NATIONAL HURRICANE CENTER
CENTRAL PACIFIC HURRICANE CENTER
TROPICAL CYCLONE REPORT[1]

HURRICANE LINDA

(EP122021)

10–19 August 2021

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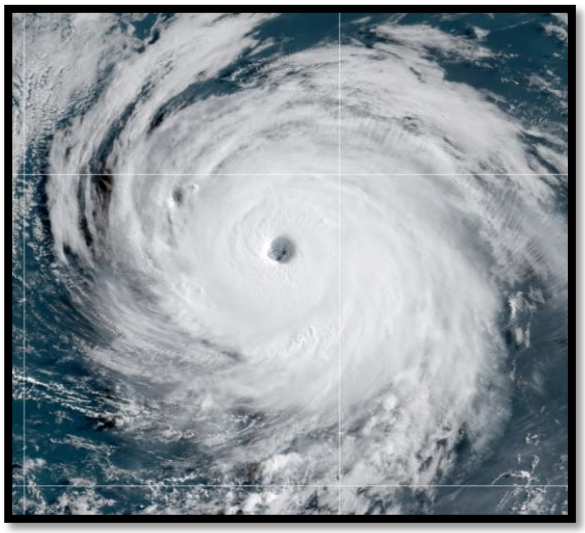

GOES-17 GEOCOLOR IMAGE OF CATEGORY FOUR HURRICANE LINDA AT 1500 UTC 14 AUGUST 2021. IMAGE COURTESY CIRA/NOAA.

Linda was a long-lived hurricane that peaked at category 4 intensity (on the Saffir-Simpson Hurricane Wind Scale) while it traversed the eastern Pacific basin without impacting any major land areas. Then, Linda moved across the central Pacific basin as a post-tropical cyclone and brought heavy rain and gusty winds to portions of the Hawaiian Islands before dissipating.

[1] Original report released on 8 December 2021. Updated 6 May 2022 to include best track analysis, map, and summary from the Central Pacific Hurricane Center.

Hurricane Linda

10–19 AUGUST 2021

SYNOPTIC HISTORY

Linda appears to have originated from a tropical wave that crossed Central America and moved into the far eastern Pacific Ocean on 6 August. The wave moved westward at 10–15 kt and helped induce the formation of a broad area of low pressure along the eastern Pacific monsoon trough on 7 August, a few hundred n mi offshore the coasts of Guatemala and southern Mexico. The disturbance produced some disorganized shower activity over the next day or so while its low-level circulation gradually became better defined. Scatterometer surface wind data indicated that a well-defined area of low pressure formed by 1200 UTC 9 August, about 230 n mi south-southwest of Puerto Angel, Mexico. Shower and thunderstorm activity gradually increased later that day, and the associated convection began showing signs of organization early on 10 August. It is estimated that a tropical depression formed by 0600 UTC that day, about 240 n mi south of Acapulco, Mexico. Deep convection continued to become better organized with increased signs of banding in the southern semicircle, and the depression strengthened into Tropical Storm Linda at 1200 UTC 10 August, about 225 n mi south-southwest of Acapulco. The "best track" chart of Linda'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[2].

Linda initially moved west-northwestward around a mid-level ridge to its northeast, but then briefly turned westward to west-southwestward on 11 August as the ridge became established to the north of the cyclone. Despite being in an environment of about 20 kt of deep-layer northerly wind shear, Linda was able to sustain enough organized convection over 28°–29°C sea-surface temperatures (SSTs) to quickly strengthen into a 55-kt tropical storm by 1200 UTC 11 August. Some moderate northerly shear and dry-air intrusions briefly disrupted Linda's organization later that day, but the cyclone resumed strengthening early on 12 August and became a hurricane by 1200 UTC that day, when it was located about 325 n mi south-southwest of Manzanillo, Mexico. The hurricane moved west-northwestward, a motion that continued for the next several days as the center of the system moved away from the southwestern coast of Mexico. Shortly after becoming a hurricane, Linda began rapidly intensifying within a moist and unstable environment over 27.5°–28.5°C SSTs. Linda became a major hurricane (Category 3 or greater on the Saffir-Simpson Hurricane Wind Scale) at 1800 UTC 13 August, with a warm and well-defined 15–20 n-mi-wide eye apparent in visible and infrared satellite imagery. After Linda's intensity briefly leveled off early on 14 August, the hurricane began to strengthen again as the deep-layer shear diminished to less than 10 kt. Linda reached an estimated peak intensity of 115

[2] A digital record of the complete best track, including wind radii, can be found on line at ftp://ftp.nhc.noaa.gov/atcf. Data for the current year's storms are located in the *btk* directory, while previous years' data are located in the *archive* directory.

kt (cover photo) by 1200 UTC 14 August, when it was located about 400 n mi southwest of the southern tip of the Baja California peninsula.

Microwave data indicate that Linda underwent an eyewall replacement cycle on 14–15 August (Fig. 4), and thereafter the hurricane began exhibiting annular characteristics in satellite imagery (Fig. 5). Linda's large (35–40 n mi wide), circular eye became surrounded by a nearly symmetric ring of deep convection with few banding features. This structure emerged within an environment of weak (~ 5 kt) easterly vertical wind shear, nearly constant SSTs between 26.0°–26.5°C, and easterly flow at 200 mb, which are conditions commonly associated with annular hurricanes (Knaff et al. 2003). Despite marginal SSTs, Linda only slowly weakened on 16 August as the hurricane maintained its stable annular structure. A strengthening ridge over the western United States steered Linda westward to west-southwestward on 16–17 August, which eventually brought the hurricane into a drier mid-level environment and over SSTs cooler than 26°C. Infrared cloud top temperatures warmed within the thinning eyewall early on 17 August, and Linda weakened to 75 kt at 0600 UTC that day.

Shortly thereafter, Linda moved over a small region of warmer SSTs, which induced a brief period of re-strengthening as the hurricane remained within a weak deep-layer shear environment. It is estimated that Linda reached a second peak intensity of 95 kt by 1200 UTC 18 August, when it was centered about 1230 n mi west-southwest of the southern tip of the Baja California peninsula. Linda moved westward to west-northwestward and passed north of the 26°C SST isotherm later that day, and the hurricane began rapidly weakening over cooler waters and within a drier, more stable environment. Just 24 h after reaching its second peak intensity, Linda weakened into a tropical storm that was struggling to sustain any organized convection, and it degenerated into a gale-force, post-tropical cyclone by 1800 UTC 19 August when it was located about 925 n mi east of Hilo, Hawaii. The post-tropical cyclone remained devoid of any convection and continued weakening as it crossed 140°W and moved into the central Pacific basin by 0000 UTC 20 August.

The low-level circulation of post-tropical cyclone Linda remained intact for several days within the central Pacific basin and maintained gale-force winds until reaching the main Hawaiian Islands late on 23 August. Two periods of intense deep convection occurred on the approach to Hawaii, but strong vertical wind shear confined this activity to the northern semicircle of the low. The first burst of convection flared during a roughly 12 h period from late 21 August into early 22 August, followed by a more sustained episode lasting about 20 h from late 22 August through 1000 UTC 23 August. During these incidents, several ASCAT passes revealed surface wind retrievals of around 40 kt within the northern semicircle of post-tropical cyclone Linda. Deep convection ceased about 10 h prior to the low-level circulation center passing over the main Hawaiian Islands. The combination of island terrain and continued vertical wind shear weakened the post-tropical cyclone, leading to dissipation by 1200 UTC 24 August.

