ICRI marine and polar

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1. Technology is the main driver
2. Remote and rugged environments -> time lag
3. Distributed and fixed points in addition to ships

UNIVERSITY OF BERGEN
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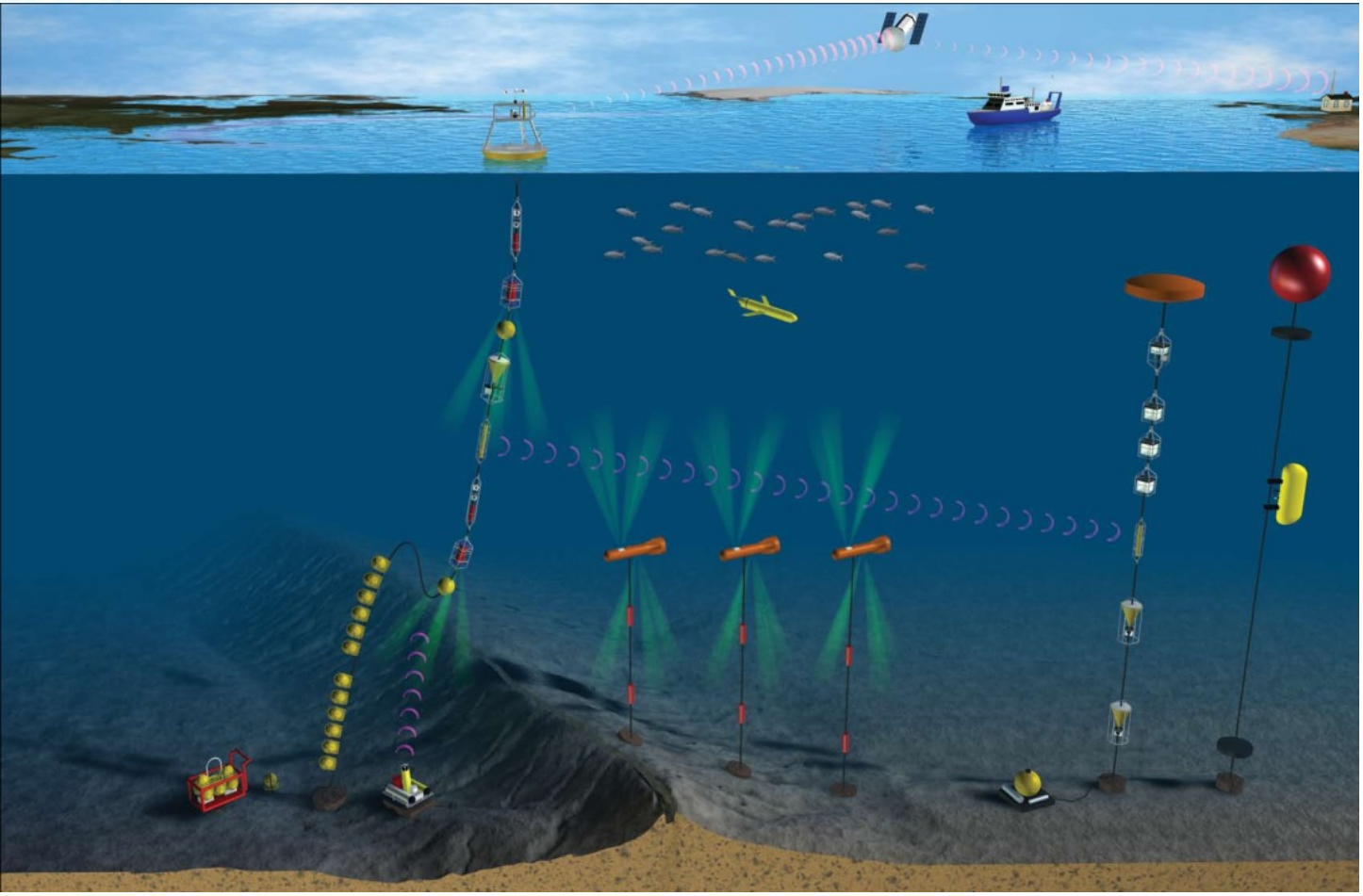
Future of ocean and atmosphere measurements

Geophysical institute

A university department with met, ocean, climate, renewable energy research and education

