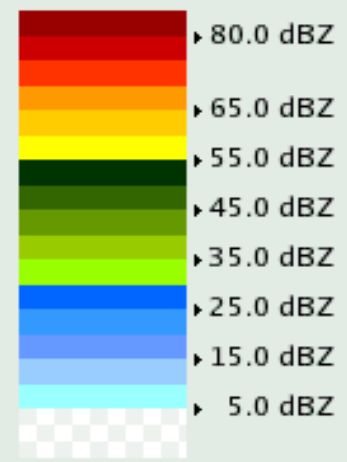
Outlined areas denote current position of systems discussed in the Tropical Weather Outlook. Color indicates probability of tropical cyclone formation within 48 hours.

Low <30%
 Medium 30-50%
 High >50%

- June 24, at 6:00pm (25th 0000UTC) the broad area of low pressure centered between the eastern tip of Honduras and Jamaica had become better defined.
- Surface pressures had begun to fall in the area and there was also an increase in the shower activity. .
- The system now had a 60 percent chance of becoming a tropical depression.

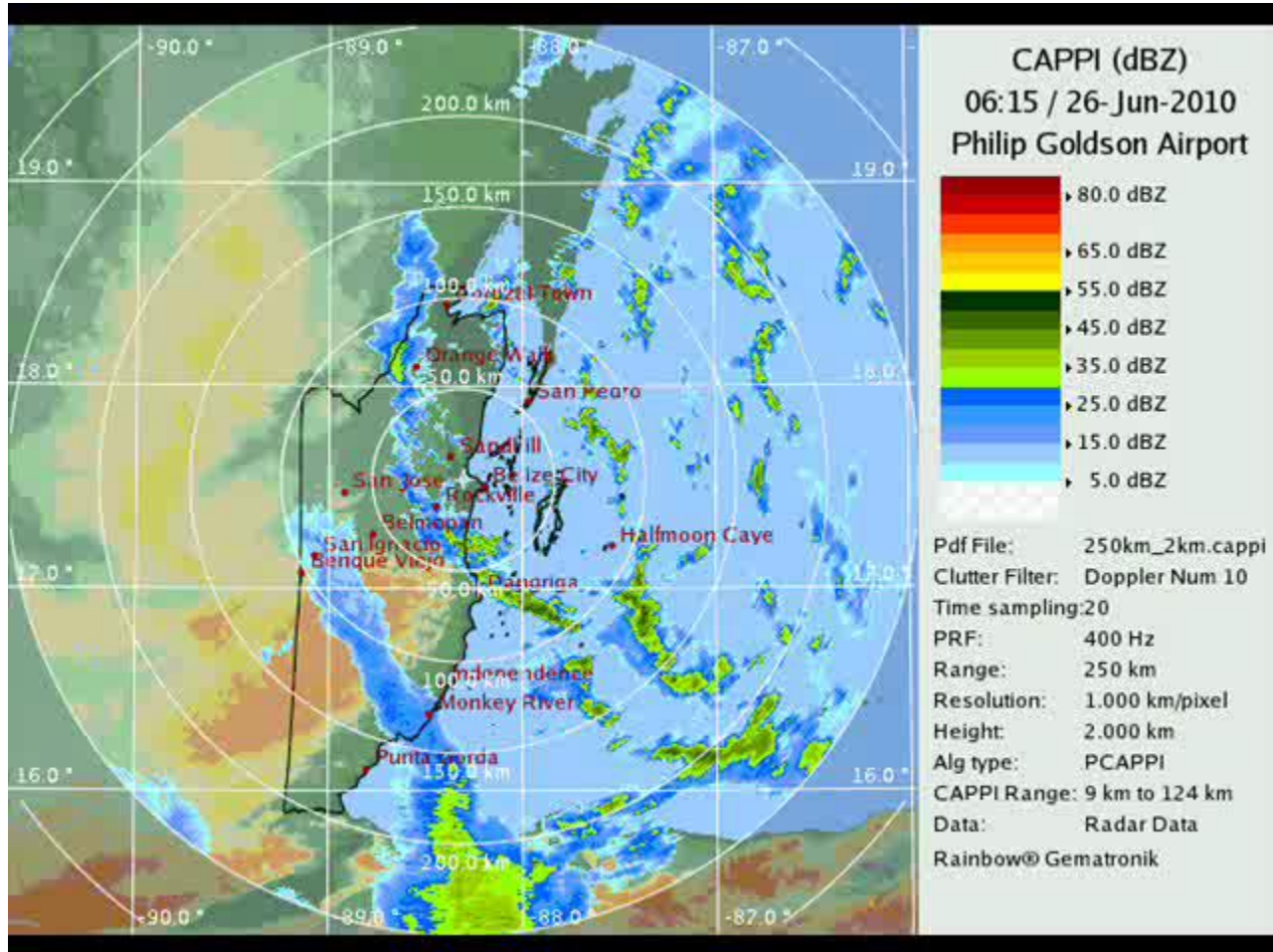


CAPPI (dBZ)
16:30 / 26-Jun-2010
Philip Goldson Airport



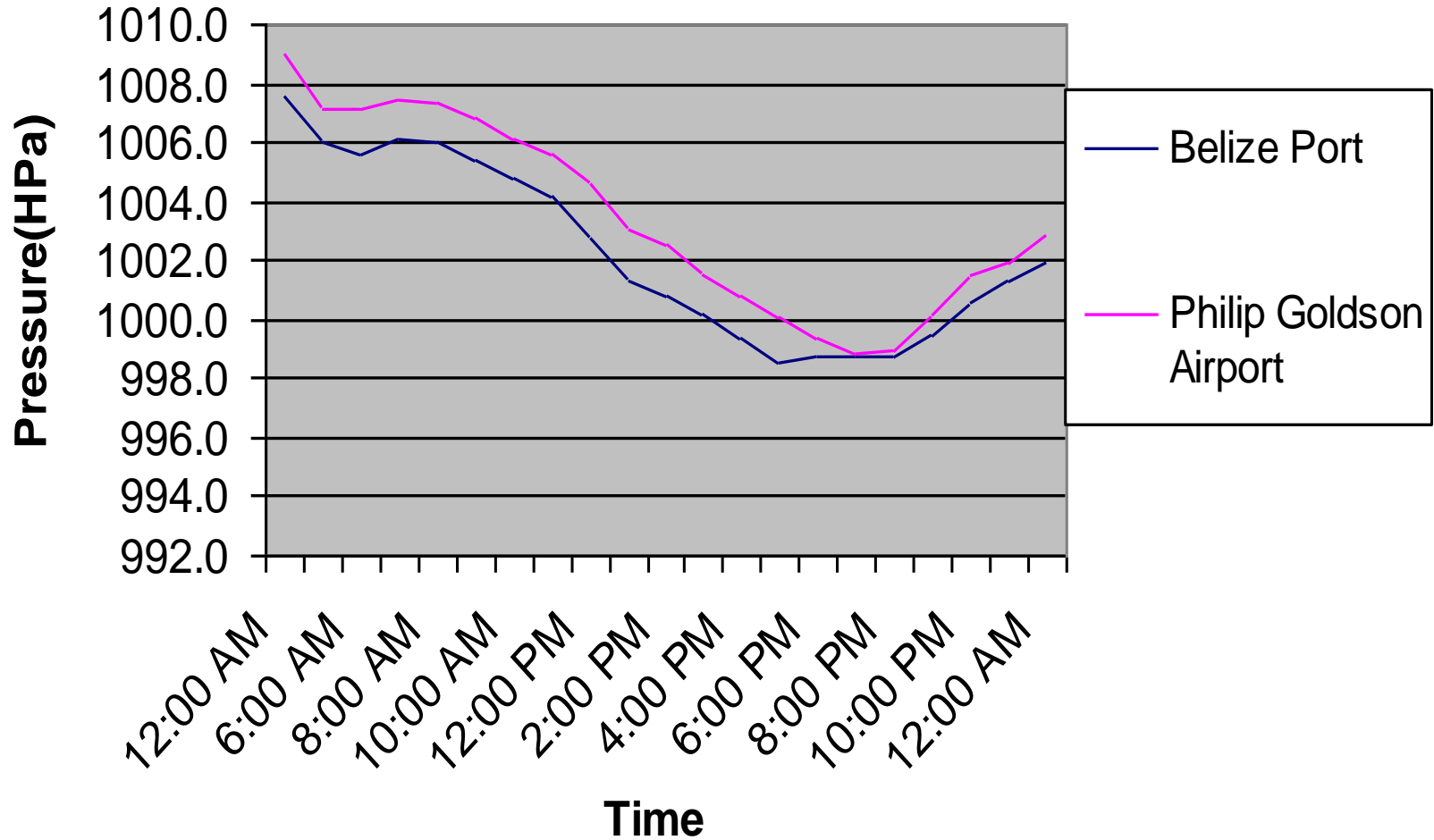
Pdf File: 250km_2km.cappi
 Clutter Filter: Doppler Num 10
 Time sampling:20
 PRF: 400 Hz
 Range: 250 km
 Resolution: 1.000 km/pixel
 Height: 2.000 km
 Alg type: PCAPPI
 CAPPI Range: 9 km to 124 km
 Data: Radar Data
 Rainbow® Gematronik

