Best Track Committee Re-Analysis Comments for 1966
(Replies provided in bold face – Chris Landsea – April 2020)

General comments:

1. Please re-examine all of the intensity values where aircraft-based eye diameters were used to calculate the radius of maximum winds (RMW). As seen in the 1965 data, there are several cases in the data set where there are fix-to-fix or aircraft-to-aircraft inconsistencies in the eye diameters. One of the more glaring examples is from Hurricane Inez on 8-9 October, when during an 18-h period the eye diameters were reported (in n mi) as 12, 30, 40, 10, 10, and 42x52. The shrinking from 40 to 10 n mi occurred during a 3 hour period, which would be a bit fast for a normal eyewall contraction.

Some of these changes are likely due to eyewall replacement cycles, and some such cycles have been noted in the write-ups. However, is it possible that other are resulting from the aircraft reporting wind-based eyes on some fixes and radar-based eyes on others? Please check this when the data/metadata allows, and also when it is possible please check the aircraft-based RMWs against RMWs based on surface observations (e. g. Inez moving through the Florida Keys).

These issues have been addressed for each system. Certainly, noise in the RMW estimates from aircraft reconnaissance may be due to some using radar eyes and others using surface winds to determine the eye size. The standard operating procedure was to use the radar eye diameter. The issue may also have been when there were concentric eyewalls in reality that the recon report described only the inner, or perhaps, only the outer eyewall diameter. (Keep in mind that 1966 was a couple decades before concentric eyewall cycles were understood.) For Inez in the Keys, estimated RMW obtained from North Key Largo, Flamingo, and Tavernier minimum pressure and maximum wind observations range from 10 to 20 nm. These are consistent with the recon derived values. It is suspected that on the 9th because the central pressure stopped dropping and the eye diameter abruptly increased, that Inez went through a concentric eyewall cycle.

1a. There above RMW issues, along with some fix-to-fix variations in the central pressures, lead to a fair number of 5 kt ups and downs in the best track intensities, some of which are noted below. Please apply some smoothing to these intensities where necessary.

These issues have been addressed for each system.

2. Since we are now entering where tropical depression are being included in HURDAT2, could the metadata please include a reference to whatever operational designation the system was given?

Yes, these are now included.

3. Could there also be a statement that at this stage of the re-analysis remnant lows are now being included in HURDAT2, but pre-cursor lows for tropical depressions are not? Note: pre-cursor extratropical lows for system that underwent subtropical or tropical transition are included and should continue to be included.

Agreed. Where satellite imagery provides evidence for remnant low status, these can now be so included.

4. Since many of the Tropical Cyclone Discussions of the season are available in the storm wallets, have they been fully examined for possible additional data?

Yes, all of the Tropical Cyclone Discussions have been mined for additional information.

5. There are synoptic observations, particularly from Cuba, which need to be examined to see if any additional information (including pressures) can be obtained for cyclones like Inez. However, a decoder for the old synoptic code is needed. Please obtain the decoder for this period and examine the available data.

Decoding individual hourly observations that exist in the Storm Wallets is above and beyond the scope of this project. These observations were already used operationally, then used for the Prelim Report, then used for the Monthly Weather Review seasonal summary. All collected observations that are relevant have been described in these documents.

1966 Alma (AL011966):

1. Please better justify the delayed genesis on 4 June. While the Committee agrees that it is not the normal current practice to start depressions over the mountainous terrain of Central America, it is also not a hard and fast rule. In addition, the data from the Bay Islands on the 0000 UTC 5 September microfilm map suggests the center was over water or near the northern coast of Honduras at that time. At the very least, genesis should be no later than that, and it should be left at the original time unless a better case can be made.

Agreed to begin genesis at 5th 00Z right along the northern coast of Honduras near 16.0N 84.7W.

2. Please re-examine the RMWs and proposed intensities on 7-8 June as suggested by general point 1. While some reduction in the original intensities seems justified based on the pressures, the uncertainties in the RMW size may preclude using them for adjustments.

Proposed intensities unchanged on the 7th to early on the 8th, as the RMW was consistently larger than typical during these times despite the uncertainty.