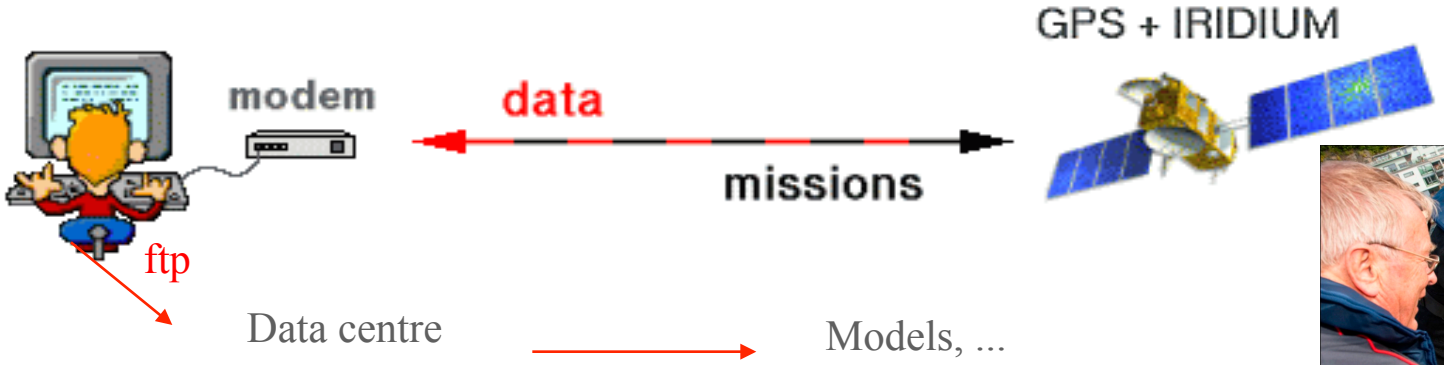
How can we understand the ocean?



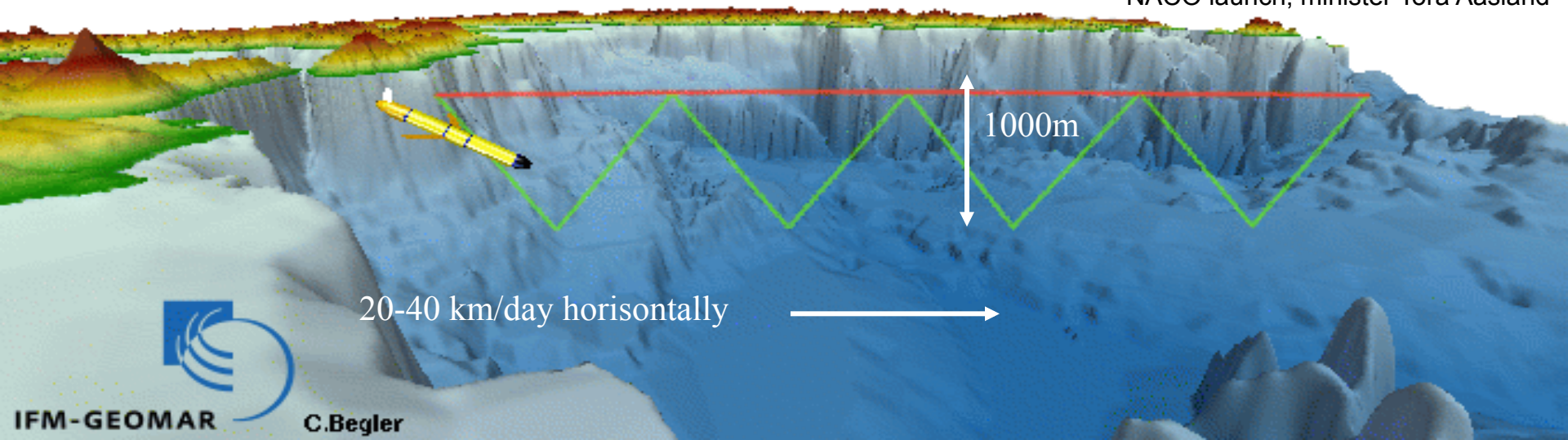
- Remote sensing
- Research cruises
- Ships of opportunity
- Lagrangian observatories (such as Argo)
- Eulerian observatories (such as EMSO and EuroSITES)
- **gliders and new technology**

