



Veículos submarinos autónomos para mapeamento e recolha de dados da coluna de água

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Outline

- Laboratory overview
- Vehicle systems
- Software tool chain
- Operation
- Data products
- Conclusions



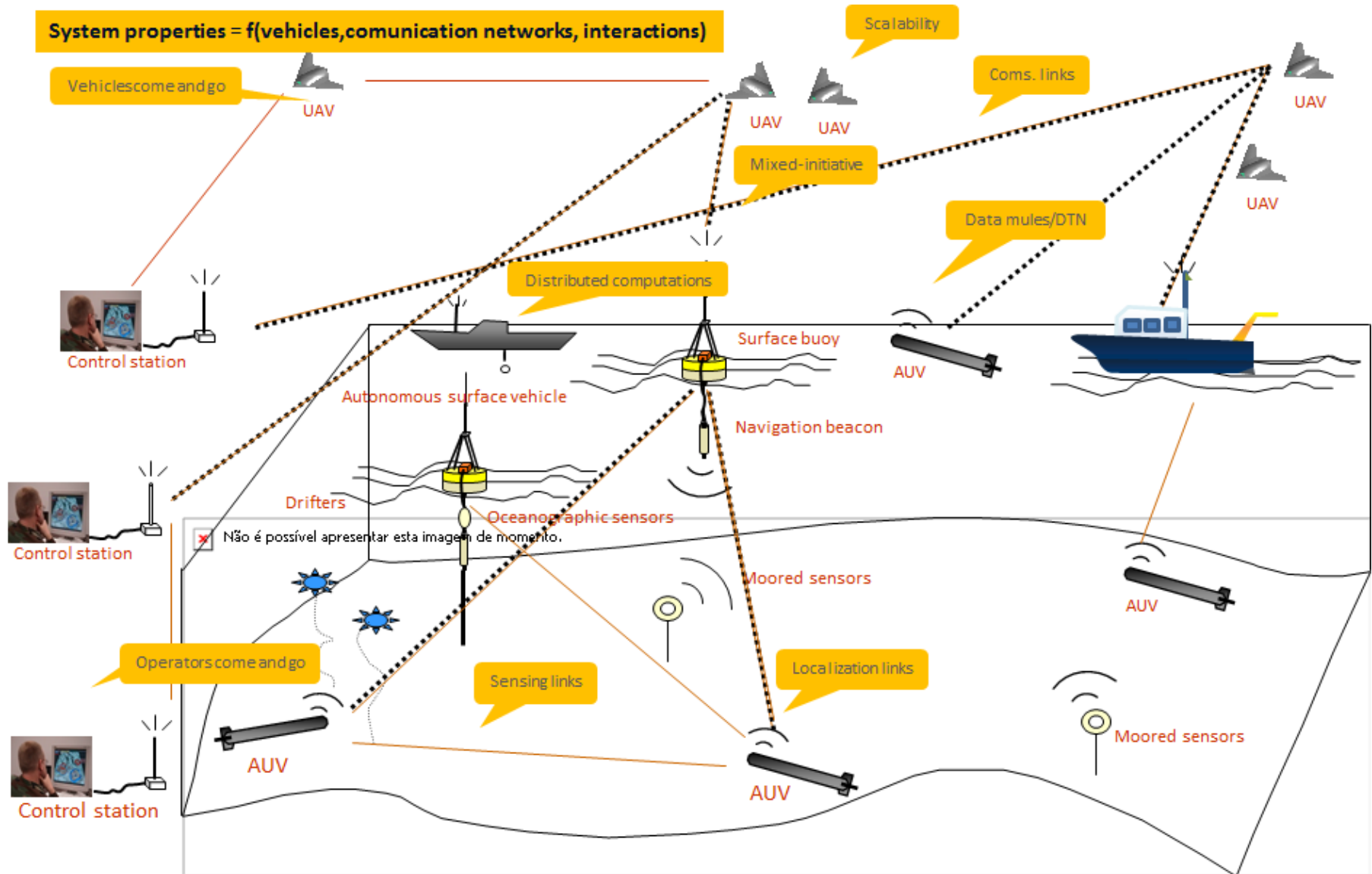
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Laboratory overview

