



NEWS

naval meteorology and oceanography

Nov. 18, 2013

Commander's Corner

Holiday Season – Be Safe and Enjoy to the Fullest

By Rear Adm. Brian Brown

It's hard to believe that the holiday season is once again almost upon us. It's amazing how time flies when you're staying busy – and as I pointed out in my last column, our operational oceanography program has certainly had a productive year, despite its challenges.

My wish this upcoming holiday season is for all of you to be safe and enjoy the season to its fullest. After a year of hard work and stresses, this is the time to relax, reflect and have fun with friends and family. It's also a time to keep safety and stress control first and foremost in your mind with the increased commitments, expenditures, travel and celebrations sure to be cropping up.

For some, the “most wonderful time of the year” is as stressful as it is joyful. Our Navy family is operating under more stress and uncertainty than ever this year, and planning for the holidays can be overwhelming at times. Uncertainty surrounding time off and finances, combined with well-intentioned but sometimes unrealistic expectations of loved ones, can sometimes result in pushing ourselves to extremes to meet overly ambitious goals. Planning ahead for the holidays can offset potential negative impacts to relationships, finances, physical health and emotional well being to truly enjoy the holidays and do so responsibly.

Remember, your personal readiness affects the Navy's readiness. If you can proactively identify the sources of stress before things start to pile up, you can truly enjoy your holidays and do so responsibly. Using the Travel Risk Planning System (TRIPS) is one of the most effective ways to manage the risks of highway travel. TRIPS online (<https://trips.safety.army.mil/navy/login.aspx>) identifies potential risks associated with your travel plans and offers mitigation strategies to reduce those risks. And I highly recommend checking out Navy Operational Stress Control's “Thrive During the Holidays” campaign, which provides proactive resources to get ahead of holiday chaos while focusing on building resilience for the New Year.

I like the idea of not just surviving, but thriving. At times when we're the most stressed, it may seem like it takes all of our strength just to withstand the storm, and recovery returns us to where we were before. But thriving means we achieve growth – and that requires personal action. I would encourage you all to empower yourselves by taking personal responsibility for your health, wellness and growth.



Also, please look out for each other, and keep an eye on your shipmates who may be having a difficult time during the holidays. Each and every one of you is important to our Navy family and our oceanography team. We need you all to return recharged and ready for the new year.

From the Deputy/Technical Director

Every Platform Needs To Be A Sensor

By Dr. William H. Burnett

First, I am thrilled to welcome the new Technical Director of the Office of the Oceanographer and Navigator of the Navy (N2N6E), Mr. Scott Livezey. Scott has had an incredible career with the Navy and served as a civilian leader for many years at the Naval Meteorology and Oceanography Command (NMOC). I look forward to working closely with Scott to help us move our community forward into the future.



We are currently editing our articles for an upcoming issue of *Oceanography* magazine that discusses the Navy's operational numerical models. Ten years ago, I had the opportunity to provide the overview for a similar issue that discussed our models and to predict where we would be in 10 years. Now, I get to look back and see if my predictions were any good.

In 2003, I predicted that the fleet would be collecting massive amounts of ocean observations from on-scene sensors and weapon systems. This data, called "through the sensor" observations, would come from a number of tactical sensors. While it is true that we do collect observations from a number of different sensors not owned by our community, the amount of observations is only a trickle compared to the fire hose of observations we should have now. The question is, "Why is that?"

On Oct. 22, 2010, Mr. Robert Luke suddenly died at the age of 50 from a heart attack. He enlisted in the Navy after graduating from high school in Wisconsin and served his country proudly for 21 years as a chief aerographer's mate. To me, he was a chief's chief. He loved the ocean; he loved the weather, and he loved being a chief. I met Luke (his friends called him Luke, his best friends called him Robert) when he worked at the Naval Oceanographic Office. He was the guy who ran chili cook-offs and other events to collect money for the Toys For Tots program. It was his passion. He joined the National Data Buoy Center (NDBC) as the Program Manager for the U.S. Volunteer Observing System (VOS) program, and we worked together when I joined NDBC in 2004.

I'm not blaming Luke for the lack of real-time observations from in-situ platforms and weapons systems. However, Luke and I spent many hours wondering why we couldn't obtain real-time weather observations from all the ships operating in the ocean. The VOS program, administered by the National Weather Service, provides government-owned barometers and anemometers to merchant ships and pays for the communication costs to transmit the data. All the ship owner had to do was volunteer to place the sensor on the ship and ensure the observation was collected. The reasoning was simple: collect the data for the National Weather Service, and use the data in numerical models, which provide more accurate forecasts for the open ocean – making the environment safer for the fleet.

The costs to place these sensors? At worst the cost, borne by the federal government, would be \$50,000. That is the very high end for meteorological instruments – you can find weather sensors at the \$1,000 level now. The cost to build and operate the merchant ships is in the billions of dollars. Placing a weather sensor on the ship wouldn't even register on the ships' monthly operating account – yet Luke and I could not convince shipping fleets to make weather instruments part of the standard suite of the ship's operating equipment. Luke and I would attend numerous shipping conferences to argue our case, but fleet owners didn't want to listen. We could never figure out why.

Our community faces the same problems today with the U.S. Navy. We need to collect ocean and weather observations from all the platforms that are deployed. Any ship, aircraft, unmanned vehicle and weapon system should have a sensor collecting observations in real-time. But they aren't. We have stopped collecting upper air observations from our ships, and we don't even have a shipboard observing system anymore. It is time to look hard at our goal of "every platform a sensor" and figure out how we get there from here.

