

A satellite is shown in orbit above the Earth's surface, which is covered in white clouds and blue oceans. The satellite is a large, cylindrical object with a gold-colored thermal blanket and various instruments. The Earth's horizon is visible in the upper right corner.

# Protecting people and planet



KONGSBERG



KONGSBERG

# Kan roboter bidra i miljøovervåkning av Oslofjorden

# Partnere i Frisk Oslofjord



**Færder  
nasjonalpark**



**Ytre Hvaler  
nasjonalpark**



**Vestfold og Telemark**  
FYLKESKOMMUNE



**VIKEN**  
FYLKESKOMMUNE



**inspiria**  
science center



**Kartverket**



**NORGES  
GEOLOGISKE  
UNDERSØKELSE**  
- NGU -



Norsk institutt for vannforskning



**KONGSBERG**

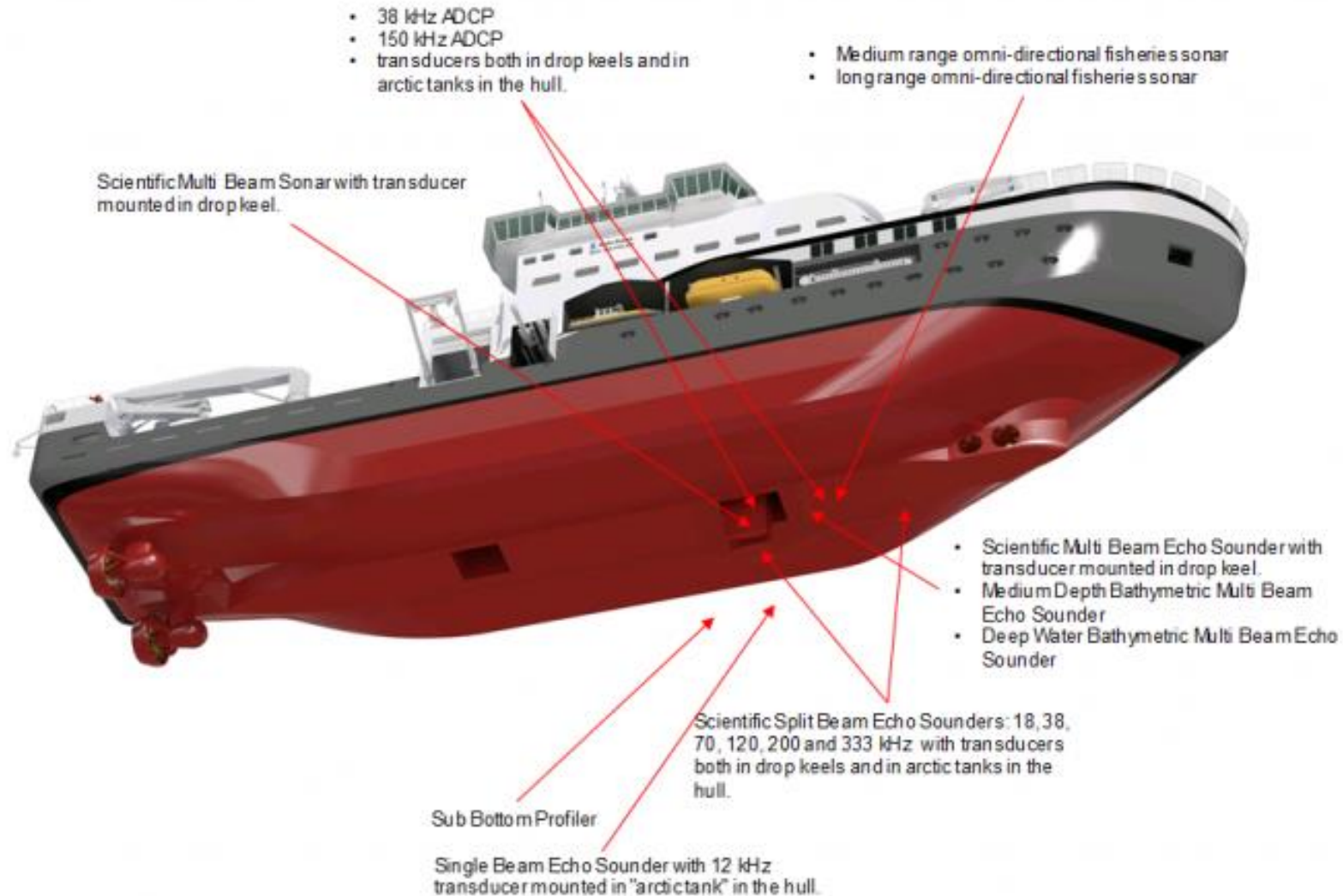


**FISKERIDIREKTORATET**



**MILJØ-  
DIREKTORATET**

# Akustikk på forskningsfartøy















Browser address bar: <https://192.168.53.215/video/0>

Top right controls: EO, STAB

Top center slider: 2.3°

Left vertical slider: -1.1°

Bottom left controls: Stow, 15.7°

Bottom right controls: [Pause], [Full Screen]



