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From the Editor

John Wasserman

Greetings shipmates and friends and a very Happy Mardi Gras to all of you from the Mississippi Gulf Coast! Welcome to the latest and hopefully greatest installment of the Mariners Weather Log.

First of all, please join me in a heart Welcome Aboard to our newest member of the US VOS team, Matt Thompson. Matt is the new Port Meteorological Officer for Miami. His brief story is included in this issue on page 9.

I received an e-mail from Steph Mason who had been doing what sounded like an exhaustive internet search looking for anyone with information on the ship The Spinning Jenny of Lune. The search led her to an online version of the Mariners Weather Log. I asked Steph to write a story about the ship and I have included it in this issue. I thought it was a fascinating read and I am excited to share the story with you. I would like to encourage all the readers out there to contact me if they have stories they would like to share with myself or fellow mariners, some yarns are just too exceptional to keep to oneself. Mark Twain once said "I like a good story well told. That is the reason I am sometimes forced to tell them myself."

I was happy to participate in my 3rd seaterm on board the TS Kennedy with Massachusetts Maritime, Buzzards Bay, Massachusetts. My stay was a short one this time, I took along Rob Niemeyer the Jacksonville PMO showed him the ropes for a few weeks and he completed the term. Rob did a great job and I am sure he learned as much from the cadets as they did from him! We always look forward to working more closely with all the Maritime Academies.

One last note, The US hosted an international PMO meeting in December. It was very educational for me and all of the US PMOs. We all look forward to working more closely with our international counterparts in the future.

That's all for now, please enjoy. Until next time

John

On the cover:
Spinning Jenny of Lune

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VOS Program

Sailing from a factory shed, round the world, into mystery

By: Steph Mason

The Spinning Jenny of Lune

Bob Mason was a man with big dreams for his retirement, in 1980 he decided to build his own 18 meter yacht from ferro cement and sail his wife and four children around the world. As the owner of some disused cotton mills in Lancashire, England, Bob had plenty of room in which to construct his leviathan.

He first bought plans for a Hartley 57 from New Zealand, which he then redrew to raise up the poop deck giving the ketch a slight galleon look. With his degree in Engineering from Cambridge University, Bob was well qualified to undertake the monster project and quickly began welding the steel armature which was suspended from the ceiling of the shed in which the yacht was being constructed.

The armature then had to be tightly covered with ten layers of chicken wire, five inside, five outside, and the yacht's lines made fair, "this was the hardest part of the entire build," recalls Bob's youngest son, Pete.

Once the armature was completed a team of plasterers spent three weekends applying the cement, one weekend each for the inside, outside and decks, after which the whole craft had to be kept wet with blankets and hoses for a further fortnight.

With the shell completed it was time to put in the Gardner engine Bob had had reconditioned for marine use after it had been rescued from a lorry which was due to be scrapped having traveled one million miles. Water tanks and the under floor storage areas were assembled before the main interior carpentry could begin for the living space. Each of Bob's children designed their own cabins which their father, who is a talented carpenter, then fabricated so that by July 1985 **Spinning Jenny of Lune** was ready to be towed out of her shed, through the streets of Bolton and launched in the Manchester Ship Canal.

However, even before she touched the water Bob's plans were beginning to unravel. Since he began the project three out of his four children had married, and he and his wife, Mary, had become grandparents. In fact, only Pete, who

was still at university studying Naval Architecture, wanted to go sailing at all. With 50 tones of boat to handle it was necessary to address the crewing problem swiftly; chartering her seemed the only option.

After five years of hard work the day of **Spinning Jenny's** first wetting was extremely nerve wracking. Bob and Pete traveled on top of the yacht lifting up telephone wires over the hull every few yards, conscious that every one that snagged and broke had to be paid for by them. As she was gently lowered into the water it took balls of steel to watch; so many ferro cement boats had failed to float to their marks and so could never be insured, others had sunk straight to the bottom, but **Spinning Jenny** sat perfectly in the water, her white line being gently lapped by the wavelets. The family started the engine and chugged down to Liverpool where the mast was stepped and **Spinning Jenny** showed how much she enjoyed a good breeze as she ploughed through the seas on her maiden voyage up to Glasson Dock.

Chartering with up to eight guests aboard, **Spinning Jenny** went from Wales to the Canary Islands for her first winter, then back to the Mediterranean or up to Scotland and Norway before heading back down to the Canary Islands again when the weather cooled. Many groups of artists chartered the yacht, as did water sports enthusiasts who enjoyed the additional windsurfing and dinghy sailing offered aboard, plus several groups from a religious sect who had dietary and worshipping requirements that were sympathetically catered to by the family.

By 1989 Bob and Mary were ready to come ashore and join their grandchildren on a farm on the island of Anglesey in Wales, so Pete's girlfriend, Steph, joined the boat as cook/mate, while Pete himself became **Spinning Jenny's** captain. After the couple married they continued to charter until the outbreak of the first Iraq war left Britons unwilling to fly abroad for holidays at just the time when the yacht was on Sardinia's highly expensive Costa Esmeralda. The previous season friends on the Spanish island of Mallorca had assured the couple that if they ever needed work they would be offered it there, so they sailed back to Mallorca and dropped anchor in Porto Colom where Pete began work maintaining other people's yachts while Steph became editor of the local English language daily newspaper. Soon Pete was captaining large yachts for wealthy owners and **Spinning Jenny** became more of a home than a business; with the arrival of the couple's first son, born on board in September 1993, the transformation into a houseboat was almost complete.

The big green ketch spent the next five years moored in the shadow of Palma de Mallorca's great medieval cathedral, but it was not until the birth of the couple's third child that they finally accepted their sailing days were temporarily at an end and it was time to sell.

In the spring of 1998 a German builder called Eddy Hagdorn bought the yacht with the intention of sailing her round the world, just as Bob Mason had dreamed of doing nearly twenty years earlier. Eddy and his crew remained in Mallorca for six months to familiarize themselves with **Spinning Jenny** and have Pete nearby to sort out any teething problems, then one bright autumn afternoon they hauled Eddy's beloved motorbike onto the back deck, strapped it down and cast off for Australia where they had booked a berth for the Olympics in Sydney.

Having explored the Great Barrier Reef and braved the Southern Ocean before having a ringside spot at Sydney's fabulous Olympic firework display, Eddy and **Spinning Jenny** began voyaging north again and by spring 2001 she was in Miami. Pete and Steph were delighted when they checked the yacht's website and found she was due to sail back to Palma in April.
Full of excitement at seeing **Spinning Jenny** again after her circumnavigation, Pete was thrilled when his mobile phone rang one April morning and he saw Eddy's number come up on the screen. Answering the call, Pete realized that Eddy's phone must have rung his number randomly as the mobile was clearly in Eddy's pocket. Knowing that **Spinning Jenny** was due home soon, Pete waited a few minutes and then phoned Eddy back to ask if his mobile coverage meant that the yacht was close to land with Eddy aboard. As Pete explained that he was returning the call Eddy's phone had just made to him, Eddy's voice came out harshly, "You are the very last person on earth I would have phoned right now, I've just heard that **Spinning Jenny** EPIRB has gone off 100 miles out of Miami. She's gone down and I don't know if the crew got off."

Eddy had left the yacht in Miami to return to Germany because a family member was ill, leaving a transfer crew to bring the boat back to Mallorca, but when they were 70 miles off Cape Canaveral a distress call went out.

Thanks to the prompt action and outstanding seamanship of the crew of the 700 foot **S/S Mayaguez**, the five German crew of **Spinning Jenny** were rescued moments before she sank into a mile of water. The **Mayaguez** crew was subsequently honored at the AOTOS Awards in New York City for their skill and quick response during this rescue.

In the decade since the shipwreck Bob and Pete Mason have made several attempts to contact Eddy and try to discover exactly what caused the tragedy, but to no avail. In summer 2010, Steph found references to the rescue on the internet and has been trying to find the names of the transfer crew and contact the crew of the **S/S Mayaguez** for their versions of the event. Two of the honored **Mayaguez** crew, Richard Wickenden and Charles Moy, kindly replied giving information about the sea state and the condition of the yacht crew when they picked them up, but neither knew what had caused the accident; was it a failed sea cock? Did she hit a container? What did cause a yacht that had sailed through at least two hurricanes to sink in a force 4 to 5 on a sunny April day? As Bob Mason approaches his 80th birthday this year, he still doesn't know.

The following are inputs from members of the Mayaguez who were on board during the rescue:

Richard Wickenden: As I remember, it was almost flat calm when the boat went down. Her sails were up and luffing in a light wind (Beaufort Force 1). The German crew, piled into a small dinghy, were 150-200 feet off **Spinning Jenny**. Captain John Morin maneuvered **Mayaguez** alongside the dinghy, as the Germans had no oars or means of propulsion.

The dinghy, in an overloaded state, had only inches of freeboard. Capt John Morin did a great job maneuvering the big steamship right alongside the dinghy, as the German crew scrambled thru our sideport.

I was on the bridge of our ship and took a last look at the big ketch and she was gone, just an oil slick remained. I went below to have lunch and the German crew were there. They were soaking wet, badly sunburned and badly in need of dry clothes and a good meal. We loaned them our clothes, and they devoured everything they got their hands on in our galley.