Alex Loop



- Pressure readings from the Belize Port Authority and Philip Goldson Airport indicated that Tropical Storm Alex made landfall north of Belize City around 5:45pm (2345UTC)

Barometric Pressure on 26th June 2010



Rainfall (24th to 27th June)

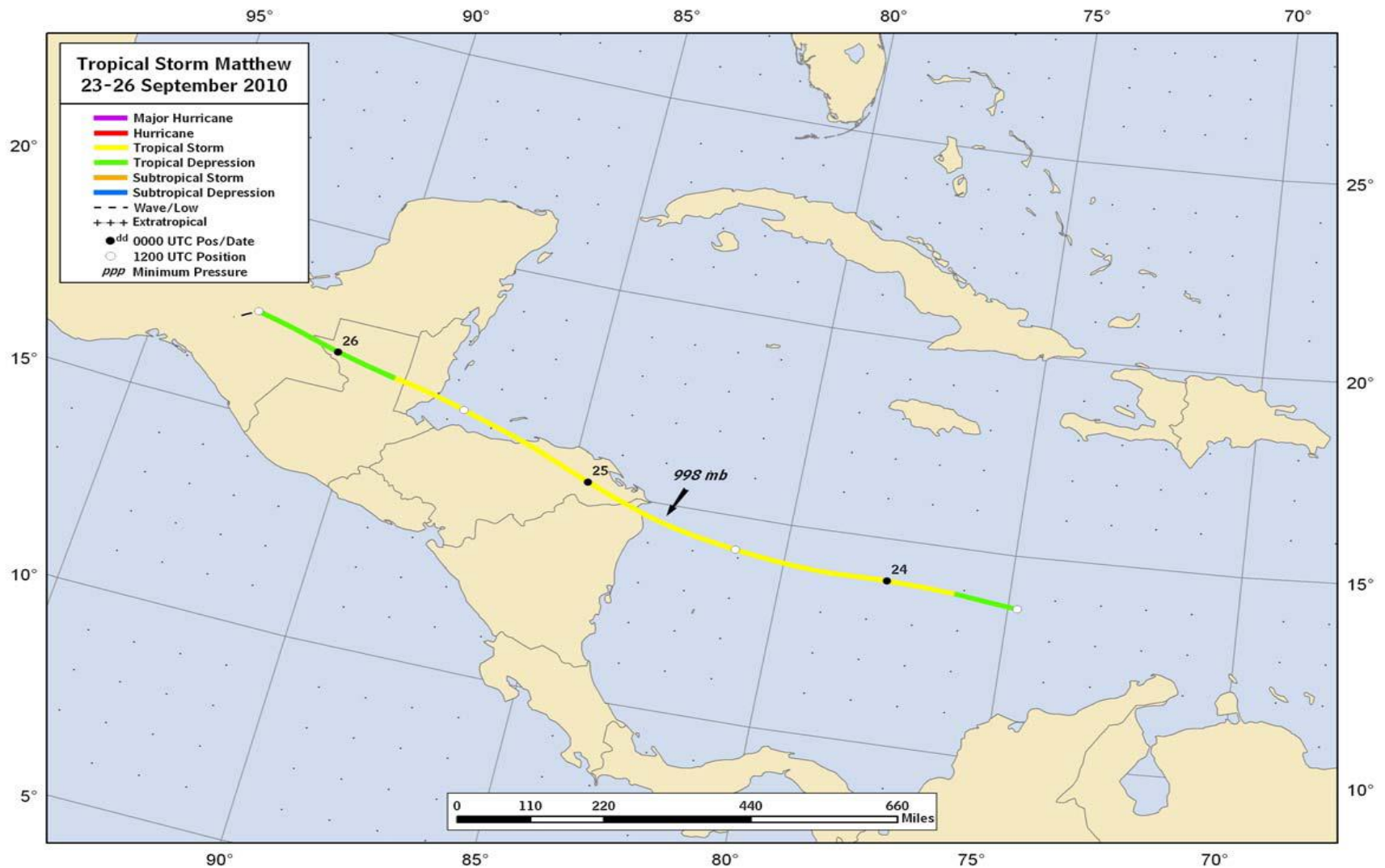
- Tropical Storm Alex was forecast to produce accumulation of 4 to 8 inches of rainfall over much of Belize with isolated maximum of up to 15 inches
- 2.9 to 8.6 inches most of which occurred on the 26th
- Minimal damage
- Moderate flooding event
- No deaths

