Surface Currents for US Coast Guard Search and Rescue (SAR)

MARACOOS 20th Anniversary
Washington, D.C.
May 22, 2024

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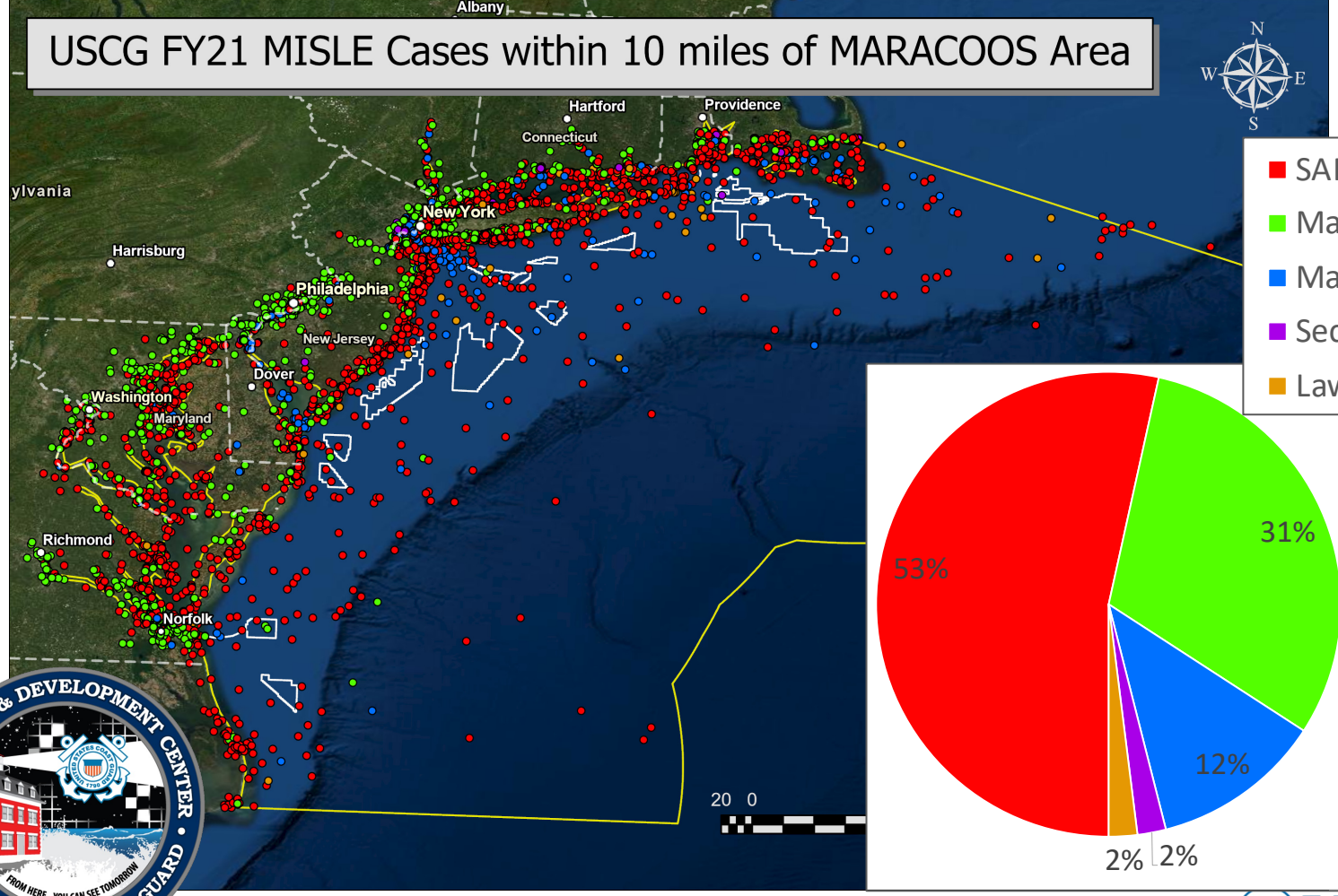
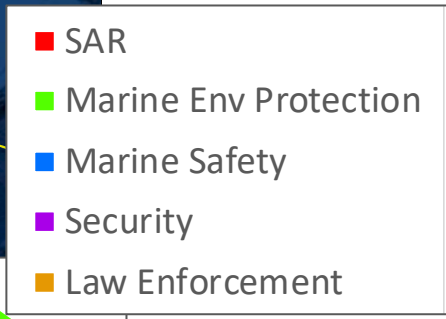
USCG Search and Rescue Statistics for 2024
(as of 04/05/2024)
Cases: 4,879
Lives Saved: 1,477
Property Saved: $31.4M