3. Please re-examine both the data and the write-up of Alma's passage across Cuba. First, the text states that neither landfall was accompanied by observations near the center, which contradicts the "dead calm" reported at Neuva Gerona in the Land Highlights section. Second, the storm wallet has a significant amount of coded Cuban data, but it needs a decoder to read properly. Please find the decoder and add this data to the write-up when appropriate. Third, please delete the reference to the 95 kt gust in Havana unless it is being used to make an intensity estimate.

The writeup is clarified to say that there were no quantitative observations (max winds or center pressure) near the landfalls in Cuba. Decoding individual hourly observations that exist in the Storm Wallets is above and beyond the scope of this project. They have already been decoded and used operationally, as well as in the Prelim Report and the Monthly Weather Review write-ups. The 95 kt gust reference has been deleted.

4. Please re-examine the proposed peak intensity of Alma as it passed near the Dry Tortugas. Also, please make a significant re-write of the metadata discussion, which appears to state that both the 970 mb pressure at Dry Tortugas and the nearby 975 mb aircraft fix pressure are unrepresentative of the central pressure. The re-examination should include the following:

4a. Please obtain the raw data record for the Dry Tortugas station, which will help better establish the sequence of events there. While the Committee concurs with a **possible** mesocyclone passage, it cannot sign off on disregarding the reported 970 mb pressure without better evidence that it is unrepresentative. Indeed, since the strongest winds were recorded only 7 minutes after the lowest pressure, it suggests the possibility that the central pressure was lower than 970 mb. The Committee notes that the Dry Tortugas record may also help determine the actual RMW give the differences between the eye size reported by the Key West radar and the aircraft, and it would also help determine what the wind speed was at the time of lowest pressure.

The raw data for Dry Tortagas was already obtained and included in the binder. Unfortunately, it only contains the 6-hr observations taken, not the minimum pressure or maximum winds. So no other details are available about Dry Tortugas' minimum pressure and maximum winds. The 970 mb, which already was included as a central pressure in HURDAT2, is now retained as a central pressure at 18Z. The possibility that an eyewall mesovortex was responsible for the 110 kt wind report being supported by the very short period – 7 minutes - between the lowest pressure observed and the maximum wind report is now also mentioned.

4b. Please state what is the 1-min average wind for a 110 kt fast-mile wind.

110 kt fastest mile converts to a 1 min sustained wind of 105 kt.

4c. Please try to find the data from the aircraft mission. There are only a few items available in the wallet, and the post-flight summary (see below) is unfortunately garbled. It is noted that while no 700 mb temperature is available to properly employ today's extrapolation formulas, the reported 700 mb height of 2874 m is reasonable for a pressure of 975 mb.

Unfortunately, no other information from the aircraft mission is available. The statement in he post-flight summary from the aircraft that "The eye itself was rather strange. It was well defined by the wall cloud with radar. There were numerous occasions when the surface winds were readily visible and there were hurricane force winds only a few miles radius from the eye" is added into the writeup as it also is suggestive of an eyewall mesovortex.

MRMHRCA DE HRCP I HAVE THE SUMMARY BUT MY PLAYBACK HERE SHOWS GARBLD
SPOTS AGAIN AND I KNOW I WAS CAREFUL BUT HERE IT GOES ANYWAY
↑↑↑↑↑↑↑