Tropical Storm Karl
14th and 16th September

- At 2100 UTC on 14th September a tropical storm warning was declared for the north coast of Belize to the border with Mexico.
- Landfall was along the south coast of Mexico at about 0045 UTC 16th September about 53 miles northeast of the northernmost town, Corozal.
- Maximum sustained winds: 65 mph
- No damages reported
- No flooding
- Temporary closure of the northern commercial free zone at the border with Mexico

Tropical Storm Matthew
September 24th to 25th

Track



- At midnight, Friday Sept 24th the Belize Government issued a hurricane watch for the coast of Belize.
- A tropical storm warning was issued at 9:00pm
- At midnight on Saturday the warning was declared for the coast of Belize south of Belize City. A tropical storm watch was also now in effect from Belize City north.
- Matthew Loop

Rainfall

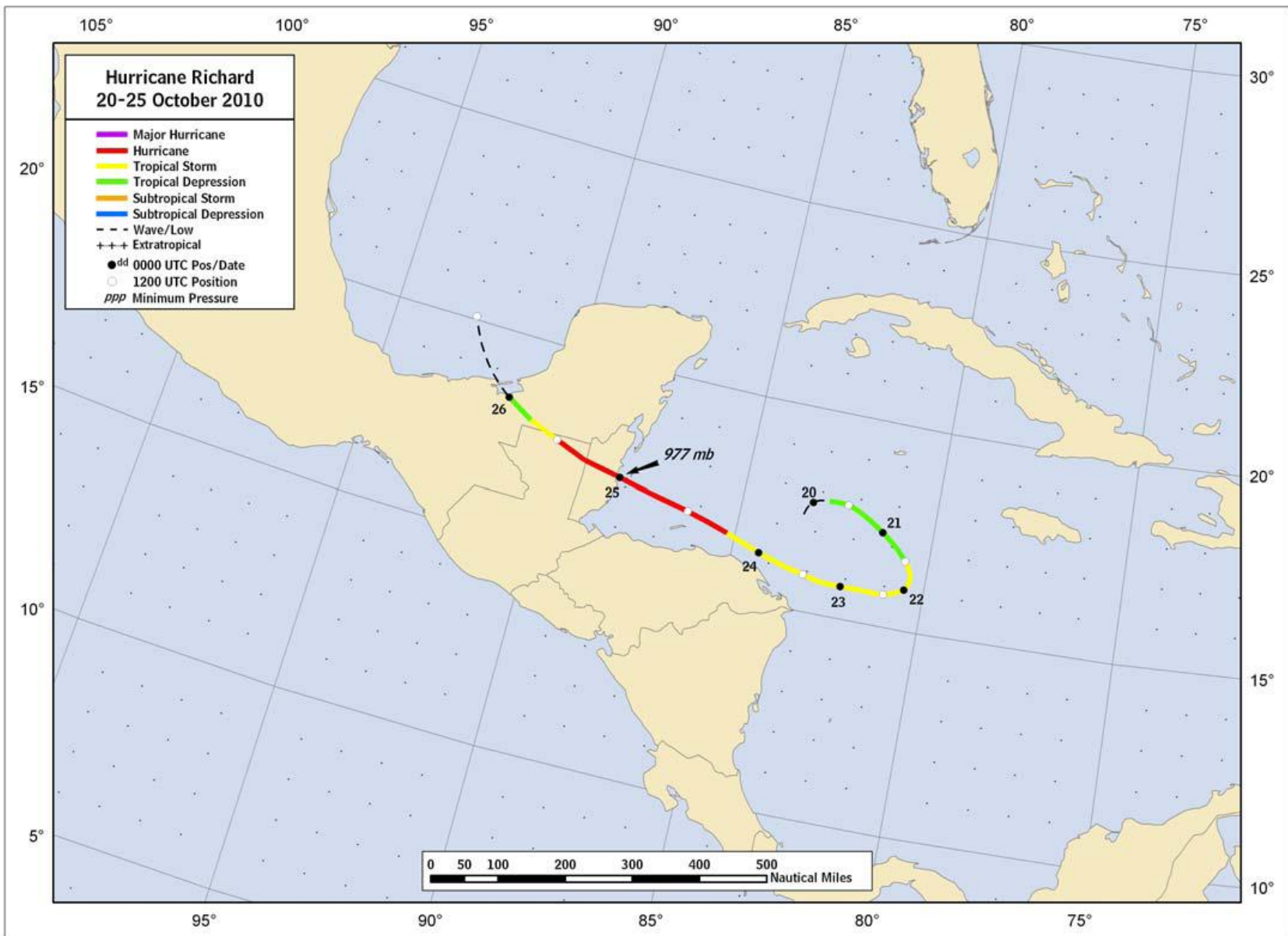
- Several network stations measured rainfall amounts ranging between 85 to 150mm during the two days (Sept.24-25th, 2010) when TS Matthew approached and crossed the country

