NATIONAL HURRICANE CENTER
TROPICAL CYCLONE REPORT

TROPICAL STORM RAYMOND

(EP172025)

9–11 October 2025

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National Hurricane Center
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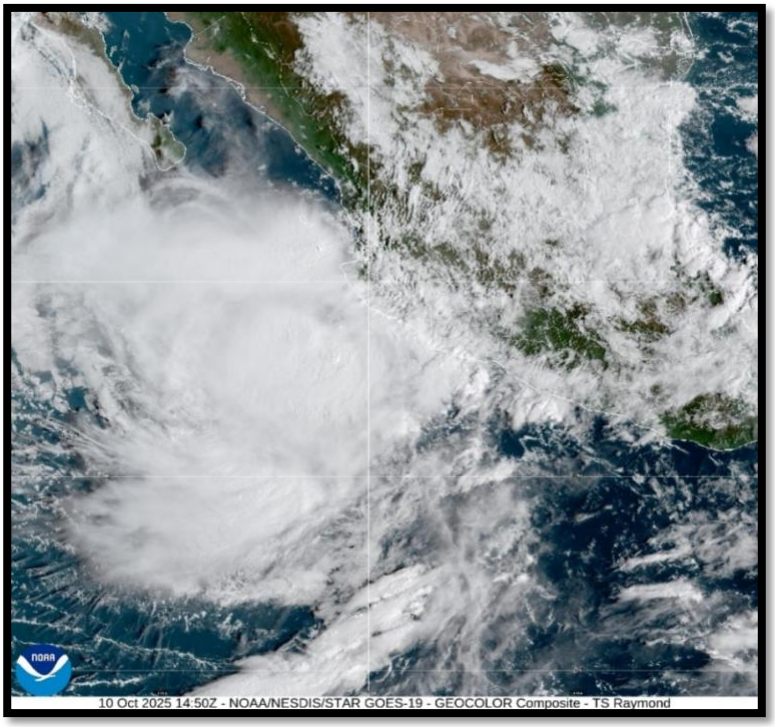

GOES-19 GEOCOLOR SATELLITE IMAGE OF RAYMOND AROUND THE TIME OF ITS PEAK INTENSITY AT 1450 UTC 10 OCTOBER 2025, AS IT PASSED OFFSHORE OF SOUTHWESTERN MEXICO. IMAGE COURTESY OF NOAA/NESDIS/STAR.

Raymond was a short-lived tropical storm that tracked offshore of southwestern Mexico before weakening and moving inland over the southern tip of the Baja California peninsula as a remnant low. It brought locally heavy rainfall and gusty winds to portions of Mexico.

Tropical Storm Raymond

9–11 October 2025

SYNOPTIC HISTORY

Raymond originated from a broad area of low pressure that evolved within the eastern North Pacific monsoon trough located a few hundred n mi off the coast of southern Mexico by 1 October. This broad low meandered within the same general area for a few days, accompanied by disorganized and intermittent bursts of convection. Between 4 and 6 October, however, the disturbance became less identifiable in both satellite imagery and scatterometer data. The evolution was partially due to the influence of Hurricane Priscilla, located around 700 n mi to the west-northwest, whose large circulation and convective envelope likely played a role in disrupting this smaller-scale feature within the monsoon trough and suppressing much of its convection.

As Priscilla lifted northward and steadily weakened, convection developed and expanded near the coast of southern Mexico by 8 October. Successive scatterometer passes afterward revealed the broad low gradually becoming better defined. Despite these improvements, persistent easterly vertical wind shear and the system's proximity to land, and the possibility that the low-level circulation moved inland likely delayed the organization of deep convection and development of a well-defined center. By 9 October, however, convective organization began to improve, with banding features developing over the western and southern semicircles. An overnight OSCAT-3 pass revealed a well-defined low-level circulation near the coast of southwestern Mexico. This pass, combined with hourly observations from the cruise ship *Norwegian Joy* (C6CX3) and subjective Dvorak estimates from TAFB and SAB, provided sufficient evidence to designate the system as a tropical depression by 0600 UTC 9 October about 75 n mi southeast of Acapulco, Mexico. The cyclone strengthened into a 35-kt tropical storm 6 h later. The "best track" chart of Raymond's path is given in Fig. 1, with the wind and pressure histories shown in Figs. 2 and 3, respectively. The best track positions and intensities are listed in Table 1.

After genesis, Raymond moved steadily west-northwestward to northwestward at 10–15 kt along the southern periphery of a strong mid-level ridge over northern Mexico and the south-central United States. Very warm sea surface temperatures and strong upper-level divergence supported modest intensification despite persistent easterly vertical wind shear. Raymond reached its peak intensity of 50 kt from 0600–1200 UTC 10 October while paralleling the southwestern coast of Mexico.