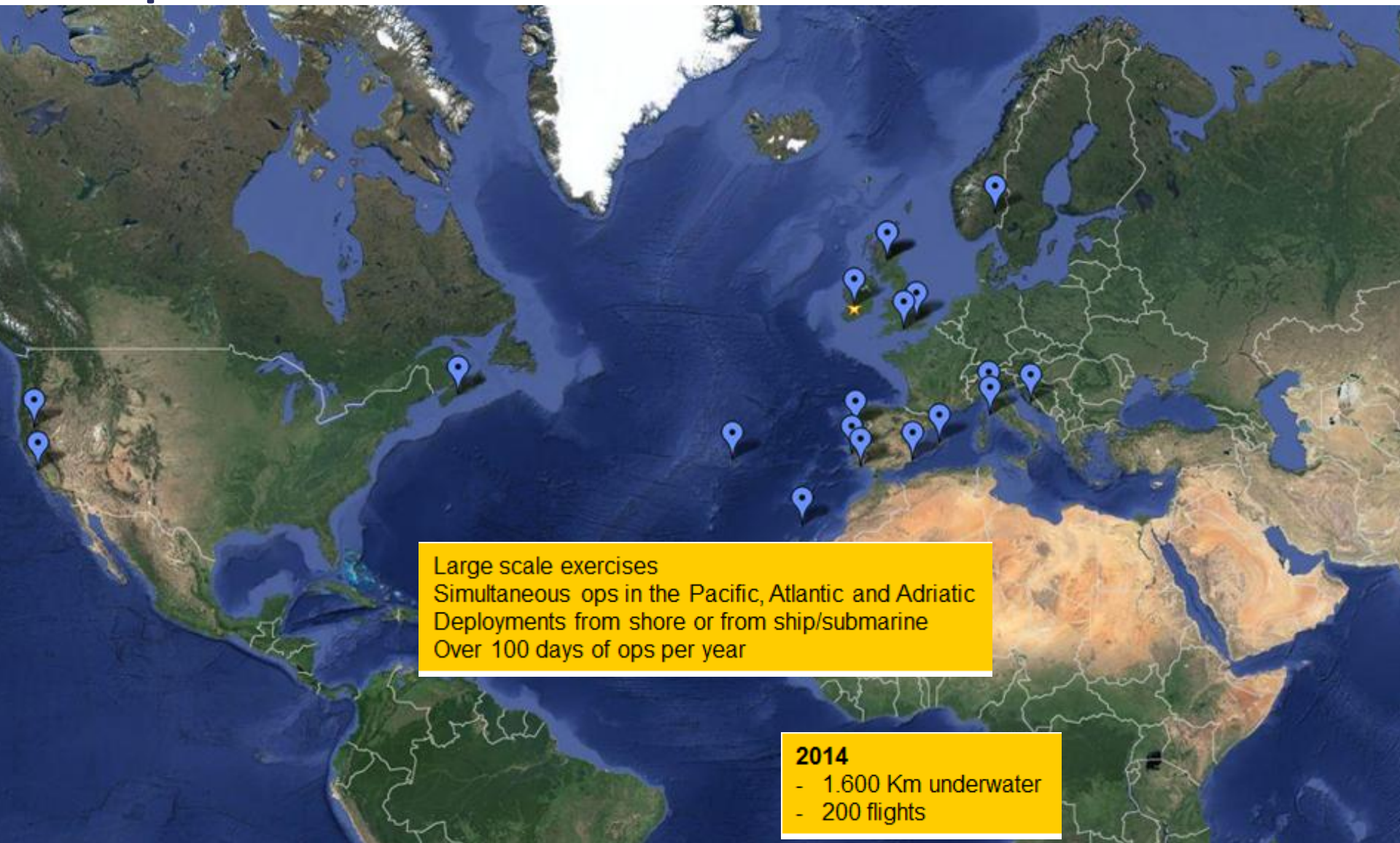


Vision

System properties = $f(\text{vehicles, communication networks, interactions})$



Op areas

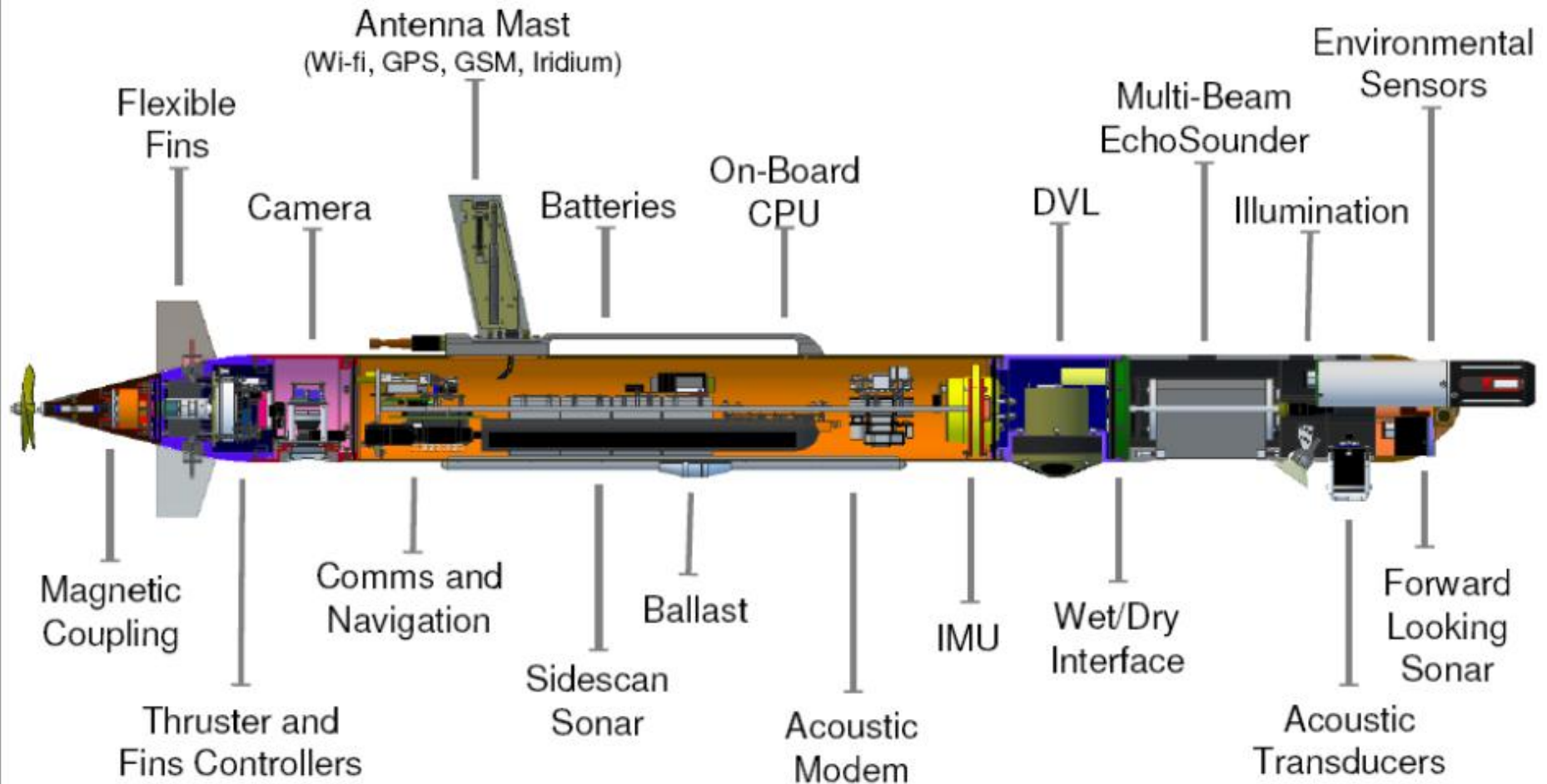




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Vehicle systems

Light AUV (LAUV)

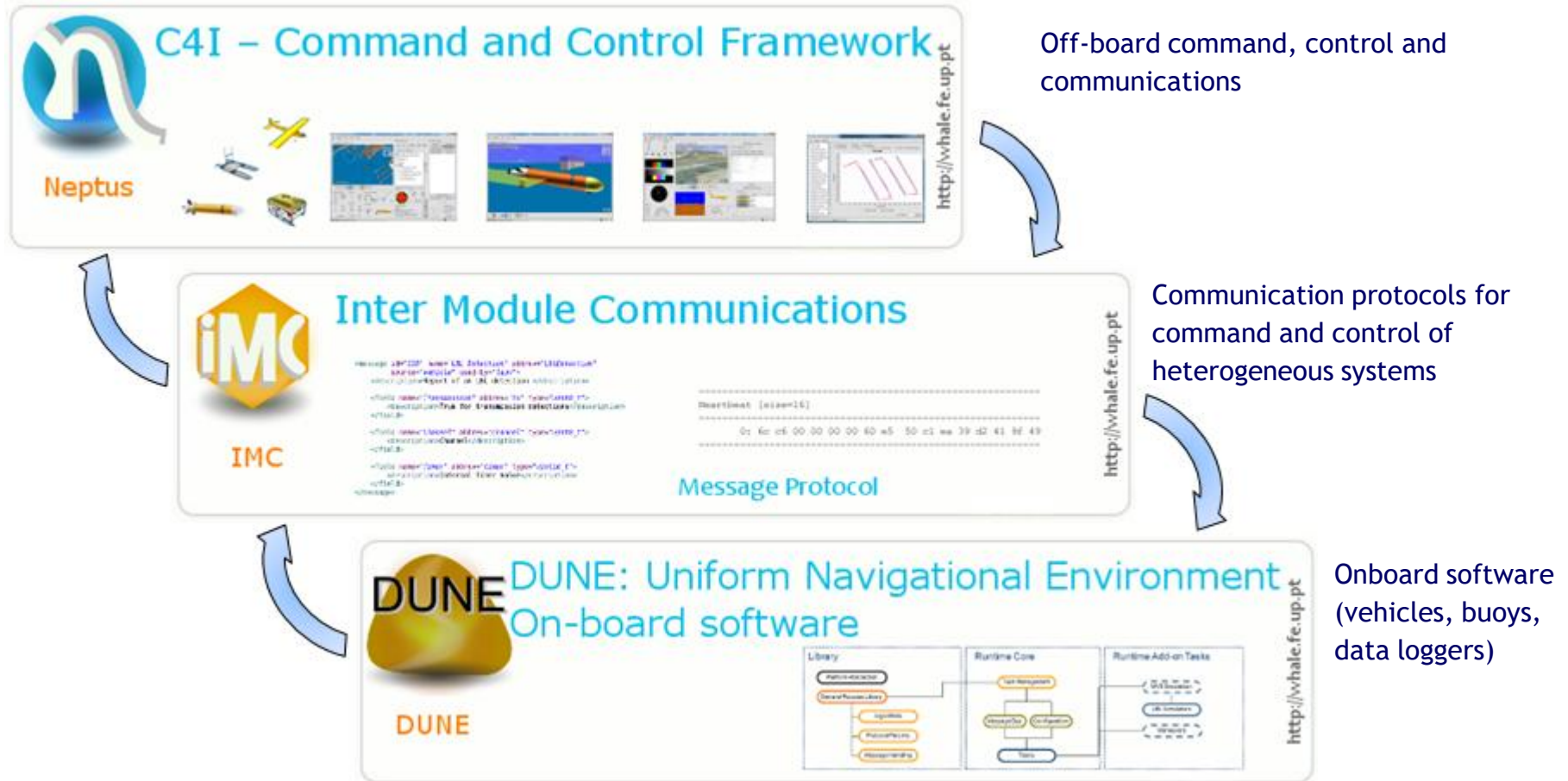




Software tool chain

Software tool chain

Field tested every other week with ocean and air vehicles



J. Pinto, P. Sousa Dias, R. Martins, J. Fortuna, E. R. B. Marques, and J. Borges de Sousa, “The LSTS tool chain for networked vehicle systems”, Proceedings of the IEEE/MTS OCEANS’13, Bergen, June, 2013.