METEOROLOGICAL STATISTICS

Observations in Linda (Figs. 2 and 3) include subjective satellite-based Dvorak technique intensity estimates from the Tropical Analysis and Forecast Branch (TAFB), the Satellite Analysis

Branch (SAB), the Central Pacific Hurricane Center (PHFO), and the Joint Typhoon Warning Center (JTWC), as well as 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), and Defense Meteorological Satellite Program (DMSP) satellites, among others, were also useful in constructing the best track of Linda.

Linda's peak intensity of 115 kt from 1200 UTC to 1800 UTC 14 August is based on SATCON estimates of 112–116 kt during this period, along with T6.0/115 kt Dvorak current intensity estimates from SAB at 1200 and 1800 UTC and TAFB at 1800 UTC. The estimated minimum pressure of 953 mb at 1200 and 1800 UTC 14 August is based on a blend of the Knaff-Zehr-Courtney (KZC) and SATCON pressure estimates. The eye of Linda passed near Clarion Island, Mexico, early on 14 August, and a Mexican Navy automated weather station on the island measured a sustained wind of 77 kt at 0900 UTC and a gust of 92 kt at 0645 UTC. The minimum pressure recorded on Clarion Island was 966.8 mb at 0815 UTC, but the hurricane strengthened as it moved away from the island and is estimated to have reached its minimum pressure several hours later.

Linda's second peak intensity of 95 kt at 1200 UTC 18 August is based on a blend of objective and subjective satellite intensity estimates that ranged between 90–110 kt, and is in best agreement with a 1250 UTC SATCON estimate of 93 kt. The associated minimum pressure of 970 mb at 1200 UTC is based on a blend of the KZC, SATCON, and Dvorak pressure estimates.

There were no ship or buoy reports of tropical-storm-force winds associated with Linda as a tropical cyclone. The system affected the Hawaiian Islands as a post-tropical low, and selected surface observations during the post-tropical phase are given in Table 3. Some coastal and elevated inland locations on the islands of Maui, Lanai, and Oahu reported tropical-storm-force wind gusts as the post-tropical low passed over the region.

CASUALTY AND DAMAGE STATISTICS

There were no reports of casualties or damage associated with Linda.

FORECAST AND WARNING CRITIQUE

The genesis of Linda was forecast reasonably well (Table 2). The disturbance from which Linda developed was introduced in the Tropical Weather Outlook (TWO) with a low (<40%) chance of formation 84 h prior to genesis. The 5-day formation chances were raised to medium (40–60%) and high (>60%) categories in the TWO 72 h and 60 h, respectively, before genesis occurred. For the 2-day outlook, the disturbance was introduced with a low chance of formation

60 h before genesis. The 2-day probabilities were raised to medium 42 h and high 24 h before a tropical depression formed.

A verification of NHC official track forecasts for Linda is given in Table 4a. Official forecast track (OFCL) errors were lower than the mean official errors for the previous 5-yr period at all forecast times. A homogeneous comparison of the official track errors with selected guidance models is given in Table 4b. Overall, OFCL outperformed all of the individual global models. The best performing track models for Linda were the GFS/ECMWF simple consensus (GFEX), the Florida State Superensemble (FSSE), and the HFIP corrected consensus approach (HCCA), all of which performed slightly better than OFCL for a majority of the forecast periods. A map with all of the NHC forecasts along with the best track of Linda (Fig. 6) shows that OFCL forecasts were quite accurate for much of Linda's lifetime, with a slight right-of-track bias noted at later forecast times.

A verification of NHC official intensity forecasts for Linda is given in Table 5a. Official forecast intensity (OFCL) errors were comparable to or slightly lower than the mean official errors for the previous 5-yr period at 12–60 h, but higher than the mean errors at 72–120 h. A homogeneous comparison of the official intensity errors with selected guidance models is given in Table 5b. OFCL outperformed almost all of the guidance, including the consensus aids, through 60 h. In the 72–120 h period, OFCL still outperformed many of the global and regional models, but was bested by the Statistical Hurricane Intensity Prediction Scheme (DSHP). Interestingly, the best overall intensity model during the 60–120 h forecast period was the Navy Global Environmental Model (NVGI), which is typically not very skillful.

A couple factors likely contributed to some of the larger OFCL intensity errors at 72–120 h. First, the timing and extent of Linda's rapid intensification were not well forecast. Although early NHC forecasts did call for Linda to quickly strengthen into a hurricane (Fig. 7), Linda's intensity peaked much higher and somewhat later than originally expected. Secondly, the annular structure of Linda that developed following an eyewall replacement cycle allowed the hurricane to maintain its intensity for longer than an average hurricane. Internal dynamic processes such as eyewall replacement cycles are virtually impossible to predict several days in advance, so early forecasts could not have reasonably anticipated this evolution to occur. The potential for Linda to develop annular characteristics was first mentioned in NHC tropical cyclone discussions on 13 August, and NHC forecasters recognized that a stable annular structure could result in a slower-than-normal weakening rate of the hurricane over marginally warm sea surface temperatures. This knowledge was incorporated into some ensuing intensity forecasts, particularly once Linda began exhibiting annular characteristics.

There were no land-based watches or warnings associated with Linda.

REFERENCES

Knaff, J. A., J. P. Kossin, and M. DeMaria, 2003: Annular Hurricanes. *Wea. Forecasting*, **18**, 204–223, https://doi.org/10.1175/1520-0434(2003)018<0204:AH>2.0.CO;2

ACKNOWLEDGMENTS

Thanks to John Cangialosi for creating the Linda “best track” map (Fig. 1).

Table 1. Best track for Hurricane Linda, 10–19 August 2021.

Date/Time (UTC)	Latitude (°N)	Longitude (°W)	Pressure (mb)	Wind Speed (kt)	Stage
09 / 1200	12.1	98.2	1008	30	low
09 / 1800	12.3	99.1	1008	30	"
10 / 0000	12.5	99.8	1008	30	"
10 / 0600	12.9	100.6	1008	30	tropical depression
10 / 1200	13.4	101.5	1006	35	tropical storm
10 / 1800	13.9	102.3	1004	40	"
11 / 0000	14.1	103.2	1002	45	"
11 / 0600	14.1	104.2	1000	50	"
11 / 1200	13.8	105.1	998	55	"
11 / 1800	13.7	105.7	997	55	"
12 / 0000	13.8	106.2	997	55	"
12 / 0600	14.1	106.8	993	60	"
12 / 1200	14.5	107.4	991	65	hurricane
12 / 1800	15.0	108.2	990	65	"
13 / 0000	15.5	109.2	987	70	"
13 / 0600	16.0	110.1	980	80	"
13 / 1200	16.6	111.2	972	90	"
13 / 1800	17.2	112.3	966	100	"
14 / 0000	17.7	113.3	964	105	"
14 / 0600	18.2	114.3	962	105	"
14 / 1200	18.6	115.5	953	115	"
14 / 1800	18.9	116.5	953	115	"
15 / 0000	19.2	117.7	957	110	"
15 / 0600	19.2	118.7	961	105	"
15 / 1200	19.1	119.7	965	100	"
15 / 1800	18.9	120.7	969	95	"
16 / 0000	18.7	121.6	969	95	"
16 / 0600	18.3	122.5	972	90	"
16 / 1200	18.0	123.3	972	90	"
16 / 1800	17.8	124.1	974	85	"
17 / 0000	17.7	125.0	978	80	"
17 / 0600	17.6	126.0	982	75	"