Raymond began to encounter an increasingly hostile environment after reaching peak intensity, characterized by strong easterly shear, drier mid-level air, and weakening outflow. These factors caused deep convection to become increasingly displaced from the low-level center, and by early on 11 October the cyclone's convective pattern had become ragged. Raymond continued moving quickly northwestward toward Baja California Sur, and any remaining deep convection dissipated during the early morning hours. Raymond became a post-tropical

remnant low by 1800 UTC 11 October, when it was nearing the southern tip of the Baja California peninsula.

The remnant low turned northward and then north-northeastward between 11–12 October in response to an amplifying mid-latitude trough over the southwestern United States. The system moved over the southern tip of the Baja California peninsula between 0000–0600 UTC 12 October and then briefly emerged over the southern Gulf of California. Raymond is estimated to have dissipated by 1800 UTC 12 October before reaching the coast of northwestern Mexico near Los Mochis. The remaining moisture was advected northward across northwestern Mexico and into portions of the southwestern United States.

METEOROLOGICAL STATISTICS

Observations in Raymond (Figs. 2 and 3) include subjective satellite-based Dvorak technique intensity estimates from the Tropical Analysis and Forecast Branch (TAFB) and the Satellite Analysis Branch (SAB), objective Advanced Dvorak Technique (ADT) estimates and Satellite Consensus (SATCON) estimates from the Cooperative Institute for Meteorological Satellite Studies/University of Wisconsin-Madison. Data and imagery from NOAA polar-orbiting satellites including the Advanced Microwave Sounding Unit (AMSU), the NASA Global Precipitation Mission (GPM), the European Space Agency's Advanced Scatterometer (ASCAT), the Defense Meteorological Satellite Program (DMSP) satellites, and the Time-Resolved Observations of Precipitation structure and storm Intensity with a Constellation of Smallsats (TROPICS) satellites, among others, were also useful in constructing the best track of Raymond.

Ship reports of winds of tropical storm force associated with Raymond are given in Table 2.

Winds and Pressure

Raymond's estimated peak intensity of 50 kt around 0600 UTC 10 October is based on a blend of subjective Dvorak intensity estimates from TAFB and objective estimates from UW-CIMSS, along with scatterometer data. A scatterometer pass at 0436 UTC 10 October sampled peak surface winds of 48 kt, supporting the 50-kt intensity estimate. There were no land-based observations of tropical storm-force winds associated with Raymond. The estimated minimum central pressure of 998 mb is based primarily on the Knaff–Zehr–Courtney (KZC) pressure–wind relationship.

Rainfall and Flooding

Raymond's close passage to the southwestern Mexican coast produced periods of heavy rainfall from 9–11 October (Fig. 4). Notable storm-total rainfall amounts included 7.46 inches (189.5 mm) at Zihuatanejo in the state of Guerrero, 6.85 inches (174.0 mm) at La Desembocada in Jalisco, and 5.71 inches (145.0 mm) at Rosario in Sinaloa.

CASUALTY AND DAMAGE STATISTICS

Localized flooding associated with heavy rainfall occurred in portions of southwest Mexico as Raymond tracked west-northwestward to northwestward just offshore. These impacts led to disruptions to transportation and even damage in some locations. Although fatalities were reported across the region before and after the formation of Raymond, a direct association with Raymond and its incipient disturbance was not conclusive.

FORECAST AND WARNING CRITIQUE

The potential for Raymond's development was recognized more than five days before formation, with confidence increasing as the disturbance began to organize near the coast of southwestern Mexico. Table 3 provides the number of hours before genesis when the first NHC Tropical Weather Outlook (TWO) forecast was issued in each likelihood category. For the 7-day outlook, a low (<40%) chance of development was first indicated 138 hours prior to genesis, and the probabilities were raised to the medium (40–60%) category 126 hours before formation. The 7-day probabilities were increased to the high (>60%) category 60 hours before formation. For the 2-day forecast period, the disturbance was given a low and medium chance of genesis 60 and 42 hours before formation, respectively, and the probabilities were increased to the high category 18 hours prior to genesis.

Despite the presence of vertical shear, the disturbance's proximity to land, and the influence of Hurricane Priscilla to the northwest, the forecasts for Raymond's genesis location were accurate. The location of genesis occurred within nearly all of NHC's graphical 7-day outlook areas, resulting in a 96% hit rate for all probabilistic categories (Fig. 5). These results indicate that, although the exact timing of genesis was somewhat uncertain due to the environmental challenges noted above, the spatial forecasts of where Raymond would form were consistently well-predicted. The eventual genesis point lay along the northern edge of the NHC outlook areas near the coast of southwestern Mexico.

A verification of NHC official track forecasts for Raymond is provided in Table 4a. Official track forecast errors were lower than the mean official errors for the previous 5-yr period at the 24- and 36-h forecast intervals. At 12 h, the official error was slightly larger than the 5-yr mean, and the lone 48-h forecast had an error that was nearly identical to the corresponding 5-yr mean. However, the very small number of forecasts limits the significance of these comparisons. A homogeneous comparison of the official track errors with selected guidance models is given in Table 4b. Overall, the NHC track forecasts generally performed better than the available guidance, with smaller errors at most forecast times.