It was very sad to watch the boat go down. I am just glad to be of help when it was most needed. This tale turned out well, at least for the crew. On other rescues, in heavy weather, the crews did not fare as well.

Charles Moy: I recently received a note from our (MM&P sec/tres.) and a copy of your request for any information concerning the sinking of The Spinning Jenny of Lune.

The Mayaguez was my last seagoing assignment prior to retiring, following a forty six year career in ships of different companies and various flags.

As you are aware the event took place a number of years ago and having been involved in a number of similar incidents involving rescuing both yachtsmen and refugees, the circumstances didn't immediately spring to mind.

On reflecting, I vaguely remember being called out from my watch below, to assist in the rescue of a number of, what were described as five or six German nationals, clinging to a sinking yacht.

On reporting to the bridge I could see the endangered vessel sitting quite low in the water, possibly on her side and as there was a fair sea running (perhaps force four or five?) realized we had arrived none too soon and appeared it would require a bit of luck on all our parts. I recall we approached as close as possible attempting to make a lee for them, keeping them on our port hand.

Prior to my leaving the bridge, on seeing they had an inflatable dinghy tied alongside, it was decided it would be better if all hands could get into the dinghy then we would approach as close as possible and when given the word I would open the port side side-port, bringing the men on board as quickly as possible.

We had rigged a boat rope and cargo nets over the port side, with the usual heaving lines and life rings. Our objective was as I mentioned, to have the yacht's crew abandon ship by getting into the dinghy and we would quickly approach and open the port side side-port where we had further cargo nets and a pilot ladder ready.

Fortunately we were fairly light and had six or more feet of freeboard from the sideport. We were lucky and things went according to plan, I was at the side-port with a couple of sailors and on receiving the word via radio, opened the side-port to see the dinghy approaching down our port side.

Again we were lucky, we threw them lines which they used to both pull the dinghy and secure it under the side-port, there was a bit of bobbing and falling back in the sea plus a few skinned knuckles and bruised knees, but everyone eventually got safely on board. And we were fortunate not to take any seas through the side-port.

As for The Spinning Jenny my sighting was brief and one couldn't tell what kind of craft she was, either she was on her side or possibly dismasted, perhaps you may find out from one of the other mates or Capt. Morin as my last sighting was brief, immediately having to cut adrift the dinghy, close the side-port and deal with the rescued crew members. Plus we had a schedule to keep and were quickly on our way to our next port.

Strangely enough, I don't recall ever inquiring as to what went wrong, suppose I didn't want to embarrass anyone at the time. ⚓

Best regards,
Charles Moy

One last editors note: While being pressed for a deadline I felt as if I would be remiss if I didn't include this final e-mail from the author:

Subject OMG! Final Spinning Jenny story!

Dear John, Richard and Charles,

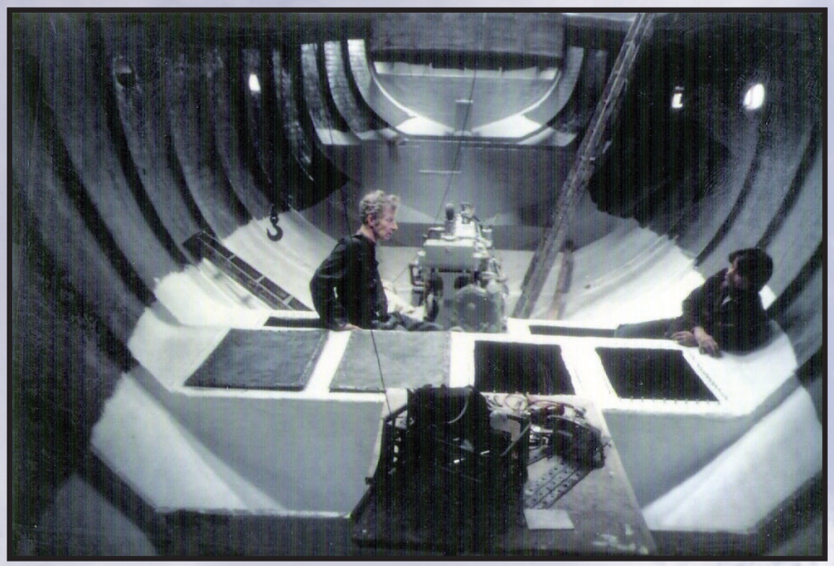
As you know, we have spent 10 years searching for Eddy, the final owner of Spinning Jenny.

Yesterday Pete had to move the boat he captains to another marina for painting. At lunch time he was sitting in a bar in Arenal and a vaguely familiar man kept staring at him. Eventually he went over and asked, "Do I know you?"
The man replied, "What's your name?"
"Pete Mason"
"I lost your Jenny, I'm so sorry," came the reply.
Clearly the onset of grey hair doesn't make Pete look too different after all!

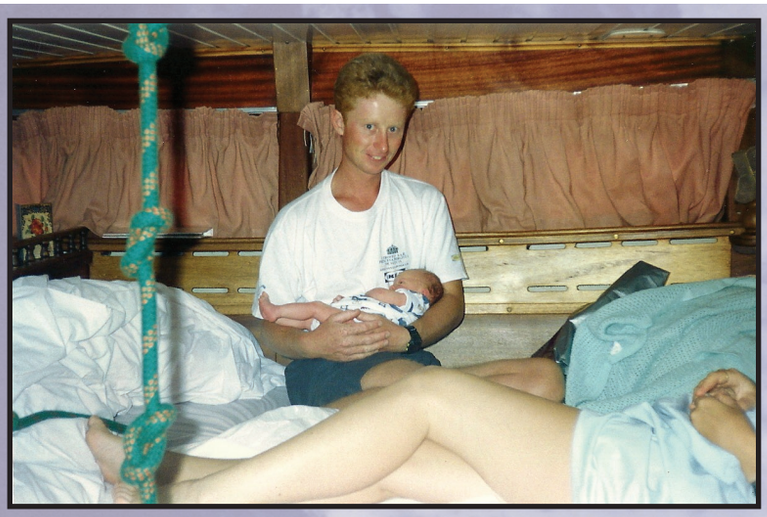
This weekend Pete, Eddy and I will be going out for a very long dinner, we have a lot of talking to do!

Building armature: making the iron frame of the ferro cement boat and then weaving 10 layers of chicken wire onto it.

Applying the cement to the outside of the armature.



Bob Mason and his son-in-law putting the engine and water tanks inside the empty hull.



Pete Mason with his son Christopher, 30 minutes after the first on board birth

Bob Mason and his wife, Mary, half an hour after launching. After five years of work she floated perfectly to her marks.

Shipwreck: Grenland

By Skip Gillam
Vinland, Ontario, Canada

Grenland

The Norwegian freighter GRENLAND visited the Great Lakes at a time when the sight of a deep sea ship on the freshwater lakes was infrequent, especially when compared to today.

This small vessel had been built at Bergen, Norway, and was completed in December 1919. It began trading for P. Lindoe of Norway as the ERICH LINDOE. The ship measured only 257 feet, 10 inches in overall length and 37.9 feet at the beam. This enabled the 1,497 gross ton carrier to fit through the myriad of locks connecting the St. Lawrence River at Montreal to its source in Lake Ontario and then, via the third Welland Canal bypassing Niagara Falls, on to Lake Erie.

While the ERICH LINDOE is known to have visited the Great Lakes in the 1920s, details on where and when it traveled are not available.

The ship was sold to Rederi A/S Harald Grenske in 1928 and renamed GRENLAND. It made two trips inland in 1933 and is shown at Toronto in a photo by Alfred King.

The ship was resold to another Norwegian firm in 1937 and became HILDUR I. It too brought cargoes across the Atlantic to the Great Lakes until World War Two interrupted its regular service. Duty called to serve Allied interests on deep sea runs and the ship managed to survive the dangers that lurked on, above or beneath the surface of the sea. HILDUR I returned to private interests after peace had been won and came back to the Great Lakes, likely for the last time, as late as 1953.

In 1956, the ship was sold to another Norwegian flag company and renamed RAAGAN. By now the aging ship was involved in short sea runs and handled a variety of cargoes.

RAAGAN had just begun its 49th year of service when tragedy struck. The vessel was en route from Egersund, Denmark, to Dordrecht, Holland, with a cargo of titanium when leaks began to develop in the well traveled hull. All on board were able to get off the ship safely before RAAGAN slipped beneath the surface of the North Sea about 60 miles off the Dutch coast on January 2, 1967.

The vessel had a long and productive life and had served various owners in peace and in war. The ship had come to the Great Lakes under three different names and for three different companies and sailed on a variety of saltwater routes. ⚓

Maine Maritime Academy Training Ship Master to Retire

Article courtesy of www.marinlink.com

Photo Courtesy of Maine Maritime Academy

Dr. William J. Brennan, president of Maine Maritime Academy (MMA), announced that Captain Laurence "Larry" Wade, master of the college's training ship, will retire in 2011. Brennan's announcement came at the conclusion of the college's 5th Annual Celebration of Achievement awards dinner held on the college campus. Wade and his wife, Deanna, were both present at the event.