- Emergency Management sources indicated the greatest damage occurred in the south of the country and affected the rice crop. Flooding caused some minimal damage and transportation problems. NEMO evacuated people from three villages in southern Belize as a precaution against flooding. Since the passage of Matthew occurred during the height of the weekend, many social and outdoor events were cancelled. There was no loss of life associated with the events surrounding tropical storm Matthew in Belize.

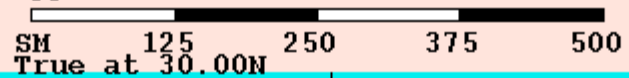
Hurricane Richard

24th and 25th October 2010

Dennis Gonguez



Approx. Distance Scale (Statute Miles)



Tropical Storm Richard
 Friday October 22, 2010
 11 PM EDT Advisory 9
 NWS TPC/National Hurricane Center

Current Information: ●
 Center Location 15.8 N 82.4 W
 Max Sustained Wind 45 mph
 Movement W at 7 mph

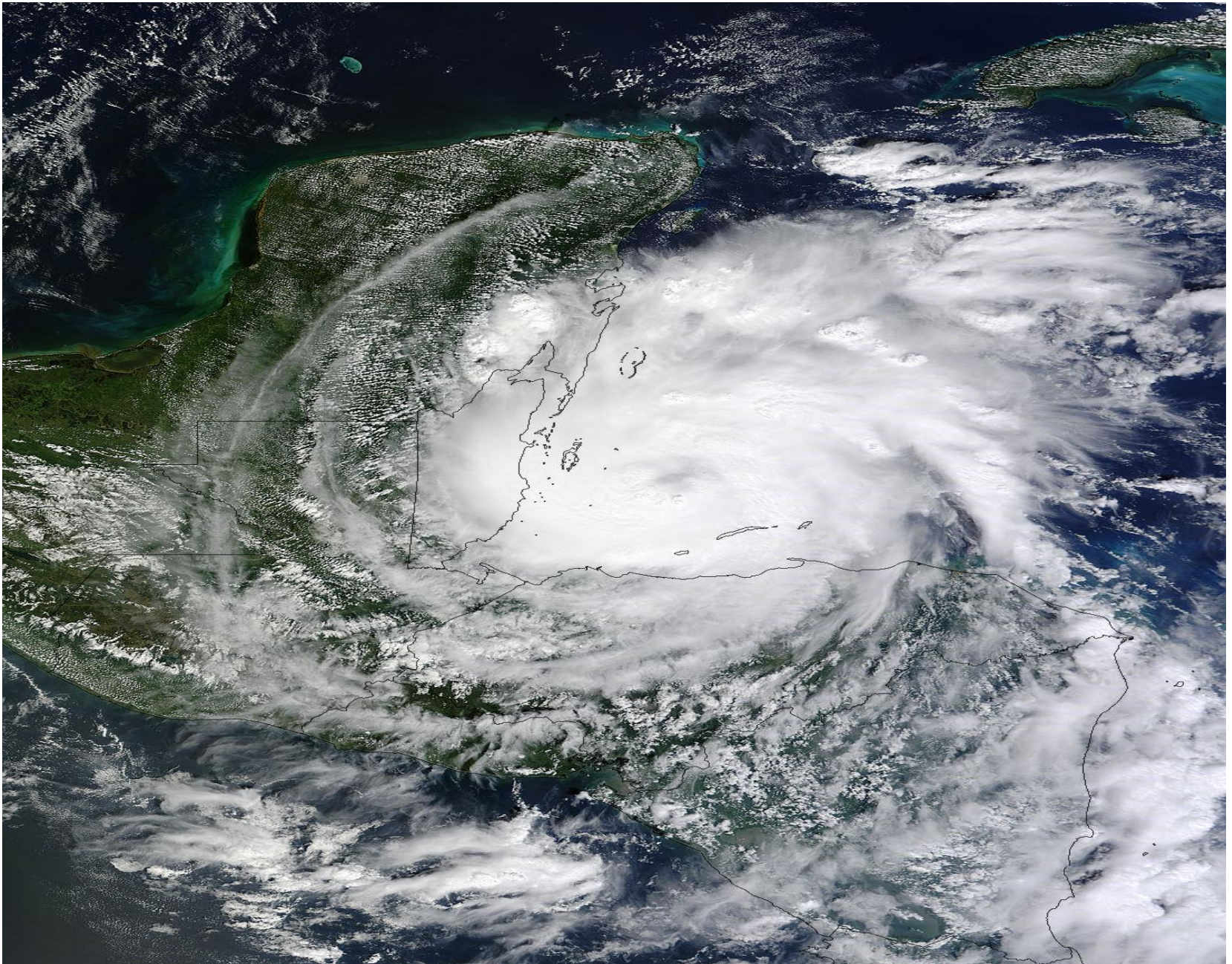
Forecast Positions:
 ● Tropical Cyclone ○ Post-Tropical
 Sustained Winds: D < 39 mph
 S 39-73 mph H 74-110 mph M > 110mph