A verification of NHC official intensity forecasts for Raymond is provided in Table 5a. Official intensity forecast errors were lower than the mean official errors for the previous 5-yr period at all forecast times, although the sample size beyond 24 h limits the meaningfulness of

these comparisons. A homogeneous comparison of the official intensity errors with selected guidance models is given in Table 5b, which shows that the official forecasts were as good as or better than all guidance at each forecast period.

Coastal wind watches and warnings associated with Raymond are given in Table 6.

ACKNOWLEDGEMENTS

Rainfall data shown in Fig. 4 were provided by CONAGUA, the National Meteorological Service of Mexico. Dr. Philippe Papin (NHC) provided the genesis verification maps (Fig. 5).

Table 1. Best track for Tropical Storm Raymond, 9–11 October 2025.

Date/Time (UTC)	Latitude (°N)	Longitude (°W)	Pressure (mb)	Wind Speed (kt)	Stage
09 / 0600	15.9	99.0	1004	30	tropical depression
09 / 1200	15.9	99.9	1003	35	tropical storm
09 / 1800	16.0	100.9	1002	40	"
10 / 0000	16.4	101.8	1000	45	"
10 / 0600	17.0	102.9	998	50	"
10 / 1200	17.8	104.4	998	50	"
10 / 1800	18.6	105.9	1000	45	"
11 / 0000	19.6	107.2	1000	45	"
11 / 0600	20.4	108.2	1002	40	"
11 / 1200	21.1	109.0	1003	35	"
11 / 1800	21.8	109.6	1004	30	low
12 / 0000	22.6	110.0	1004	30	"
12 / 0600	23.5	110.0	1006	25	"
12 / 1200	24.5	109.7	1006	25	"
12 / 1800					dissipated
10 / 0600	17.0	102.9	998	50	minimum pressure & maximum winds

Table 2. Selected ship reports with winds of at least 34 kt for Tropical Storm Raymond, 9–11 October 2025.

Date/Time (UTC)	Ship call sign	Latitude (°N)	Longitude (°W)	Wind dir/speed (kt)	Pressure (mb)
09/0700	C6CX3	16.3	101.5	300/35	1010.9
09/0900	C6CX3	16.3	101.2	300/35	1007.5
09/1700	C6CX3	16.4	99.3	090/36	1012.0
09/2100	C6CX3	16.0	98.5	140/37	1012.0
09/2200	C6CX3	15.9	98.3	140/35	1012.0

Table 3. Number of hours in advance of formation associated with the first NHC Tropical Weather Outlook forecast in the indicated likelihood category. Note that the timings for the “Low” category do not include forecasts of a 0% chance of genesis.

	Hours Before Genesis	
	48-Hour Outlook	**168-Hour Outlook**
Low (<40%)	60	138
Medium (40%-60%)	42	126
High (>60%)	18	60

Table 4a. NHC official (OFCL) and climatology-persistence skill baseline (OCD5) track forecast errors (n mi) for Tropical Storm Raymond, 9–11 October 2025. Mean errors for the previous 5-yr period are shown for comparison. Official errors that are smaller than the 5-yr means are shown in boldface type.

	Forecast Period (h)							
	12	24	36	48	60	72	96	120
OFCL	28.2	**22.2**	**29.9**	53.5				
OCD5	53.0	110.1	154.6	185.8				
Forecasts	7	5	3	1				
OFCL (2020-24)	22.4	33.6	43.5	53.2	65.1	79.4	108.6	135.2
OCD5 (2020-24)	38.2	75.3	117.2	161.0	206.0	252.0	340.7	422.7

Table 4b. Homogeneous comparison of selected track forecast guidance models (in n mi) for Tropical Storm Raymond, 9–11 October 2025. Errors smaller than the NHC official forecast are shown in boldface type.

Model ID	Forecast Period (h)							
	12	24	36	48	60	72	96	120
OFCL	28.2	22.2	29.9	53.5				
OCD5	53.0	110.1	154.6	185.8				
GFSI	**26.3**	31.5	52.5	84.9				
HMNI	32.8	28.3	**25.7**	64.1				
HFAI	34.4	43.9	36.2	53.8				
HFBI	42.7	53.3	56.1	98.0				
HWFI	29.5	32.1	63.7	91.3				
EMXI	37.8	50.5	90.7	143.0				
CMCI	33.1	94.1	135.9	205.9				
AEMI	**23.4**	28.9	55.1	92.8				
HCCA	**27.5**	**20.4**	40.6	69.9				
FSSE	**26.8**	33.0	56.9	64.2				
GFEX	29.5	37.6	60.6	73.7				
TVCE	**28.1**	27.7	34.8	61.6				
TVCX	29.0	29.7	37.0	61.8				
TVDG	**26.5**	29.6	40.1	61.6				
TABD	44.2	53.3	77.3	119.1				
TABM	41.5	63.8	73.8	**5.6**				
TABS	64.8	175.5	255.3	236.6				
Forecasts	7	5	3	1				

Table 5a. NHC official (OFCL) and climatology-persistence skill baseline (OCD5) intensity forecast errors (kt) for Tropical Storm Raymond, 9–11 October 2025. Mean errors for the previous 5-yr period are shown for comparison. Official errors that are smaller than the 5-yr means are shown in boldface type.