Date/Time (UTC)	Latitude (°N)	Longitude (°W)	Pressure (mb)	Wind Speed (kt)	Stage
17 / 1200	17.5	126.9	980	80	"
17 / 1800	17.6	127.8	977	85	"
18 / 0000	17.7	129.0	974	90	"
18 / 0600	17.9	130.1	972	90	"
18 / 1200	18.1	131.3	970	95	"
18 / 1800	18.5	132.5	974	90	"
19 / 0000	19.0	134.0	981	80	"
19 / 0600	19.4	135.5	989	70	"
19 / 1200	19.6	137.0	997	55	tropical storm
19 / 1800	19.6	138.7	1003	45	low
20 / 0000	19.8	140.3	1006	40	"
20 / 0600	19.9	141.8	1006	40	"
20 / 1200	20.0	143.3	1007	35	"
20 / 1800	19.9	144.7	1007	35	"
21 / 0000	19.9	146.1	1007	35	"
21 / 0600	19.9	147.3	1007	35	"
21 / 1200	20.0	148.1	1007	35	"
21 / 1800	20.3	148.9	1006	40	"
22 / 0000	20.6	149.7	1006	40	"
22 / 0600	20.7	150.7	1007	35	"
22 / 1200	20.9	151.7	1007	35	"
22 / 1800	21.0	152.7	1006	40	"
23 / 0000	21.0	153.8	1006	40	"
23 / 0600	21.0	154.8	1006	40	"
23 / 1200	21.0	155.5	1007	35	"
23 / 1800	21.2	156.2	1007	35	"
24 / 0000	21.1	157.4	1009	30	"
24 / 0600	20.8	158.7	1011	25	"
24 / 1200					dissipated
14 / 1200	18.6	115.5	953	115	minimum pressure and maximum wind

Table 2. Number of hours in advance of Linda's 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	**120-Hour Outlook**
Low (<40%)	60	84
Medium (40%-60%)	42	72
High (>60%)	24	60

Table 3. Selected surface observations for Linda during its post-tropical phase, 22–24 August 2021.

Location	Minimum Sea Level Pressure		Maximum Surface Wind Speed			Total rain (in)
	Date/ time (UTC)	Press. (mb)	Date/ time (UTC)[a]	Sustained (kt)[b]	Gust (kt)	
Offshore						
NOAA Buoys						
51000 – Northern Hawaii (23.53N 153.79W)	22/1400	1013.0	22/1838	26 (4 m, 1-min)	30	
Hawaii						
International Civil Aviation Organization (ICAO) Sites						
Marine Corps Air Station Kaneohe Bay (PHNG) (21.45N 157.77W)	24/0057	1012.0	24/0028	31	39	0.67
Lanai AP (PHNY) (20.79N 156.95W)	23/1356	1012.1	23/1040	23	33	0.97
Kahului AP (PHOG) (20.89N 156.44W)	23/1354	1013.1	23/2154	21	31	0.41
Honolulu – Daniel K. Inouye Intl. AP (PHNL) (21.33N 157.94W)	24/0153	1012.3	23/2250	20	28	0.02
Lihue AP (PHLI) (21.98N 159.34W)	24/0253	1014.4	24/0210	22	28	0.41
Hilo Intl. AP (PHTO) (19.72N 155.06W)	23/0253	1010.4	23/0130	18	28	0.57
Oahu – Kalaeloa AP (PHJR) (21.31N 158.07W)	24/0153	1013.2	24/0125	19	27	0.07
Kailua – Kona Intl. AP (PHKO) (19.74N 156.05W)	23/0153	1011.2	23/2215	21	27	T
Kaunakakai – Molokai AP (PHMK) (21.15N 157.10W)	23/2254	1013.5	23/2315	17	23	0.67
National Ocean Service (NOS) Sites						
Mokuoloe (MOKH1) (21.43N 157.79W)	24/0230	1013.1	24/0048	26 (10 m)	33	
Kahului Harbor (KLIH1) (20.90N 156.47W)	23/2000	1012.5	24/0336	24 (7 m)	29	
Honolulu (OOUH1) (21.30N 157.87W)	24/0200	1012.6	24/0154	14 (10 m)	27	
Hilo (ILOH1) (19.73N 155.06W)	23/0300	1009.3	23/0130	21 (16 m)	25	
Nawiliwili (NWWH1) (21.95N 159.35W)	24/0136	1014.8	24/0242	19 (7 m)	25	
Kawaihae (KWHH1) (20.04N 155.83W)	23/0200	1010.1	22/2300	15 (8 m)	20	

Location	Minimum Sea Level Pressure		Maximum Surface Wind Speed			Total rain (in)
	Date/ time (UTC)	Press. (mb)	Date/ time (UTC)[a]	Sustained (kt)[b]	Gust (kt)	
Hydrometeorological Automated Data System (HADS) Sites (NWS)						
Bellows AFS (BELH1) (21.37N 157.72W)			24/0045	31	36	
Waianae Valley (WVNH1) (21.48N 158.15W)			24/0237	12	31	
Nuuanu Upper (NUUH1) (21.35N 157.82W)						6.23
WeatherFlow Sites						
Kihei (XKHI) (20.79N 156.47W)			23/2052	27 (26 m)	39	
Molokini Light (XMOL) (20.63N 156.50W)			24/0124	29 (12 m)	37	
Kailua (XKAI) (21.40N 157.73W)			24/0026	28 (10 m)	36	
Kanaha (XKAN) (20.90N 156.46W)			24/0341	27 (16 m)	34	
Makapu'u Beach (XMAK) (21.32N 157.66W)			24/0205	24 (5 m)	34	
Mokuleia (XMOK) (21.58N 158.21W)			24/0201	20 (11 m)	28	
Punalu'u (XPUN) (21.57N 157.88W)			24/0332	22 (7 m)	27	
Remote Automatic Weather Stations (RAWS)						
Kuaokala (KKRH1) (21.57N 158.26W)			24/0236	31	49	
Lanai 1 (KNIH1) (20.87N 157.01W)			23/0937	24	36	
Palehua (PLHH1) (21.38N 158.10W)			24/0016	22	36	
Kii (KFWH1) (21.69N 157.95W)			24/0145	22	33	
Makapulapai (MKPH1) (21.20N 156.97W)			24/0215	22	30	
Kaneloa (KAOH1) (20.52N 156.57W)			23/0453	20	36	
Kealia Pond NWR (KPDH1) (20.79N 156.47W)			23/2220	16	27	
Puu Alii (PAFH1) (21.14N 156.90W)						6.14
Ahumoa (AHMH1) (19.84N 155.61W)						2.50