User group: PT, US, NL, NOR, SWE, SP, FR, UK, DE, GR, IN, QT

neptus Command and Control

Supports all phases of the mission life cycle

Planning, Execution, Review and Analysis

Modular architecture through plug-ins

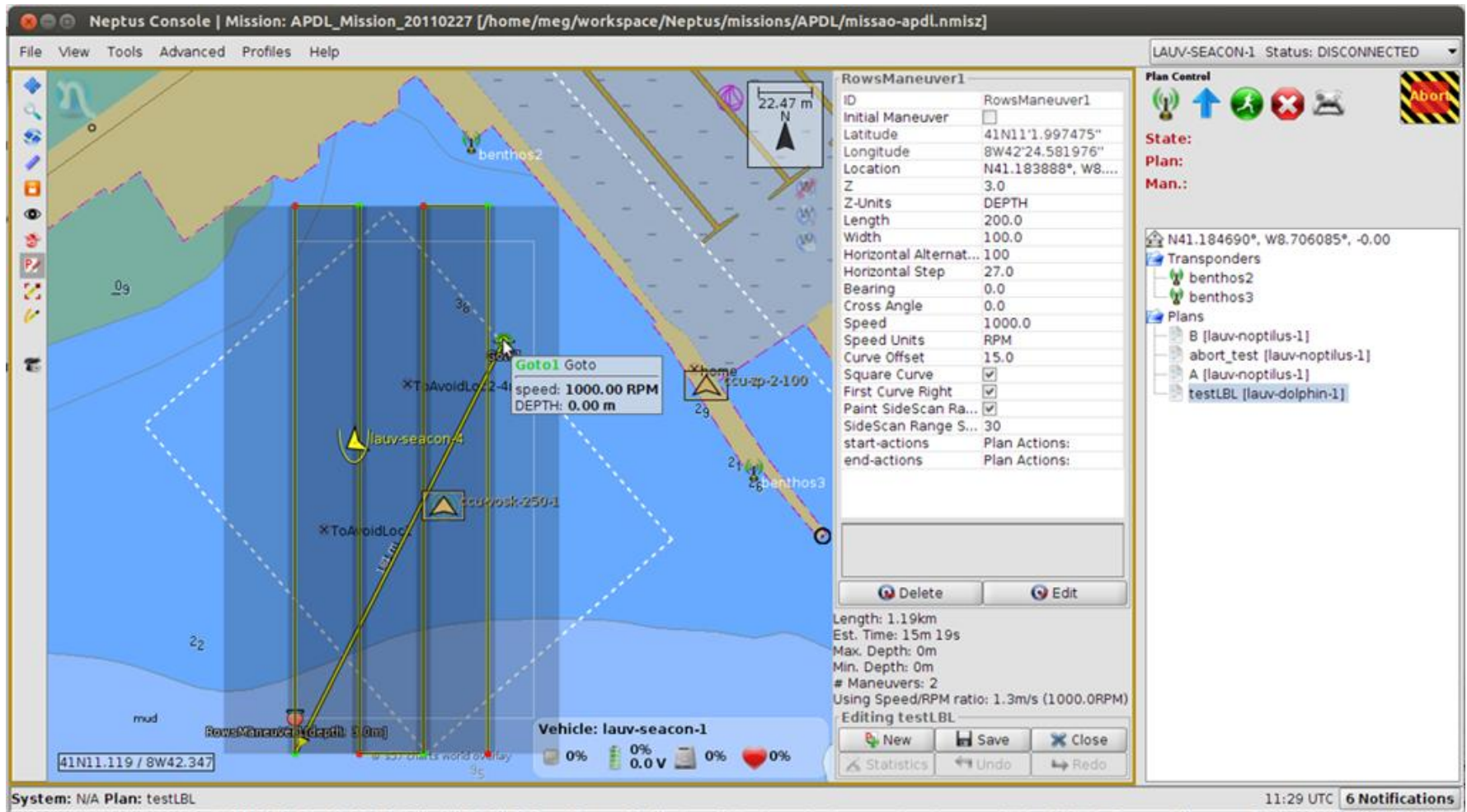
Console Displays, Communication Protocols, Data visualizations,
Maneuvers, ...





Supports all phases of the mission life cycle

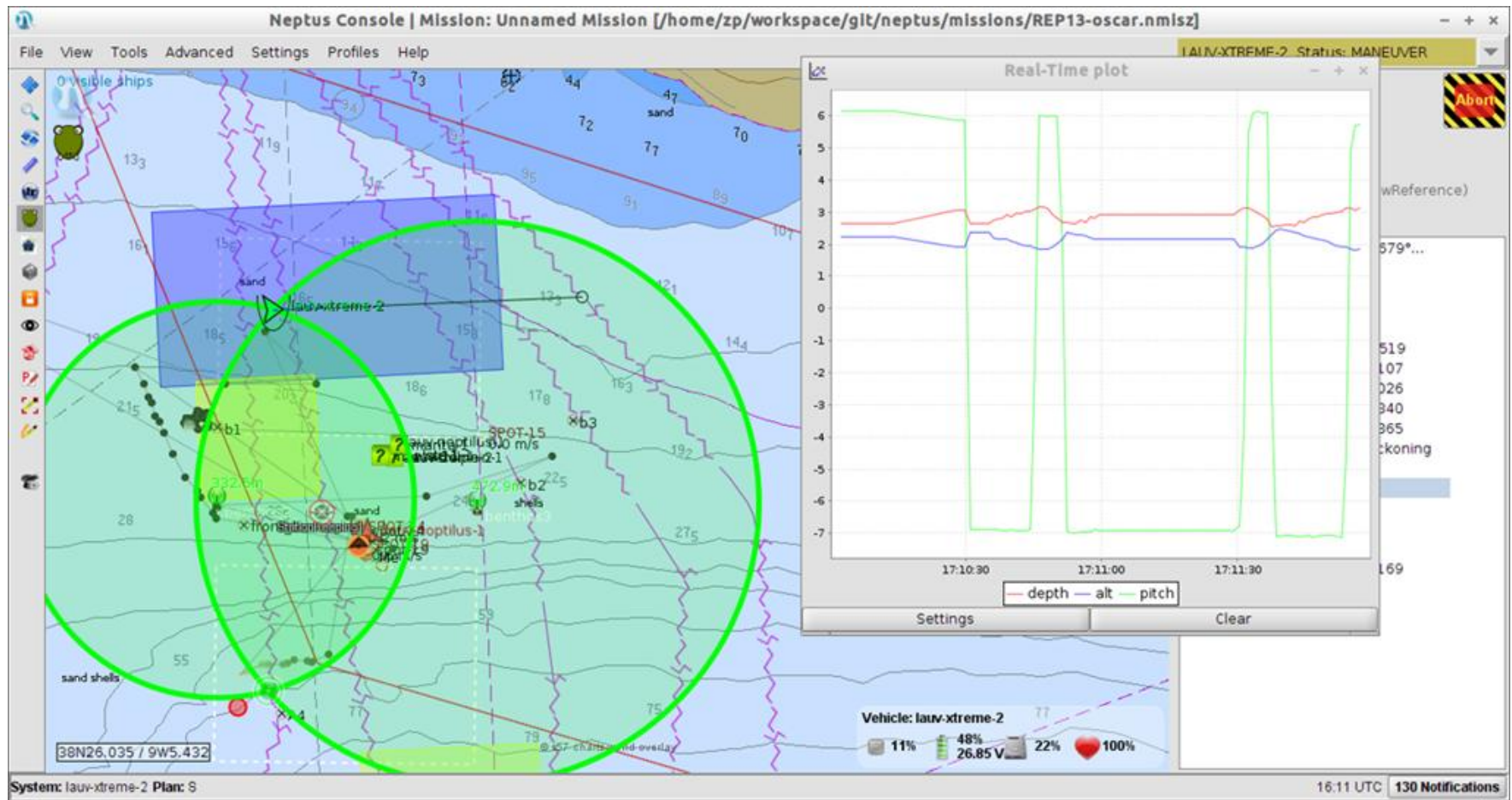
Planning, Execution, Review and Analysis