	Forecast Period (h)							
	12	24	36	48	60	72	96	120
OFCL	**3.6**	**4.0**	**3.3**	**0.0**				
OCD5	5.9	16.0	19.3	4.0				
Forecasts	7	5	3	1				
OFCL (2020-24)	5.7	8.9	10.8	12.9	14.4	15.5	17.0	18.6
OCD5 (2020-24)	7.4	12.4	16.2	19.2	21.0	21.3	21.5	21.6

Table 5b. Homogeneous comparison of selected intensity forecast guidance models (in kt) for Tropical Storm Raymond, 9–11 October 2025. Errors smaller than the NHC official forecast are shown in boldface type.

Model ID	Forecast Period (h)							
	12	24	36	48	60	72	96	120
OFCL	3.6	4.0	3.3	0.0				
OCD5	5.9	16.0	19.3	4.0				
HWFI	5.4	6.4	8.7	5.0				
HMNI	4.3	5.4	8.3	8.0				
HFAI	6.4	5.2	5.3	2.0				
HFBI	4.7	5.6	5.7	4.0				
DSHP	6.0	7.4	5.0	15.0				
LGEM	5.6	9.0	5.3	4.0				
ICON	4.9	5.2	4.0	0.0				
IVCN	4.4	4.6	3.3	0.0				
IVDR	4.6	4.0	4.3	1.0				
GFSI	4.4	6.0	6.0	4.0				
EMXI	7.9	11.0	8.3	3.0				
HCCA	4.4	5.4	3.3	3.0				
FSSE	4.1	4.0	5.3	2.0				
Forecasts	7	5	3	1				

Table 6. Watch and warning summary for Tropical Storm Raymond, 9–11 October 2025.

Date/Time (UTC)	Action	Location
09/1500	Tropical Storm Watch Issued	Southwest coast of Mexico from Zihuatanejo northward to Cabo Corrientes
09/2100	Tropical Storm Warning Issued	Southwest coast of Mexico from Zihuatanejo northward to Cabo Corrientes
10/0900	Tropical Storm Watch Issued	Baja California Sur from Los Barriles northward to Santa Fe
10/1500	Tropical Storm Warning Discontinued	Southwest coast of Mexico from south of Punta San Telmo to Zihuatanejo
10/1800	Tropical Storm Warning Issued	Las Islas Marias, Mexico
10/2100	Tropical Storm Warning Issued	Baja California Sur from Los Barriles northward to Santa Fe
10/2100	Tropical Storm Warning Discontinued	Southwest coast of Mexico from South of Manzanillo to Punta San Telmo
11/0900	Tropical Storm Warning Discontinued	Southwest coast of Mexico from Manzanillo northward to Cabo Corrientes
11/1500	Tropical Storm Warning Discontinued	Las Islas Marias
11/1800	Tropical Storm Warning Discontinued	Baja California Sur from Los Barriles to Santa Fe