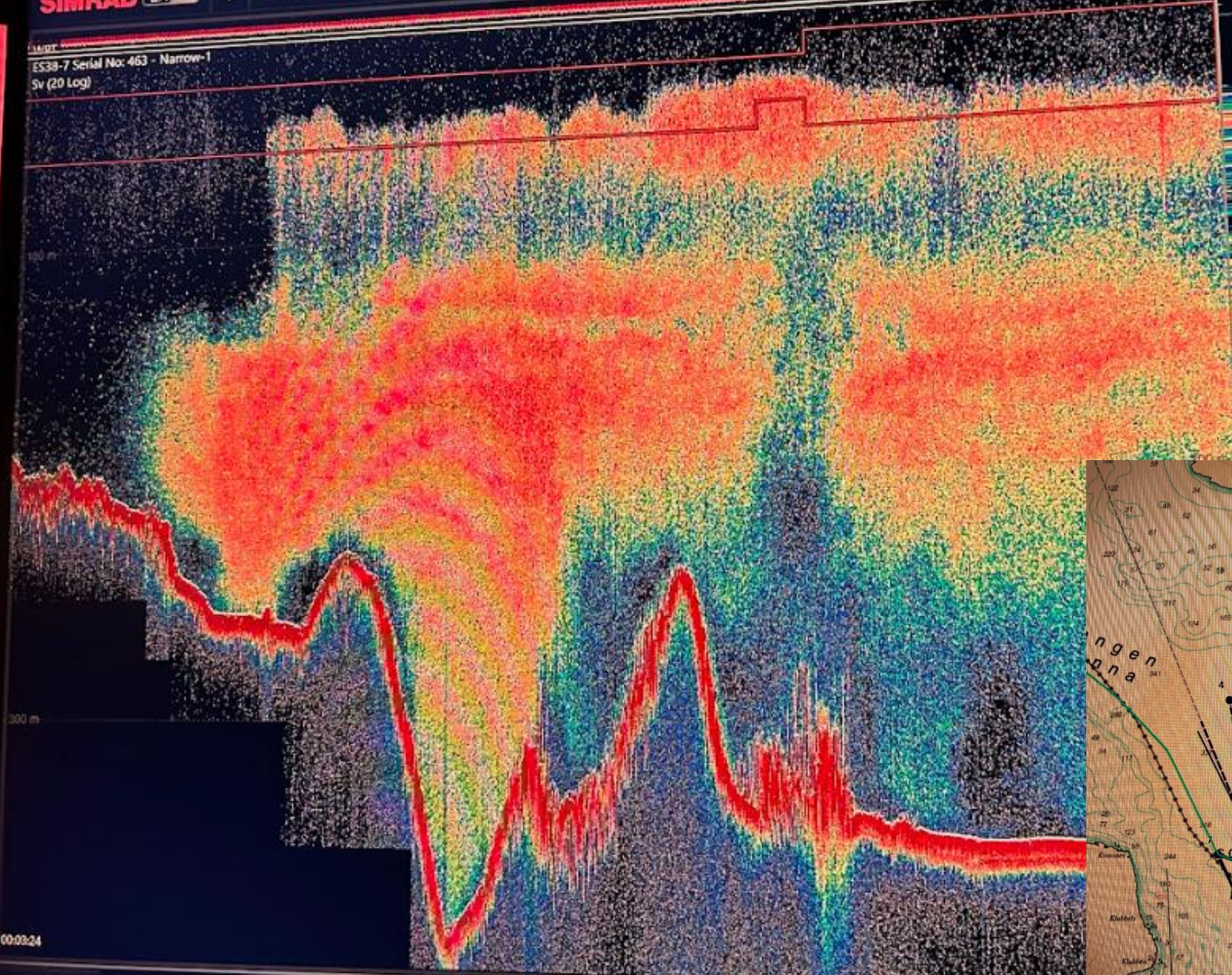
Intra Refresh

GOP Size

Lenovo



ES38-7 Serial No: 463 - Narrow-1 Sv (20 Log)



400.0 m

0.0 m

20  
-70 dB

40  
-50 dB

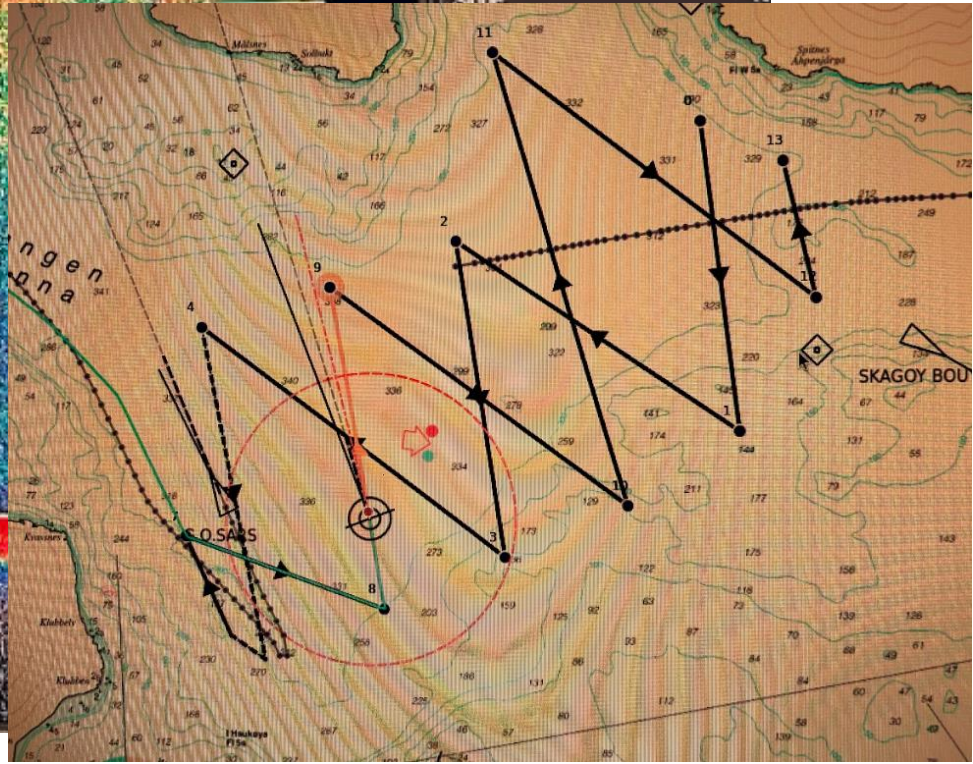
Icons: Signal strength, Monitor, Crosshair, Window

**Extras**

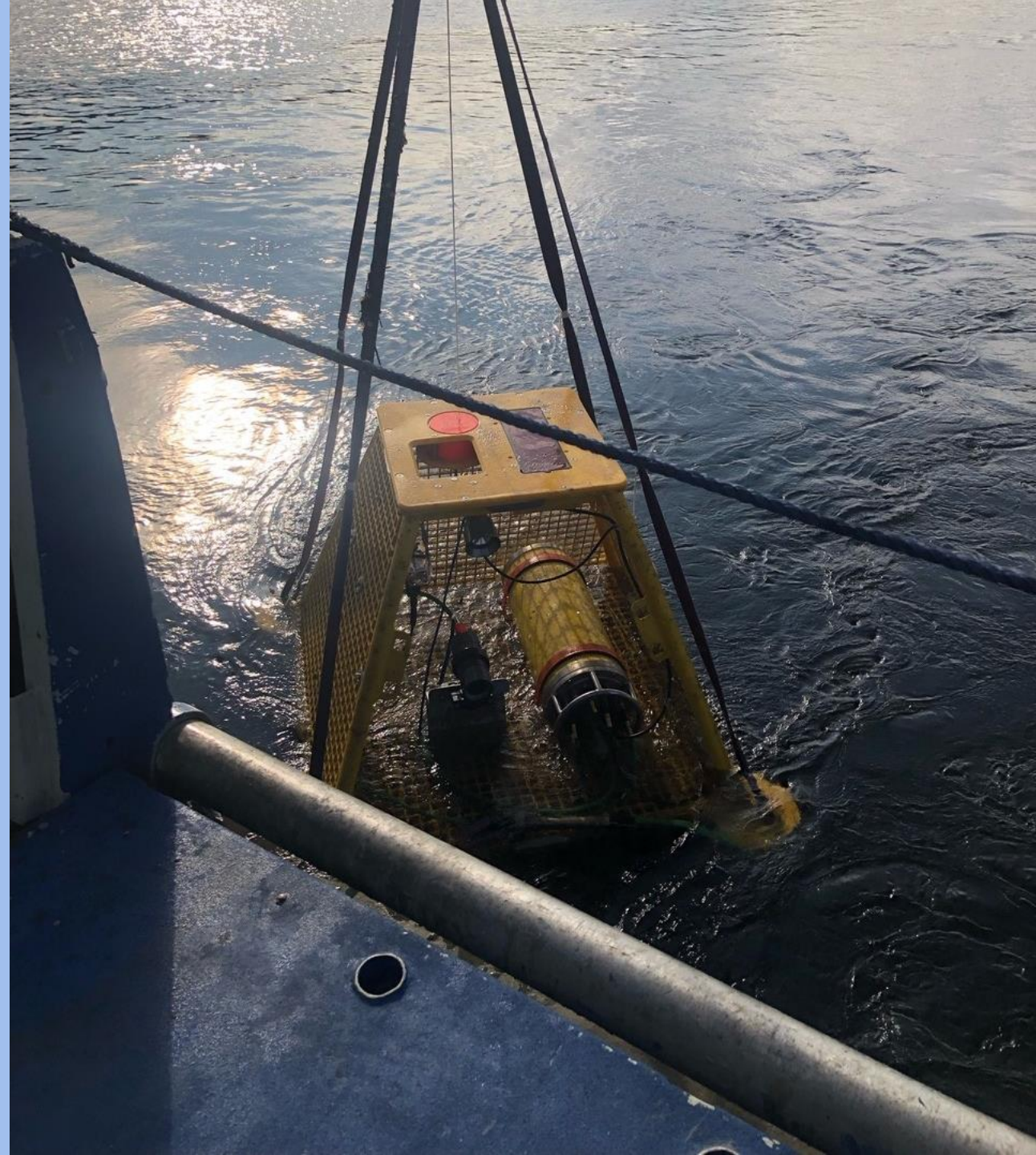
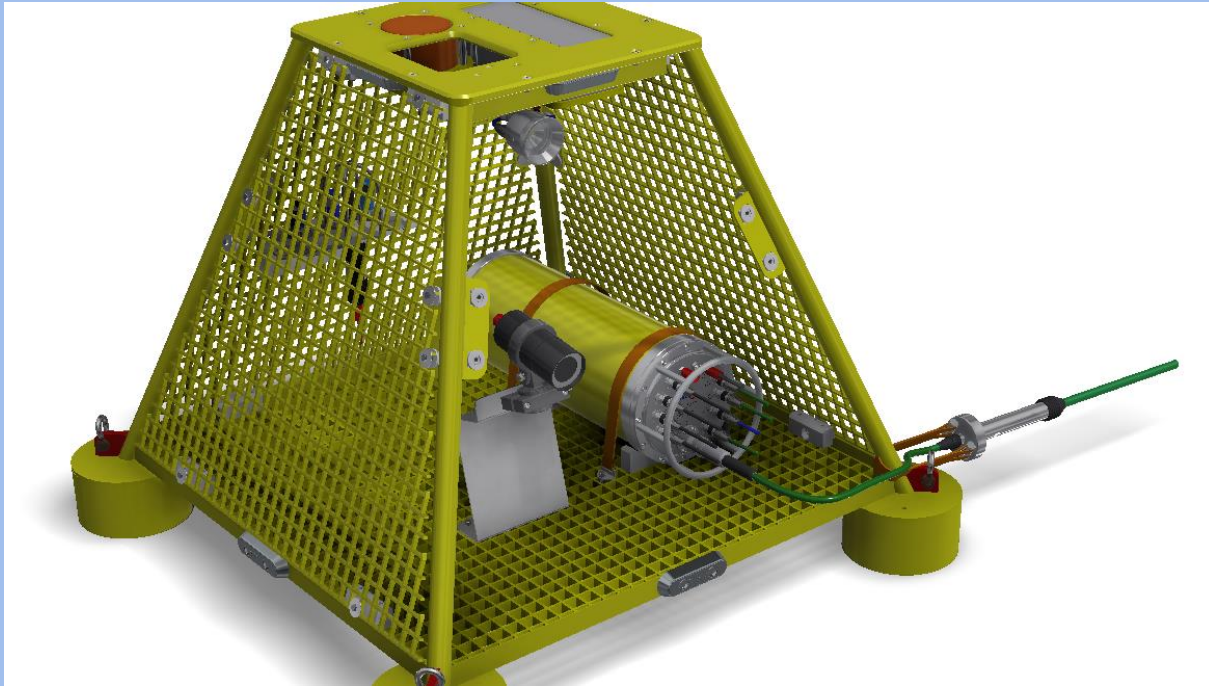
**Transceiver Settings**

