

## First ever autonomous net capture in the Arctic

NOAA's Pacific Marine Environmental Lab (PMEL) launched the first in a series of eight satellite-tracked (holey sock) drifter buoys. These buoys are part of a continuing effort to provide information on ocean currents, specifically relaying information on water movement from the north Bering Sea into the Arctic Ocean. The data will be used to characterize the transport of heat, nutrients, etc. into the Arctic.

NOAA's UAS Program Office / Aircraft Operations Center and AeroVironment (AV) conducted the first Puma (small) Unmanned Aircraft System (sUAS) flights during this cruise. One of the



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primary objectives of this technology evaluation is to conduct autonomous net captures on HEALY while minimizing impact on operations and crew. After overcoming some initial software issues, the team launched the sUAS from the bow into an approximate 22-knot relative wind, conducted several sorties to refine the net (mounted on the forward, starboard side of the ship) approach techniques and procedures for both the sUAS and HEALY. **They executed the first ever autonomous net capture in the Arctic on a Coast Guard cutter!** This evolution demonstrated the ability to conduct sUAS operations without the need for a flight deck and also without the need to launch a cutter boat for sUAS recovery. The team will be conducting additional flights throughout the cruise to continue analyzing tactics, techniques, and procedures.

A news crew from the television show TechKnow on Al Jazeera America ([America.AlJazeera.com](http://America.AlJazeera.com)) was aboard to take an in depth look at research related to the current state of the Arctic, the risks ahead, and how innovative technology can enable response in such a remote environment. For awareness, TechKnow's tagline is "where hardware meets humanity," and they examine how innovative science research and technology impacts daily lives. Only July 9th, the news crew conducted a live video report from HEALY to Al Jazeera America's news room in New York for their 20:00 national broadcast. The relevance is that this demonstrates the ability to conduct live video feeds, for example, during an incident of national significance (IONS). The news crew plans to conduct additional live feeds while aboard, and times and dates will be posted as available.

The D17 Tribal Liaison, Sudie Hargis, provided Tribal Relations and Cross-Cultural Awareness trainings for CGC HEALY and Science team crewmembers (3 sessions), discussing Alaska Native tribes and organizations, and relationship to USCG Operations in the Arctic. The intention is to give an easy-to-understand overview and practical information and guidance for all crewmembers to further enable and facilitate cultural engagement.

**Is this is an issue of potential concern?**

**This item has high visibility**

**Geographic Location (Relevant region, city location)** Bering Strait, <http://icefloe.net/healy-realtime-data>

**Partnering offices** PMEL, USCG

**Embargoed?** No

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