

iCYCLONE CHASE REPORT

storm	Hurricane FRANKLIN		
location	Vega de Alatorre, Veracruz, Mexico		
date	09-10 August 2017		
chasers	Josh Morgerman	author	Josh Morgerman

Location

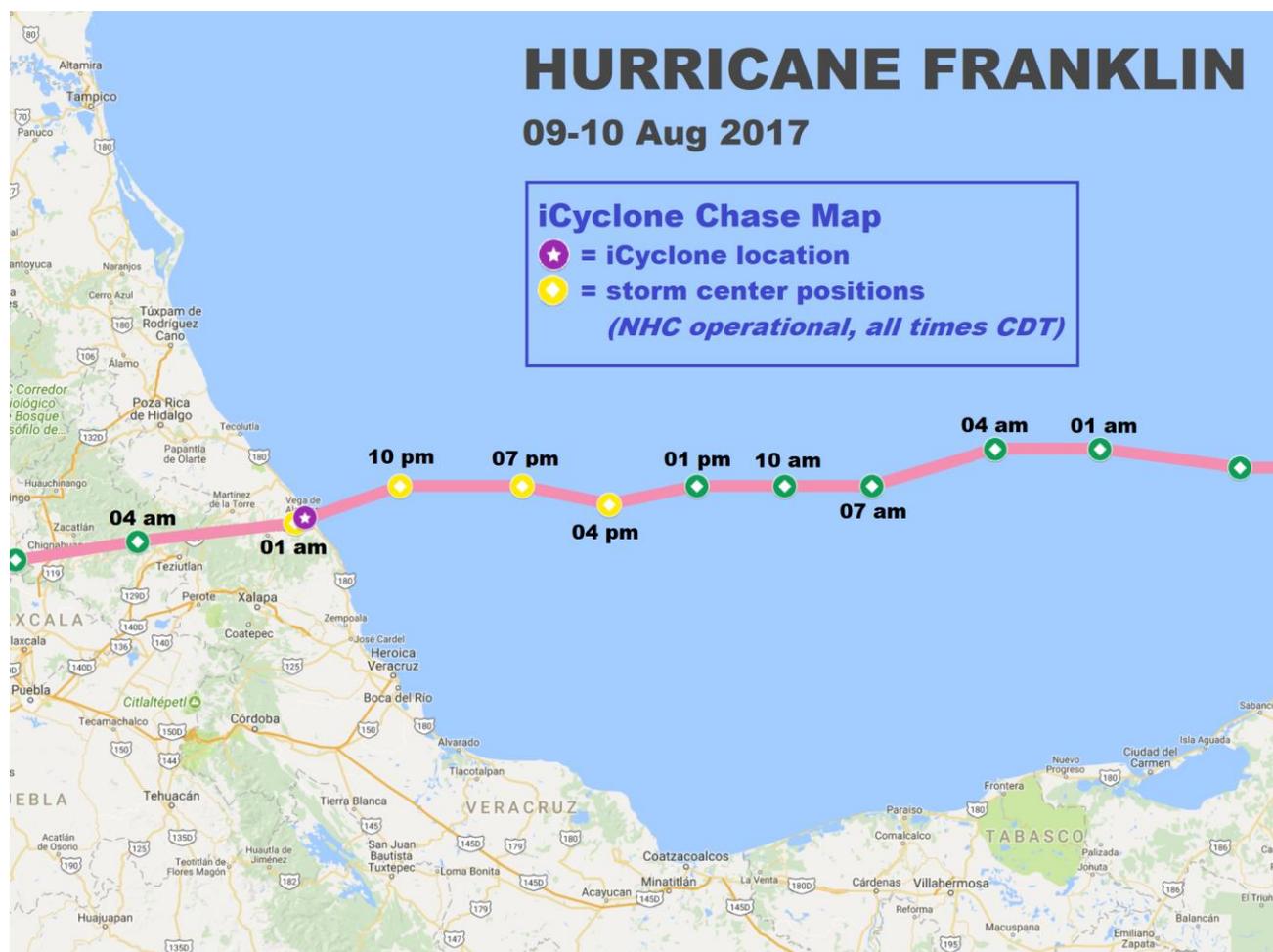
I observed the passage of **Hurricane FRANKLIN** in the small town of **Vega da Alatorre, Veracruz, Mexico**, at **20.03009 96.64112W**. This location is at a gas station on Highway 180, on the E edge of town, about 2 n mi from the ocean.