Mode:	Act
Pulse Duration:	1.0
Sample Interval:	0.0
Frequency:	38
Power:	40
Slope:	10

00:03:24



# Subsea Monitoring stations



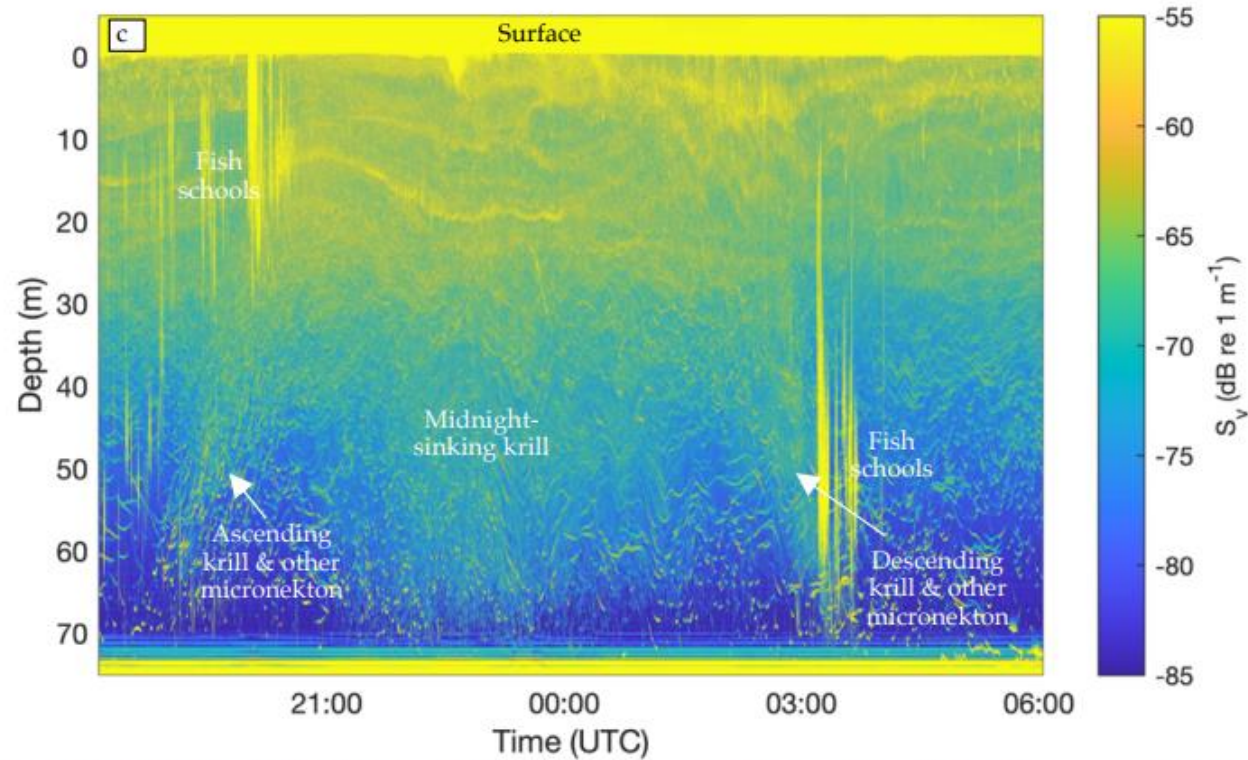
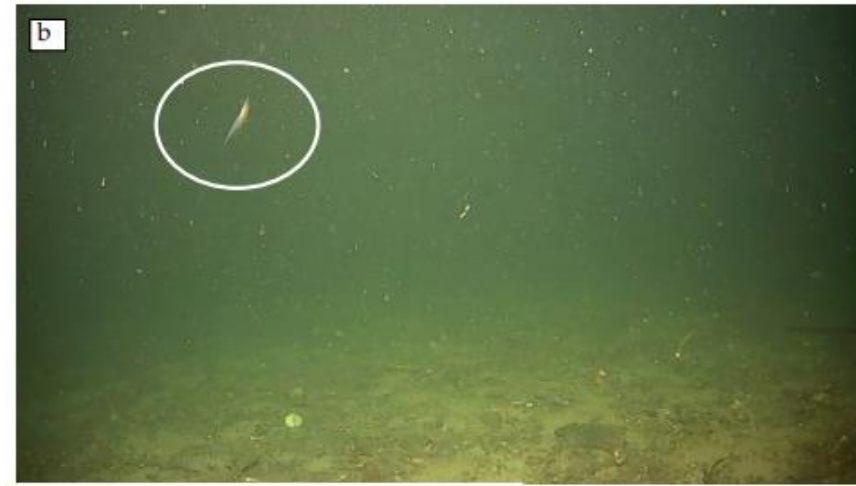
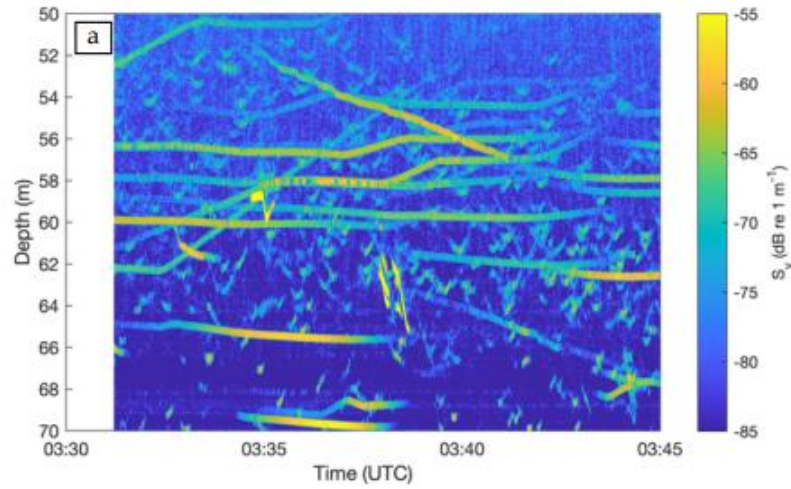