Potential Track Area:
 ▽ Day 1-3 ▢ Day 4-5

Watches:
 ■ Hurricane ■ Trop.Storm

Warnings:
 ■ Hurricane ■ Trop.Storm

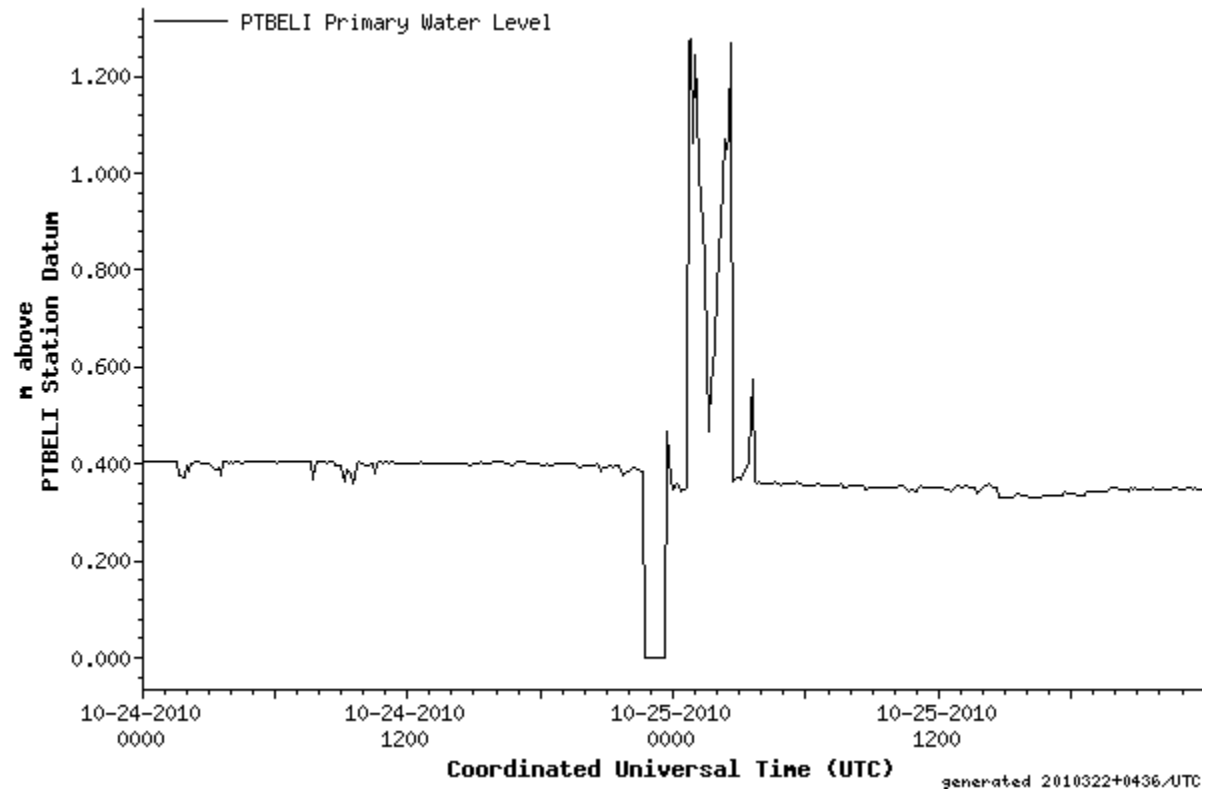
- See 11pm Advisory 9 (Internal issues/contentions include declaring/lifting a “phase” a. at nights and b. when the system is not a hurricane as yet)
- See 3 am Intermediate Advisory 7a.
- ..RICHARD WEAKENS TO A TROPICAL STORM OVER NORTHEASTERN GUATEMALA... SUMMARY OF 400 AM CDT...0900 UTC...INFORMATION -----
LOCATION...17.6N 89.6W ABOUT 170 MI...275 KM SSE OF CAMPECHE MEXICO ABOUT 90 MI...150 KM W OF BELIZE CITY
MAXIMUM SUSTAINED WINDS...65 MPH...100 KM/HR PRESENT MOVEMENT...WNW OR 285 DEGREES AT 12 MPH...19 KM/HR
MINIMUM CENTRAL PRESSURE...993 MB...29.32 INCHES WATCHES AND WARNINGS ----- CHANGES WITH THIS ADVISORY...
THE GOVERNMENT OF MEXICO HAS DISCONTINUED ALL COASTAL WARNINGS FOR MEXICO. **HURRICANE AND TROPICAL STORM CONDITIONS HAVE LIKELY DIMINISHED ALONG THE BELIZE COAST.**



- Hurricane Richard with sustained winds of 90 mph made landfall 20 miles south of Belize City at approximately 0045 UTC
- 4,639 individuals sought shelter. Thousands of other coastal dwellers voluntarily relocated inland to family and friends.

- **Port of Belize Data (Belize City)**
- Maximum Storm Surge = 4.2 ft at 0000 UTC
25th Oct
- Maximum wind= 56 miles per hour (49 knots)