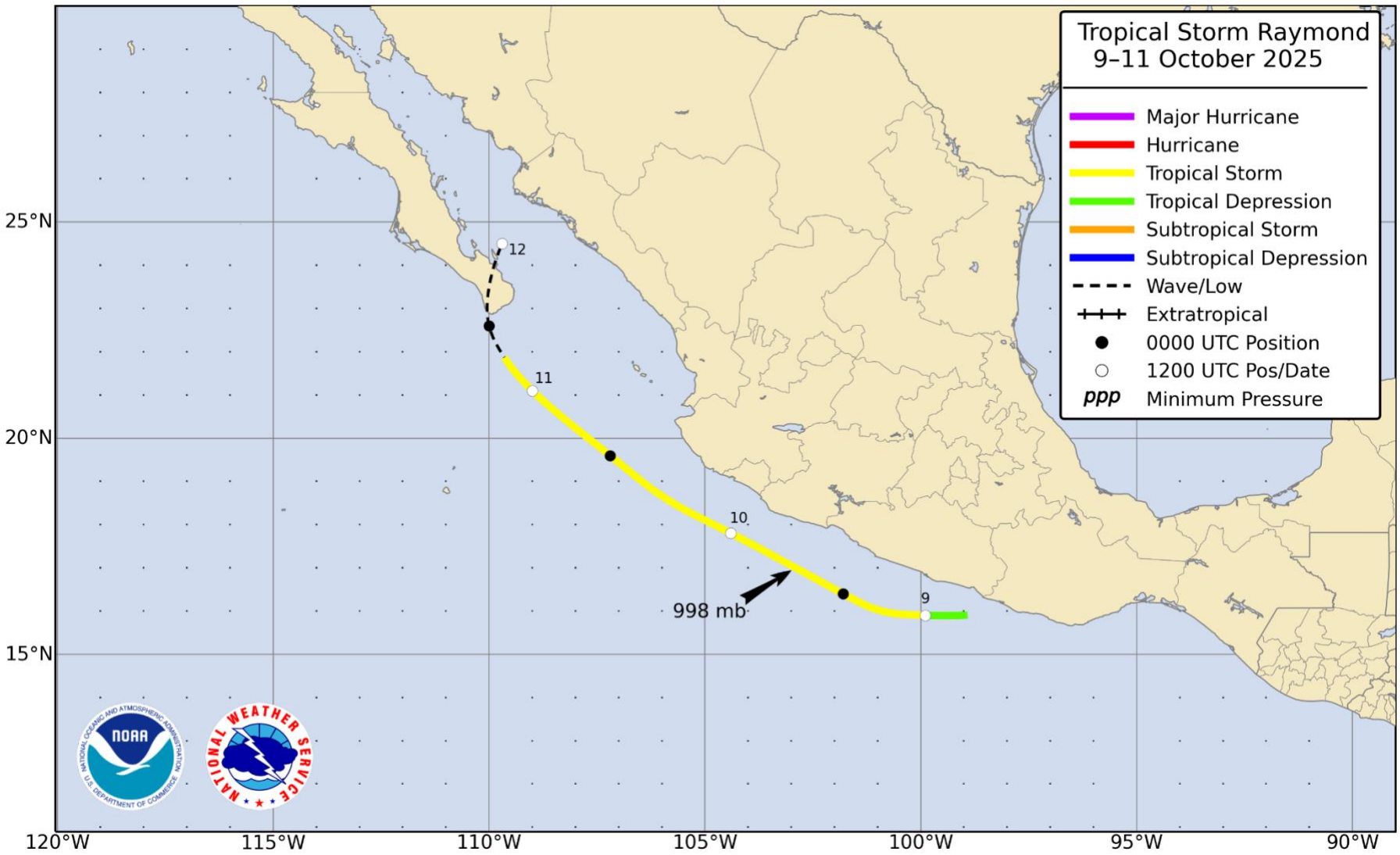

Figure 1. Best track positions for Tropical Storm Raymond, 9–11 October 2025.