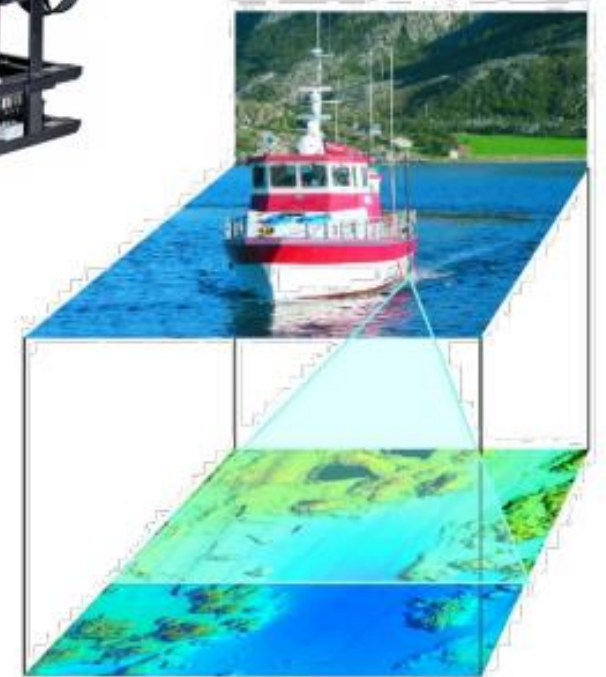
Figure 3: Lander recordings of krill: a) Morning descent of weak, fast-swimming acoustic targets ascribed to krill in mid-April. b) A single krill on the lander camera. c) Diel vertical migration of krill and other targets on the night 26.-27.04.2023.