USCG FY21 MISLE Cases within 10 miles of MARACOOS Area





RESEARCH & DEVELOPMENT CENTER
UNITED STATES COAST GUARD
FROM HERE...YOU CAN SEE TOMORROW

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High Frequency Radar Station

CODAR Tx/Rx Antenna
Lewes Beach, DE USA

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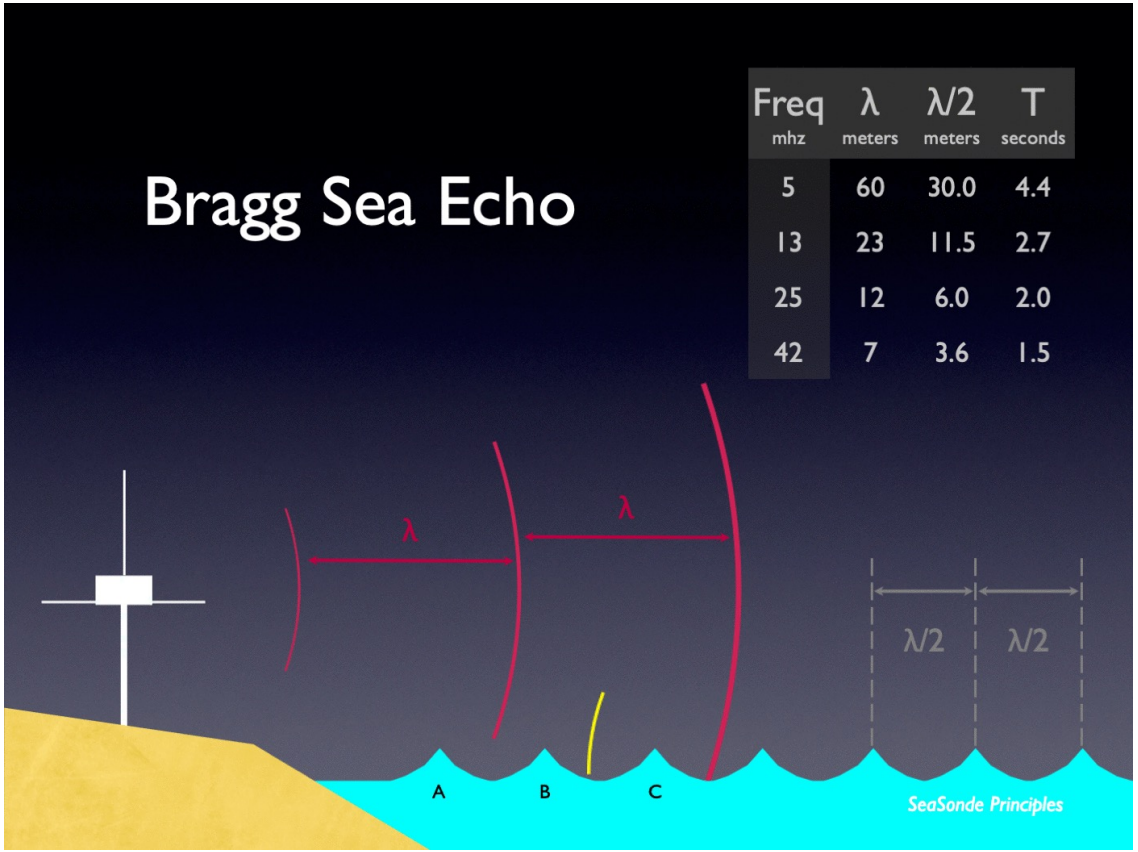
How Radars Work…