around 0100 UTC on 25th Oct
- Minimum Pressure= 999 millibars at 0000 UTC
25th Oct

Storm Surge



Wind and Rain

- **National Meteorological Service (Philp Goldson International Airport)**
- Maximum gust= 64.0 miles per hour at 0146 UTC 25th Oct (Analyses are not yet completed to determine the maximum wind speed)
- Total Rainfall = 145.3 mm (5.7 inches)

Damages

- Two deaths
- Richard interacted with numerous population centers including both cities and resulted in notable damages to both agriculture and housing sector.

Damages



Damages

- The path of Hurricane Richard took it directly across the country's two cities; Belmopan, administrative capital and Belize City, commercial capital and 53 communities, inclusive of some of the most heavily populated towns and villages . (approx 192.00 persons)
- 831 homes/ dwelling damaged or destroyed in 55 communities.
- The Citrus industry recorded the greatest loses in the agriculture sector as 1,500 acres of un- harvested oranges and grapefruits were blown off trees.

Damages

- Total damages amounted to Bz\$76M
- Storm surge destroyed many homes in the less privileged parts of Belize City
- The National Emergency Management Organization issued the ‘ALL CLEAR” for the country of Belize at 6:30 am (1230 UTC) on Monday October 25, 2010.

- Alex Loop
- Karl Loop
- Matthew Loop
- Richard loop