In his announcement, Brennan praised Wade for his contributions to the college's at-sea training program and his ongoing commitment to the furtherance of the college. He noted that since Wade's appointment as the training ship's top officer in 1996, he has logged more than 15 training cruises and has guided more than 3,000 student mariners safely throughout the world. He added that Wade will be greatly missed at the Castine college following his retirement, but anticipated his continued support of the college and its Alumni Association.

As part of the transition process, Wade will assist with planning and shoreside support of the annual spring training cruise, but will not sail with the vessel as master for this year's voyage. He emphasized that his more than 50-year affiliation with the college will not end upon his retirement. He intends to strike a balance between increased time spent with family and active volunteerism at the college and in the community.

A 1964 graduate of Maine Maritime Academy, Wade sailed as a professional merchant mariner for more than 30 years, earning an unlimited master's license in 1970. He later formed Wade Marine Services, Inc., a maritime consulting company that provided services to the shipping industry and to the Maritime Administration (MARAD). Through this work, he participated in the conversion of the current training ship, and eventually returned to the college in 1996 as captain of the vessel.

Wade participated in MARAD's emergency activation of the college's training ship in response to the disaster in New Orleans brought about by Hurricane Katrina in 2005. As part of that effort, the training ship and its crew provided emergency housing for relief workers, and served more than 35,000 meals to guests while in the area. During his leadership of the ship's response, the training ship crew was recognized with the MARAD Meritorious Service award. The ship's crew had previously received this award for their efforts in support of MARAD's ship readiness initiative. The award had not been presented to civilian mariners since World War II.

Captain Wade has represented Maine Maritime Academy in leadership posts on numerous maritime training committees and advisory boards, and has been an active advocate for the college's alumni through its Alumni Association. He served two terms as co-chair of the Ships Operation Cooperative Program, a private/public partnership sponsored by MARAD and formed in 1993 to share resources and technology to improve all aspects of ship operations for its members. He also served as treasurer of the MMA Alumni Association and continues to serve on various Association committees.

Wade is a lifelong member of the Boston Marine Society and the Portland Marine Society, as well as a 40-year member of the New England District of the Society of Naval Architects and Marine Engineers.

Wade and his wife, Deanna, enjoy a very active family of four daughters, 11 grandchildren and one great-grandchild. Both are active community volunteers and are long-time members of Kiwanis International. Captain Wade has served as president of the Orono-Old Town club, and as lieutenant governor of the New England District of Kiwanis Division 2. He also serves on the Board of the Page Farm and Home Museum, located at the University of Maine, and as Secretary/Treasurer of the Board of the Oncology Support Foundation, a part of Eastern Maine Healthcare Charities. He resides in Bradley, Maine. ⚓

US VOS welcomes aboard its newest PMO to Seattle

By John Wasserman

Matt's interest in weather began at an early age, helping as a weather spotter in Kansas City, MO, while involved with the Civil Air Patrol in high school.

Matt joined the U.S. Navy in 1991 and was honorably discharged in 1997 as an Aerographers Mate. Two weeks after being discharged, he went to McMurdo Station, Antarctica and worked as a Met Tech on a seasonal basis for the next seven years. In 2001, he took a break from the U.S. Antarctic Program (USAP) and attended The Landing School of Boatbuilding and Design in Kennebunk, ME, earning his American Boat and Yacht Council Mechanic Certificates. After leaving the USAP in 2005, he returned to college for a short time to finish some courses, and upon completion, was hired by the NWS in Alaska. He moved to Cold Bay, AK to fulfill duties as a Met Tech, and later transferred to a Mobile Emergency Unit Member Met Tech based out of the Regional office in Anchorage.

On December 22, 2010, he assumed the Port Meteorological Officer duties in Seattle, WA.

In his spare time Matt is also a Firefighter/EMT. He is a member of US Sailing, and enjoys offshore sailing. ⚓

EVA N Receives International Ice Patrol's CARPATHIA Award for 2010

Since 1913, the U.S. Coast Guard has monitored the iceberg danger on the Grand Banks of Newfoundland and warned mariners of this hazard to safe navigation. Each year the International Ice Patrol (IIP), a Coast Guard unit located in New London, Connecticut, recognizes the vessel that provided the most ice and weather reports. The award is named after the vessel CARPATHIA, which rescued 705 TITANIC survivors on April 15, 1912. As the IIP was established to prevent another disaster due to a ship colliding with an iceberg, it is fitting to remember the heroic actions of the Captain and crew of the CARPATHIA.

The IIP congratulates M/V EVA N on earning the 2010 CARPATHIA Award by providing the most information reports during the 2010 Ice Season. 2010 marked the second consecutive year that M/V EVA N earned this important award. The IIP relies heavily on reports from vessels like the M/V EVA N to monitor the iceberg danger in the Northwest Atlantic Ocean. The M/V EVA N's 134 reports led the way in 2010.

The IIP thanks all vessels for their reports during the 2010 ice season. Due to these reports, the IIP was able to provide the most accurate information to the mariner. The following vessels comprised the top ten providers of information reports to IIP in 2010:

Rank	Vessel Name	Call Sign	Flag State	Reports Received
1	EVA N	A8QJ7	Liberia	134
2	MINERVA SYMPHONY	SXIS	Greece	34
3	ISADORA	P3LA8	Cyprus	22
4	CAP THEODORA	SVAM5	Greece	19
5	ORLETA LWOWSKIE	YJZH8	Vanuatu	17
6	COSTA ATLANTICA	IBLQ	Italy	15
7	CAP LARA	SXBW	Greece	13
8	SICHEM MISSISSIPPI	3FXR9	Panama	12
9	APL EGYPT	A8BZ6	Liberia	10
10	WARTA	C6LH2	Bahamas	10

Between February 01 and August 31, ships are encouraged to immediately report sightings of icebergs or stationary radar targets (RT) that may likely be ice to IIP. Through the remainder of the year, ice reports should be directed to the Canadian Ice service. Ships operating near the iceberg or sea ice limits are encouraged to make sea surface temperature (SST) and weather (WX) reports even if no ice is detected. Ships that provide routine WX reports to METEO Washington are urged to continue to do so. If SST and WX reports are not typically filed as described above, then special reports directly to IIP every 6 hours are requested when operating within the area between latitudes 40°N and 60°N and between longitudes 39°W to 57°W.

When reporting icebergs or stationary RT, please include the following information:

SHIP NAME AND CALL SIGN
SHIP POSITION (latitude, longitude)
ICEBERG/RT POSITION (Specify either the geographic coordinates (latitude, longitude) or range/bearing from ship's stated geographic position (latitude, longitude))
TIME OF SIGHTING (in UTC)
METHOD OF DETECTION (Visual, Radar, or Both)
SIZE AND SHAPE OF ICEBERG (see Tables 2 and 3)
SEA ICE CONCENTRATION (In Tenths)
SEA ICE THICKNESS IN FEET OR METERS (Specify Units)
SEA SURFACE TEMPERATURE (Specify units)

Eva N

When reporting sea surface temperature and weather, please include the following:

SHIP NAME AND CALL SIGN
TIME (in UTC)
SHIP POSITION (latitude, longitude)
COURSE
SPEED
VISIBILITY
AIR AND SEA SURFACE TEMPERATURE (Specify Units)
BAROMETRIC PRESSURE
WIND DIRECTION AND SPEED

Report ice sightings, WX, and SST to **COMINTICEPAT NEW LONDON CT** through INMARSAT, U.S. Coast Guard Communication Stations, or Canadian Coast Guard Marine Communications and Traffic Services (see Table 4 for guarded frequencies). If reporting ice sightings to IIP through INMARSAT C, use Service Code 42 as there is no charge when using this code.

Instructions for sending INMARSAT Code 42 Warnings:

INMARSAT-C (General instructions)

1. Access the 2-digit code service on SES as instructed in your manufacturer's information.
2. Using the SES text editor, prepare the message.
3. Enter the 2-digit code of the service required (42).
4. Select the CES (01, Vizada, AORW).
5. Transmit the message.
6. Wait for acknowledgment from the CES.
7. The message will be forwarded, at no charge, from the mariner to IIP by Vizada Satellite Services.

Telephone communications are available to the IIP Office throughout the year. The IIP Duty Officer can be reached 0700-1630 EST. **AFTER NORMAL WORKING HOURS, MESSAGES ARE RELAYED TO IIP VIA THE FIRST COAST GUARD DISTRICT COMMAND CENTER THAT CAN BE REACHED AT PHONE (617) 223-8555, OR FAX (617) 223-8117.**

International Ice Patrol in New London, CT

Phone:	(860) 271-2626
Toll Free:	(877) 423-7287
Fax:	(860) 271-2773
Email:	iipcomms@uscg.mil
Web:	http//www.uscg-iip.org

Product survey available via IIP website or on e-mail request.