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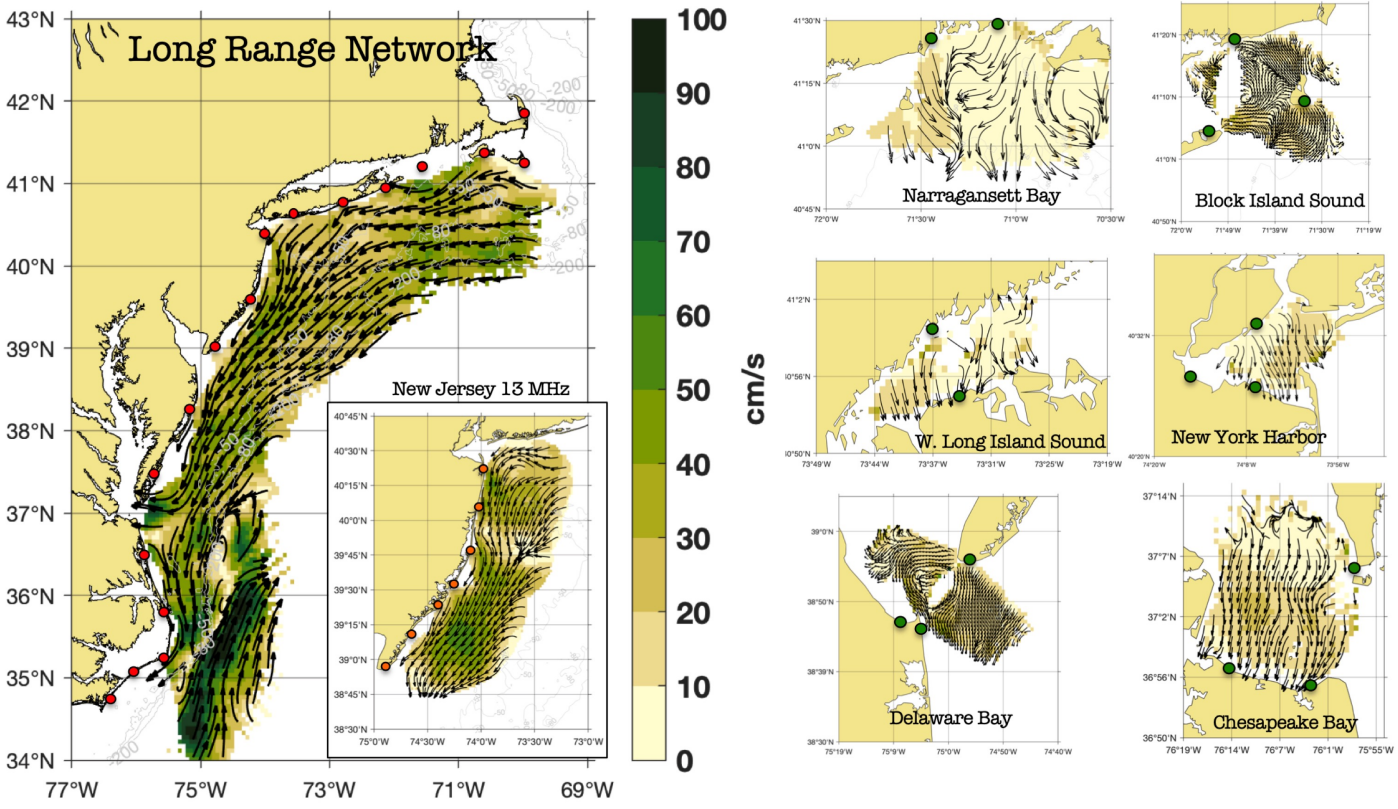
High Frequency Radar Network



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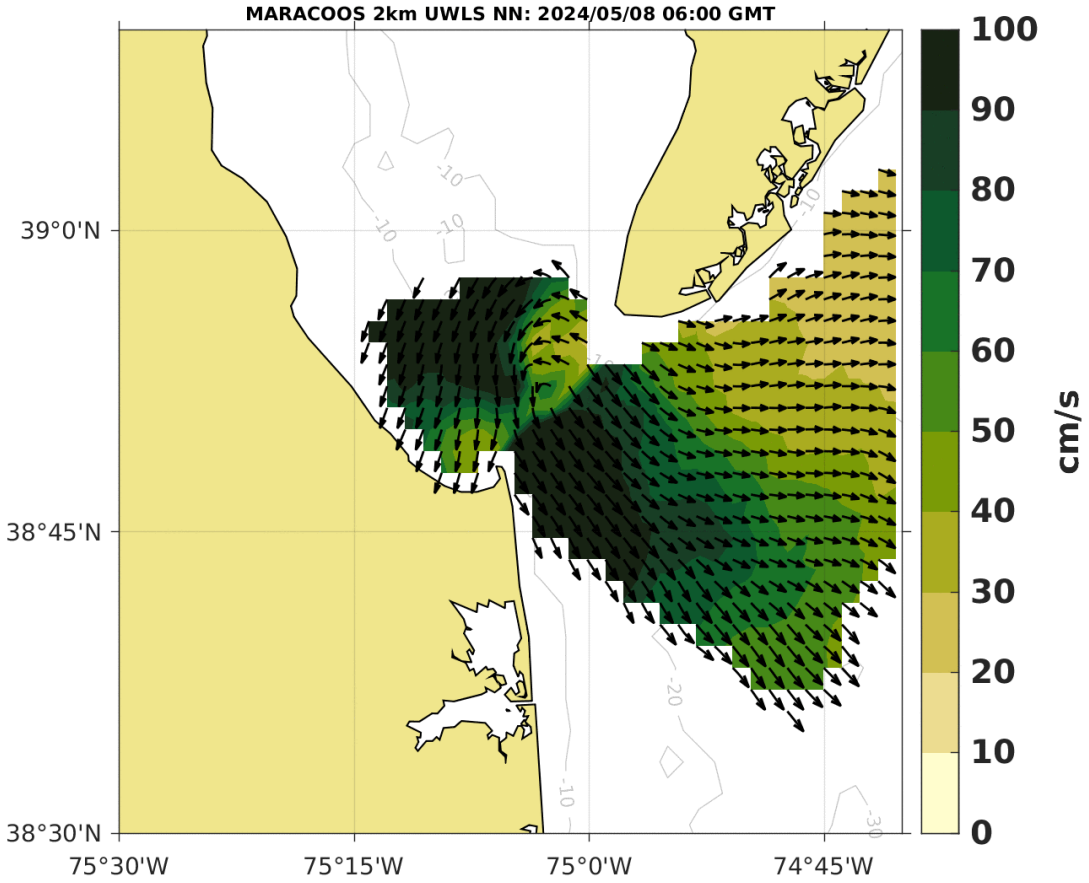
Surface Currents