Example: Norwegian Atlantic Current Observatory (NACO)
National glider observatory off the Norwegian shelf

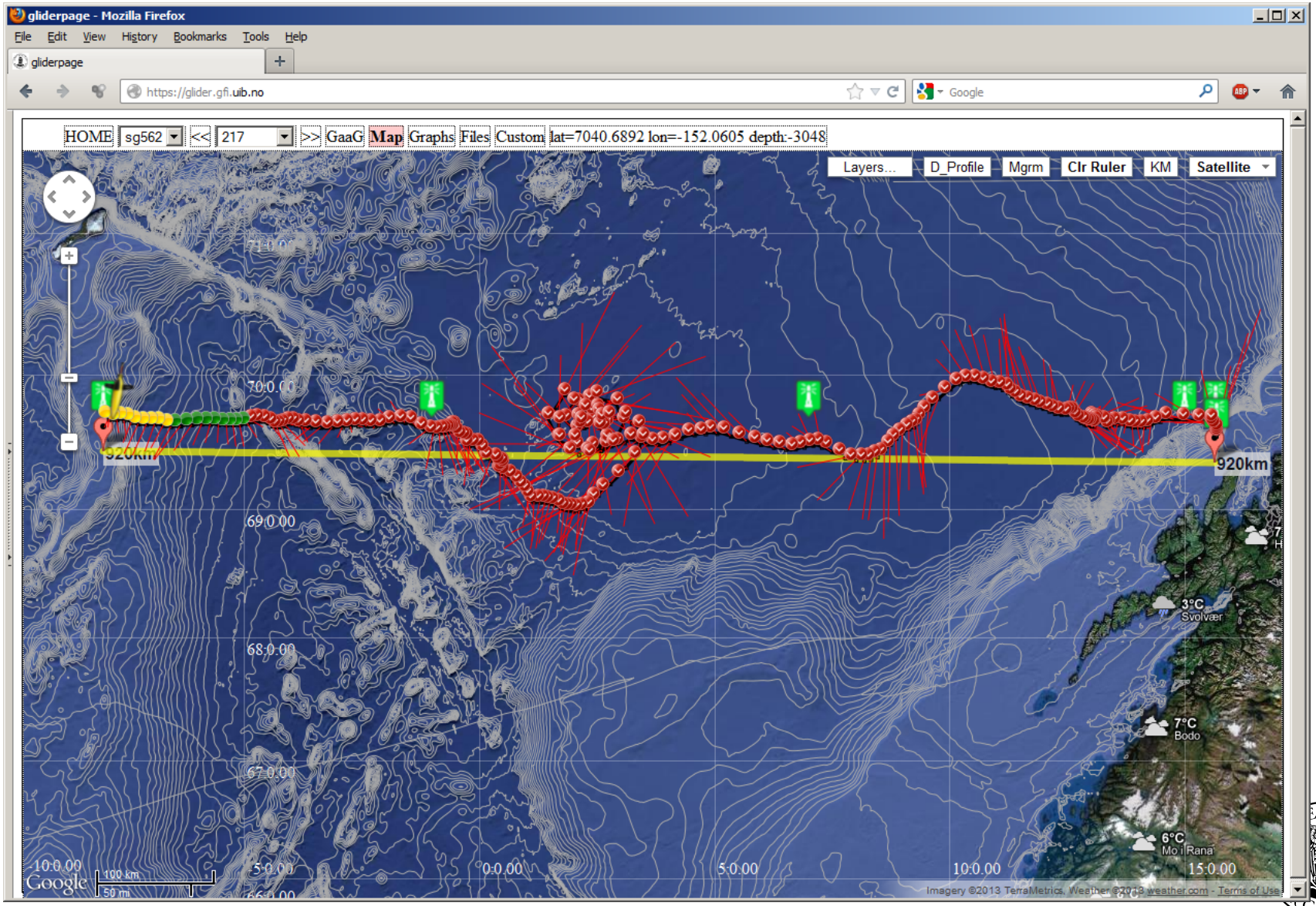
Operation central



NACO launch, minister Tora Aasland



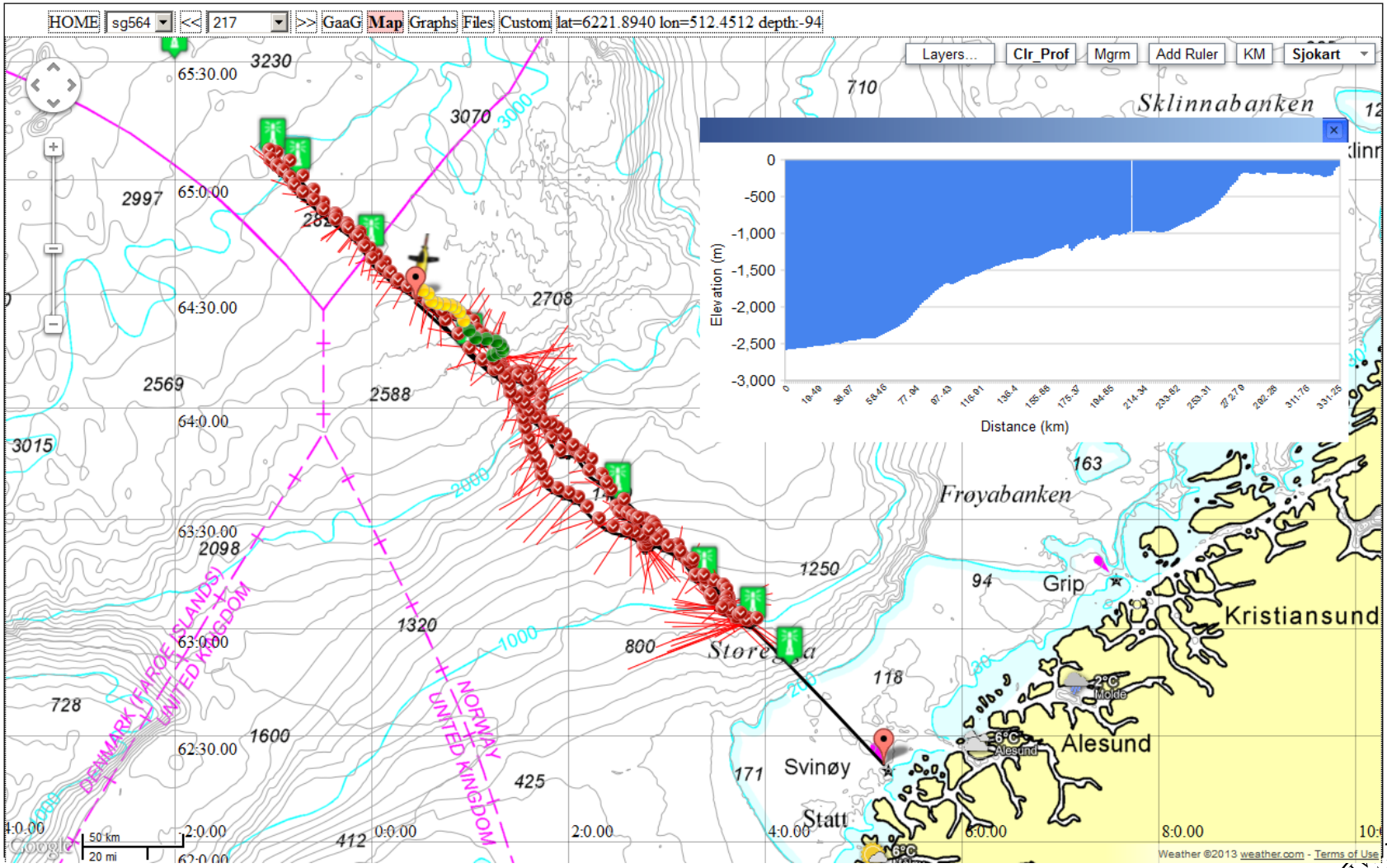
Combining section with eddy process study



http://naco.gfi.uib.no

uib.no

Gliderpage – current vs depth profile



Fixed point observatory at shelf break @500m

Messages

1. *Major progress in marine science has been technology driven and is expected to continue to be technology driven*.
2. *Polar and marine environments are demanding and costly to physically access*.
3. *It is particularly important for polar and marine science to develop and validate new measurement platforms and achieve a good combination of distributed observations and high quality fixed point time series observatories*.

European projects: FixO3/EMSO (Fixed point), Euro-Argo and GROOM (Distributed), SIOS (Integrated), EuroFleets