Canadian Ice Service in Ottawa, ON

Phone:	1-(877) 789-7733
Fax:	(613) 996-9160
Email:	cis-scg.client@ec.gc.ca
Web:	http//www.ice-glaces.ec.gc.ca

Mean Circulation Highlights and Climate Anomalies

September through December 2010

By Anthony Artusa, Meteorologist, Climate Operations Branch, Climate Prediction Center NCEP/NWS/NOAA

September-October 2010

The 500 hPa circulation pattern over the Northern Hemisphere during September featured above average heights over Greenland, northern Russia, eastern Asia, and Alaska, and below-average heights in the Gulf of Alaska, south central Europe, and central Siberia *Figure 1.* The sea level pressure (SLP) pattern largely mirrored the 500-hPa pattern, and emphasizes the persistent area of lower than normal SLP centered over Kamchatka *Figure 2.*

The mid-tropospheric circulation during October 2010 featured above average heights over western North America, Greenland, and across the western and central North Pacific Ocean, and below-average heights over the Gulf of Alaska, eastern Canada and far northeastern contiguous U.S., and southern Europe *Figure 3.* The SLP map again largely mirrored the mid-tropospheric pattern, including well below average SLP centered over the Aleutians and also the southern Canadian Maritimes *Figure 4.*

Of special significance during October was the so-called "North American Extra-tropical Cyclone of October 26-27, 2010" (see *Reference 1*), which is notable for several reasons. Bigfork, Minnesota reported a minimum observable SLP of 955.2 hPa, which set a new record for Minnesota. Similarly, Superior, Wisconsin set a new minimum SLP record (961.3 hPa) for the state of Wisconsin. In addition to breaking lowest SLP records, this storm brought wind gusts as high as 55-65 kts to the region, 29.2 cm of snow at Duluth, MN (4th greatest storm total snowfall in October), and as much as 12.5 cm of rain. The western mid-lake buoy on Lake Superior reported significant wave heights up to 5.7 meters, with even higher values reported on the Canadian side of the Lake.

The Tropics

Negative sea surface temperature (SST) anomalies continued to strengthen across the equatorial Pacific Ocean during September and October 2010. The latest monthly SST indices for the Nino 3.4 region were -1.6C (for both September and October). The oceanic thermocline, measured by the depth of the 20C isotherm, was shallower than average across the central and eastern equatorial Pacific. Atmospheric convection was enhanced over Indonesia, and suppressed across the western and central equatorial Pacific. Equatorial low level easterly trade winds and upper level westerly wind anomalies remained stronger than average over the western and central Pacific. Collectively, the atmospheric and oceanic anomalies signal the ongoing La Nina.

The second half of the 2010 Atlantic hurricane season continued to be unusually active. Despite this, most of the tropical storms and hurricanes remained well offshore, sparing the United States (see *References 2,3*). The strongest hurricane of the season, Igor, followed the pattern of a classical Cape Verde type storm. After emerging off the west coast of Africa as an area of disturbed weather, the system moved westward across the low latitude Atlantic, peaking as a borderline Category 4/5 hurricane with 135 kts winds as it began to gradually recurve northwestward and then northward, sparing the Leeward Islands. Shortly thereafter, it rapidly weakened to a strong Category 1 hurricane as it passed just west of Bermuda, bringing peak wind gusts of at least 80 kts to that area. Bermuda escaped major damage with this hurricane, which would continue northward and transition into an extra-tropical (cold core) cyclone, before causing significant damage 1-2 days later to Newfoundland. In stark contrast to the very active Atlantic hurricane season, the East Pacific hurricane season was one of the most inactive seasons since the satellite era began.

November-December 2010

The 500 hPa circulation pattern during November 2010 featured above average heights over the far northern Pacific, eastern Canada, Greenland, and western Russia, and below average heights over the central North Atlantic, Europe, and central Siberia *Figure 5.* The sea level pressure and anomaly map (*Figure 6*) records well below average SLP over much of Europe and Russia.

The month of December was characterized by a strong, negative phase of the Arctic Oscillation (AO), with well above average 500 hPa heights across the polar region, and well below-average 500 hPa heights over middle latitudes of the Northern Hemisphere *Figure 7.* This pattern also projects strongly (-1.8) onto the negative phase of the North Atlantic Oscillation (NAO). The SLP and anomaly map (*Figure 8*) reflected the mid-tropospheric pattern quite well.

The Tropics

Negative SST anomalies persisted across the equatorial Pacific Ocean during November and December 2010. The latest monthly SST index for the Nino 3.4 region registered -1.5C for both months. The oceanic thermocline (measured by the depth of the 20C isotherm) remained much shallower

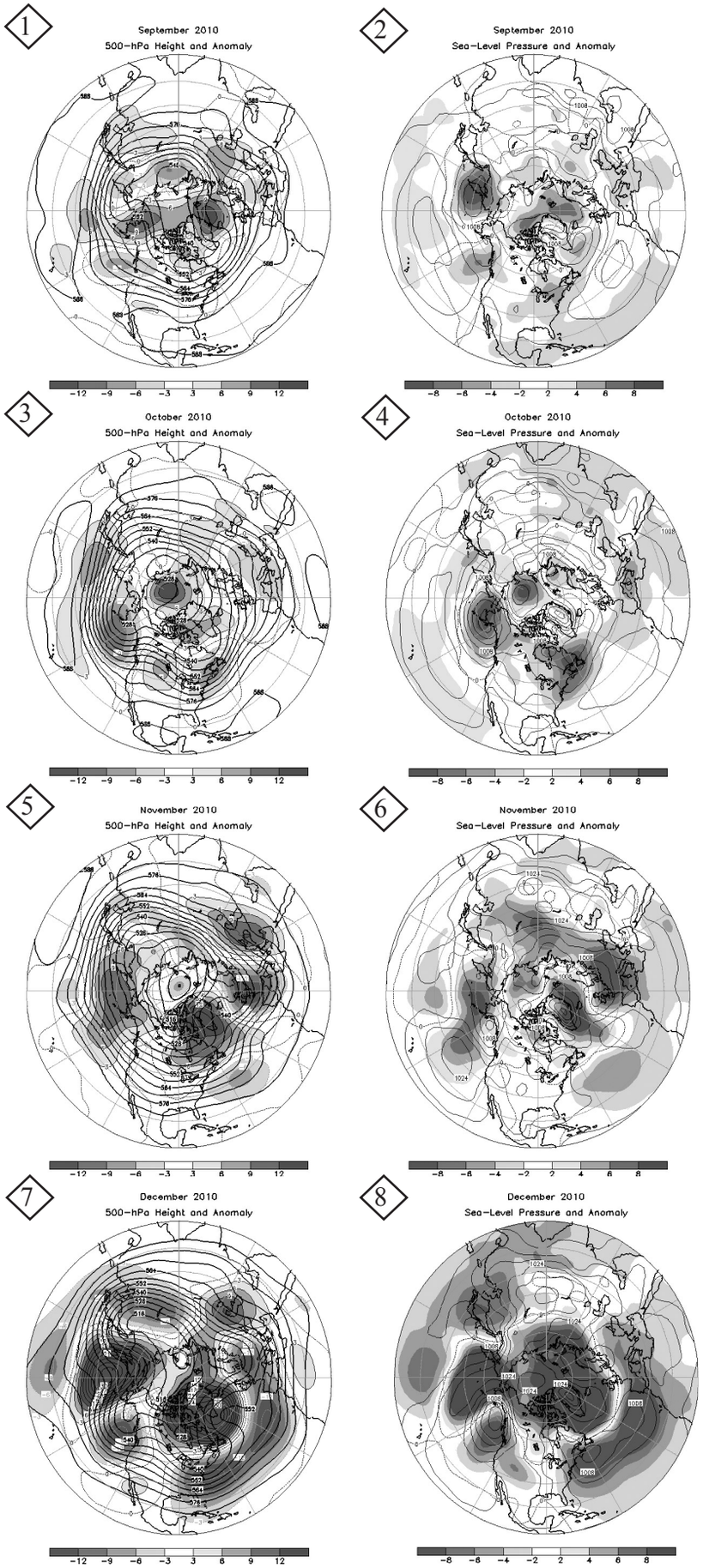
than average across the central and eastern equatorial Pacific, with sub-surface temperatures reaching 1C to 5C below average in these regions. Deep cloudiness and thunderstorm activity near the equator was enhanced over Indonesia, and was suppressed over the western and central equatorial Pacific. Equatorial low-level easterly trade winds and upper-level westerly winds remained stronger than average over the western and central Pacific. These atmospheric and oceanic anomalies reflect the ongoing moderate to strong La Nina. ⚓

References

Reference 1: "North American Extratropical Cyclone of October 26-27, 2010" information was taken from the National Weather Service Forecast Office in Duluth, MN (http://www.crh.noaa.gov/dlh/)

Reference 2: NOAA News (http://www.noaanews.noaa.gov/stories2010/20101129_hurricaneseason.html)

Reference 3: National Hurricane Center (http://www.nhc.noaa.gov/archive/2010/IGOR.shtml)



Figures 1,3,5,7
Northern Hemisphere mean and anomalous 500-hPa geopotential height (CDAS/Reanalysis). Mean heights are denoted by solid contours drawn at an interval of 6 dam. Anomaly contour interval is indicated by shading. Anomalies are calculated as departures from the 1979-1995 base period monthly means.

Figures 2,4,6,8
Northern Hemisphere mean and anomalous sea level pressure (CDAS/Reanalysis). Mean values are denoted by solid contours drawn at an interval of 4 hPa. Anomaly contour interval is indicated by shading. Anomalies are calculated as departures from the 1979-1995 base period monthly means.