# Tradisjonelle metoder

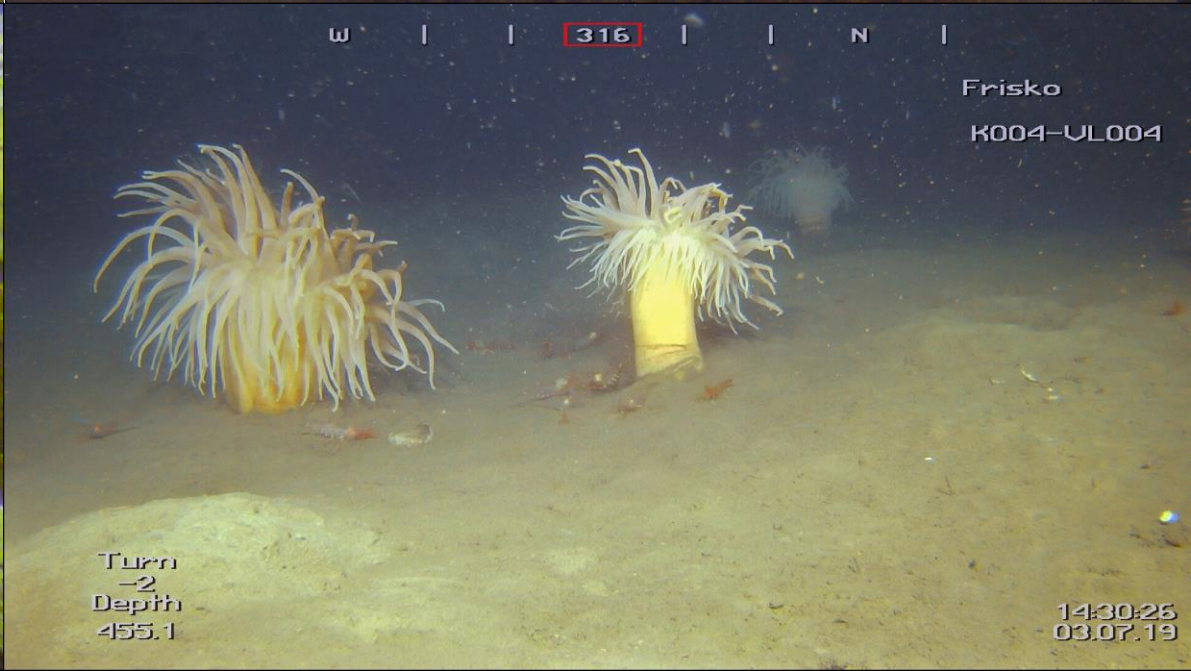
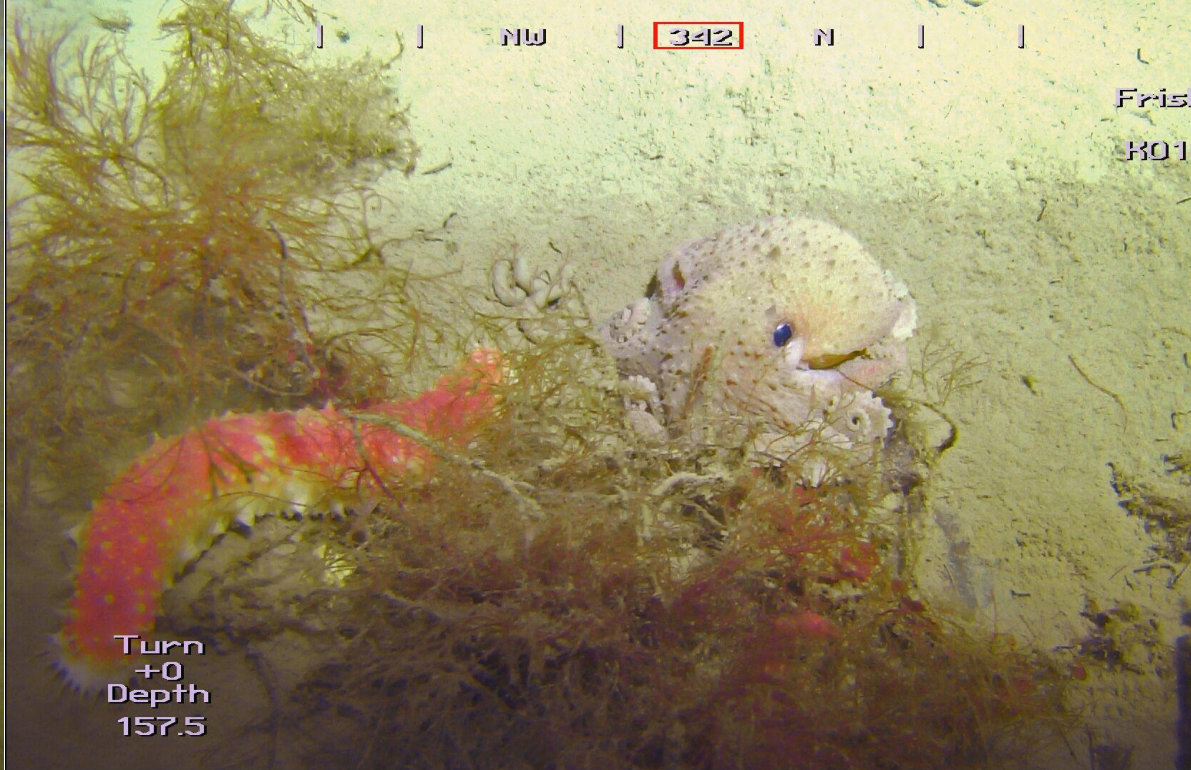
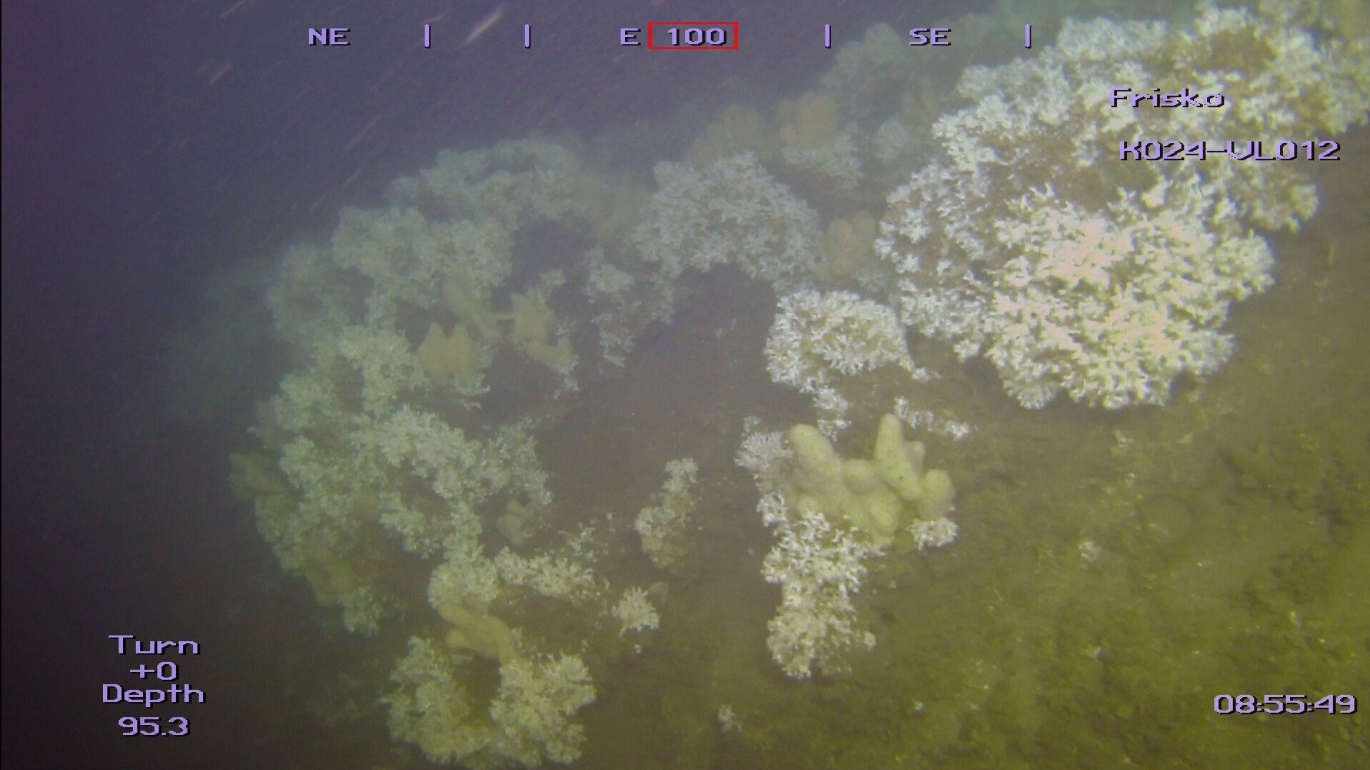


- Multibeam echo sounder (EM 2040, EM 712, EM 304)
- Sub Bottom Profiler (TOPAS, SBP 29)
- Video from ROV or towed camera
- Bottom grab
- Trawl
- Sled