Location	Minimum Sea Level Pressure		Maximum Surface Wind Speed			Total rain (in)
	Date/ time (UTC)	Press. (mb)	Date/ time (UTC)[a]	Sustained (kt)[b]	Gust (kt)	
United States Geological Survey (USGS) Sites						
Mt. Waialeale (WLLH1) (22.07N 159.50W)						7.12
Moanalua #1 (MOGH1) (21.39N 157.84W)						5.79
Poamoho #1 (PMHH1) (21.53N 157.92W)						4.92
Kilohana (KLOH1) (22.15N 159.59W)						3.88
Punaluu Stream (PNSH1) (21.56N 157.89W)						3.73
Pu'u Kukui (PKKH1) (20.89N 156.59W)						3.43
West Wailuaiki (WWKH1) (20.81N 156.14W)						3.29
Community Collaborative Rain, Hail, & Snow Network (CoCoRaHS) Sites						
Pu'u O Hoku Ranch (HI-MI-9) (21.15N 156.73W)						3.40
Public/Other						
Manoa Lyon Arboretum (MNLH1) (21.33N 157.80W)						7.10

[a] Date/time is for sustained wind when both sustained and gust are listed.
[b] Except as noted, sustained wind averaging periods for C-MAN and land-based reports are 2 min; buoy averaging periods are 8 min.

Table 4a. NHC official (OFCL) and climatology-persistence skill baseline (OCD5) track forecast errors (n mi) for Hurricane Linda, 10–19 August 2021. 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	**16.0**	**23.0**	**29.0**	**32.3**	**35.2**	**39.1**	**49.8**	**65.4**
OCD5	35.8	74.6	113.8	147.1	183.0	217.1	286.4	336.8
Forecasts	36	34	32	30	28	26	22	18
OFCL (2016-20)	21.3	33.1	44.0	54.6	65.3	76.0	95.9	116.6
OCD5 (2016-20)	33.1	69.4	107.8	147.0	183.4	219.7	280.2	342.0

Table 4b. Homogeneous comparison of selected track forecast guidance models (in n mi) for Hurricane Linda, 10–19 August 2021. Errors smaller than the NHC official forecast are shown in boldface type. The number of official forecasts shown here will generally be smaller than that shown in Table 4a due to the homogeneity requirement.

Model ID	Forecast Period (h)							
	12	24	36	48	60	72	96	120
OFCL	13.6	18.5	25.9	32.5	36.1	39.3	47.4	61.6
OCD5	30.7	65.7	106.5	145.2	188.7	230.4	319.2	377.1
GFSI	**13.4**	19.1	28.2	35.0	41.2	43.5	51.5	81.9
HMNI	15.6	25.6	37.6	53.4	71.7	88.3	130.0	180.0
HWFI	18.1	31.2	46.4	57.6	67.0	73.3	70.7	92.9
EGRI	17.5	32.0	49.5	70.0	89.8	107.7	155.3	189.4
EMXI	17.8	28.1	37.2	43.4	47.6	47.4	52.4	72.5
CMCI	17.1	25.8	37.9	54.0	70.3	87.8	114.4	126.7
NVGI	21.9	36.7	45.2	49.8	54.1	60.3	99.5	176.0
AEMI	**12.3**	19.0	**25.6**	33.2	40.6	46.9	52.6	69.7
HCCA	**11.7**	**18.1**	**24.5**	**29.3**	**34.6**	40.2	47.6	65.0
FSSE	**12.8**	**17.9**	**23.8**	**28.0**	**32.2**	**37.8**	48.1	67.6
TVCX	**13.5**	19.9	27.8	35.3	40.9	44.0	53.9	77.9
GFEX	**13.3**	**17.7**	**24.5**	**31.4**	36.7	**37.3**	**37.9**	**57.3**
TVCE	13.6	19.1	28.2	36.9	44.3	49.8	64.5	83.8
TVDG	**13.2**	19.6	27.3	35.3	42.7	45.9	58.6	79.5
TABD	22.6	38.1	56.2	69.8	80.8	83.7	77.2	104.6
TABM	20.5	32.8	45.3	56.8	69.8	75.5	88.5	94.1
TABS	21.8	43.6	70.5	96.4	122.4	138.7	141.1	134.5
Forecasts	28	26	24	22	20	18	14	13

Table 5a. NHC official (OFCL) and climatology-persistence skill baseline (OCD5) intensity forecast errors (kt) for Hurricane Linda, 10–19 August 2021. 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	5.8	9.3	**9.8**	**11.3**	14.1	17.7	22.3	24.2
OCD5	6.6	12.0	14.1	16.9	20.5	24.3	28.2	30.3
Forecasts	36	34	32	30	28	26	22	18
OFCL (2016-20)	5.6	9.0	10.9	12.6	14.0	15.3	16.0	16.7
OCD5 (2016-20)	7.2	12.0	15.3	17.6	19.0	20.4	21.2	20.8

Table 5b. Homogeneous comparison of selected intensity forecast guidance models (in kt) for Hurricane Linda, 10–19 August 2021. Errors smaller than the NHC official forecast are shown in boldface type. The number of official forecasts shown here will generally be smaller than that shown in Table 5a due to the homogeneity requirement.

Model ID	Forecast Period (h)							
	12	24	36	48	60	72	96	120
OFCL	6.2	10.6	12.1	13.6	15.2	16.4	21.8	24.6
OCD5	7.2	13.7	17.3	19.7	21.4	21.6	25.3	28.2
GFSI	8.4	13.7	16.9	20.5	21.0	21.3	24.4	26.2
HMNI	7.7	12.2	16.2	19.3	21.6	23.1	27.4	**23.8**
HWFI	11.1	15.6	18.5	20.6	22.0	21.3	25.6	24.7
EGRI	8.8	14.0	18.4	22.2	25.0	27.1	27.8	29.1
EMXI	8.7	12.0	13.2	14.8	17.6	18.8	**19.4**	**22.4**
CMCI	10.0	15.8	18.3	20.0	24.0	24.6	**21.0**	28.1
NVGI	8.6	14.1	16.3	15.6	**12.6**	**12.4**	**8.1**	**14.5**
AEMI	10.4	14.6	17.9	19.9	22.2	21.8	**18.4**	**22.9**
HCCA	7.5	11.4	15.8	17.5	18.0	18.1	24.0	26.4
FSSE	7.4	10.8	14.0	16.3	17.4	**16.3**	**20.6**	24.6
DSHP	7.4	12.8	16.0	16.6	16.9	**15.4**	**14.1**	**14.5**
LGEM	7.1	13.3	18.8	22.7	24.2	24.7	28.4	29.5
ICON	7.8	12.9	16.7	19.4	20.9	20.5	23.5	**22.8**
IVCN	7.8	12.2	15.5	17.4	18.4	18.3	**21.4**	**22.9**
IVDR	7.9	12.2	15.5	17.2	18.1	18.3	21.9	**23.4**
Forecasts	28	26	24	22	20	18	14	13