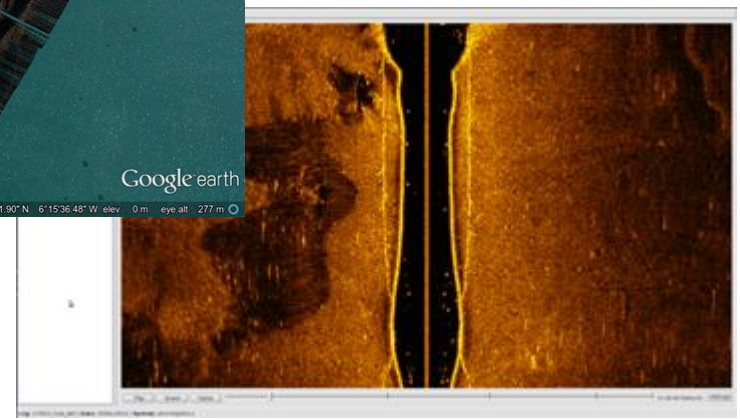
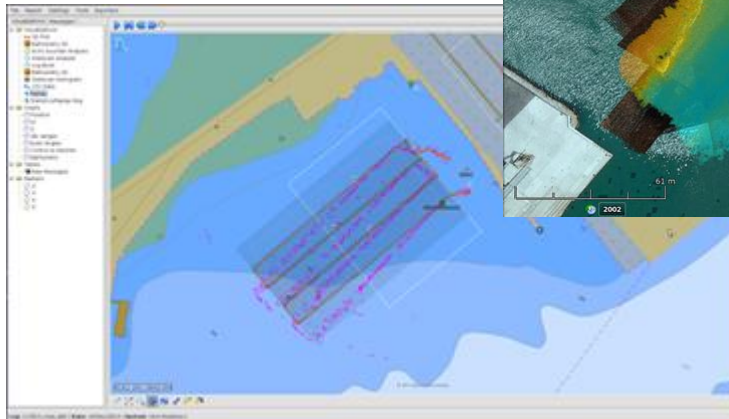
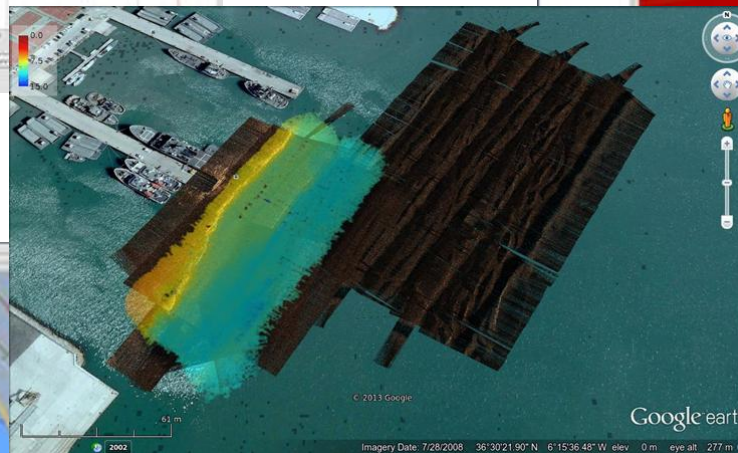
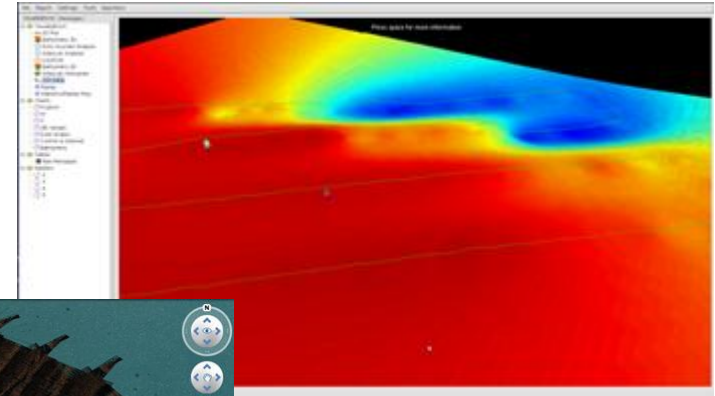
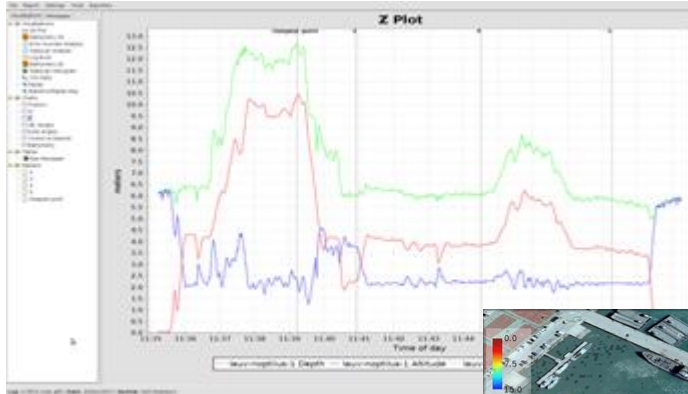
Supports all phases of the mission life cycle

Planning, **Execution**, Review and Analysis



Supports all phases of the mission life cycle

Planning, Execution, **Review and Analysis**





Operation

LAUV operations

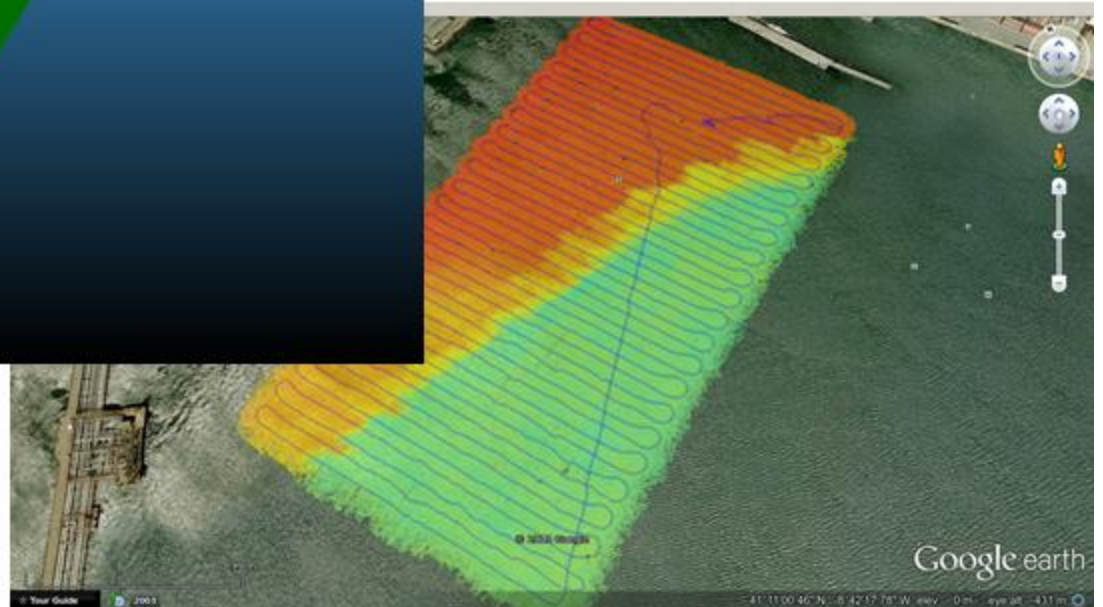
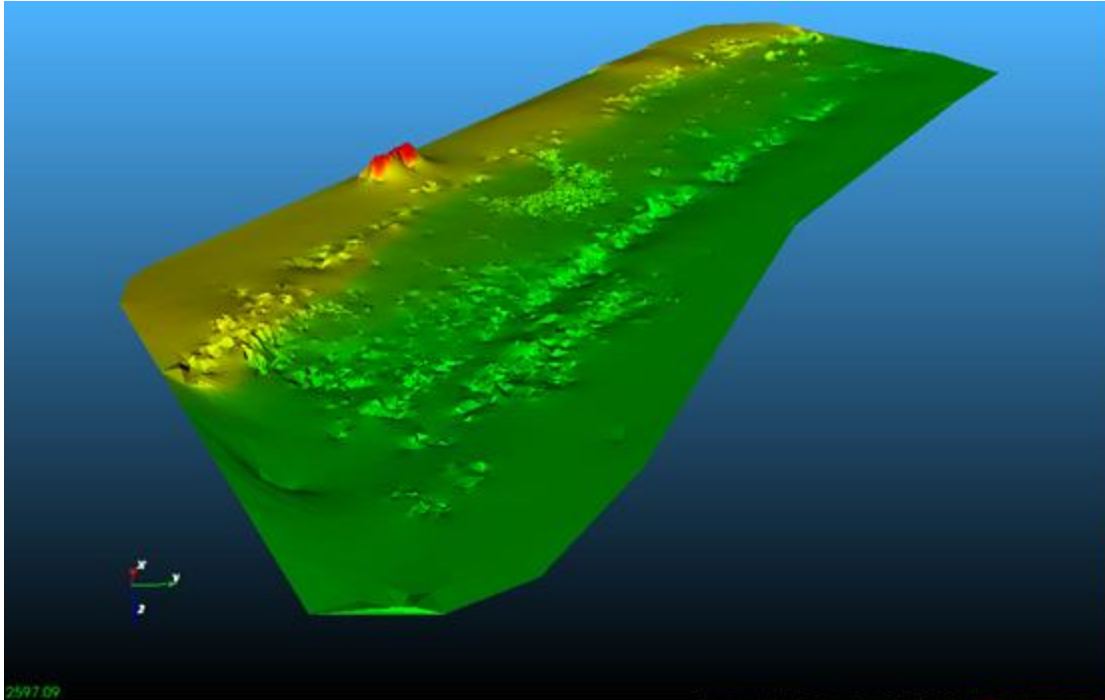