NORGES  
GEOLOGISKE  
UNDERSØKELSE  
- NGU -





# Hugin and Munin AUV Family





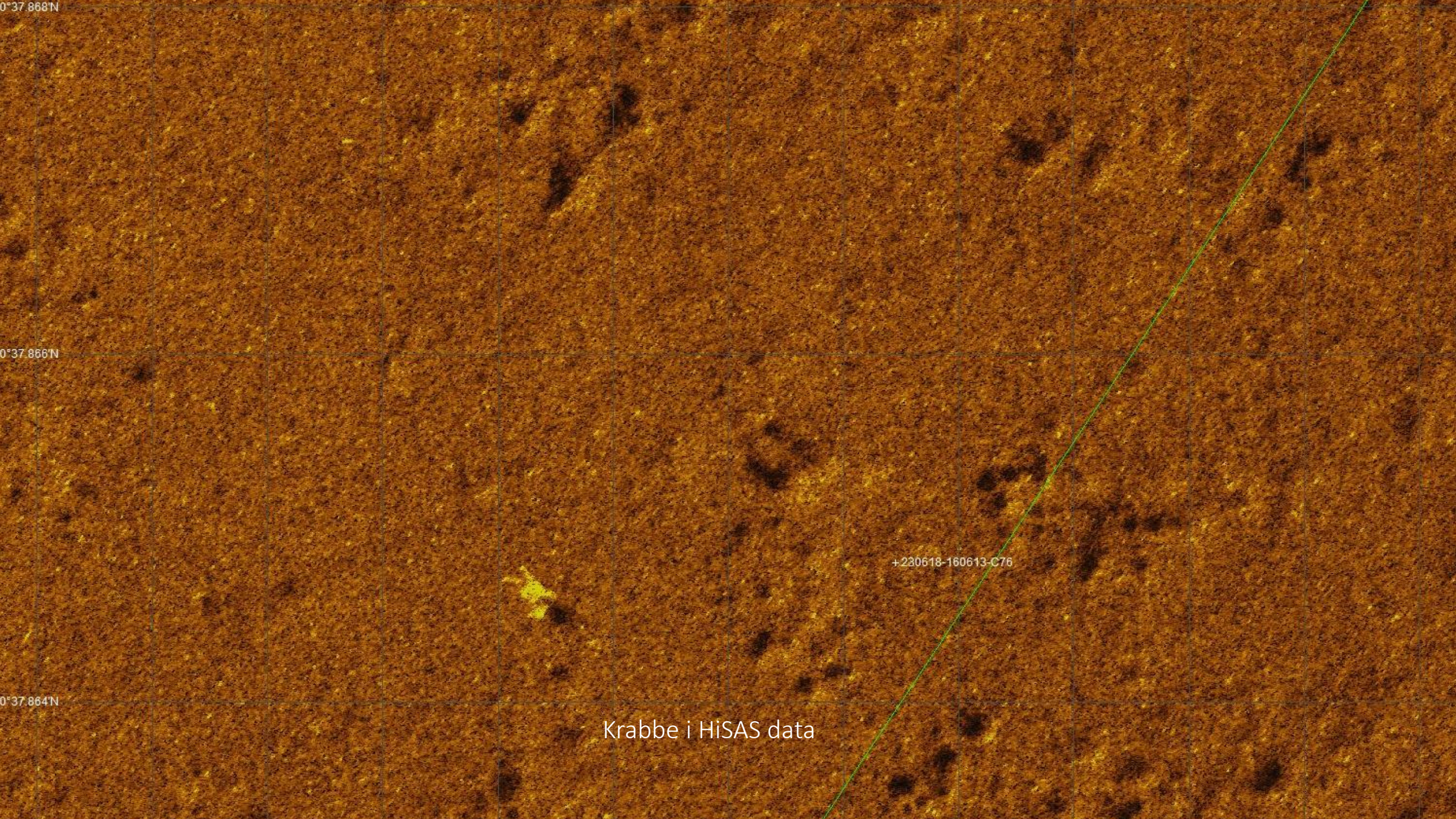
0°37.868'N

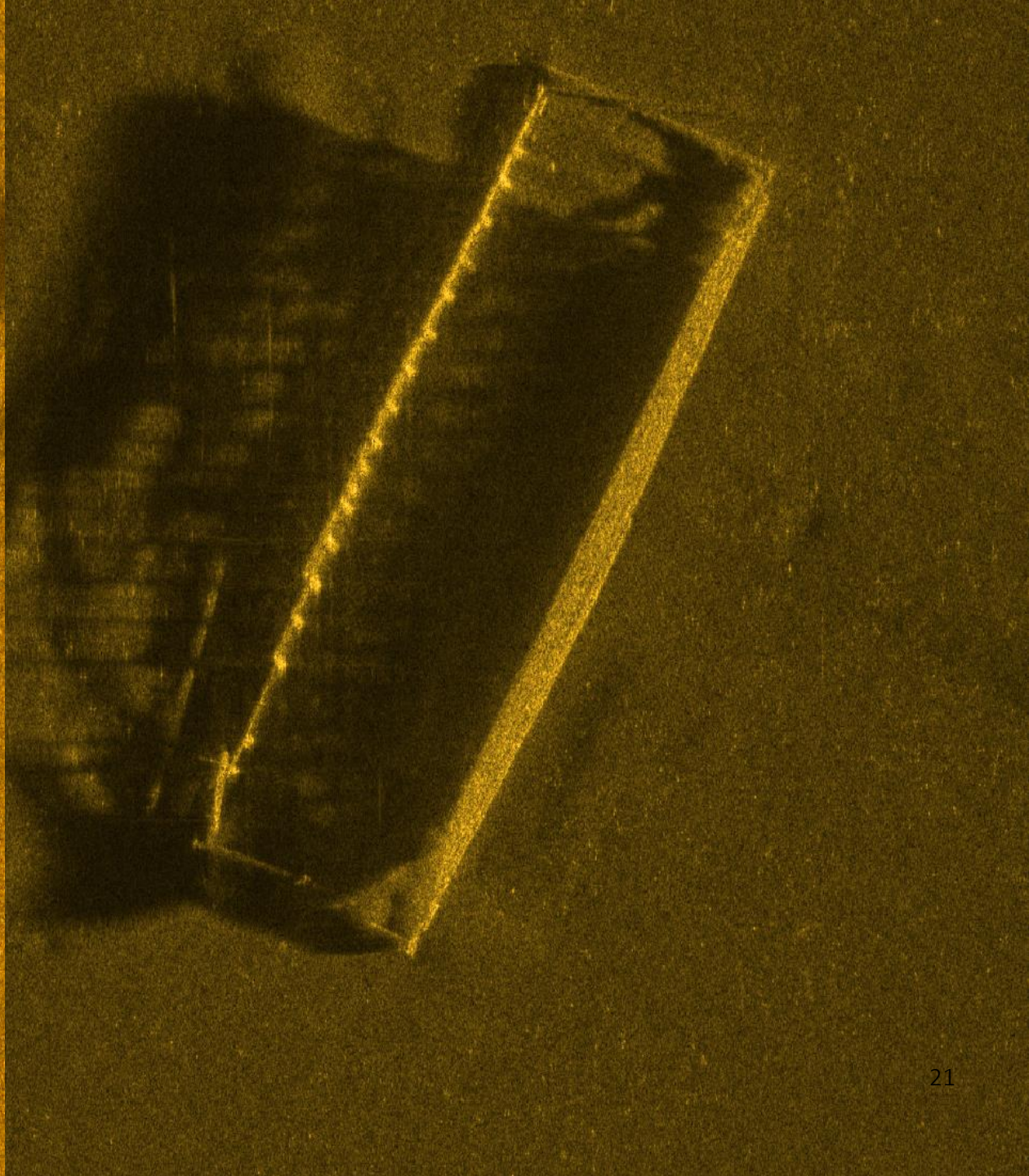
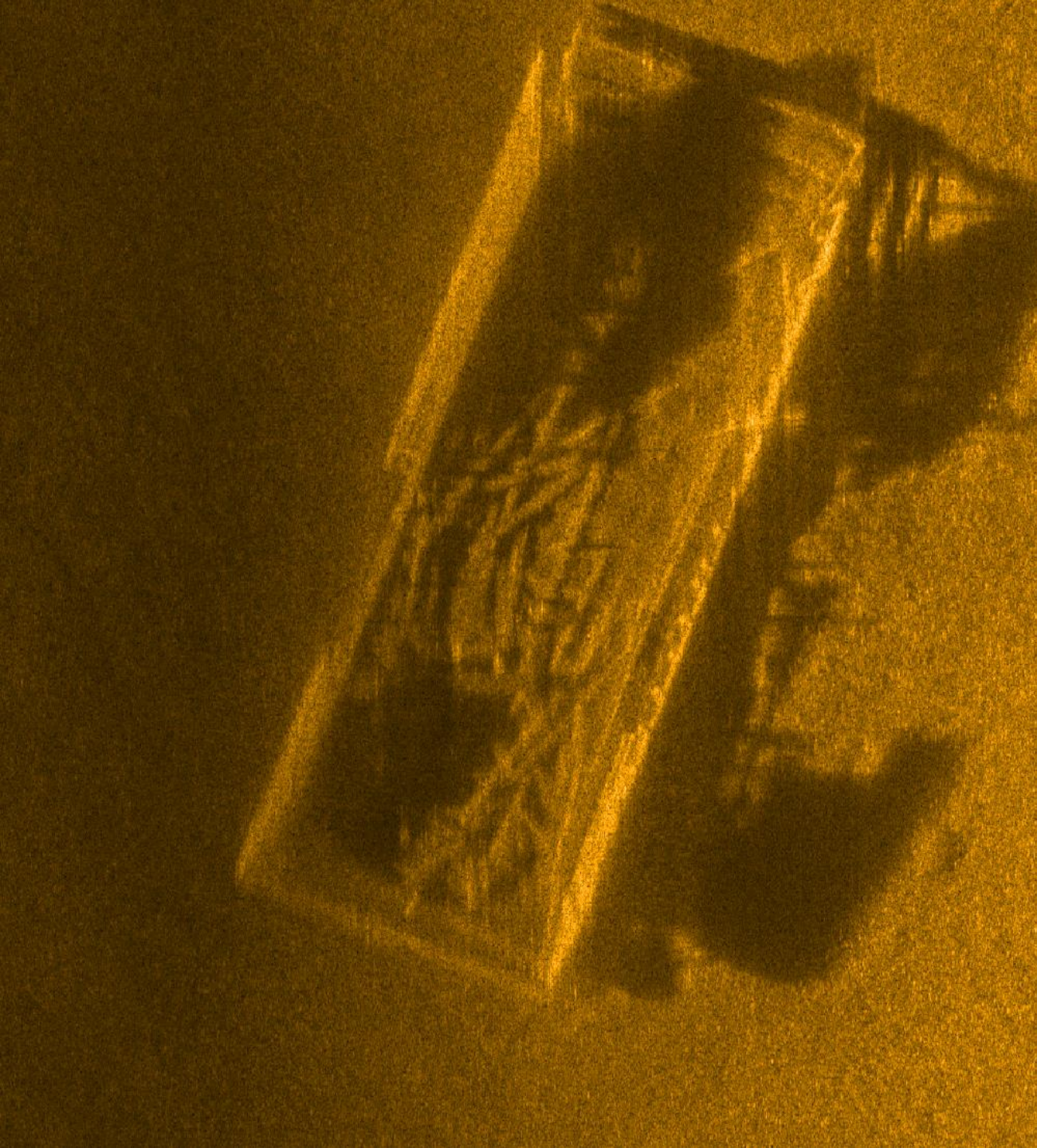
0°37.866'N