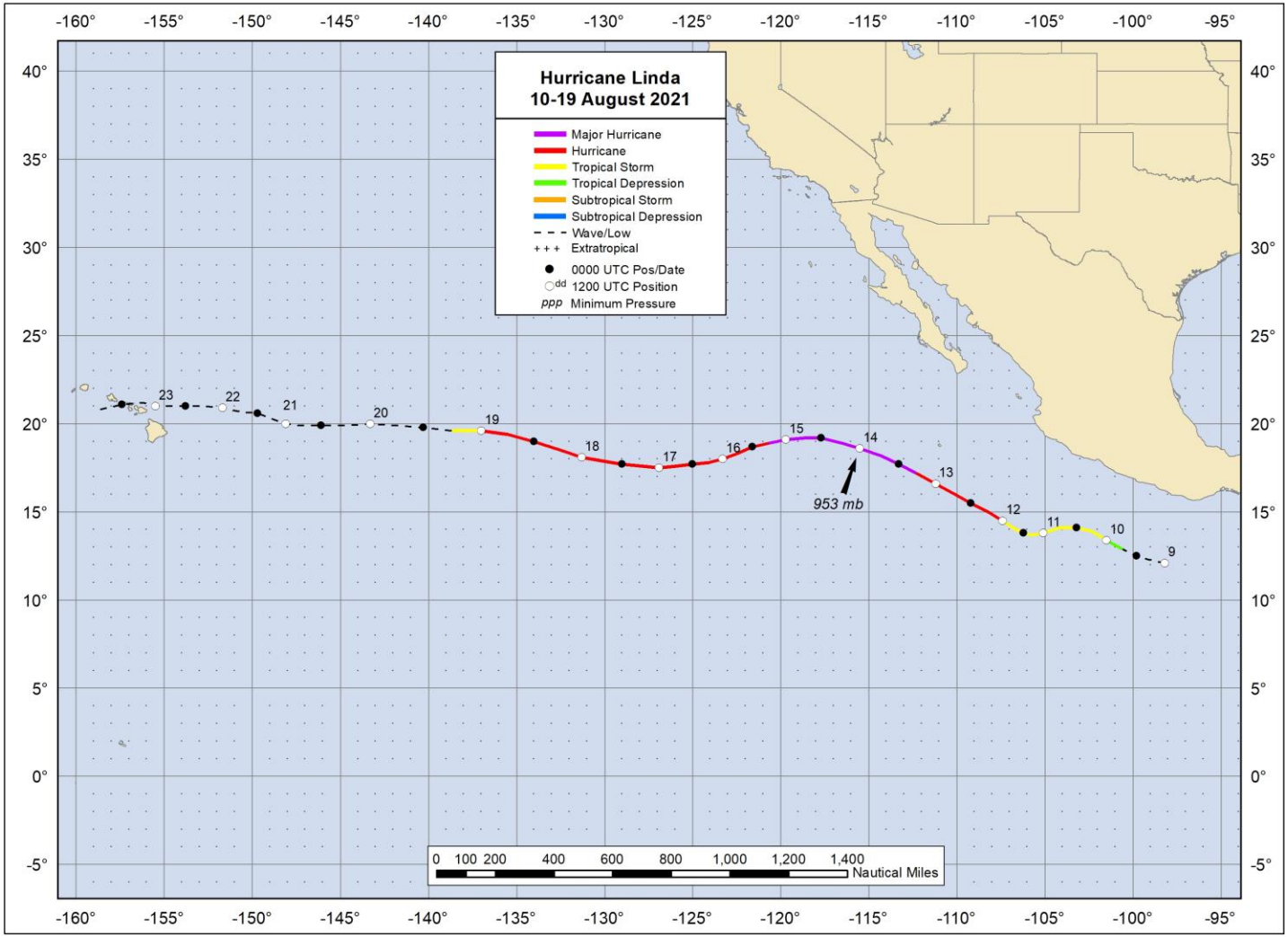

Figure 1. Best track positions for Hurricane Linda, 10–19 August 2021.

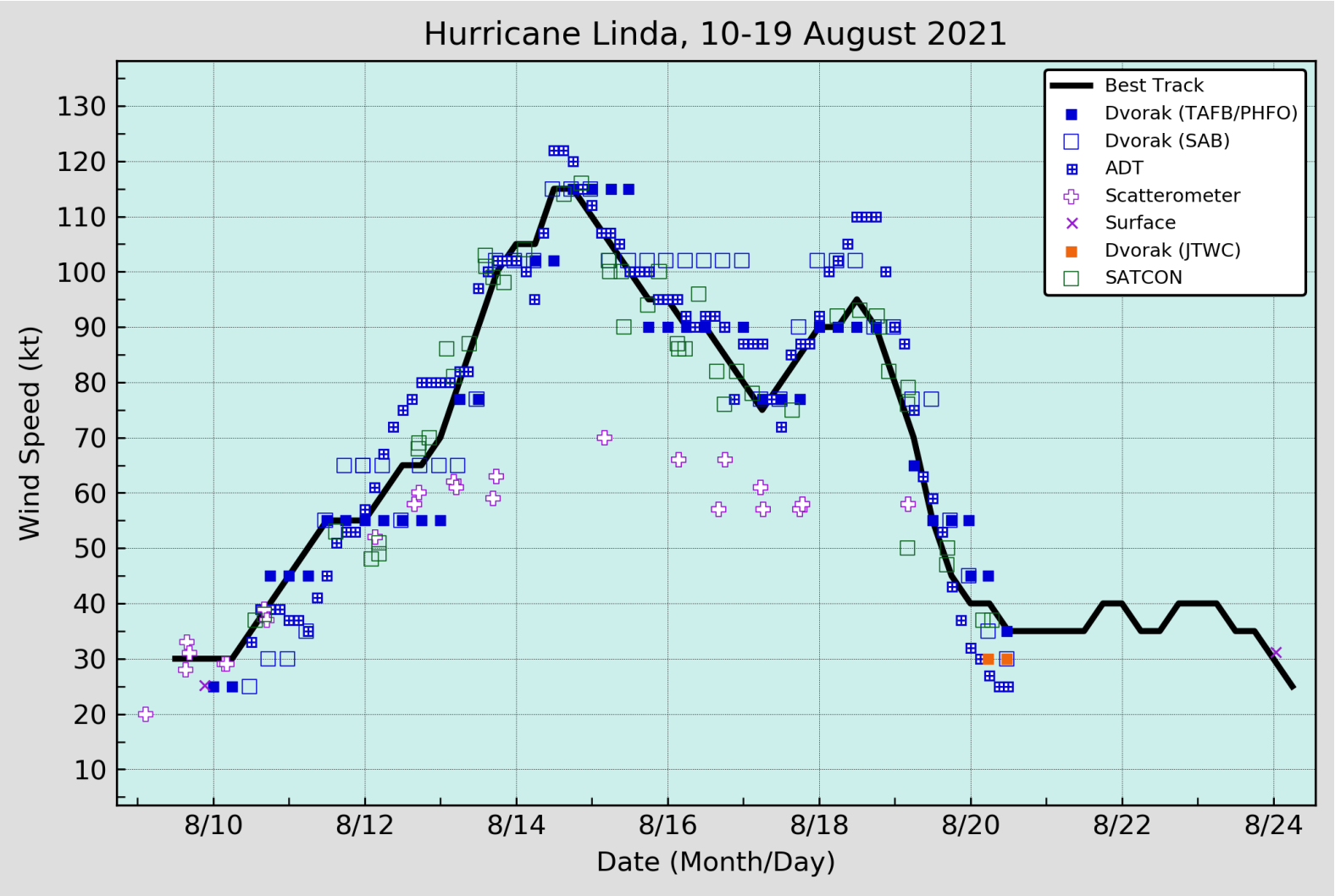

Figure 2. Selected wind observations and best track maximum sustained surface wind speed curve for Hurricane Linda, 10–19 August 2021. Advanced Dvorak Technique estimates represent the Current Intensity at the nominal observation time. SATCON intensity estimates are from the Cooperative Institute for Meteorological Satellite Studies. Dashed vertical lines correspond to 0000 UTC.