As per NHC advisory positions, this was extremely close to the cyclone’s track—less than **1 n mi N of FRANKLIN’s center** (at its point of closest approach).

I arrived at this location only a couple of hours before the arrival of the cyclone’s center, and I remained there until the core of the cyclone had passed.

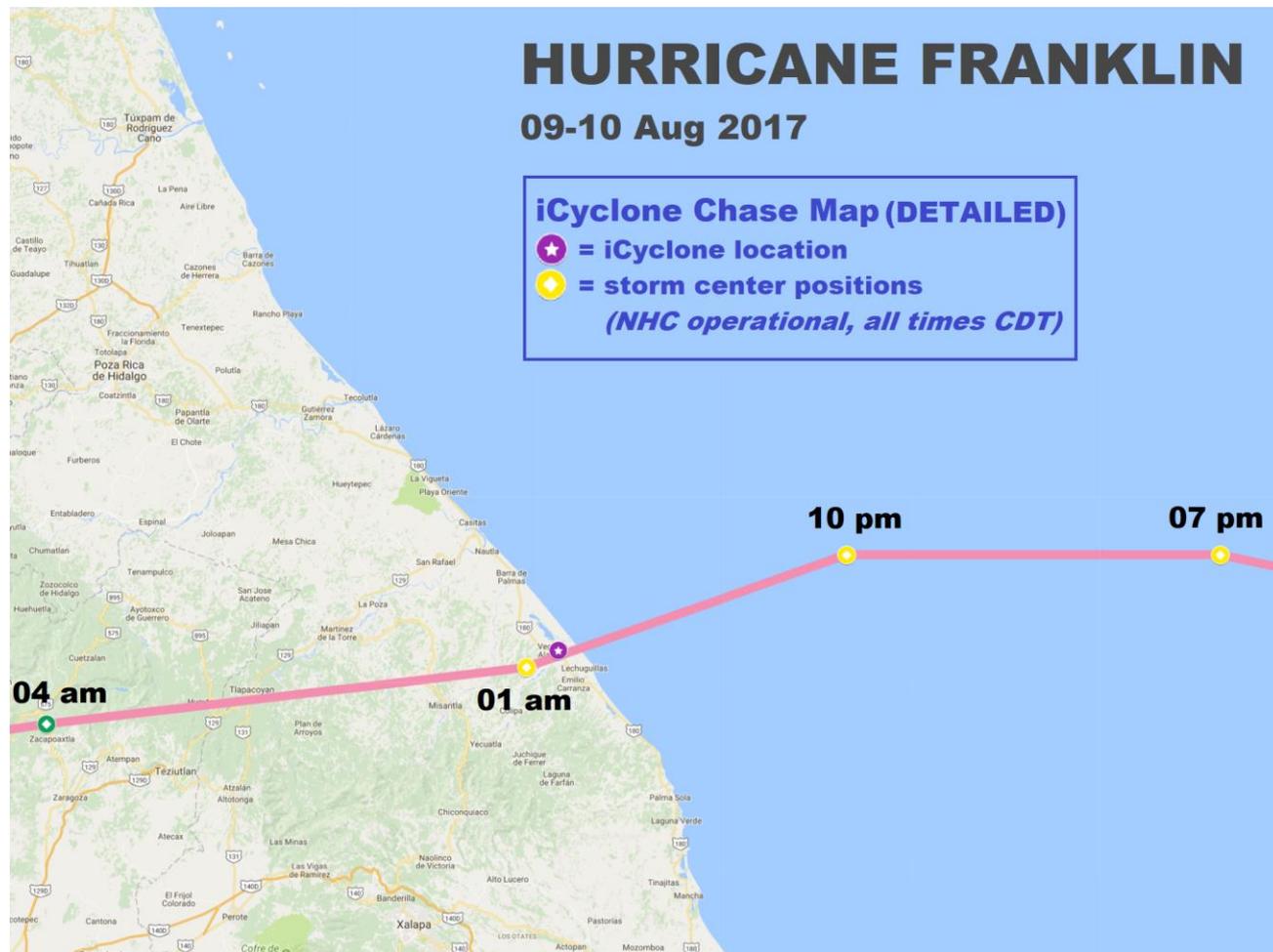
The **Chase Map** shows **my location** (**purple star**) in relation to **FRANKLIN’s center** (**yellow points**), as per NHC advisory positions. (**Chase Map (Detailed)** is a closer view.)