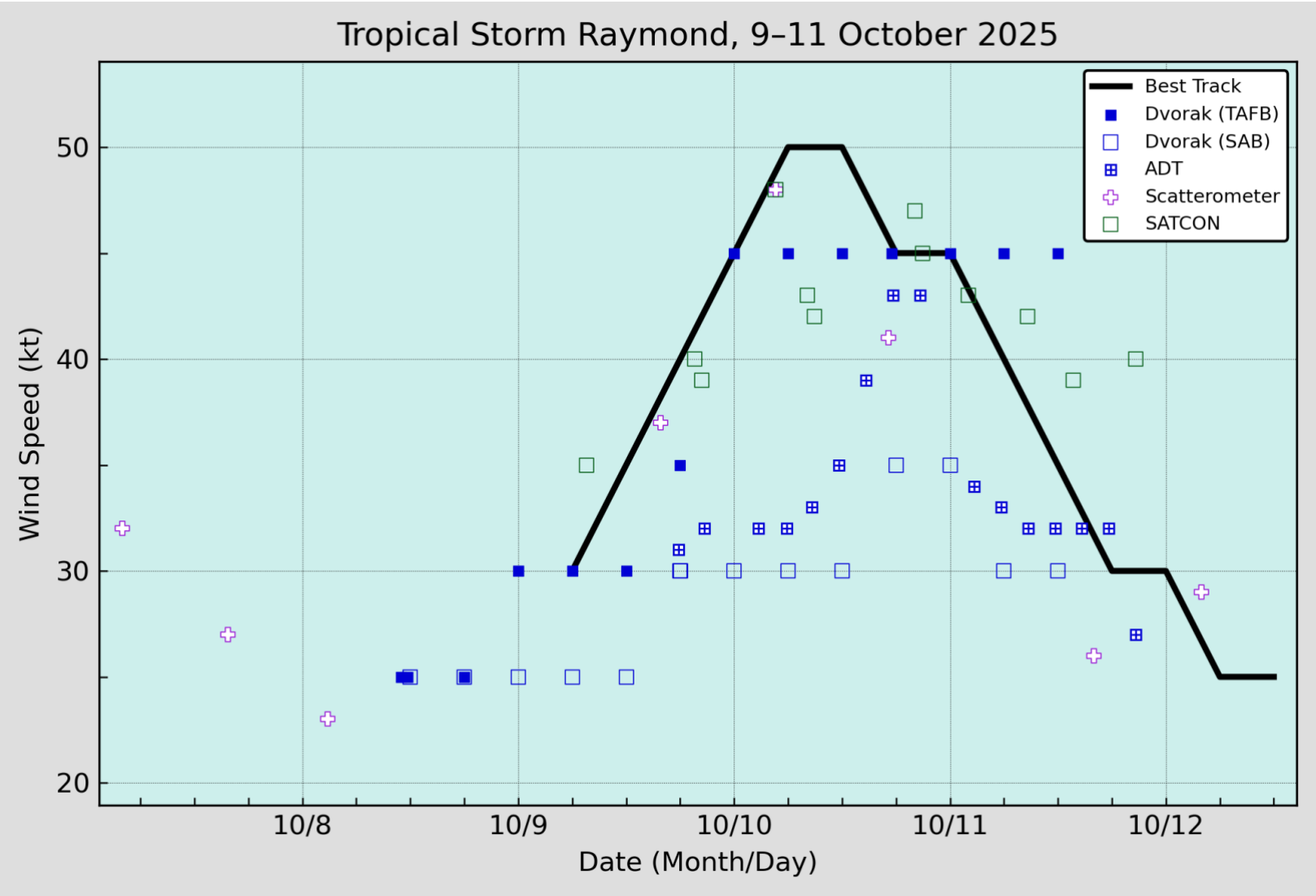

Figure 2. Selected wind observations and best track maximum sustained surface wind speed curve for Tropical Storm Raymond, 9–11 October 2025. Advanced Dvorak Technique estimates represent the Current Intensity at the nominal observation time. SATCON intensity estimates are from the Cooperative Institute for Meteorological Satellite Studies. Dashed vertical lines correspond to 0000 UTC.