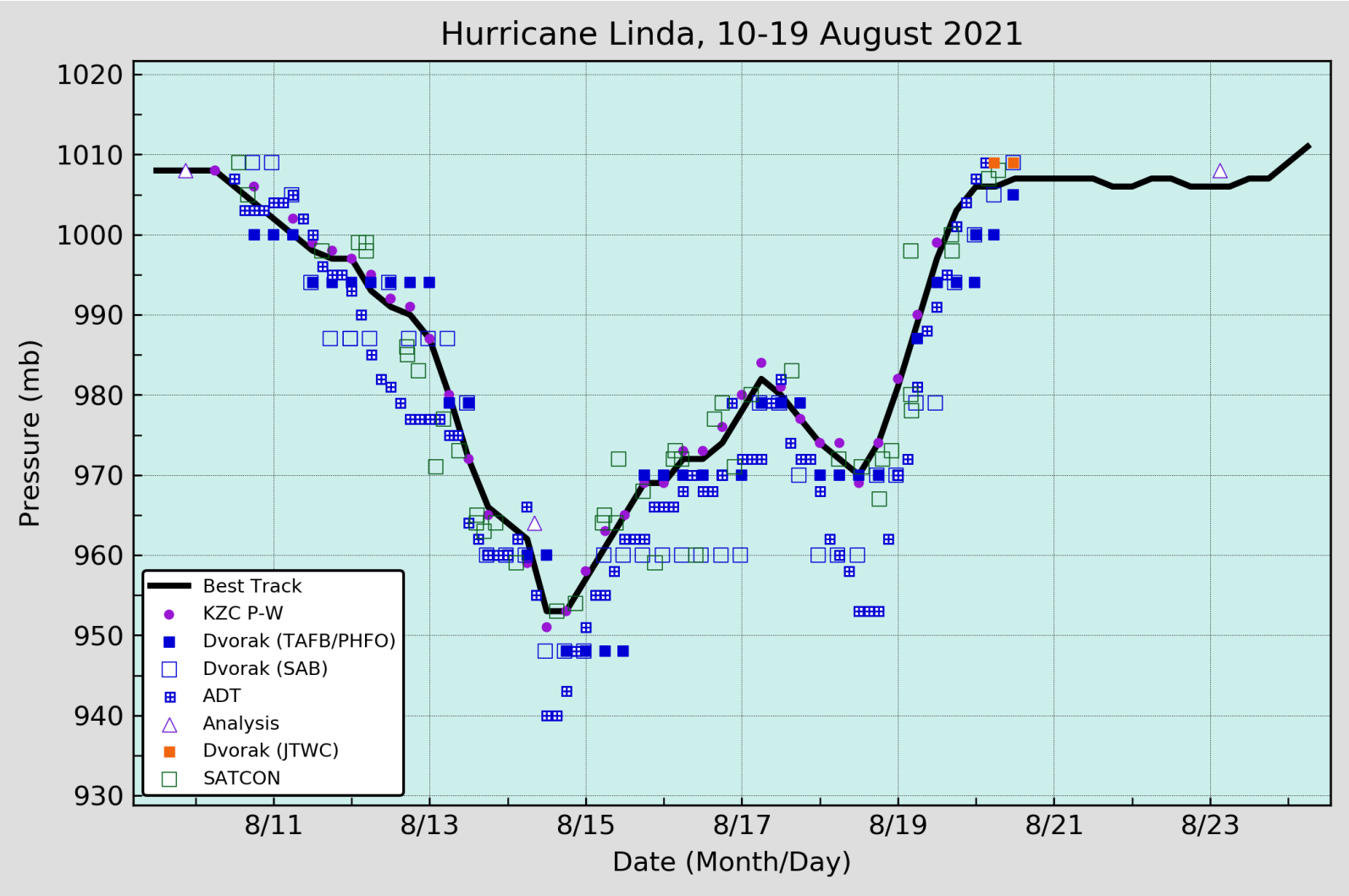

Figure 3. Selected pressure observations and best track minimum central pressure curve for Hurricane Linda, 10–19 August 2021. Advanced Dvorak Technique estimates represent the Current Intensity at the nominal observation time. SATCON intensity estimates are from the Cooperative Institute for Meteorological 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.