MHRC HERE AND SHOOTS

GULL FOUR ALMA 16 ↑ POST FLIGHT SUMMARY

DEPARTED RAMEY AT 08/1405Z. FLEW AT 500 MB TO RECON STORM AS IT
PASSED NORTH OF CUBA. CIRRUS WAS THIN OVERCAST UNTIL 23.5N® 75.7W
BECOMMING CIRROSTRATUS AND THICHENING. ENCOUNTERED ALTO CUMULUS
AND ALTO STRATUS LAYER AT 22.7N® 73.8W WHICH BECAME INSTRUMENT
CONDITIONS AT 23.5N® 75.7W. PASSING OVER ANDROS ISLAND®WE
BROKE OUT AND SURFACE WAS VISIBLE MUCH OF THE TIME.
DESCENDED TO 700MB AT 80.5W. CONVECTIVE ACTIVITY PREDOMINATED
[illegible]
WALL CLOUD WAS ENTERED WITH MODERATE RAIN AND ENCOUNTERED MODERATE
TURBULENCE JUST INSIDE THE EYE.
THE EYE ITSELF WAS RATHER STRANGE. IT WAS WELL DEFINED BY THE WALL
CLOUD WITH RADAR. THERE WERE NUMEROUS OCCASIONS WHEN THE SURFACE
WINDS WERE READILY VISIBLE AND THERE WERE HURRICANE FORCE WINDS
ONLY A FEW MILES RADIUS FROM THE EYE. THE EYE WAS FINALLY
[illegible]
S
SSU IQJGOHE SURFACEEEYE. THE

R

E PATTERN WAS
[illegible] INSIDE THE EYE. THE DIAMETER OF THE SURFACE WIND EYE

O
BE VERY SMALL.
THE OVERALL LOWER CLOUD COVERAGE WAS ABOUT 6/8 STRATOCUMULUS®
BUT MANY AREAS CONTAINED ONLY 1/8. DIRECTLY OVER THE CENTER THE
[illegible] BECAME THIN. SEVERAL TIMES NEAR THE INSIDE OF THE WALL

E ENCOUNTERED MODERATE TURBULENCE.
THE WALL CLOUD WAS OVAL SHAPE WITH THE LONG AXIS BEARING
07

0↑250DEGREES AND 60 MILE DIAMETER. THE SHORT AXIS WAS 40 MILES
DIAMETER.
MAX SFC WINDS 80 KNTS AT 15 MILES EAST OF EYE. MAX FLT LEVEL WIND
[illegible] AS WE ENTERED THE STORM. MINIMUM 700MB HGT WAS 2874

S AND COMPUTED SLP WAS 975MB.
LEAVING THE STORM AT FLT LEVEL 110 WE ENCOUNTERED FEEDER BAND AT
24.2N® 81.5W WITH HEAVY RAIN AND SEVERAL JOLTS OF MODERATE PLUS
TURBULENCE. RETURNED BY SAME ROUTE AND ALTITUDE TO RAMEY WITH
CONDITIONS MUCH THE SAME. LANDED RAMEY 2215Z.

100MPH – 75

END OF SUMMARY M

5. Please re-examine the landfall intensity in the Florida Panhandle. On one side, there is a 982 mb pressure at St. Marks measured 5 minutes before the dead calm arrived, suggesting it was likely inside the RMW. On the other, there is an aircraft fix one hour before landfall with a dropsonde pressure of 977 mb and an extrapolated pressure of 976 mb that suggests the dropsonde pressure is reasonable. How does the fix position reported by the aircraft compare to the location

of St. Marks, and is it possible that St. Marks did not sample the lowest pressure? If this is the case, please use a landfall intensity more based on the aircraft pressure.

Agreed that it is possible that the 982 mb minimum pressure measured at St. Marks may not have been a central pressure, though it was inside the RMW. The fix position from the aircraft was about 25 nm south of St. Marks. Given the consistency of the dropsonde pressure and extrapolated pressure from the aircraft, 977 mb is used as the central pressure at landfall. The intensity at landfall is 75 kt Category 1 hurricane.

6. The Committee concurs with the earlier proposed time of extratropical transition. However, despite the temperature gradient across the system apparent in the various analyses, the appearance of the system in satellite imagery looks a lot like a tropical cyclone. Please note this aspect of the system more in the write-up.

Agreed. So noted.

1966 Becky (AL021966):

1. The Committee concurs with the proposed changes to this system, with one exception noted in the next point.

Agreed.

2. While the Committee general agrees with the subtropical storm designation on 30 June, the satellite imagery for that day is less than impressive in terms of convection. It is recommended that the subtropical cyclone status be delayed until 1800 UTC that day, which should be after this image.

Agreed.