Figure 1: Chase Map



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Figure 2: Chase Map (Detailed)



Chronology

FRANKLIN made landfall very close to Vega de Alatorre. The hurricane’s eye passed directly over the town, resulting in a calm period of about a half hour.

Following are observations made in Vega de Alatorre, with color-coding to indicate passage of the **cyclone’s core** and **calm eye** over the location. All times are **CDT**:

- **11 pm.** Moderate rain, windy.
- **11:30 pm.** Wind becoming dangerously strong, power out (after multiple transformer explosions). Low howling sound. 996 mb & falling fast.
- **11:50 pm.** Light rain, very turbulent. Trees dancing wildly, debris flying, lots of clanking sounds. 992 mb & falling fast.
- **12 midnight.** Lull. 991 mb.
- **12:10 am.** Prolonged, pronounced calm. Can walk around parking lot without danger. ~990 mb.
- **12:25 am.** Periods of dead calm, breaks in clouds. Can hear dog barking in distance. Wind shifting S, clanking sound starting back up.
- **12:34 am.** Stormy conditions **suddenly & rapidly returning**. Winds from opposite direction. 995.4 mb & rising fast.
- **12:44 am.** Very stormy—heavy rain & high winds. Backside much stronger. 997.3 mb & rising.
- **1 am.** Much calmer—slacking off now. 1002.4 mb & rising fast.

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Key points:

- The **calm eye** lasted little more than a **half hour**—from ~12 midnight to 12:33 am.
- The lowest air pressure, **990.4 mb**, occurred during the eye, at **12:09 am CDT**.
- **The cyclone's core was asymmetric:**
 - **The frontside** (before the eye) was quite “dry,” bringing only light/moderate rain and relatively moderate winds.
 - **The backside** (after the eye) was **much stronger**—with extremely heavy rain and much higher winds.
- **The cyclone's core was small.** The entire core (including the calm eye) passed this location in little more than **1.5 hours**.
 - **The vigorous backside was especially quick**—just one, intense 25-min burst.

See more below Re: instrument calibration and data collection.

Air Pressure Data

I collected quality-controlled air-pressure data with a single Kestrel 4500.

The device was in my car in the gas-station parking lot where I rode out the storm. I moved the car a couple of times within the parking lot—however, it's unlikely this had any material impact on the data, since the changes in distance were very small and the parking lot was of uniform elevation.

The sampling rate was one reading per minute.

Calibration

Geographer James Hyde checked local data and estimated the ground elevation at this location to be **65 ft**—so the device was calibrated for sea-level pressure using a **reference altitude of 65 ft**.