Tropical Atlantic and Tropical East Pacific Areas
September through December 2010

Marshall Huffman and Scott Stripling
Tropical Analysis and Forecast Branch,
National Hurricane Center, Miami, Florida
NOAA National Center for Environmental Prediction

The National Hurricane Center's (NHC) Tropical Analysis and Forecast Branch (TAFB) issued 19 non-tropical cyclone warnings in their Atlantic High Seas Area of Responsibility (AOR) and 13 warnings in their Pacific High Seas AOR during the period from 1 September to 31 December 2010. *Tables 1 and 2* summarize the warning events of this period. The TAFB Tropical Atlantic AOR extends from 7° to 31°N west of 35°W, including the Caribbean Sea and Gulf of Mexico.

Atlantic Warnings

September proved to be a very active period for tropical cyclone formation with 8 named systems during the month, which required a multitude of tropical cyclone related warnings, culminating in the transition of tropical storm Nicole to an area of broad low pressure with widespread minimal gales on the 29th. Interestingly, the one storm force wind event from this period occurred during the extra tropical transition phase of Hurricane Tomas on 8 November. See the NHC web site for a summary of seasonal tropical cyclone activity at: http://www.nhc.noaa.gov/2010atlan.shtml

La Nina conditions developed across the tropical Pacific by August 2010 and contributed to the very active Atlantic Hurricane Season, as well as the very inactive East Pacific Hurricane Season. La Nina conditions persisted through December, and continued to influence weather patterns across the Atlantic Basin (*Reference 1*). This influence was amplified by the development of an upper atmospheric blocking pattern across the North Atlantic, known as the negative phase of the North Atlantic Oscillation (NAO). A detailed description of the NAO can be found at http://www.cpc.ncep.noaa.gov/data/teledoc/nao.shtml. The NAO can strongly affect winter weather patterns across North America, the North Atlantic, and Western Europe by evolving into one of two prevailing modes. These two modes, termed the positive and negative phase of the NAO, are most readily identified by persistent middle to upper atmospheric patterns that dominate the North Atlantic. *Figure 1* shows a graphical representation of these negative and positive NAO phases. During the last week of November, the negative phase of the NAO became strongly established across the Atlantic and persisted beyond the end of December. *Figure 2* shows the mean 500 hPa heights across the Atlantic basin during December and exhibits a classic negative NAO

Table 1. Non-tropical cyclone Warnings issued for Atlantic AOR between 01 Sept 2010 and 31 Dec 2010.

Onset	Region	Peak Wind Speed	Duration	Forcing
0000 UTC 02 Jan	SW N Atlc	40 kts	36 hr	East of Cold Front
0000 UTC 26 Oct	Central Atlc	35 kts	24 hr	N of Low
0000 UTC 28 Oct	Central Atlc	35 kts	12 hr	E of Low
1200 UTC 29 Oct	Gulf of Mexico	35 kts	18 hr	W of Cold Front
1200 UTC 04 Nov	Gulf of Mexico	35 kts	24 hr	W of Cold Front
0000 UTC 08 Nov	SW N Atlc	50 kts	42 hr	Post-tropical Tomas
1200 UTC 25 Nov	SW N Atlc & Central Atlc	35 kts	84 hr	Either Side of Cold Front
1200 UTC 26 Nov	Gulf of Mexico	35 kts	12 hr	W of Cold Front
1200 UTC 30 Nov	Gulf of Mexico	40 kts	24 hr	W of Cold Front
0000 UTC 02 Dec	Central Atlc	35 kts	54 hr	S of Low
0600 UTC 05 Dec	SW N Atlc	35 kts	12 hr	E of Cold Front
1800 UTC 08 Dec	Gulf of Mexico	35 kts	12 hr	W of Cold Front
1200 UTC 12 Dec	Gulf of Mexico	35 kts	30 hr	W of cold Front
1800 UTC 12 Dec	SW N Atlc & Central Atlc	35 kts	54 hr	Either Side of Cold Front

pattern. The upper air pattern during this period resulted in a succession of low pressure systems that moved from the eastern U.S. across the northwest Atlantic, and dragged cold fronts east and southeastward across the southeast U.S. and much of the TAFB Atlantic AOR. Unseasonably cold air followed several of these fronts across the region during the end of November and December, resulting in below normal temperatures across much of the southeast U.S. During this five week period, a succession of six cold fronts swept across the Gulf of Mexico and then into the Atlantic and Caribbean, resulting in 12 of the 19 TAFB warning events.

Three of the cold fronts during this period were responsible for extended gale force wind events which continued beyond 3 days (>72 hours) across the TAFB AOR. The first of these three extended gale events began on 25 November when a deepening storm system across the North Atlantic increased the pressure gradient on both sides of an associated cold front stretching across north portions of the TAFB AOR. Minimal gales of 35 kts continued near this frontal boundary as it moved southeastward over the next few days. A new area of low pressure developed along the front, north of the TAFB AOR across the central Atlantic, which shifted southeastward into the Eastern Atlantic, where it then deepened and became occluded, bringing northerly gales across the western semicircle of the low into the TAFB AOR from 0600 UTC 28 Nov through 0000 UTC 29 November. *Figure 3* shows the NWS unified surface analysis for 1200 UTC 28 November with gale center over the Eastern Atlantic.

The strongest winds observed across the Gulf of Mexico during this period occurred with a cold front that swept across the Gulf from 30 Nov through 1 Dec, and produced northerly gales to 40 kts across the central Gulf behind the front. *Figure 4* shows these gale force winds captured by a 30 Nov 1524 UTC high resolution ASCAT pass. A

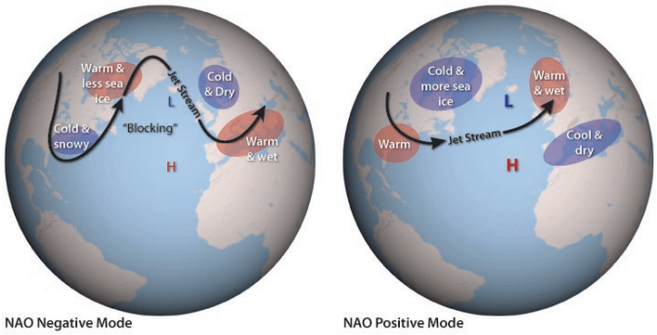


Figure 1. Schematic depicting the Jet Stream pattern and resultant winter weather associated with Negative and Positive phases of the NAO. Source: http://www.ncdc.noaa.gov/sotc/2010/13

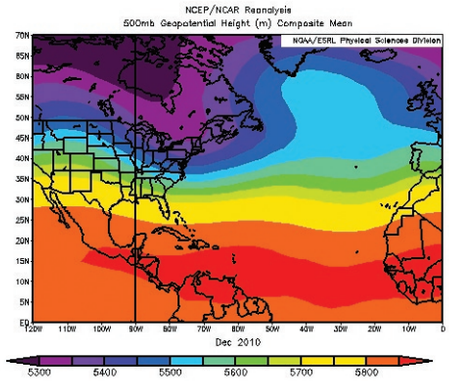


Figure 2. Mean 500 hPa heights across the Atlantic during December 2010 depicting classic NAO negative phase blocking pattern. Graphic provided by the NOAA Earth Systems Research Lab (ESRL) Physical Sciences Division (PSD) from the NCEP/National Center for Atmospheric Research (NCAR) Reanalysis dataset.

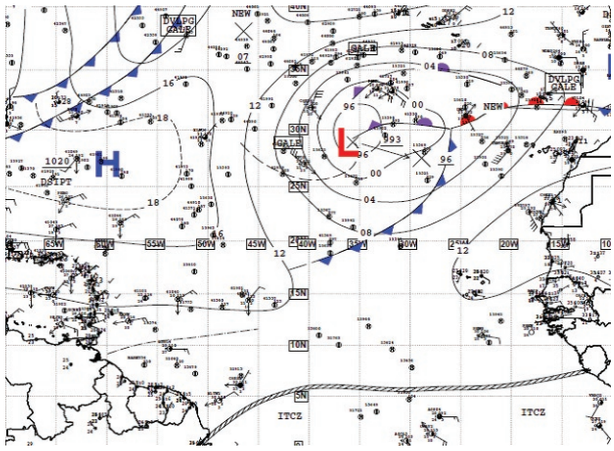


Figure 3. National Weather Service (NWS) Unified Surface Analysis for 1200 UTC 28 Nov 2010.

0900 UTC 1 December observation from cargo ship **H A Skelnar** (C6CL6) reported N-NW winds at 45 kts near 24.2N 87.3W, located in the strong wind band occurring within 150 nmi behind the cold front across the central Gulf of Mexico. This observation was considered slightly high based on other observations across the area and an ASCAT pass from 6 hours previous that only showed winds 30 to 35 kts. This event was one of seven gale events across the Gulf of Mexico during the period, and the only event with verified winds to 40 kts.