6 hour animation of Delaware Bay May 8, 2024

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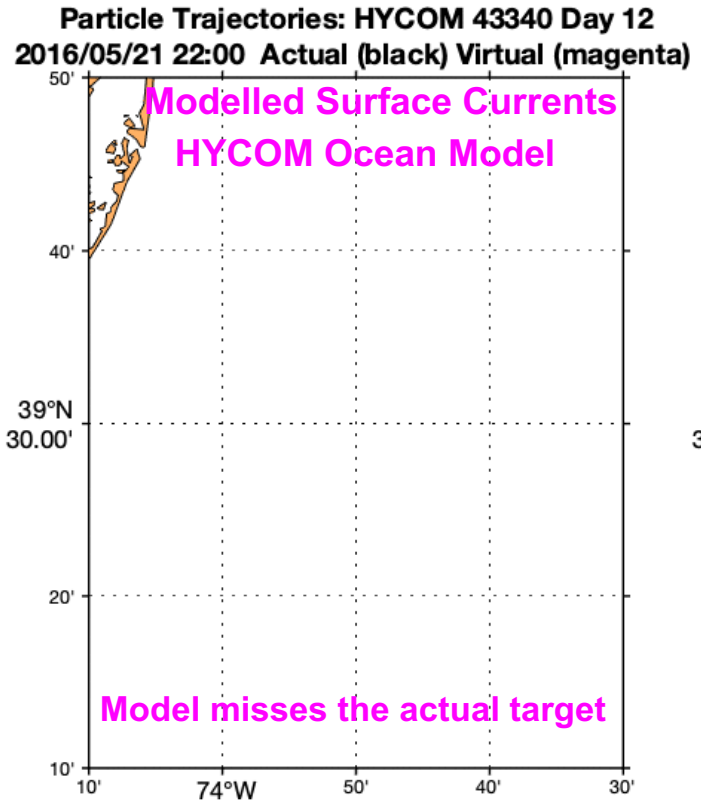
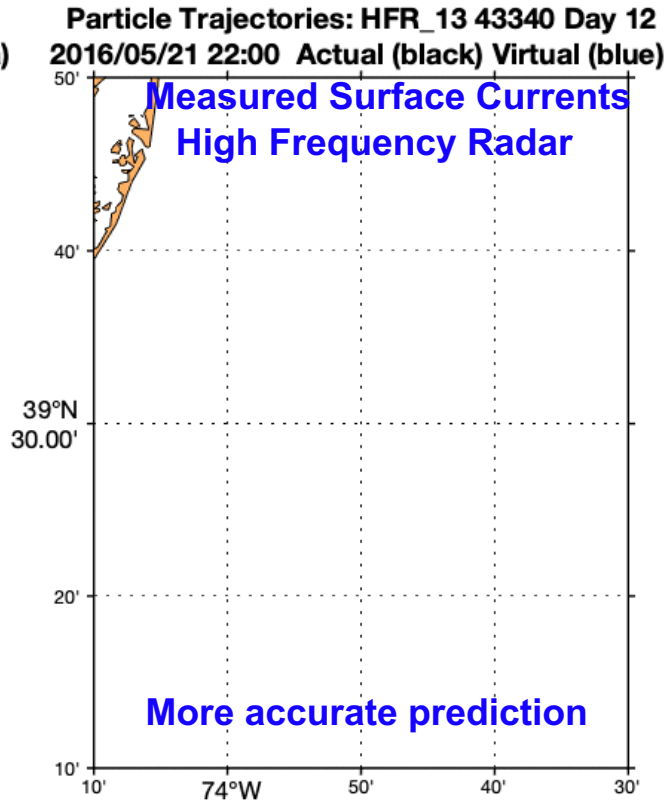
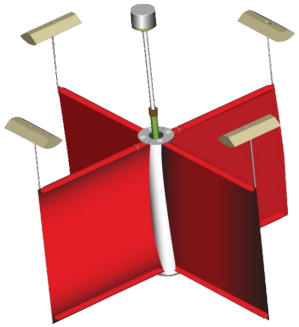
Modelled vs Measured Currents