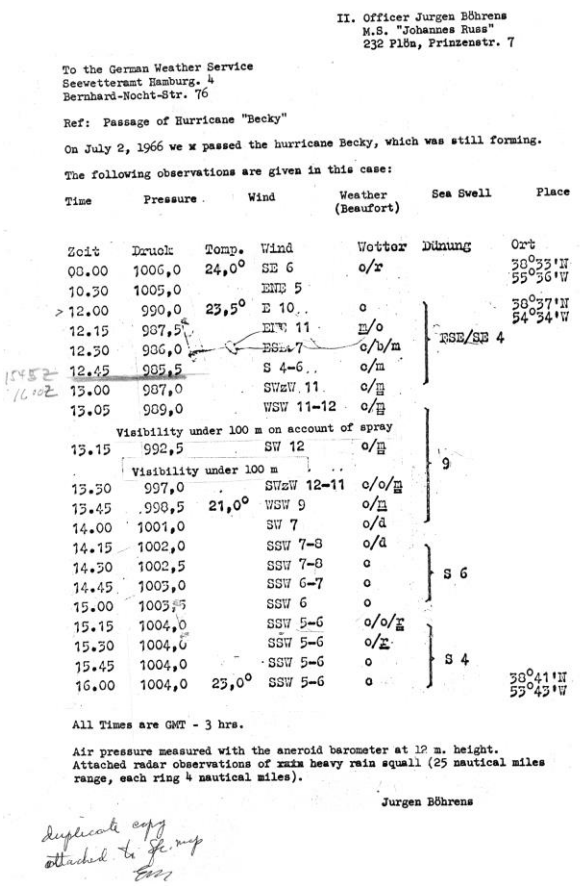
3. There are a couple of typos on the re-analysis paragraph for 1 July: First, there is an entry for June 1st that should probably be July 1st. Second, isotherm should probably be isothermal.

Corrected.

4. The minimum pressure reported by the *Johannes Russ* on 2 July was 985.5 mb and while the ship log clearly shows it was inside the RMW at the time of the minimum pressure, the winds were not calm (see below). Please make the write-up consistent on the minimum pressure and better highlight how this was the record of a good center encounter.

The minimum pressure of 986 mb was measured at 1545Z inside the RMW, along with estimated surface winds near 20 kt (Beaufort 4-6), thus a central pressure of 984 mb is analyzed at this time and added to HURDAT in the time slot of 18Z on the 2nd. Central pressures of 985 mb and 986 mb were present in the original HURDAT at

12Z and 18Z, respectively, on the 2nd, and have been removed based on the ship data available.



II. Officer Jurgen Böhrens
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Ref: Passage of Hurricane "Becky"

On July 2, 1966 we x passed the hurricane Becky, which was still forming.

The following observations are given in this case:

Time	Pressure		Wind	Weather (Beaufort)	Sea Swell	Place
Zeit	Druck	Temp.	Wind	Wetter	Dünung	Ort
00.00	1006,0	24,0°	SE 6	o/r		30°33'N 55°36'W
10.30	1005,0		ENE 5			
12.00	990,0	23,5°	E 10	o		30°37'N 54°34'W
12.15	987,5		ENE 11	m/o	ESE/SE 4	
12.30	986,0		ESE 7	o/b/m		
12.45	985,5		S 4-6	o/m		
13.00	987,0		SWzW 11	o/m		
13.05	989,0		WSW 11-12	o/m		
	Visibility under 100 m on account of spray					
13.15	992,5		SW 12	o/m	9	
	Visibility under 100 m					
13.30	997,0		SWzW 12-11	o/o/m		
13.45	998,5	21,0°	WSW 9	o/m		
14.00	1001,0		SW 7	o/d		
14.15	1002,0		SSW 7-8	o/d		
14.30	1002,5		SSW 7-8	o	S 6	
14.45	1003,0		SSW 6-7	o		
15.00	1003,5		SSW 6	o		
15.15	1004,0		SSW 5-6	o/o/m		
15.30	1004,0		SSW 5-6	o/m		
15.45	1004,0		SSW 5-6	o	S 4	
16.00	1004,0	25,0°	SSW 5-6	o		30°41'N 55°43'W

All Times are GMT - 3 hrs.