A second long lived gale and large swell event evolved during the third week of December as two distinct low pressure centers developed near a lingering frontal boundary that stretched from the northern Gulf of Mexico east northeastward into the central Atlantic. On 18 December, a low center over the northeast Gulf of Mexico, and a second center offshore of the North and South Carolina coasts both shifted northeastward and intensified, with the southernmost low deepening to a 1002 hPa low near 27N69W, located just east of the cold front on 1800 UTC of the 19th. This low produced gales across its northeast and eastern semicircles as it shifted northeastward and out of the TAFB AOR. Westerly gales of 35 to 40 kts were reported by the cruise liners **Celebrity Eclipse** (9HXC9) and **Grand Princess** (ZCBU5) between 1200 and 1800 UTC as they transited just east of the central Bahamas and moved through the south semicircle of this low. The northernmost low moved northeastward across the northwest Atlantic and deepened steadily over the next 48 hours, eventually producing hurricane force winds across its southwest quadrant on the 21st outside of the TAFB AOR. The resultant broad wind field to the west of this second low and the associated cold front that moved southeast across the TAFB AOR produced very large long period swell that affected the entire Atlantic AOR. Gale force winds continued west of the cold front until 1200 UTC 23 December, extending this gale event to 90 hours. Seas north of 28N and behind

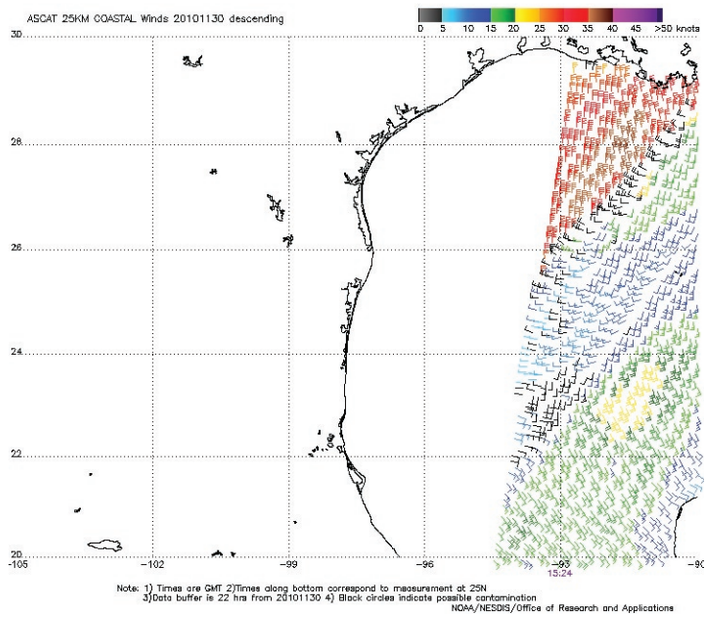


Figure 4. 30 Nov 1524 UTC ASCAT pass with brown wind barbs south of the Louisiana coast revealing 35-40 kts winds behind cold front.

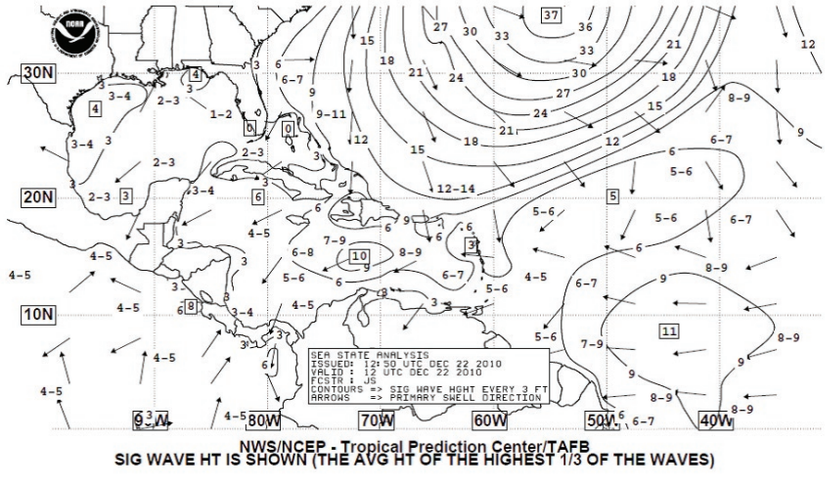


Figure 5. TAFB Atlantic Sea State chart (in feet) from 1200 UTC 22 December showing large wave field spreading from NW Atlantic south and southeastward into TAFB AOR.

the cold front maximized at 30 to 33 ft on 22 and 23 December, *Figure 5.*

A third long lived gale event began at 0600 UTC 26 Dec as a cold front shifted east out of the Gulf of Mexico and entered the west Atlantic, with southerly gales occurring across northwest portions of the TAFB AOR, east of the coastal front and a developing low pressure center along the Georgia coast. The cruise liners **Norwegian Dawn** (C6FT7) and **Carnival Fascination** (C6FM9) reported these southerly gales ahead of the front between 0400 and 0700 UTC. The low lifted northeastward along the eastern seaboard and rapidly intensified to storm force during the next 48 hours, while the associated cold front shifted southeastward through the Bahamas to eastern Cuba and the northwest Caribbean. Gale force winds

occurred across north portions of the AOR on both sides of the front through 00 UTC 28 December before shifting exclusively west of the progressing front through 18 UTC 29 Dec. Numerous vessels transiting these waters reported west to northwest gales, including **Norwegian Spirit** (C6TQ6), **Saudi Diriyah** (HZZB), **S/R Wilmington** (WBVZ), and **Prince of Seas** (A8JI5). Gales associated with this event lasted 84 hours.

Caribbean Sea Warnings

There were no non tropical cyclone warnings issued for the Caribbean during this period, although several events of widespread northeast to east trades of 25 kts across central portions occurred, as well as the typical enhanced northeasterly trades to 30 kts along the coast of Colombia. The pattern transition to the negative phase of the NAO also affected the Caribbean by allowing Gulf of Mexico and West Atlantic cold fronts to progress southeastward into portions of the Caribbean. During the last 6 weeks of the year, three cold fronts moved into the northwest Caribbean but did not progress east of 70W, and gradually dissipated, while an additional six fronts swept through the northwest and central Caribbean and reached the northeast Caribbean and Leeward Islands. One of these six fronts continued southeast to the Windward Islands then sank slowly southward into the southeast Caribbean on 23 December, where it transitioned to a shear line extending from the tropical north Atlantic through the Windward Isles to just north of Aruba, Bonaire and Curacao (also known as the A-B-C Islands). From there the front became stationary and dissipated within 48 hours. Recent climatology would suggest that this frequency of early season cold fronts moving into the Caribbean is higher than typically normal.

Eastern North Pacific Ocean to 30N and East of 140W

All but two of the eastern North Pacific non-tropical cyclone warning events observed from 1 September 2010 to 31 December 2010 found between 30N and the equator east of 140W were in the Gulf of Tehuantepec, driven by mid-latitude cold frontal passages through the narrow Isthmus of Tehuantepec. There were eleven occurrences of gale force winds, with five of those events producing winds of storm force. These events are cataloged in *Table 2*.

The first non-tropical cyclone warning event of the period occurred over the open waters of the eastern North Pacific Ocean. This gale event was associated with an area of low pressure located in the vicinity of 20N108W that continued to drift northwestward during the period of gale force winds. Winds reached gale force beginning at 1800 UTC 20 September according to the Advanced Scatterometer ASCAT data and the ship, **Zim San Francisco** (FDZA2) which reported 35 kts at 0300 UTC 21 September within 75 nmi north-northwest of the low center. While gale force wind warnings were in effect for this system in the TAFB High Sea Forecast area, post-analysis in the Tropical Cyclone Report for Georgette (*Reference 2*) indicated that indeed a tropical cyclone had formed at the onset of gale conditions.

The other gale force wind event not related to the Gulf of Tehuantepec region was a very short lived Gulf of California gale that lasted 6 hours beginning 0600 UTC 1 December.

Table 2. Non-tropical cyclone warnings issued for the subtropical and tropical eastern North Pacific between 01 September 2010 and 31 December 2010.