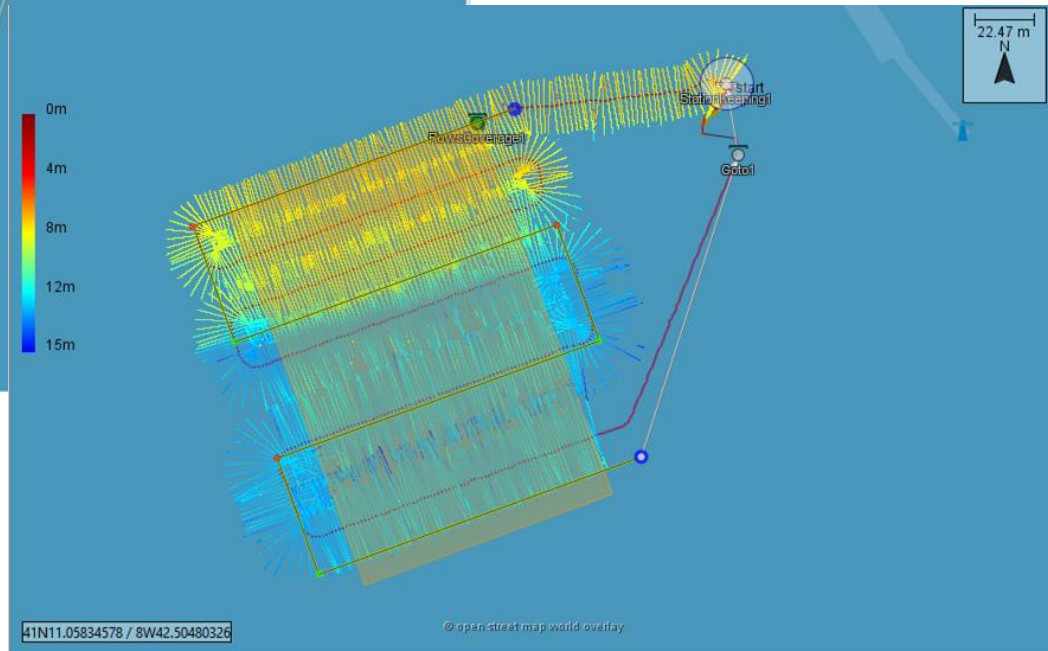
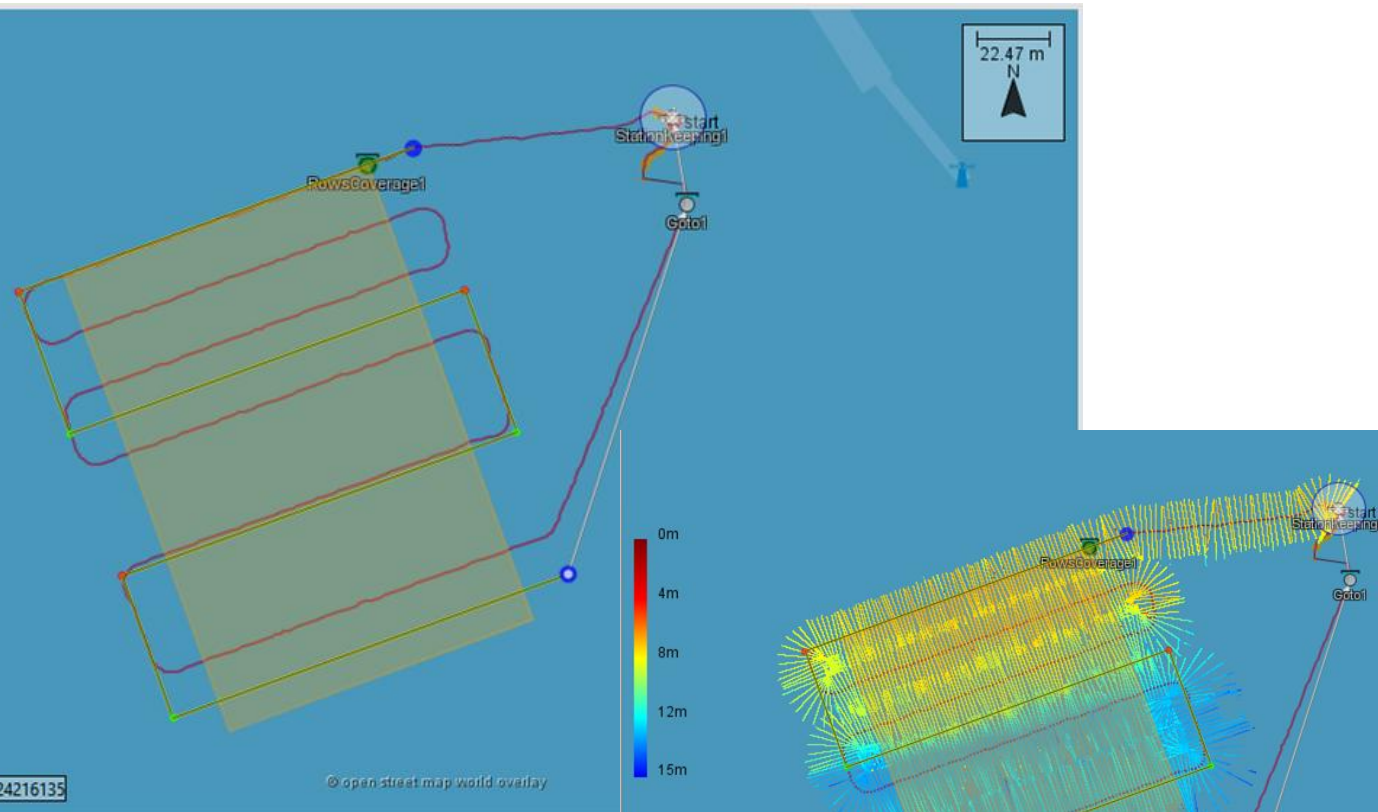
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Data products