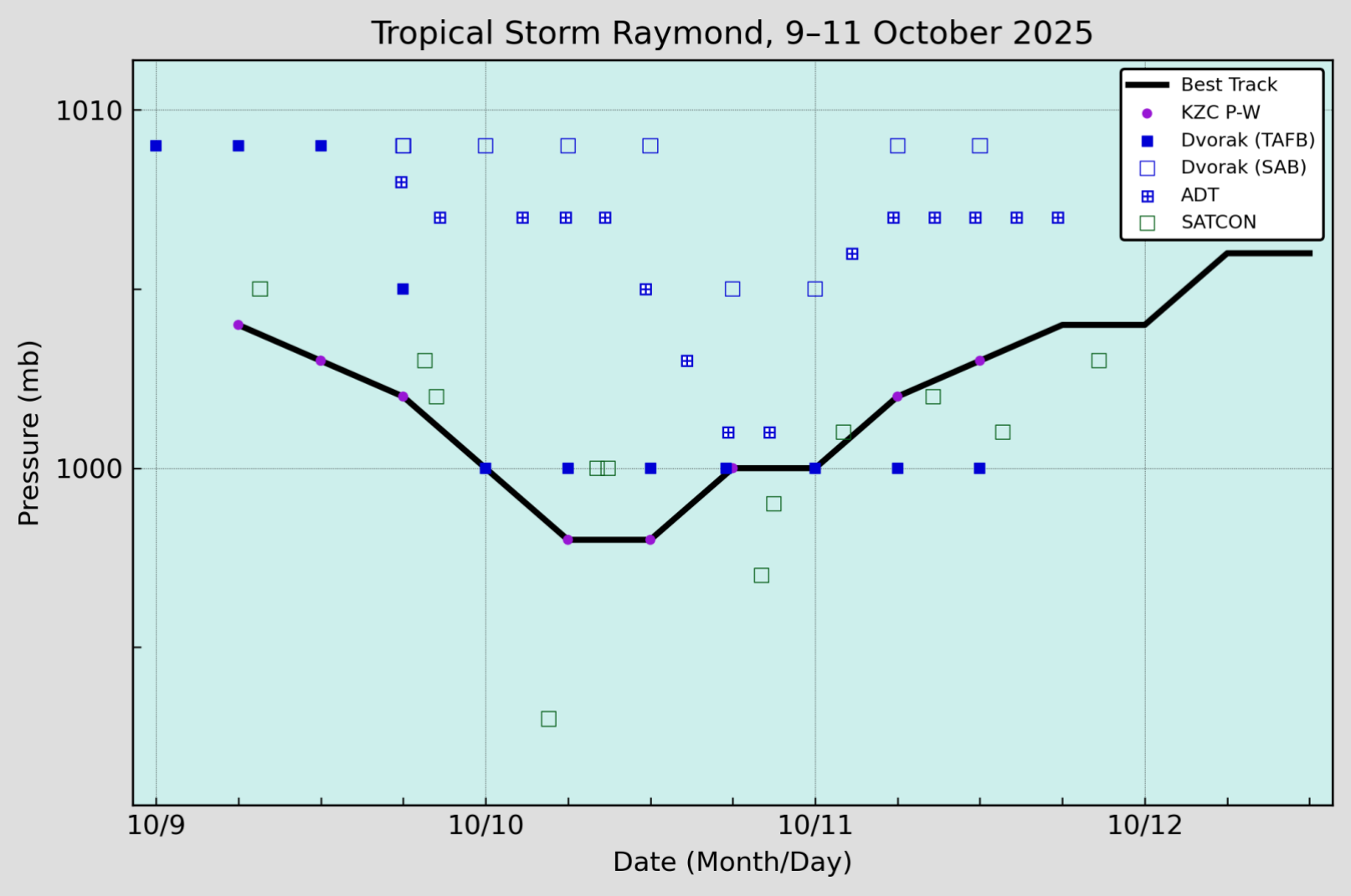

Figure 3. Selected pressure observations and best track minimum central pressure curve for Tropical Storm Raymond, 9–11 October 2025. Advanced Dvorak Technique estimates represent the Current Intensity at the nominal observation time. SATCON intensity estimates are from the Cooperative Institute for Meteorological Satellite Studies. KZC P-W refers to pressure estimates derived using the Knaff-Zehr-Courtney pressure-wind relationship. Dashed vertical lines correspond to 0000 UTC.

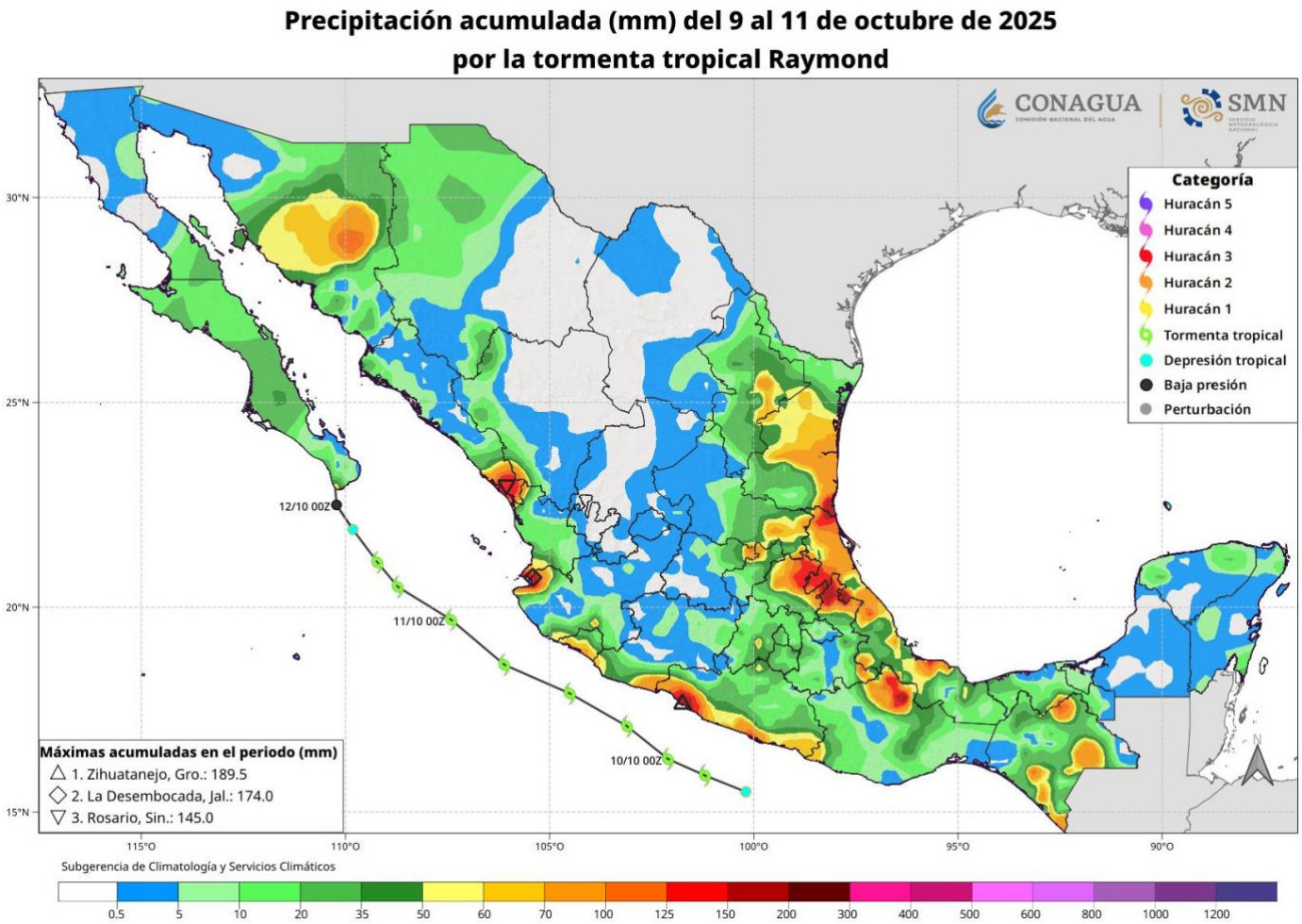

Figure 4. Rainfall accumulations (mm) in Mexico from 9–11 October 2025. Track and intensity are based on the operational NHC assessment. Not all of the rainfall depicted here is directly related to Raymond. Image courtesy of CONAGUA, the National Meteorological Service of Mexico.