News

Kuehn Assumes Command of Fleet Survey Team



Cmdr. David R. Kuehn assumed command of the Fleet Survey Team (FST) from Cmdr. Ronald R. Shaw Jr. in a ceremony held Oct. 18 at Stennis Space Center.

Kuehn came to FST from OPNAV where he served as Deputy Executive Assistant to the Deputy Chief of Naval Operations for Information Dominance.

Shaw, who has been selected for captain, moves to Millington, Tenn., where he will be the Senior Oceanography Detailer.

Capt. Paul Oosterling (left), commanding officer of the Naval Oceanographic Office and guest speaker for the Fleet Survey Team (FST) Change of Command, congratulates Cmdr. David R. Kuehn (front right), the new FST commanding officer, as departing FST commanding officer Cmdr. Ronald R. Shaw Jr. (far right) stands by. (U.S. Navy Photo/by Rebecca Eckhoff/released)

Personnel



Two Graduate from NPS

Oceanography officers, Cmdr. Micah Weltmer and Lt. Cmdr. Pamela Tellado, graduated from the Naval Postgraduate School in September.

Weltmer (l) earned a Ph.D. in physical oceanography following three years of intensive work and a successful defense of his dissertation, "Stratified Fronts in Well-Mixed Estuaries."

Tellado (r) earned a master's in meteorology and physical oceanography and the 6401P METOC Operational Sciences subspecialty code.



AGs are Sailors of the Quarter at ONI

Two aerographer's mates were named Sailor of the Quarter at the Office of Naval Intelligence (ONI). Aerographer's Mate 1st Class Abdul Kasimcarew was named Senior Sailor of the Quarter, and Aerographer's Mate 2nd Class Jason Rhodes was named Junior Sailor of the Quarter. Kasimcarew is in a Naval Meteorology and Oceanography Command (NMOC) policy billet where he works in completing METOC requirements for ONI and four echelon III commands. Rhodes works to fulfill METOC special warfare requirements at Kennedy Irregular Warfare Center.

Command Spotlight: U.S. Naval Observatory

Since its establishment as the Depot of Charts and Instruments in December 1830, the determination and dissemination of precise time has been a primary mission area of the U.S. Naval Observatory (USNO). From its founding up through the mid 1960s USNO's realization of time was tied inexorably to the apparent motions of the sun, moon, and stars. Starting in 1972, however, time-scales were no longer tied to the whims of the heavens. Instead, they began to follow the precise beat defined by the "ticking" of atomic resonances.

In the decades that followed, USNO has developed the world's most precise and robust system for precision timekeeping: a clock system based on dozens of different types of atomic frequency standards, all working in concert to provide the DoD with the time-scale it needs to carry out operations on a global scale.

Among the different types of atomic clocks in the USNO's inventory, none are more precise than the Navy Rubidium Fountain Clocks, which were designed, developed, and produced "in-house" by USNO staff members. The four fountain clocks achieved full operational capability in August 2013.

Dr. Steven Peil

Dr. Steven Peil, a research physicist in the Clock Development Division at USNO, has been involved in the project to build operational rubidium fountains for the USNO clock ensemble since its early stages.

He is the recipient of the USNO's 2012 Simon Newcomb Award for Scientific Achievement for his research into an aspect of relativity theory known as Local Positional Invariance, or LPI.

Peil carried out his post-doctoral research at NIST in Gaithersburg, Md. There he worked in the lab of Dr. William Phillips, one of the pioneers of the field of laser cooling and trapping, which has revolutionized atomic physics. At NIST, Peil built up and worked on an experiment related to the field of quantum computation, which gave him the relevant experience with laser-atom interactions for his work at USNO.

Peil gained experience with precision measurements during his Ph.D. work at Harvard University, where he built a system to trap a single electron at record low temperatures for an improved measurement



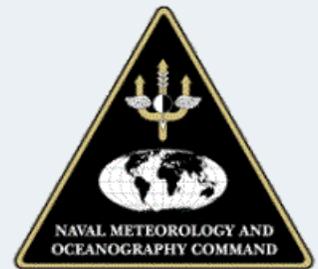
Dr. Steven Peil (second from right) is one of the designers of the Navy Rubidium Fountain Clock, with (L to R) Dr. Bobby Junker, C4ISR Department Head at ONR; Dr. William Phillips, 1997 Nobel Prize winner, fellow of the Joint Quantum Institute of the University of Maryland and the National Institute of Standards and Technology; and Dr. Chris Ekstrom, chief of the Clock Development Division at USNO.

of the electron's magnetic dipole moment. At USNO, he plans to begin developing the next generation of atomic clocks, which rely on an optical-frequency transition and can out-perform the rubidium fountains.

Social Media

Follow Naval Oceanography on Facebook and @navyoceans on Twitter to keep up with all the latest news and images from the Naval Meteorology and Oceanography community.

Rear Adm. Brian B. Brown, USN
Commander, Naval Meteorology and Oceanography Command
Naval Meteorology and Oceanography Command News
1100 Balch Boulevard, Stennis Space Center, MS 39529



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Naval Meteorology and Oceanography Command editorial staff:

Public Affairs Officer

Public Affairs Assistant/Editor

Design

Cathy L. Willis

George M. Lammons

Jenni T. Ervin

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Tel: (228) 688-4384 • Fax: (228) 688-4880 • E-mail: cathy.willis@navy.mil