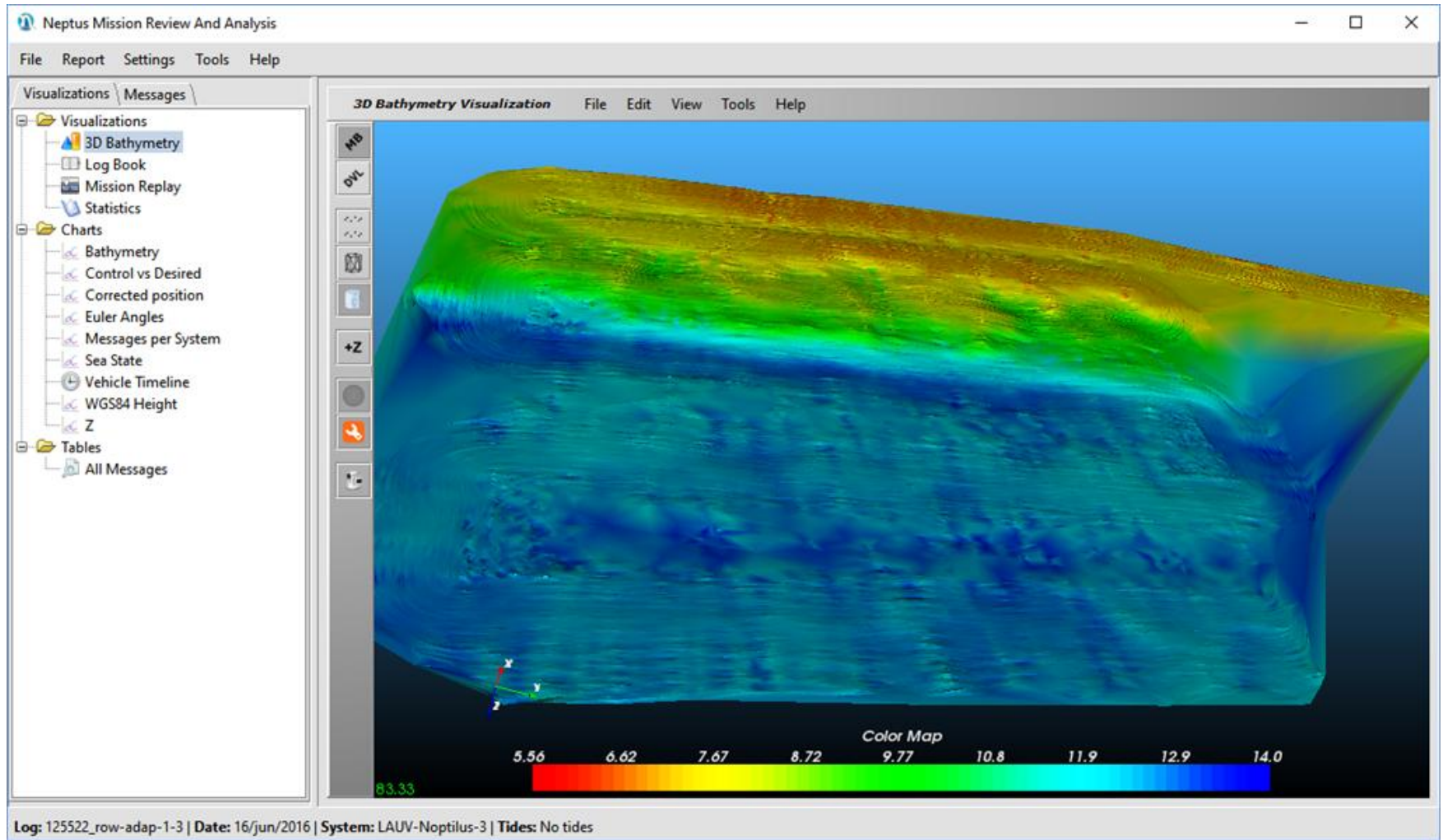
Multibeam



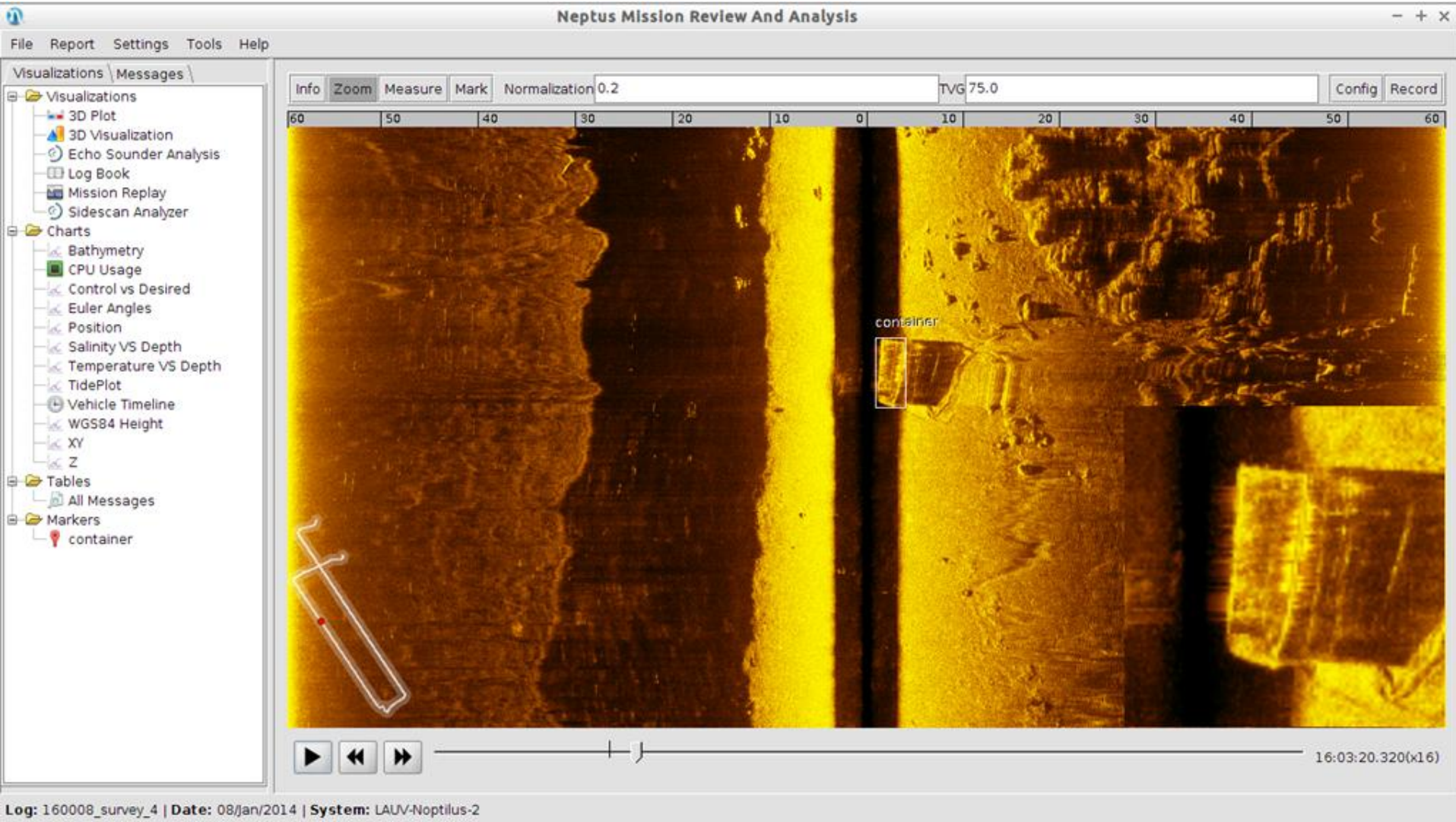
Adaptive Multibeam



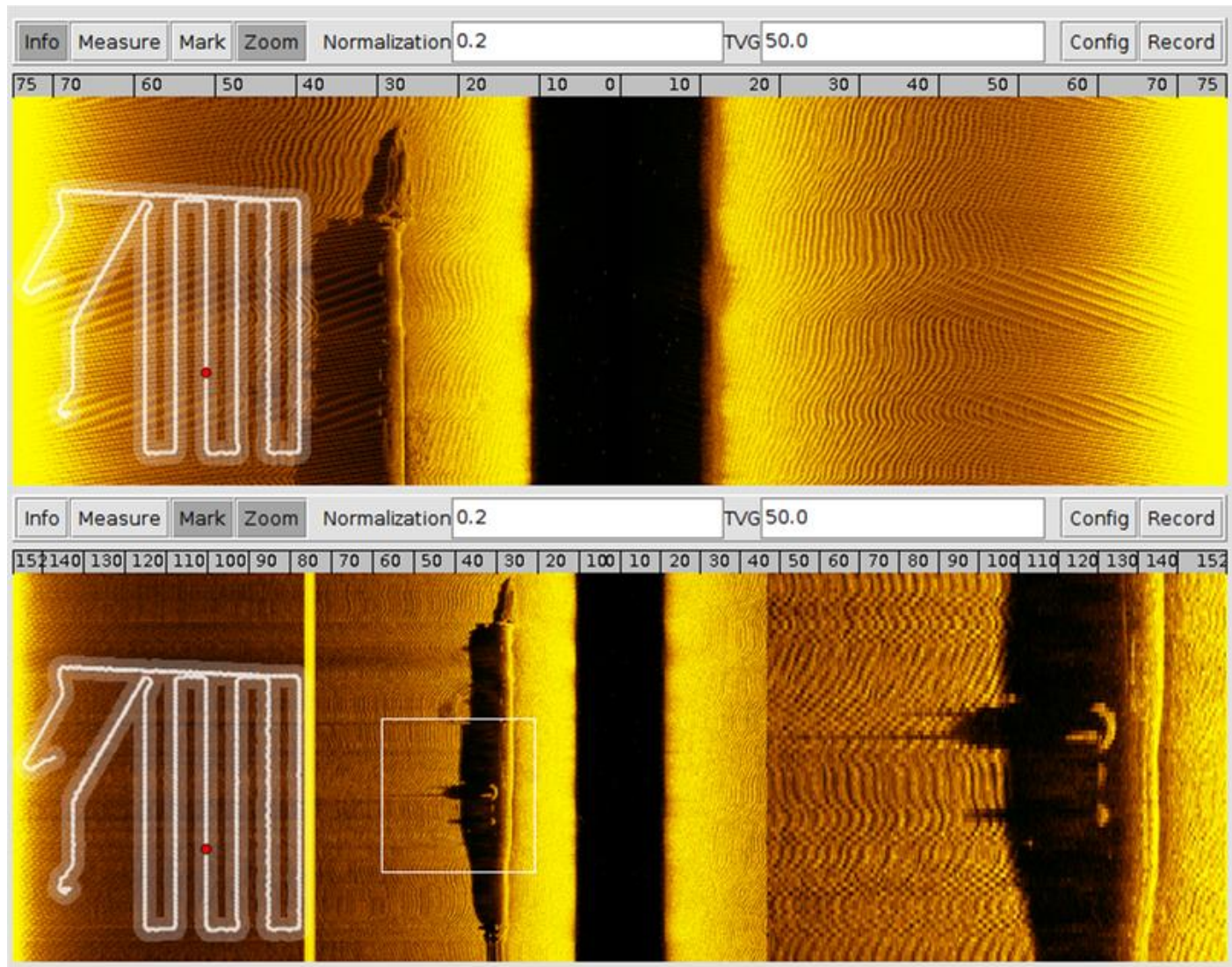
Adaptive Multibeam



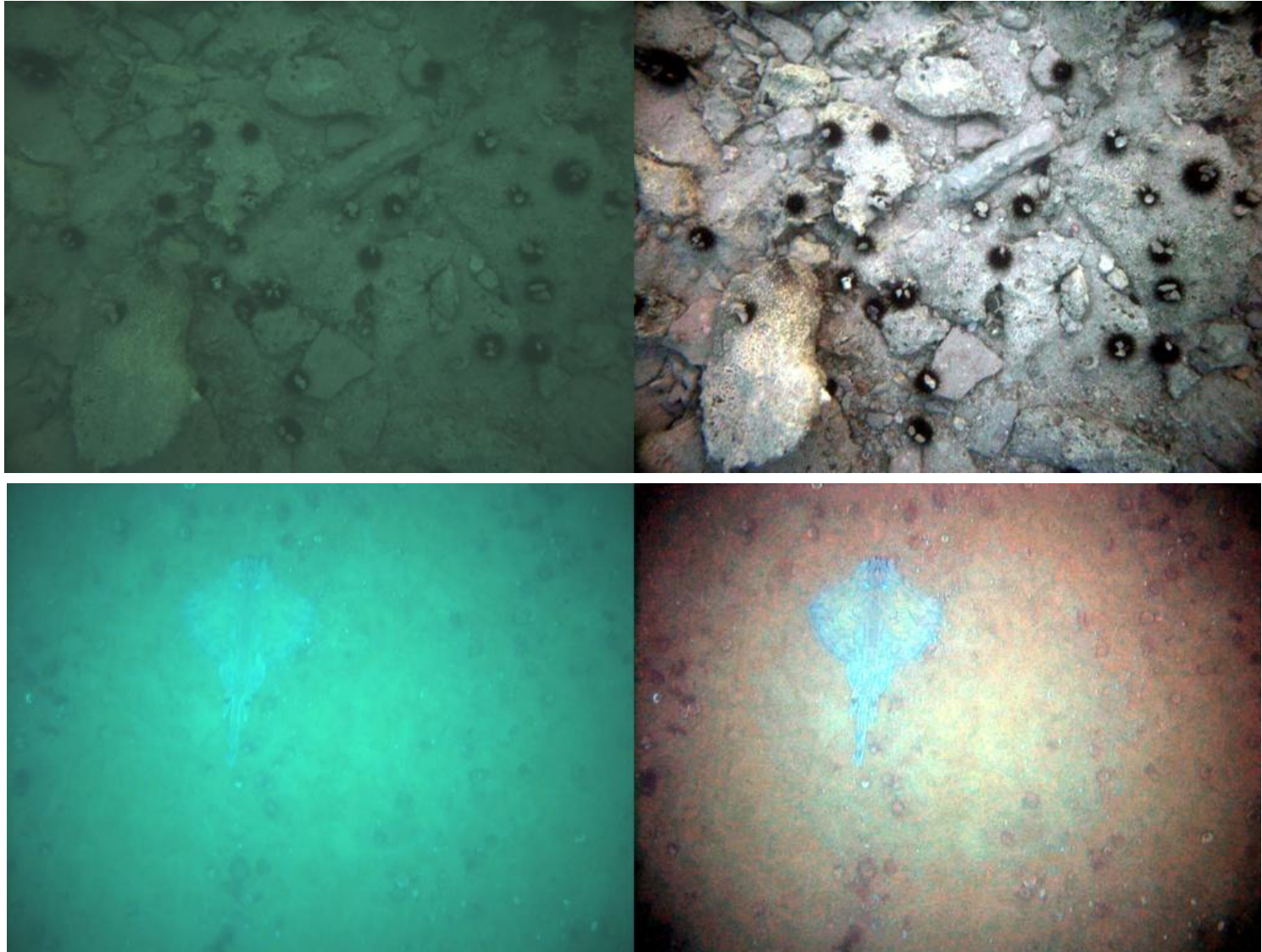
SideScan