Data

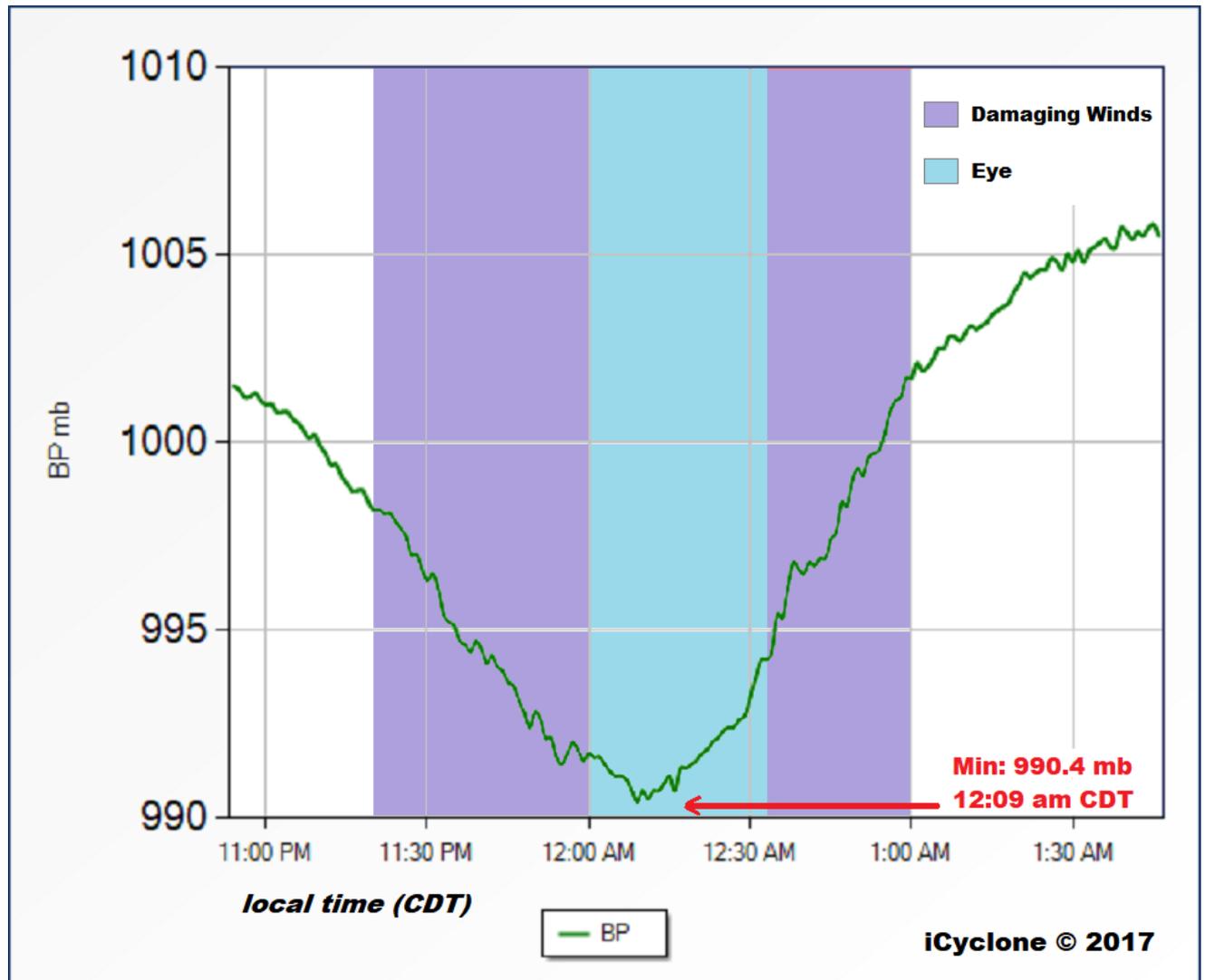
The minimum pressure of **990.4 mb** occurred at **12:09 am CDT (0509Z)**. This was during the calm eye.

The complete data are graphed in **Figure 3**, below.

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Figure 3: Barogram

Air-pressure data reveal the minimum value of 990.4 mb occurred at 12:09 am, as the eye passed over Vega de Alatorre.



HURRICANE FRANKLIN: 09-10 Aug 2017

Vega de Alatorre, Veracruz, Mexico

20.03009N 96.64112W – ref el 65 ft

Damage

Damage appeared to be light—consisting mostly of downed trees, torn branches, and damage to signs and product cases at gas stations.