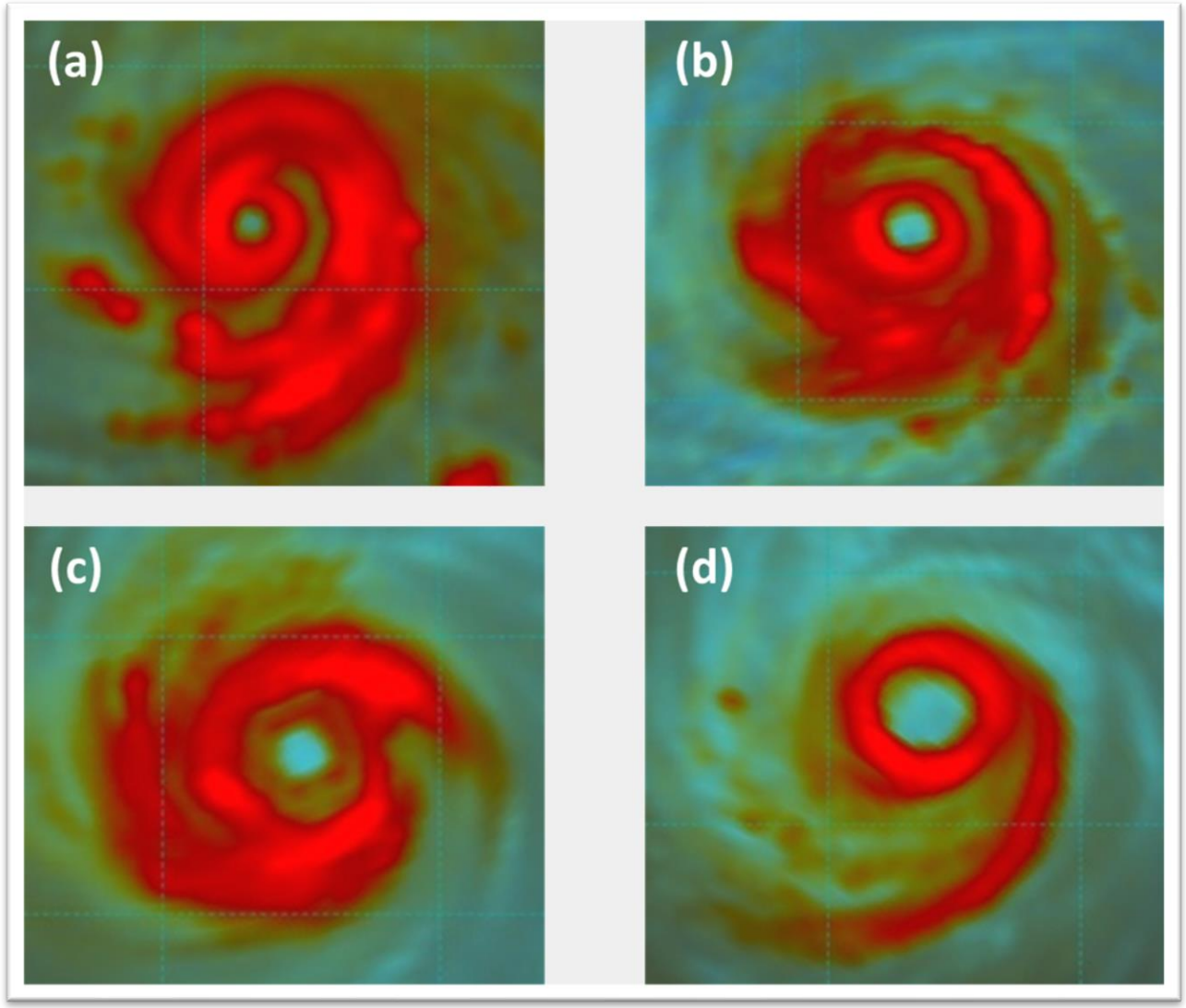

Figure 4. A series of Hurricane Linda microwave images during an eyewall replacement cycle. (a) 1208 UTC 14 August SSMIS image (91 GHz) with spiral rainbands around a small, well-defined eye. (b) 2107 UTC 14 August AMSR2 image (89 GHz) with a moat emerging between concentric eyewalls. (c) 0739 UTC 15 August GMI image (89 GHz) with the remnants of the old eyewall inside a larger eye. (d) 2057 UTC 15 August GMI imagery (89 GHz) with a large, consolidated eyewall.

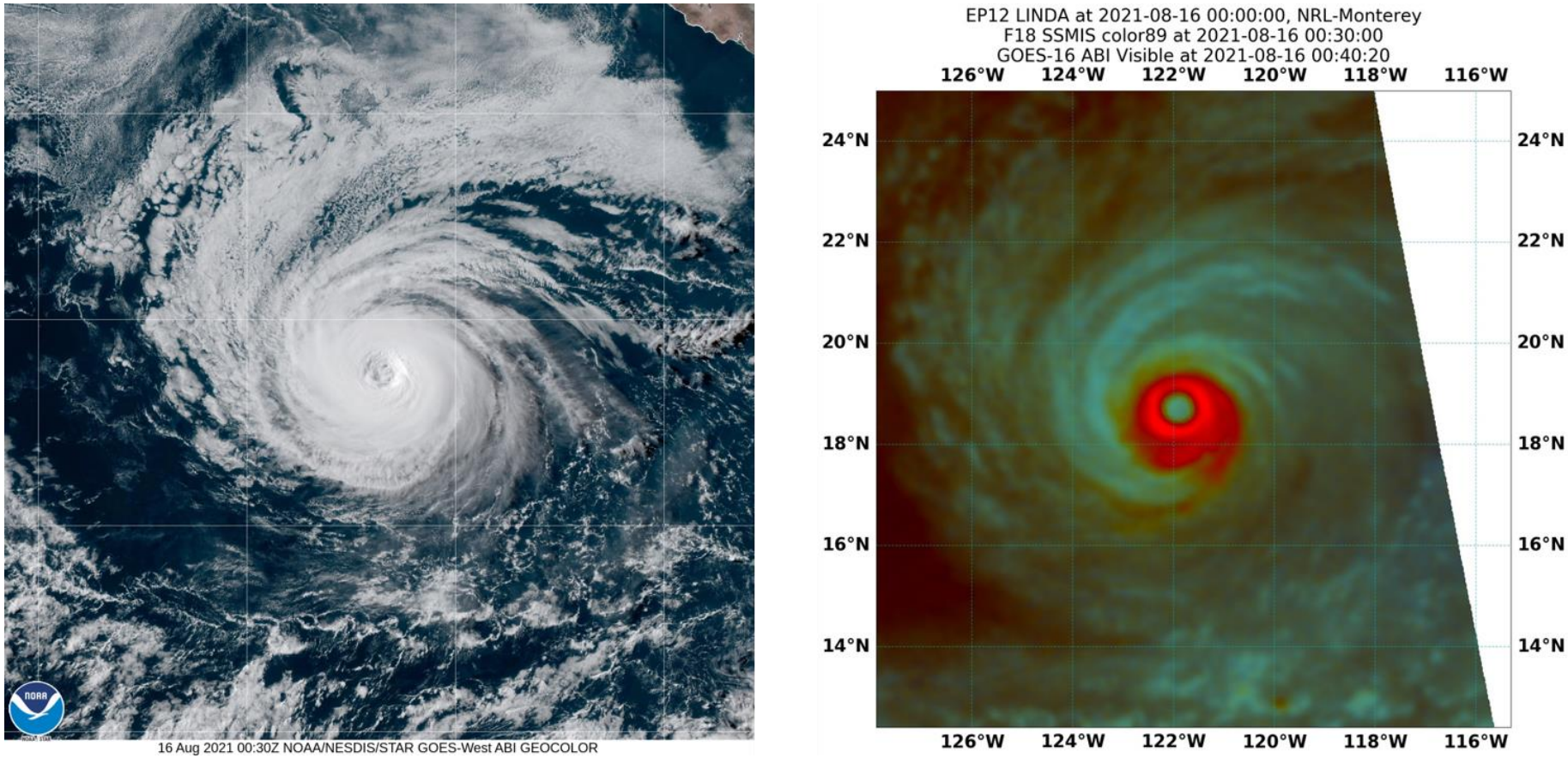

Figure 5. GOES-17 GeoColor image (left) and SSMIS 91 GHz microwave image (right) of Hurricane Linda at 0030 UTC 16 August. The hurricane exhibited annular characteristics, with a large (35–40 n mi wide) eye surrounded by a ring of deep convection and no banding features.