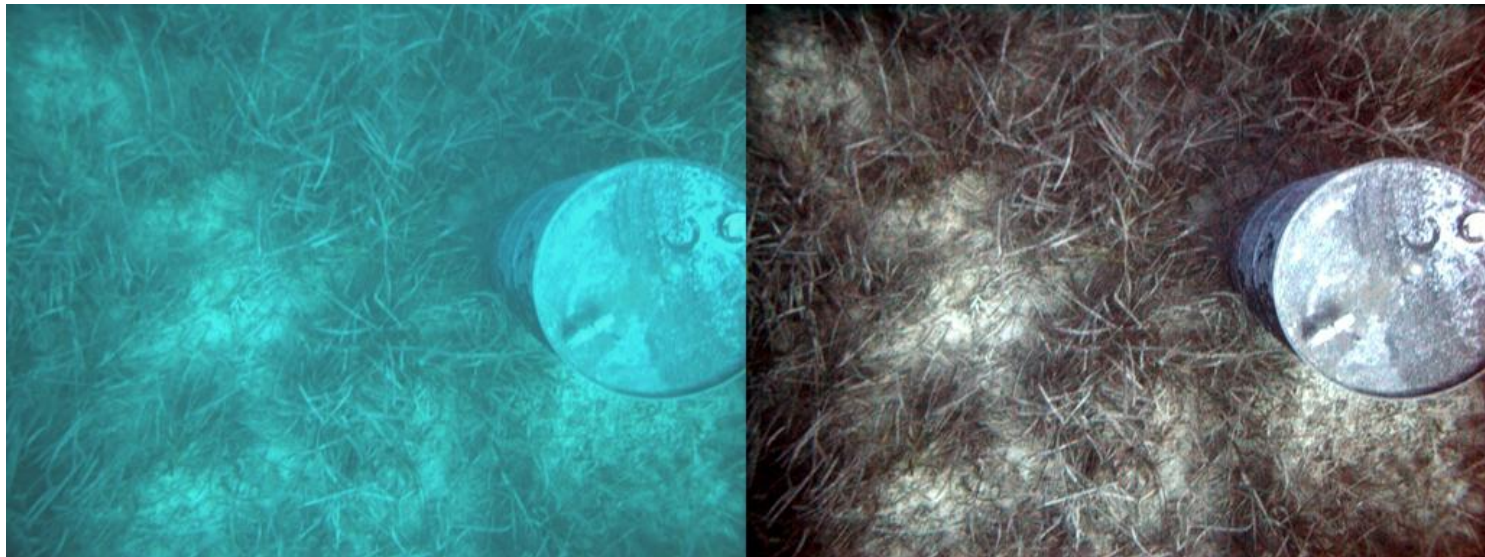
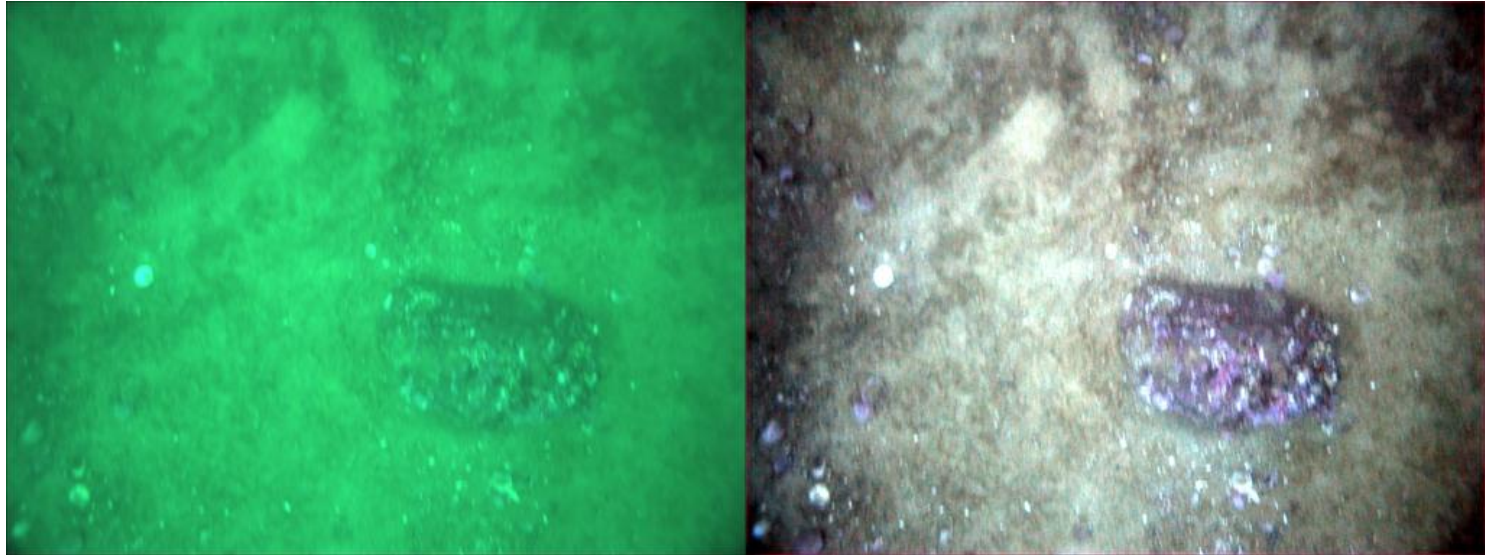
SideScan U1277



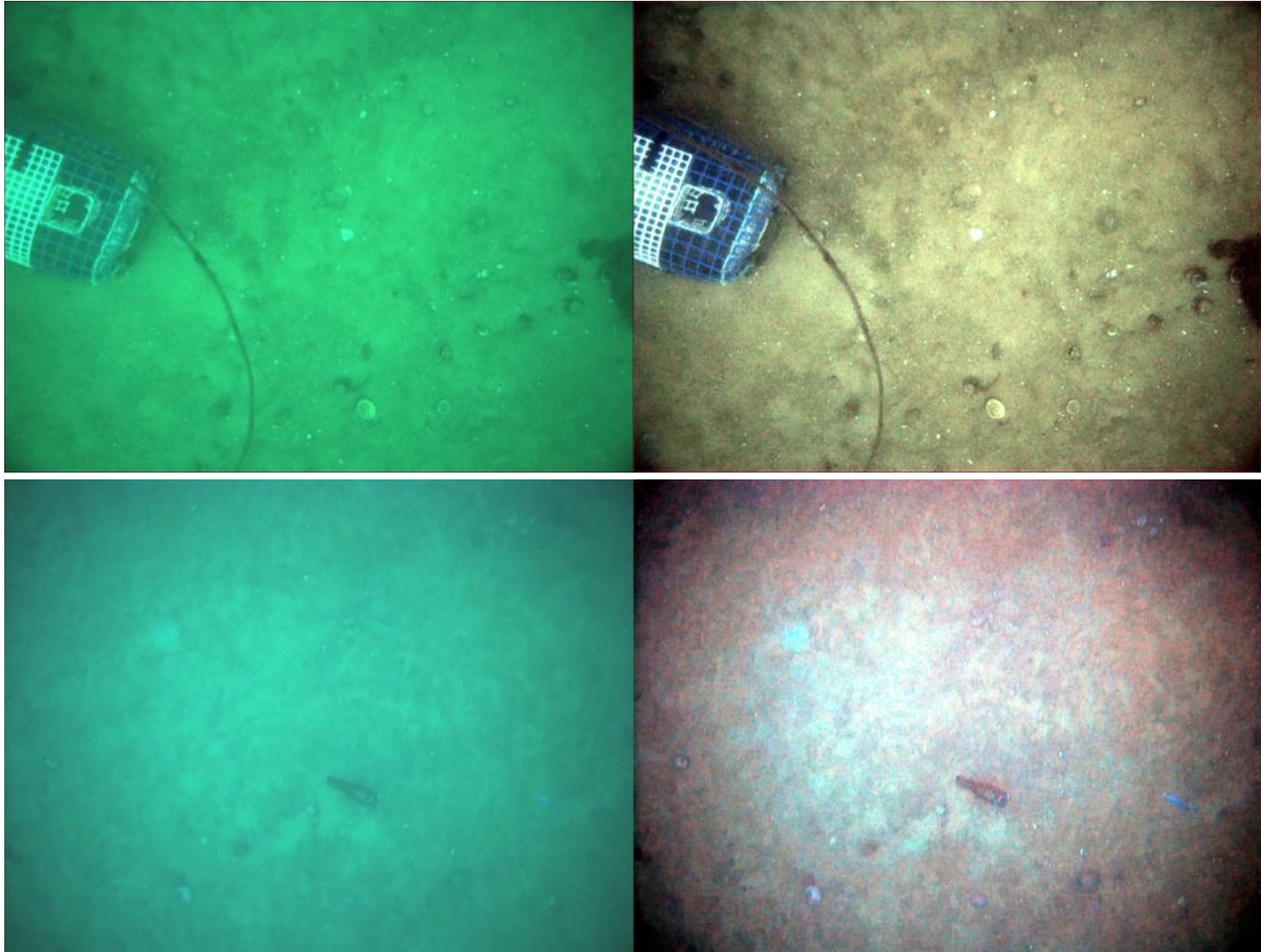
Camera



Camera



Camera





Conclusions

Conclusions

- With the use of this technology, we are able to map the ocean floor quickly and efficiently.
- We will use these developments in future operations (REP17).
- But a lot remains to be done.

Questions?





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Thank You



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