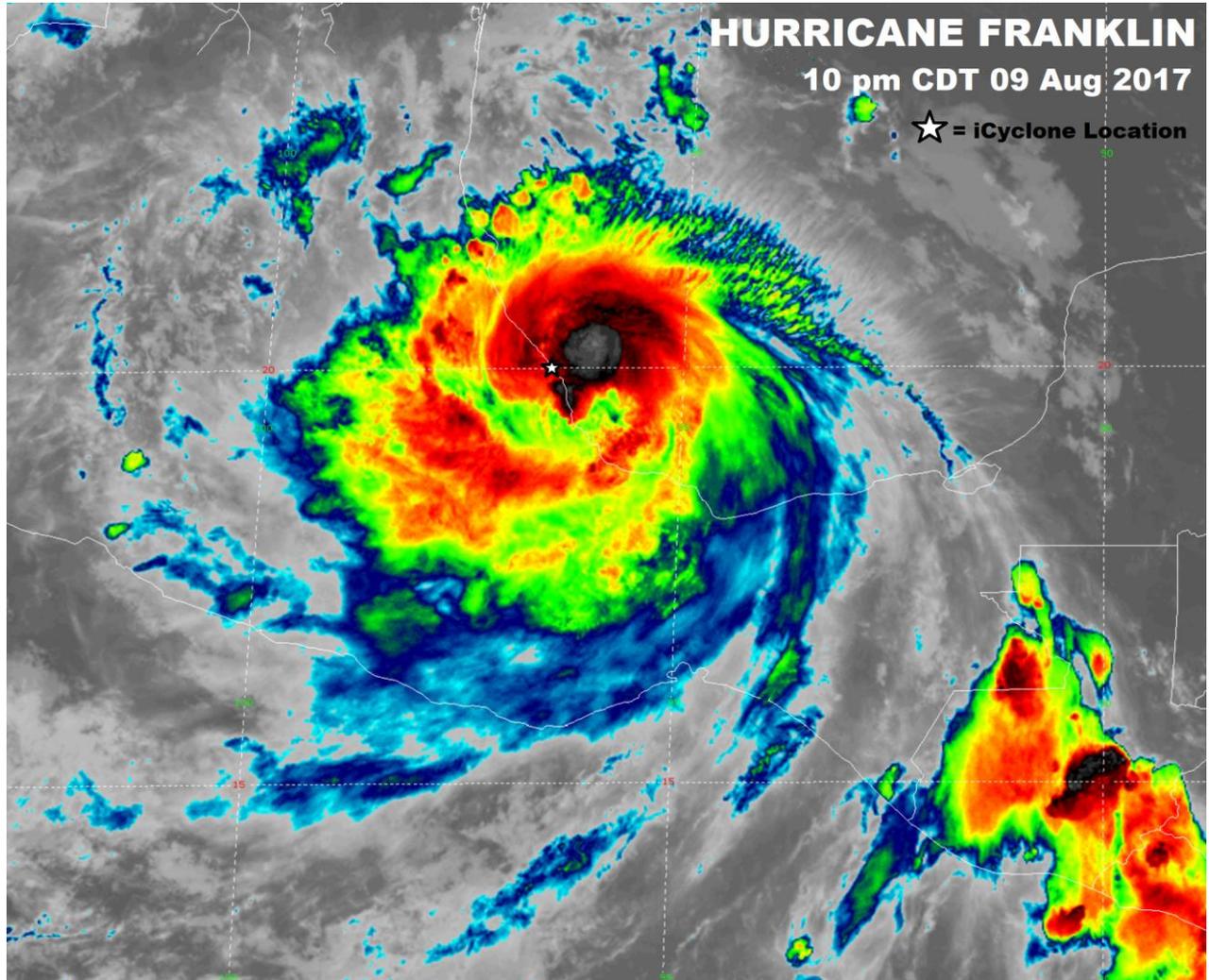
Strong winds were apparently confined very close to the center. For example, Palma Sola—just 19 n mi SE of the landfall point—had no apparent wind damage.

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Imagery

Figure 4: Hurricane approaching Veracruz coast.

This infrared shot shows Hurricane FRANKLIN at 10 pm CDT 09 Aug 2017 (03Z 10 Aug)—just a few hours before landfall. iCyclone (white star) was directly in the path of the calm eye.



Questions or Feedback?

Get in touch:

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