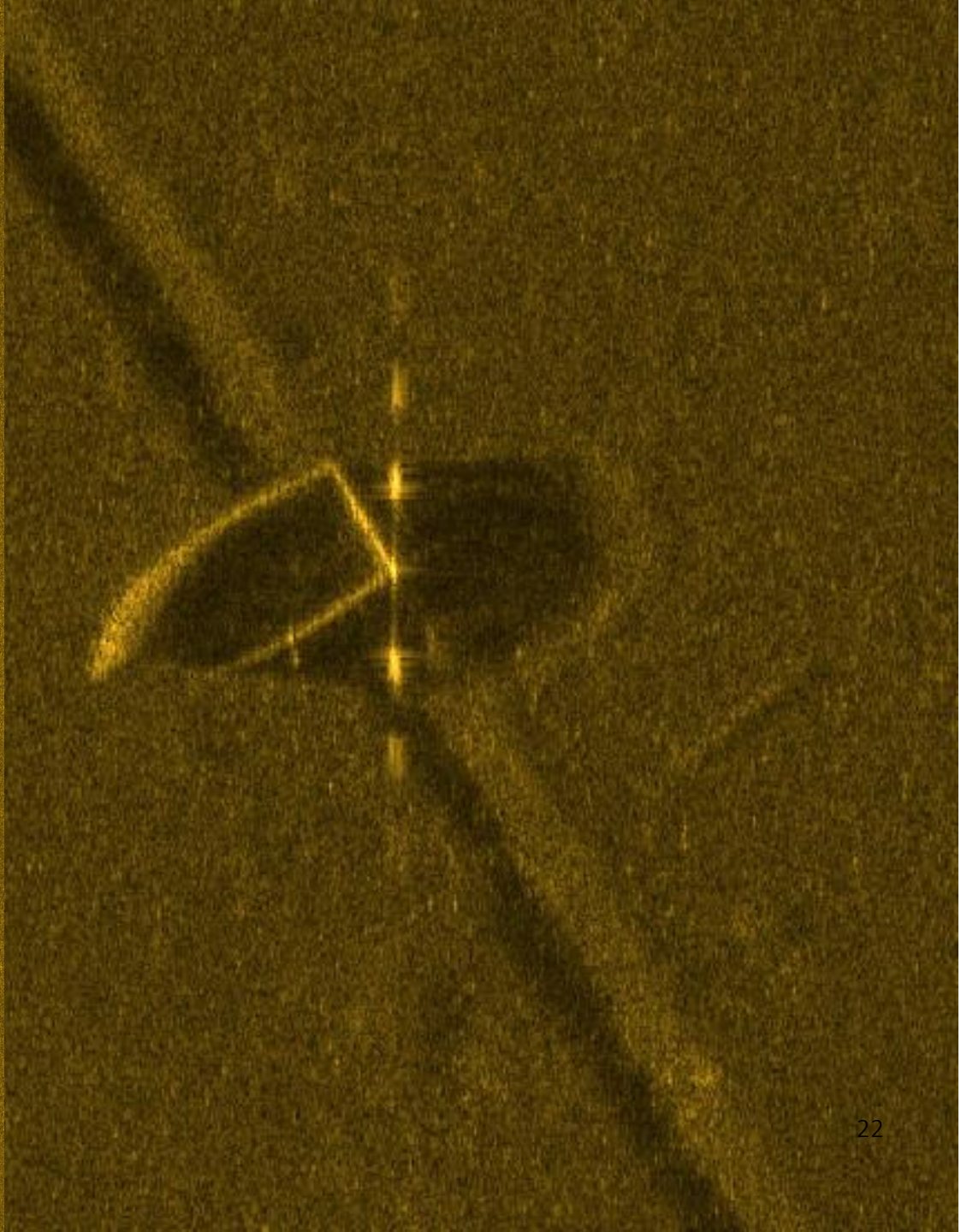
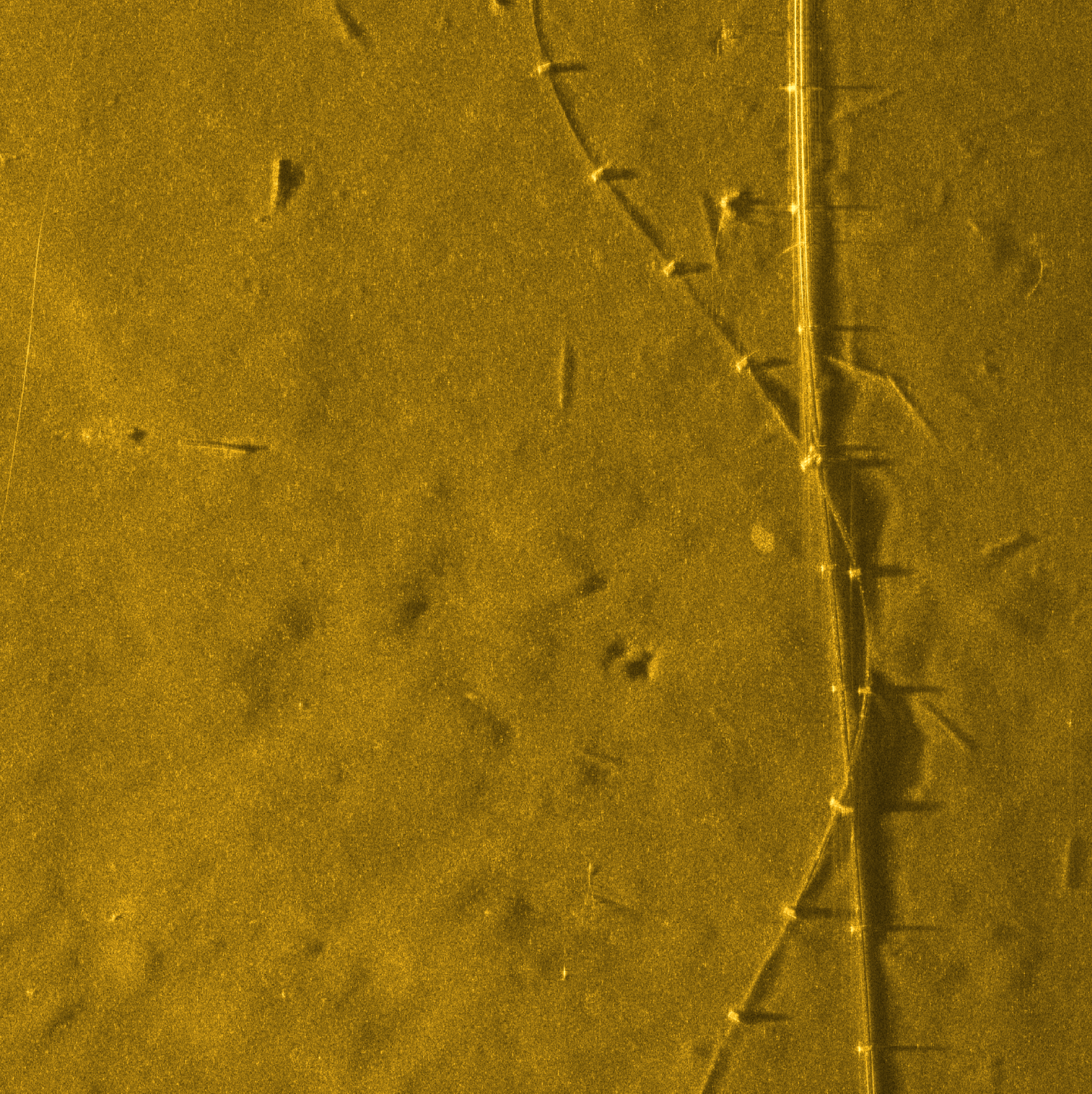
0°37.864'N