Onset	Region	Peak Wind Speed	Gale/Storm Duration
1800 UTC 20 Sep	High Seas near 20N108W	35 kts	18 hr / transitioned to a tropical cyclone
1200 UTC 03 Oct	Gulf of Tehuantepec	35 kts	84 hr
1800 UTC 13 Oct	Gulf of Tehuantepec	50 kts	78 hr / 48 hr
0600 UTC 29 Oct	Gulf of Tehuantepec	40 kts	48 hr
0600 UTC 04 Nov	Gulf of Tehuantepec	50 kts	108 hr / 12 hr
1800 UTC 18 Nov	Gulf of Tehuantepec	45 kts	42 hr
1200 UTC 27 Nov	Gulf of Tehuantepec	35 kts	12 hr
0600 UTC 01 Dec	Gulf of Tehuantepec	50 kts	60 hr / 30 hr
0600 UTC 01 Dec	Gulf of California	35 kts	06 hr
1200 UTC 06 Dec	Gulf of Tehuantepec	40 kts	24 hr
0000 UTC 09 Dec	Gulf of Tehuantepec	50 kts	36 hr / 18 hr
1800 UTC 12 Dec	Gulf of Tehuantepec	50 kts	48 hr / 12 hr
0600 UTC 26 Dec	Gulf of Tehuantepec	40 kts	42 hr

A recent study, Cohen et al. 2010 (*Reference 3*), showed from special observations that gales may be more frequent in the Gulf of California than previously recognized. Strong surface troughing along the eastern coast of the Gulf of California was responsible for a tight pressure gradient over the Gulf of California between this trough and a ridge anchored by a 1028 hPa high centered over the northeast Pacific Ocean near 36N126W. This resulted in strong northerly flow across the entire Gulf of California. A 0418 UTC 1 December ASCAT pass traversed the gulf waters and indicated a large area of 30 kts wind barbs over the central Gulf of California. A gale warning was issued through 1200 UTC 1 December because the ASCAT instrument is known to have a low bias on wind speed measurements near gale force and greater (*Reference 4*) and is not able to fully sample the narrow Gulf. *Figure 6*

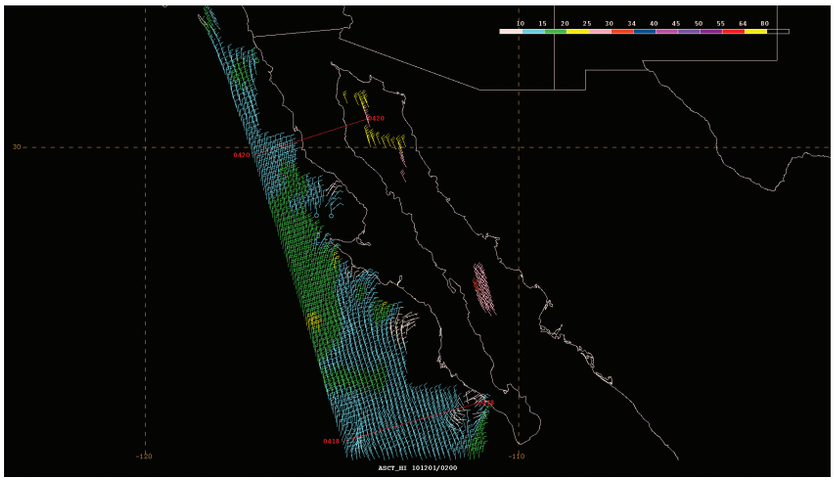


Figure 6. Ocean vector wind retrievals from the ASCAT pass on 0418 UTC 01 December 2010. Note the area of near gale force winds in the Gulf of California extending from 22N to 29N.

The remainder of the non-tropical cyclone warning events pertains to the Gulf of Tehuantepec region. The first gap wind event to reach storm force began at 1800 UTC 13 October. *Figure 7* shows the ASCAT pass from 0407 UTC on 14 October 2010. Winds in the 30 to 40 kts range were observed in the Gulf of Tehuantepec by this scatterometer pass. Winds reached storm force in the Gulf of Tehuantepec by 0000 UTC 14 October, with storm force conditions lasting 48 hours, the longest duration of any storm force event for the September to December period of 2010. Ship observations from the **Norwegian Star** (C6FR3), the **Sea Princess** (ZCBU3), the **Leverkusan Express** (DEHY), and the **Coral Princess** (ZCDF4) were vital for monitoring the event. The **Norwegian Star** (C6FR3) reported a north wind of 52 kts at 0100 UTC on 14 October 2010 near 15N95W with maximum seas of 5.7 m (19 ft). Likewise, the **Coral Princess** (ZCDF4) reported a north wind of 50 kts between 0300 and 0700 UTC in the vicinity of 16N94W and maximum seas of 5.4 m (18 ft). Winds in the region gradually tapered off after 0000 UTC on 17 October when the gale warning ended.

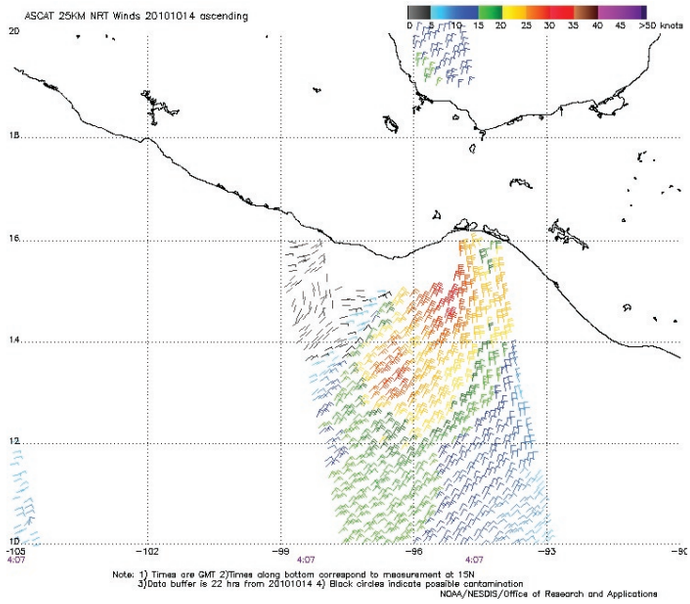


Figure 7. Ocean vector wind retrievals from an ASCAT pass on 0407 UTC 14 October 2010. Note the large swath of winds to gale force in the Gulf of Tehuantepec and area extending south-southwest.

The longest non-tropical cyclone warning period in the eastern North Pacific began at 0600 UTC 04 November and lasted four and a half days. While this gale period began with the passage of a weak cold front through western Gulf of Mexico and the Isthmus of Tehuantepec, it lasted longer than average due to a complex area of low pressure over the northern Gulf of Mexico and an associated reinforcing cold frontal passage through the Isthmus of Tehuantepec early on 05 November 2010. *Figure 8* shows the 0600 UTC 04 November,

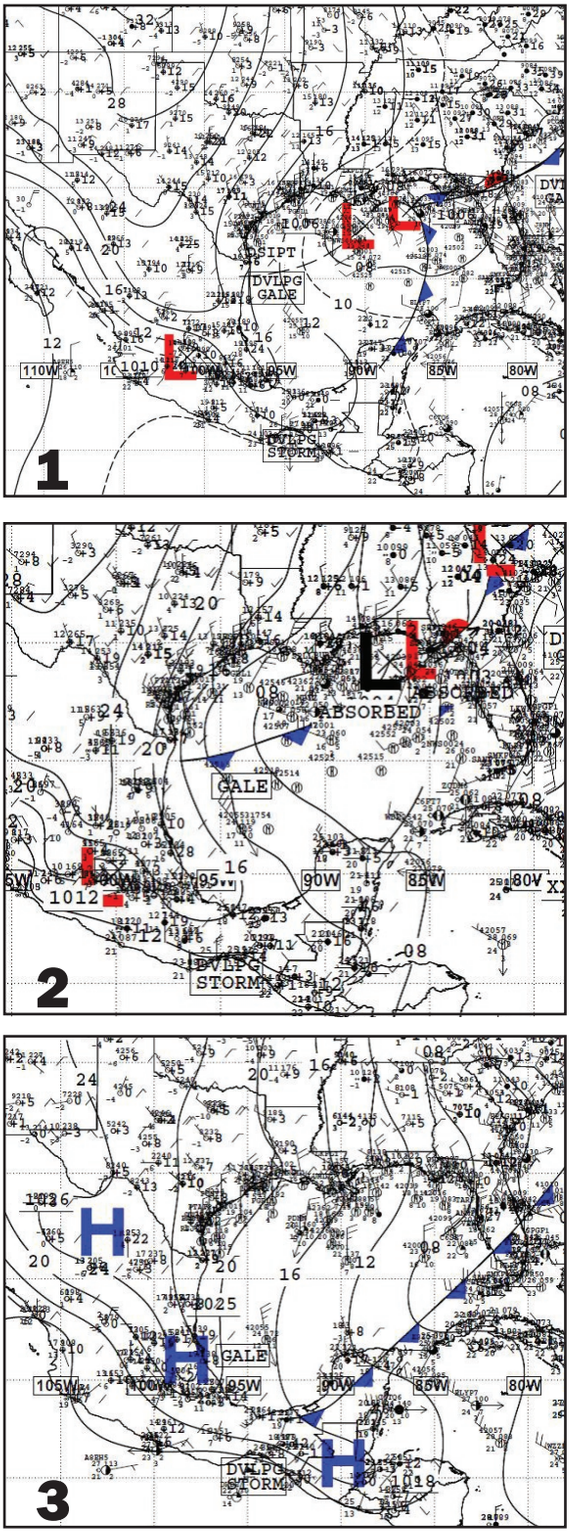


Figure 8. The National Weather Service Unified Surface Analyses at 0600 UTC 04 November (1), 1200 UTC 04 November (2) and 0600 UTC 05 November 2010 (3). Note the developing low in the Gulf of Mexico moved east-northeastward with a secondary, stronger cold front providing a brief period of storm force winds to the Gulf of Tehuantepec region.

