

Date: 15 July 2015

Location: Leaving SAREX grounds and transiting Northwest

Primary Activities: Al Jazeera America Live Broadcast; Aerostat and Puma Sorties; Distributed Tactical Communications System (DTCS) Testing

Conditions: 8/10's ice coverage; fog early then clearing with overcast skies

Temperatures: Air temperature range 40 - 43 F; water temperature 28 - 31 F

We are just over the halfway point for the Arctic Technology Evaluation 2015 mission. The following are a few shots showing some of the science team and crew members in their day-to-day activities.



Puma team in action (Photo courtesy USCG R&D Center Team)



Members of the SAR Exercise team (Photo courtesy USCG R&D Center Team)



ROV preparing to launch (Photo courtesy of USCG R&D Center Team)



CGC HEALY crew preparing life raft for SAR exercise (Photo by Nick Halisak, Stevens Institute)



Wave Glider and 3D Printing teams (Photo courtesy of USCG R&D Center Team)

The news crew from the television show TechKnow on Al Jazeera America (America.AllJazeera.com) attempted another live video report from HEALY to Al Jazeera America's news room in New York for a 20:45 EST national broadcast. As with many of the other Arctic Technology Evaluation 2015 teams, they encountered operational and connectivity issues not uncommon in this region. One of the most likely communications issues stemmed from HEALY being in a marginal satellite signal footprint. Another lesson learned is that significant pre-planning and preparations are required for these types of operations in this environment. The news crew and HEALY crew are still investigating the issues, and they will attempt another live broadcast later this week, operations and connectivity permitting.

On this cruise, the Coast Guard Research & Development Center (RDC) is testing the Excelis® Distributed Tactical Communications System (DTCS). The DTCS has the potential to provide Beyond Line-Of-Sight (BLOS), Over-The-Horizon (OTH), and On-The-Move (OTM) one-to-many tactical voice and data communications at higher latitudes. The DTCS is managed by the Defense Information Systems Agency (DISA) through its Enhanced Mobile Satellite Services (EMSS) program management office. Current range between radios is approximately 250 nautical miles. However, DISA / Excelis® testing is progressing towards global coverage by 2016. The RDC's ultimate test objectives are to first confirm basic operations of the radios and ensure transmitted data will integrate into the Coast Guard COP. Once achieved, the RDC will conduct testing as close to actual operational conditions as possible to analyze operational effectiveness and suitability. So far, the RDC has conducted preliminary DTCS connectivity testing in preparation for operation testing once HEALY reaches latitudes beyond KU band capability. During the SAR Exercise, the DTCS was our only viable voice communications method between HEALY and Oliktok Point.

The Aerostat and Puma teams continued flying sorties today in part to continue testing multi-platform integration to provide and enhance situational awareness. Weather and operations permitting, the teams will fly two sorties per day, and will report any significant outcomes in the SitReps.

Over the next few days, we will be in a continuing operations and test mode as we move North into the 10/10's (complete) ice coverage!

For description of ATE 2015 plans see newsletter at:

http://www.uscg.mil/acquisition/rdc/pdf/ATE15%20Pub_FINAL.pdf