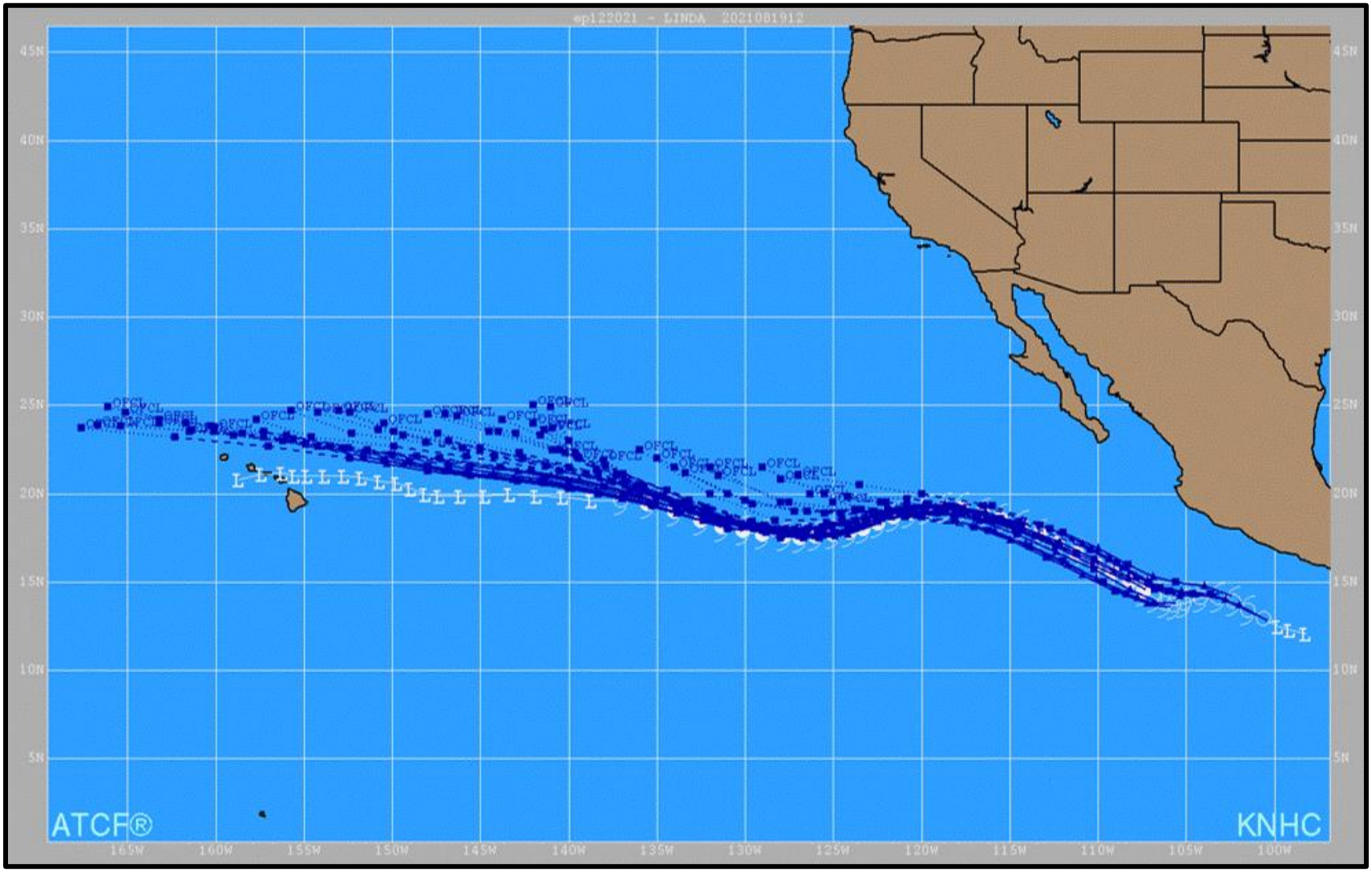

Figure 6. NHC five-day official track forecasts (blue lines) for Linda from 10–19 August 2021. The best track of Linda is indicated by the solid white line, with its position marked with a cyclone symbol at 6 h intervals.

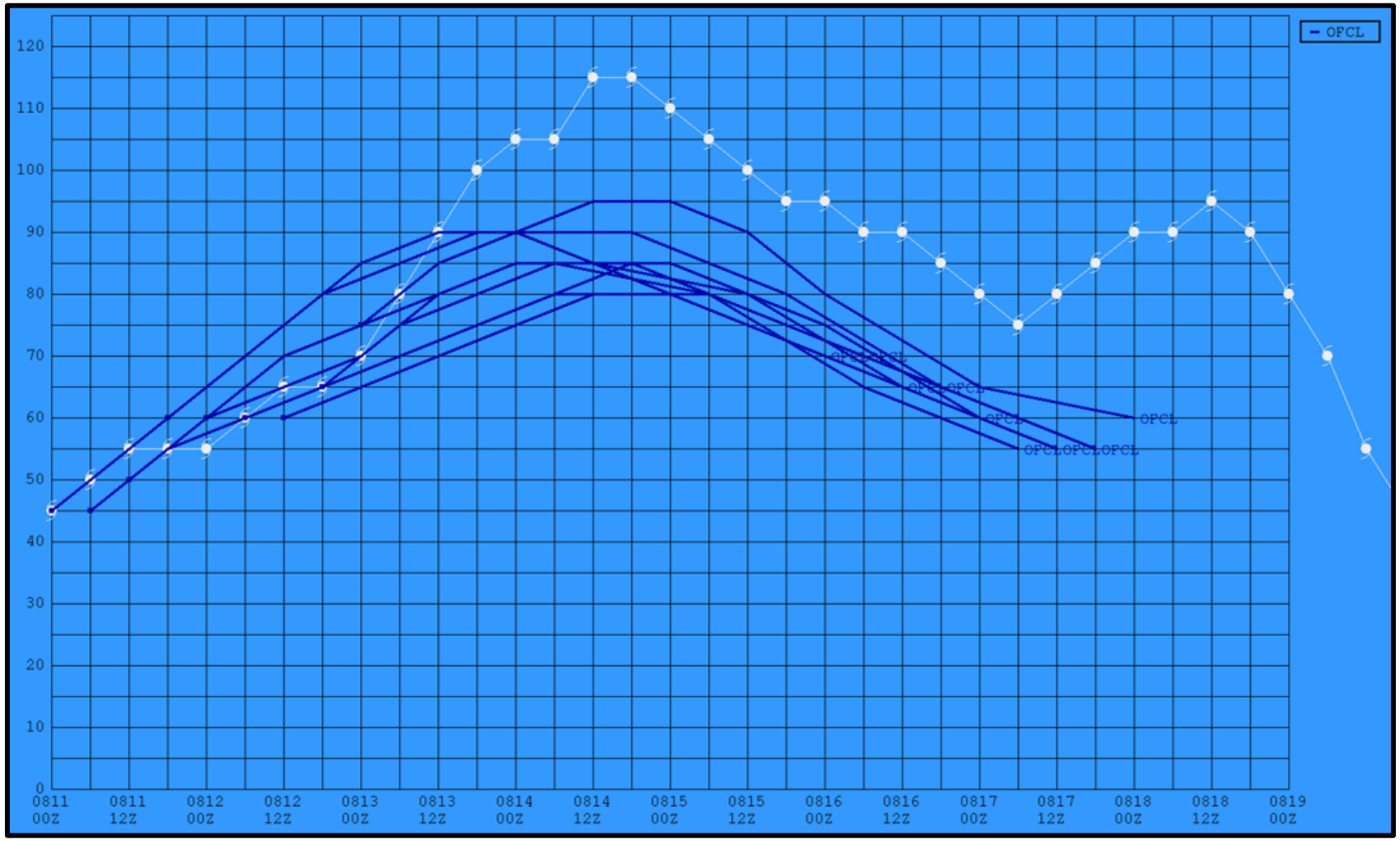

Figure 7. NHC five-day official intensity forecasts (blue lines) for Linda from 0000 UTC 11 August to 0000 UTC 13 August, prior to the onset of Linda's rapid intensification. The best track intensity (kt) is indicated by the solid white line, with intensity values marked with a cyclone symbol at 6 h intervals.