Air pressure measured with the aneroid barometer at 12 m. height.
Attached radar observations of xxix heavy rain squall (25 nautical miles range, each ring 4 nautical miles).

Jurgen Böhrens

duplicate copy attached to ships rep

1966 Celia (AL031966):

1. Is there any information or input from Canada on the last part of Celia's life?

The Canadian Hurricane Center has no additional information available for the extratropical cyclone portion of Celia's track.

2. The Committee otherwise concurs with the proposed changes.

Agreed.

1966 Dorothy (AL041966):

1. Please include the imagery and the analyses from Erickson's 1967 Monthly Weather review (MWR) paper on Dorothy in the digital collection.

Done.

2. The Erickson paper states that during the early part of its life Dorothy had mixed cyclone characteristics, and the satellite images in the paper are that of a classic subtropical cyclone evolution from 22-24 July. In light of the subtropical phase assigned to Becky earlier in this season, please assign a subtropical phase to Dorothy for an appropriate period. Please also strengthen the discussion of the mixed characteristics in the write-up.

Agreed. A subtropical phase from the 21st to the 23rd has now been added in.

3. Otherwise, the Committee concurs with the proposed changes.

Agreed.

1966 Ella (AL051966):

1. The storm wallet for Ella has data from apparent aircraft missions into the system on 22 and 23 July. Please incorporate this data into the re-analysis if appropriate.

The missions on the 22nd and 23rd were unable to close off the vortex, had peak visual winds of 25 kt, and lowest pressure of 1012 and 1010 mb, respectively. These are now added into the writeup.

2. Please better justify the reduction in intensity to 35 kt. Given the multiple ship reports of 35 kt, the Committee thinks that 40 kt or even the original 45 kt is more appropriate.

Agreed to go with a 40 kt intensity peak on the 26th.

3. The Committee otherwise concurs with the proposed changes.

Agreed.

1966 Faith (AL061966):

1. The Committee notes conflicting data for the first aircraft fix at 2025 UTC 23 August. The penetration was made at low level with a reported central pressure of 984 mb. After a subsequent climb to 700 mb, a dropsonde measured 992 mb. Unfortunately, there is insufficient data to make a quality control check on the drop. However, the 984 mb value was reported in the post-flight summary. Please re-examine the proposed intensities based on this fix.

Agreed. The intensity is boosted from the suggested 65 kt up to 70 kt.

2. The Committee concurs with the weakening to a tropical storm shown in 26 August. It does, however, request a re-examination of the increase back to a hurricane at 0000 UTC 27

August. The fix log has a pressure of 987 mb for the aircraft fix at this time. However, it appears to be a radar fix and not a penetration fix, and the coded fix form has nothing that indicates a 987 mb pressure. Given the reported pressures before and after this fix, the 987 mb may be incorrect.

Agreed. The 987 mb fix has been removed. This keeps the system as a tropical storm at both 00 and 06Z on the 27th.

3. The proposed intensity reduction to 80 kt at 0600 UTC 30 August is based on a 970 mb pressure on the fix log. However, the coded data indicates that the extrapolated pressure for this fix is 966 mb and that there was a dropsonde measurement of 965 mb. The committee recommends an intensity of at least 85 kt at this time based on these lower pressure.

Agreed, so changed.

4. Please smooth through the short-lived 5 kt reduction in intensity on 2 September. This is based on a 2 mb central pressure rise, and the Committee does not believe the rise justifies the reduction. In addition, satellite imagery shows an eye this day that was not present the day before, which also argues against any weakening.

Agreed, so changed.

5. The Committee concurs with the extratropical transition and the rest of the proposed changes.

Agreed.

1966 Greta (AL071966):

1. While the winds are only 15 kt, there is a ship with call sign GNDE on both the microfilm and Historical Weather Map series that reported 1006 mb. Was this factored into the re-analysis?

This ship reported very low pressures not just at 12Z on the 2nd (1006 mb), but also at 18Z (1003 mb) and 00Z/3rd (1004 mb). The "?" notation on the microfilm indicates their skepticism with the value. Looks like the ship was 5 to 10 mb biased too low. This is now so indicated in the writeup.