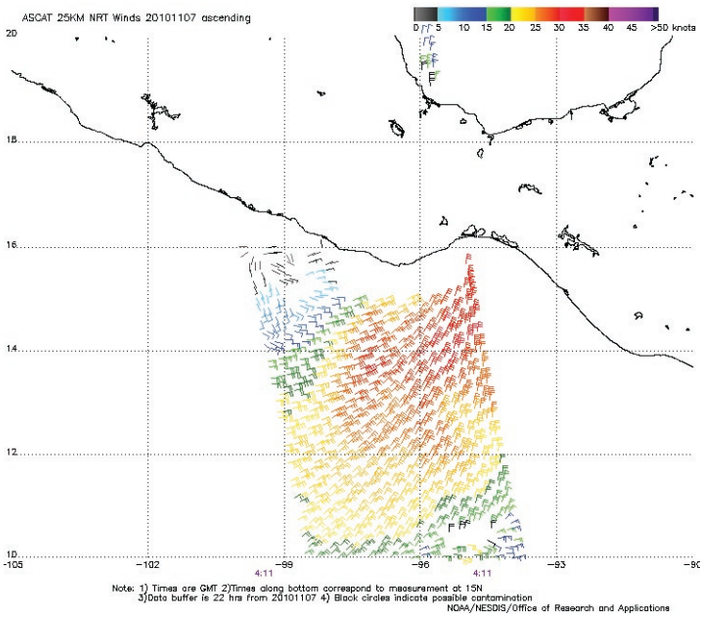


Figure 9. Ocean vector wind retrievals from the ASCAT pass on 0411 UTC 07 November 2010. Note the area of winds to gale force extending south-southwest from the Gulf of Tehuantepec.

1200 UTC 04 November, and 0600 UTC 05 November NWS Unified Surface Analyses indicating passage of the first weaker cold front and further development of the low pressure area over the Gulf of Mexico that quickly raced east-northeastward.

The strong reinforcing cold front brought 12 hours of storm force conditions to the Gulf of Tehuantepec region beginning 1200 UTC 05 November. Three ships, the **Dresden Express** (DHDE), the **CCNI Rimac** (DPTS), and the **Conti Salome** (A8LL8), participating in the World Meteorological Organization's (WMO) Voluntary Ship Observing Program (VOS) reported winds above gale force during the event. Maximum seas reported by the **CCNI Rimac** (DPTS), at 1700 UTC on 06 November 2010 near 14N97W reached 5.0 m (16 ft). Also the **Conti Salome** (A8LL8) reported maximum seas of 6.4 m (21 ft) near 14N96W at 0300 UTC 08 November 2010. The ASCAT pass from 07 November 2010 in *Figure 9* continued to show winds above 34 kts extending well south-southwest of the Gulf of Tehuantepec. Gale force conditions ended after 1800 UTC 08 November 2010 as the pressure gradient relaxed over southern Mexico and much of the Gulf of Mexico.

The final storm force event in the Gulf of Tehuantepec in 2010 began at 1800 UTC on 12 December. One observing ship, the **Norwegian Star** (C6FR3), reported winds of 55 kts during the event as noted on the NWS Unified Surface Analysis from 0600 UTC 13 December 2010 seen in *Figure 10*

A strong cold front moved southeastward across southern Mexico and the Yucatan Peninsula, fracturing as northerly winds rushed through the isthmus and drained into the Gulf of Tehuantepec.

Figure 11 highlights ocean wind vector retrievals from the ASCAT instrument on 1537 UTC 14 December 2010 shortly before the gale warning was lifted. Note the veering winds across the southwestern Gulf of Mexico, indicating the wind field passing through the Chivela Pass into the Gulf of Tehuantepec from the north would continue to diminish in magnitude. ⚓

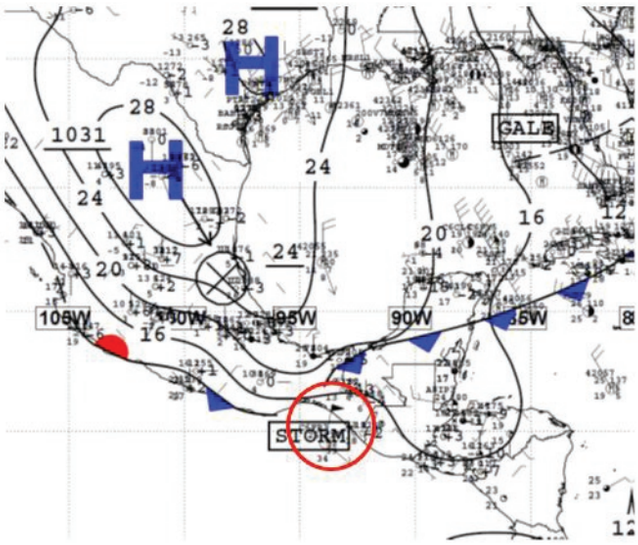


Figure 10. The National Weather Service Unified Surface Analyses at 0600 UTC 13 December 2010. Note the fractured cold front across southern Mexico due to storm force winds rushing through the Chivela Pass and into Gulf of Tehuantepec with ship observation of 50 KT circled in red near 15N94W.

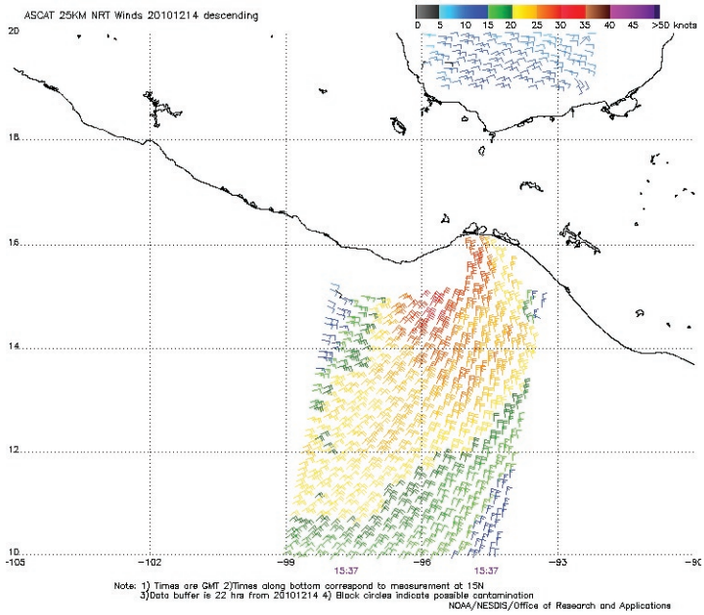


Figure 11. Ocean vector wind retrievals from the ASCAT pass on 1537 UTC 14 December 2010. Near the end of the event, north to northeast winds were beginning to diminish below gale force as winds over the southwest Gulf of Mexico veered east and southeast.

References

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VOS Program Awards

Norwegian Spirit award presentation:

Pictured are the officers of the Norwegian Spirit accepting the VOS Award for another year of outstanding participation. In addition, Captain Harstrom is presenting Paula Rychtar, the New Orlean/Gulf Coast PMO with a plaque commemorating their inaugural season of Norwegian Spirit. A spectacular lunch and a grand tour of this beautiful ship followed. Congratulations Norwegian Spirit ! Job well done!!!

From left to right: 1st officer Ricardo Deleon, 1st officer Nils Thalen, Captain Kenneth Harstrom, PMO Paula Rychtar, Staff Captain Teo Grbic

Sustained Observing Excellence Awards

Horizon Pacific

Left to Right
2nd Mate Rick Pietrusiak
3rd Mate Warren Bragg
Chief Mate Chris Kluck

Pictured are the officers and chief Steward of the NOAA SHIP GORDON GUNTER receiving their five (5) year pennant for five consecutive years of outstanding service to VOS. The GORDON GUNTER has been participants in the U.S. VOS program since 1998, and closing in fast to receive their 10 year pennant signifying 10 consecutive outstanding years of service in VOS. BRAVO ZULU!!!

From Left to Right...
LCDR Jeff Taylor, CO
ENS Michael Robbie
LT Stephen Barry, XO
ENS Van Helker, Navigation Officer
LTJG Tim Sinquefield, Safety Officer
Margaret Coyle, Chief Steward

National Weather Service
VOS Program New Recruits:
November 1, 2010 through February 28, 2011

SHIP NAME	CALL SIGN
Allure Of The Seas	C6XS8
APL Qatar	9VMJ5
Atlantic Gemini	VRDO9
Baltic Leopard	V7PX7
Cma Cgm Racine	9HA2362
Evergreen State	WDE4430
Fairchem Mustang	HP0W
Genco Thunder	V7LZ4
Genco Titus	VRDI7
Hohesand	VQQI6
Hybur Trader	V2ZP5
Hyundai No. 203	3FRY8
Maersk Westport	VRFO4
Marine Express	3FHX2
Miletus	V7UI6
Orange Blossom	ELEI6
Overseas Chinook	WNFQ
Overseas Rimar	V7HQ3
Posidana	9VBM6
Praia	A8TT4
Seven Seas Voyager	C6SW3
Star Kilimanjaro	LAIG7
Star Kvarven	LAJK7
Sunshine Ace	C6XN6
Thrasher	V7TE3
Northern Justice	A8SZ8

SHIP NAME	CALL SIGN
Overseas Anacortes	KCHV
Pacific Innovator	3ESE7
Robert Gordon Sproul	WSQ2674
S/V Denis Sullivan	WDA2619
Saga Andorinha	MYNJ6
Serac	KF007
Star Kinn	LAJF7
Umang	A8PF6

25 NEW RECRUITS! WAY TO GO!!!