



ARVP

# NEWSLETTER

JANUARY 31, 2024

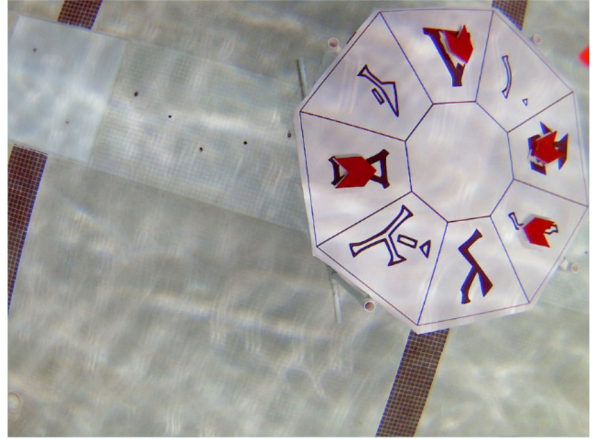
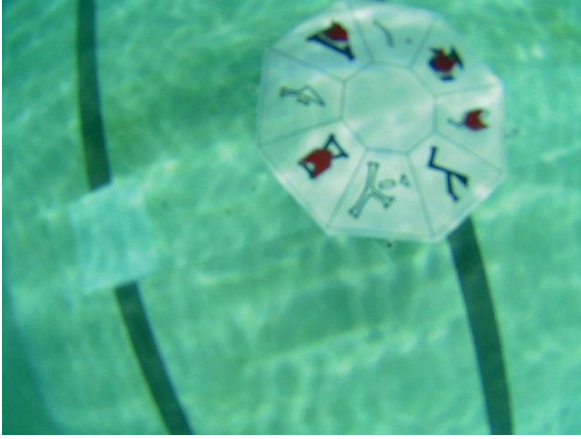
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## Testing The Waters!

ARVP is back with pool tests every other Saturday at Kinsmen to get Arctos consistent for Robosub 2024! Our robot has been taken apart and reconstructed many times to teach new members of the Electrical Team how to rebuild Arctos from scratch. New holes on the hull have also been machined and fitted for our high amp external batteries for even more thruster power, while the frame's L-brackets have been lowered to fit said batteries on the robot for faster battery swaps. This unintentionally shifted the craft's weight causing it to tip a bit forward but our team easily fixed the issue after multiple pool test runs.

Additionally, our team has procured a new, higher quality, bottom camera to identify images for our droppers. The difference is night and day as it makes it easier for Arctos to identify the difference between the drop spot and pool wall moss. In the meantime, software is preparing labeling UI for our upcoming labeling party in February, to train our vision system. We will need all the pizza to label everything, so stay tuned for a mirthful media post next week!



## ACCOMPLISHED TASKS ✓

- ✓ Working Arctos Simulator in the water! (Alpha)
- ✓ Over 100 New Member Sign Ups from Winter Recruitment!
- ✓ New Torpedo Designs Mounted!



## MEMBER QUOTE 😎

"There's no current"

- Cody Sorochan (Electrical Member) & Mahit Vyas (Electrical Co-Lead)

"It's literally off"

- Logan Krezan (Project Co-Lead)

# Mechanical: New Torpedoes!

Approaching RoboSub 2024, torpedo development focuses on optimizing reliability and ease of use. The fundamental mechanical difference is the transition from the sliding mechanism to a lever-based system, in which levers latch onto the spring plate to be released by a linkage system connected to the motor. This difference minimizes problematic friction while utilizing torque from the levers. Moreover, the addition of underwater servos brings increased power and reliability to the system without the risk of water damage. These changes, coupled with a revamped reloading system allowing for manual reloads, signify a drastic improvement in functionality overall!

## Winter Dinner!

Checkout our welcome back dinner at Sherlocks after Winter Break!



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ARVP had a big welcome back dinner at Sherlocks after winter break to celebrate a busy semester of headway to our major upgrades and improvements to Arctos! 🎉 Checkout our team as they've enjoyed a nice long social event sharing what they've been up to on the break. ❄️

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# Support Highlight

Electrical Systems Advisor!

**Cdr Patrick Larose, P.Eng.  
MSustMgt, MSysEng, MDS**

We'd like to welcome the newest member of our advisor team - Commander Patrick Larose! Cdr Larose is an electrically focused submarine engineer in the Canadian Navy, holding masters in systems engineering and sustainment management. He has previously worked with several other student engineering groups and has volunteered to support ARVP as our Electrical Systems Advisor. His contribution in design support and cold eyes review will be especially helpful in allowing us to understand actual submarine systems and apply that knowledge to our own AUV!



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