2. Given that the aircraft missions on 7 September were able to fix at least a low pressure center, the Committee would prefer the original time of dissipation after 1800 UTC 7 September.

Agreed.

1966 Hallie (AL081966):

1. Could the 1002 mb pressure in Nautla, Mexico be used to estimate a central pressure for 1200 UTC 21 September? Given this pressure, perhaps the 40 kt intensity at that time is a little low?

This data from Nautla would suggest a central pressure between 995 and 1000 mb, suggesting a range of 47 to 56 kt for the intensity. Intensity at 06Z and 12Z retained at 50 kt from the earlier 50 kt value at 00Z.

2. Please add Inga of 1961 to the list of analogs for this cyclone.

Done.

1966 Inez (AL091966):

1. Was the ship with the west wind on the 0000 UTC 24 September microfilm map used to refine the position?

No, this ship that only reported once is quite suspect because of the pressure (1018 mb) and the air temp (23C), which are both well outside of what would be expected.

2. On 25 September, the aircraft penetration fix listed at 2000 UTC was actually at 1900 UTC. A radar fix occurred at 2000 UTC.

Corrected.

3. Please clarify the landfall pressure and intensity of Guadeloupe. The landfall table has 961 mb, while in the metadata write-up there is mention of a station on Guadeloupe that had 958 mb, but this value is not used elsewhere even though the write-up says it is.

958 mb is now used consistently across the reanalysis for the landfall pressure at Guadeloupe.

4. Regarding the 2054 UTC 27 September research aircraft fix and the 2100 UTC addendum intensity: The fix log in the storm wallet has the central pressure of 971 mb used in the re-analysis. However, Shea and Gray's compilation of the research aircraft data suggests the pressure was 967 mb. Neither value can be properly quality controlled. Given this, the Committee thinks it would not be a good idea to add the temporary drop to category 2 status at 2100 UTC.

Agreed.

5. Please better clarify when the 197 mph/173 kt flight-level winds were measured. The MWR excerpt for 28 September suggests it was that day, while the write-up for 29 September suggests the time was 0140 UTC that day.

The MWR article is speaking generally in local time, not UTC. The two are consistent.

6. The Committee concurs with the increase in peak intensity to category 5. However, it would like a more rigorous explanation of why 145 kt was chosen instead of 140 kt.

Agree to reduce the new peak intensity to 140 kt, instead of 145 kt.

7. The write-up makes the assumption that the 138 mph/120 kt wind at Guantanamo Bay was a sustained wind and not a gust. Are the raw observation available to determine which it was? Note that this data point is not included in the land station highlights.

The observation for Guantanamo Bay is from the MWR table, which indicates it is a fastest mile. Converting that to a 1 min sustained, gives 114 kt. This is now added in the land station highlights.

7a. Perez's reasoning for making Inez a category 1 hurricane at Cuban landfall should be included in the write-up.

We have asked for Perez' reasoning on the Category 1 assessment. Unfortunately, he has not responded.

8. Does the track on 1 October need to be nudged southward to better fit the aircraft radar fixes?

Yes, the track has been nudged southward and westward compared to the original HURDAT to better match the aircraft radar fixes.

9. The write-up for 3 October includes a reference to 90 mph winds at West End, Grand Bahama that is not included in the land station highlights or seemingly used in the re-analysis. Please better explain the observation and its use (or lack thereof).

The observation is a peak gust included in the MWR table. It's now been removed, as it's not very relevant for the intensity assessment.

10. The Committee tentatively concurs with the proposed upgrade of Inez to a Category 2 hurricane in the Florida Keys. However, it has some reservations about this given the relatively high central pressure. Please do a quality control check on the ships which reported the 85-90 kt winds to see if their reliability can be established. Also, please provide whatever metadata is available for the station on Plantation Key, especially the anemometer elevation. Finally, please try to find the raw observations from the Dry Tortugas station to see what the maximum sustained winds were. A 105 kt gust would certainly suggest 85 kt or more sustained winds, but it would be good to have the actual recorded winds.