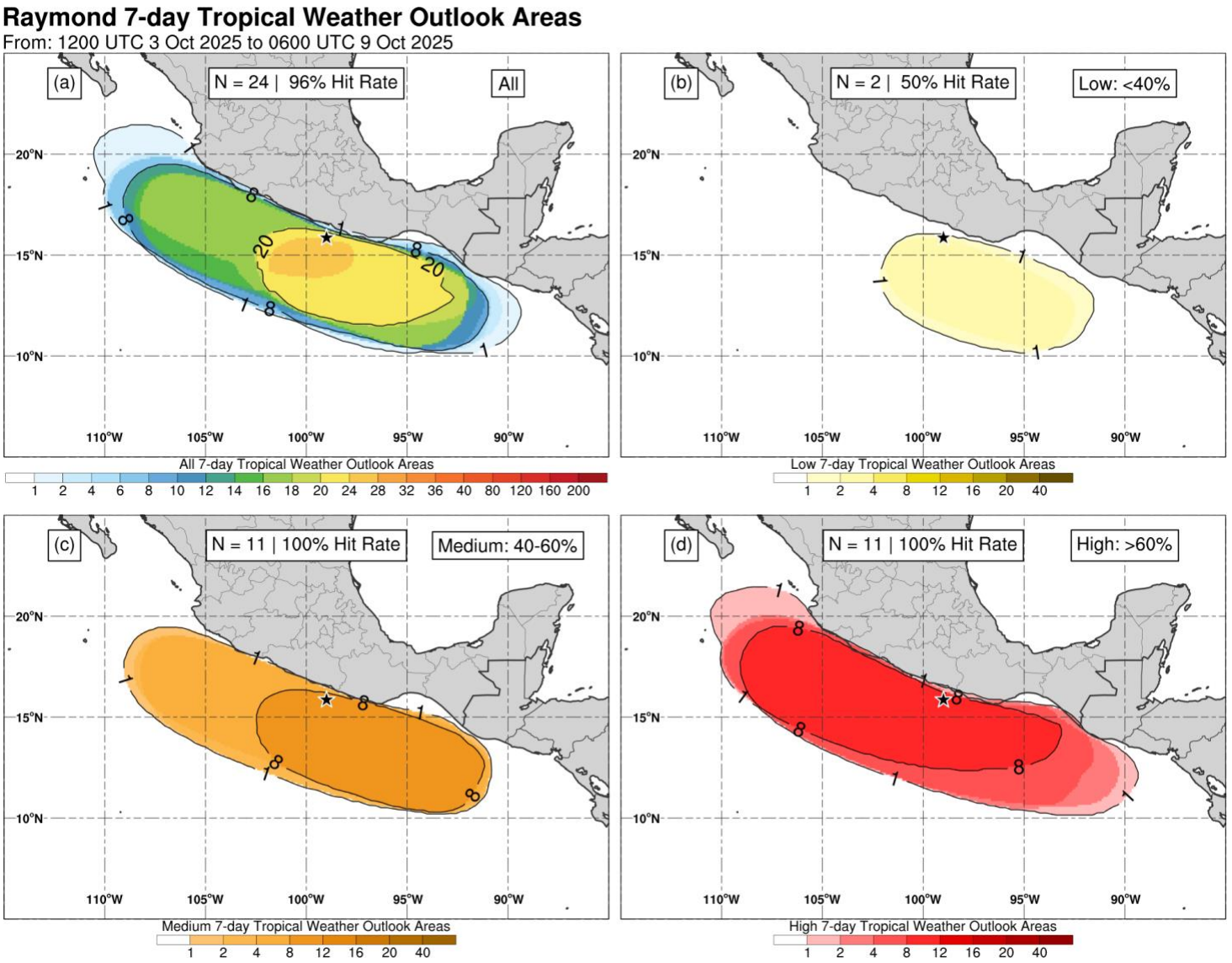

Figure 5. Composites of 7-day tropical cyclone genesis areas depicted in NHC's Tropical Weather Outlooks prior to the formation of Tropical Storm Raymond for (a) all probabilistic genesis categories, (b) the low (<40%) category, (c) medium (40–60%) category, and (d) high (>60%) category. The location of genesis is indicated by the black star.