GPS Surface Drifter

Measured surface currents are 6 times more accurate than modelled currents in the coastal ocean[1]

[1]Roarty, H., Allen, A., Glenn, S., Kohut, J., Nazzaro, L. and Fredj, E., 2018, May. Evaluation of environmental data for search and rescue II. In *2018 OCEANS-MTS/IEEE Kobe Techno-Oceans (OTO)* (pp. 1-3). IEEE.

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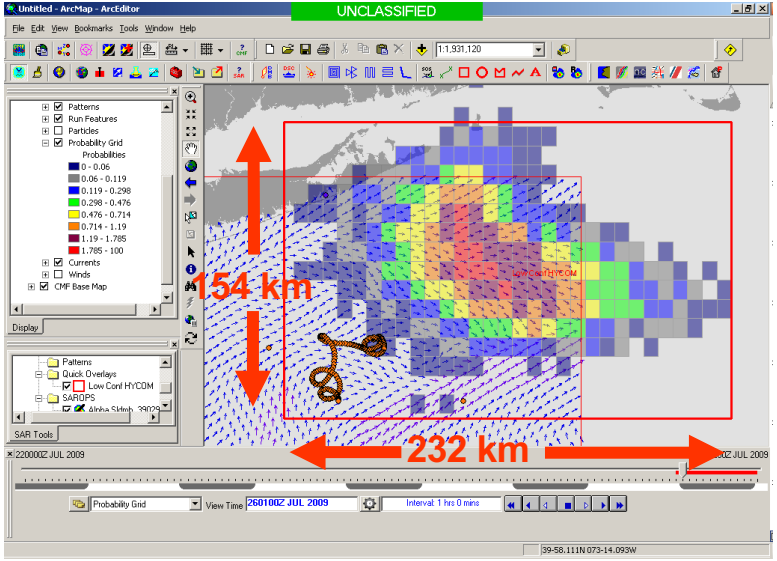
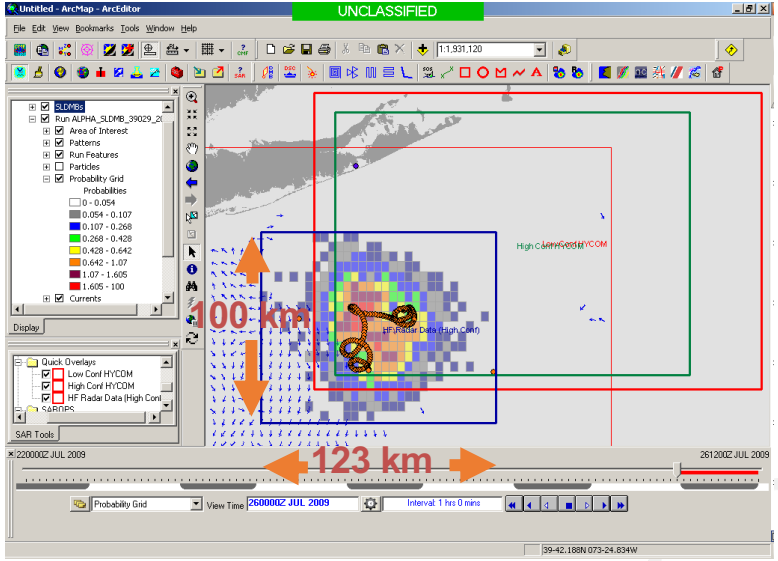
How much more accurate?

Search area reduced by 2/3 !!!





→ Benefit: Saving more lives and property AND cost savings to taxpayers

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