The 85 kt ship (*KASJ*) at 15Z on the 4th reported only once. The 60 kt ship (*3643*) had a lengthy time series and the winds reported appear quite reliable compared with station/ship/recon data. The 90 kt ship (*2975*) only had a few observations, none of the others had strong winds reported. The anemometer height for Plantation Key is

30 ft above the ground. The NCEI data available for Dry Tortugas only has observations for 00Z, 12Z, and 18Z on the 4th. The observational record for the 5th only has the words "HURRICANE INEZ" written on it with no measurements.

11. Please re-assess the intensities for the early part of 6 October. While the reported eye diameter on the fix at 2345 UTC 5 October was 10 n mi, the subsequent fixes near 0300 and 0600 UTC 6 October reported a 40 n mi eye diameter, which suggests a much larger RMW.

A penetration center fix measured central pressure of 974 mb at 0850Z on the 6th. A central pressure of 974 mb suggests maximum surface winds of 85 kt from the south of 25N pressure-wind relationship. An intensity of 85 kt is analyzed at 06Z on the 6th, lower than originally shown in HURDAT. While Inez had a small RMW late on the 4th and on the 5th, it appears (though there is substantial noise in the estimates) that the inner core had expanded some on the 6th with larger eye diameter reported, even though the pressure had dropped. Thus the intensity is analyzed to be 85 kt at all times on the 6th. The 18Z intensity is 15 kt lower than original, a large reduction.

12. Please re-evaluate the intensities on 9 October once the eye sizes and RMWs have been re-analyzed. The Committee notes that while a 115 kt intensity better matches the reported 948 mb pressure, a 120 kt wind is not an unreasonable match for the pressure. So, please do a more rigorous job of explaining why the revised peak intensity has been chosen, whatever that chosen intensity turns out to be. The Committee notes that the fix to fix variability of both the pressures and the RMWs probably requires some smoothing of the best track intensities.

Another penetration center fix measured a central pressure of 951 mb and an eye diameter of 10 n mi at 0620Z on the 9th. A central pressure of 951 mb suggests maximum surface winds of 110 kt from the south of 25N pressure-wind relationship. Because of the small eye diameter (10 nm), an intensity of 115 kt is analyzed at 06Z on the 9th, down from 120 kt originally shown in HURDAT, a minor intensity change. The next reconnaissance aircraft measured a central pressure of 951 mb and estimated an eye diameter of 45-52 n mi at 12Z on the 9th. An eye diameter of 42-52 n mi suggests an RMW of about 32-39 n mi and the climatological value is 15 n mi. It is suspected that because the central pressure stopped dropping and the eye diameter abruptly increased, that Inez went through a concentric eyewall cycle. Due to an RMW larger than the climatological value, an intensity of 110 kt is analyzed at 12Z on the 9th, down from 120 kt originally shown in HURDAT, a minor intensity change.

The central pressures on the 9th are now 948, 951, 951, and 961 mb, while the intensities are 115, 115, 110, and 100 kt.

13. Please contact the Meteorological Services of Mexico, Cuba, and the other affected countries for any additional data that is available for Inez.

The Meteorological Services of Mexico, Cuba, Dominican Republic, Haiti, and Meteo France have no additional data available for Inez.

1966 Judith (AL101966):

1. The Committee concurs with the proposed changes. However, please make an effort to see what pressures were measure in the Lesser Antilles as the center of the storm passed through the island chain.

Martinique and Trinidad are the only stations in the Windward Islands to report at 00Z on the 30th as the center of Judith was passing through. Both are too far from the center to determine a central pressure.

2. Please add to the 28 September write-up that the quality of the satellite imagery is not sufficient to allow a detailed intensity analysis.

Done.

1966 Lois (AL111966):

1. While the Committee concurs with showing a subtropical phase in the early part of Lois' lifecycle, the satellite imagery suggests that this should be delayed until 6 November. The position before that time should be included as a low or as extratropical.

2. The Committee otherwise concurs with the proposed changes.

Agreed.

1966 new tropical storm (AL121966):

1. The Committee concurs with the addition of this system. However, the write-up should better emphasize the unusual structure and how far the strongest winds were from the center. It is noted that while this system at least somewhat resembled a subtropical cyclone, the 500 mb charts do not indicate enough cold air in the system at that level to justify a subtropical classification.

Agreed. So noted.

2. Are there any observations available from the Dry Tortugas as the system passed over?

Yes, these were obtained from NCDC, though the reporting period was between three to six hours. No tropical storm force winds report and lowest pressure was 1006 mb with W 9 kt at 09Z on the 30th. This has been added into the writeup.

1966 new tropical depression (AL131966):

1. The Committee concurs with the addition of this system.

Agreed.

2. The microfilm maps suggest a surface low formed as early as 1200 UTC 25 July, and the MWR excerpt suggests a "fairly well organized circulation" existed that day. Please consider an earlier genesis time.

Agreed to begin genesis at 12Z July 25th.

1966 new tropical depression (AL141966):

1. The Committee concurs with the addition of this system to HURDAT.

Agreed.

1966 new tropical storm "Kendra" (AL151966):

1. This system is a dilemma for the Committee. The evidence is strong that the system was at least a tropical depression, especially given the amount of organized convection. On that basis, it needs to be included in HURDAT2. However, the case for making it a tropical storm is weaker – one observation of 35 kt on 7 October and an inferred pressure of below 1007 mb on 5 October which would support tropical storm strength given the surrounding pressures. Complicating the decision is that the system is the only named storm ever to be disavowed by the National Hurricane Center (for reasons unknown). Pending the quality control checks listed below, the Committee is in favor of adding this system back to HURDAT2 as a 35-kt tropical storm, with the write-up stating the uncertainty on whether the system was actually a tropical storm.

Agreed.

2. Please do a quality control check on the ship with 30 kt winds and 1007 mb to see if there is any bias in the winds or pressure.

The ship – *SJNX* – reported at 12Z 4th (15 kt NE/1015mb), 06Z 5th (30 kt N/1007 mb), and 12Z 5th (10 kt W/1013 mb). No obvious bias appears in either the winds or pressures.

2a. Have the winds from the ship that reported 35 kt been checked for bias?

The ship – ICVV – reported at 00Z 7th (20 kt NE/1013 mb), 18Z 7th (35 kt W/1003 mb), and 06Z 8th (10 kt N/1009 mb). The winds do not appear to be biased (though the pressure is around 5 mb too low).

3. Please add a note that a search for more detailed information on why the system was removed from the list of named storms failed to find anything useful

Agreed. We have reached out to Neil Frank, Joe Pelissier, and Paul Hebert to see if any of them can recall why Kendra was "unnamed". Joe remembered the name, but nothing else about the system.

1966 new tropical storm (AL161966):

1. The Committee concurs with the addition of this system.

Agreed.

2. Have the ship pressures on 15-16 November been checked for bias?

Ship "*-445*" – the ship that observed 998 mb on the 15th - reported for several days and showed a near zero bias for pressure. Ship "*B808*" – which observed 995 mb on the 15th – also reported for several days and had perhaps a 2 mb low bias.

1966 new tropical storm (AL171966):

1. Are any satellite images of this system available? It is noted that the microfilm map for 1200 UTC 23 November had a nephanalysis on it suggesting the cyclone had a subtropical or tropical cyclone cloud pattern.

Unfortunately, there are no satellite images available. We added the note about the nephanalysis to the Daily Summary on the 23rd.

2. In the write-up for 20 November, "extratropical storm" should be "extratropical gale".

Corrected.

3. The Committee concurs with the addition of this system.

Agreed.

1966 Additional Notes:

1. The Committee concurs with leaving the remaining suspect systems out of HURDAT2. However, it notes that lack of satellite imagery was a problem in the evaluation, especially for the June system and the out of season suspect systems. In the future, please provide satellite imagery for the suspects if it is available.

Agreed.

2. Satellite imagery suggests that the suspect #7 low did develop some convection, but likely did not have it for a long enough period of time to be considered a tropical cyclone. Please note this in the write-up.

Agreed.

3. The Committee concurs with leaving the other possible systems out of HURDAT.

Agreed.