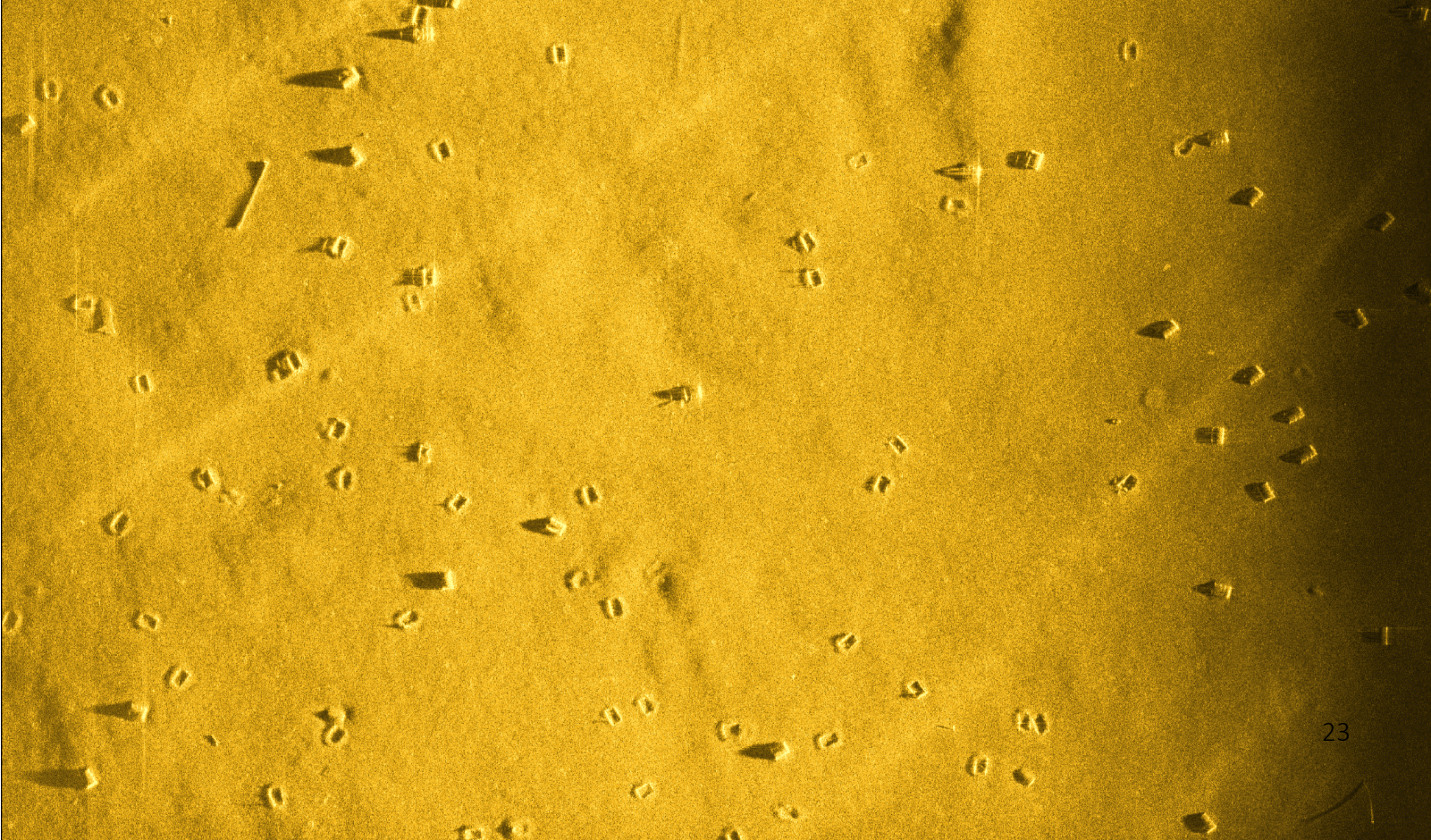
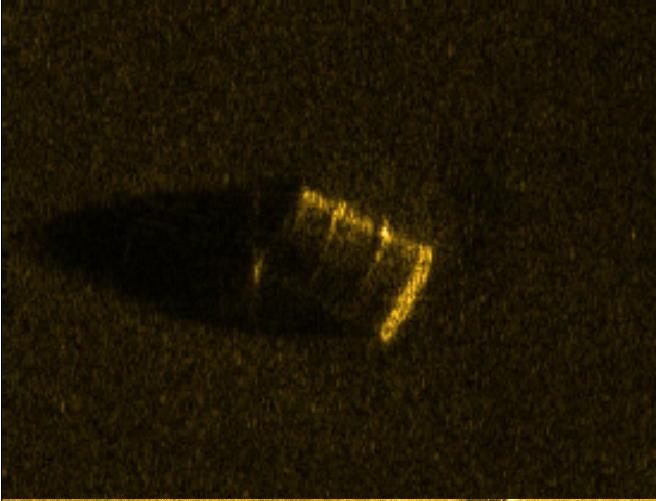
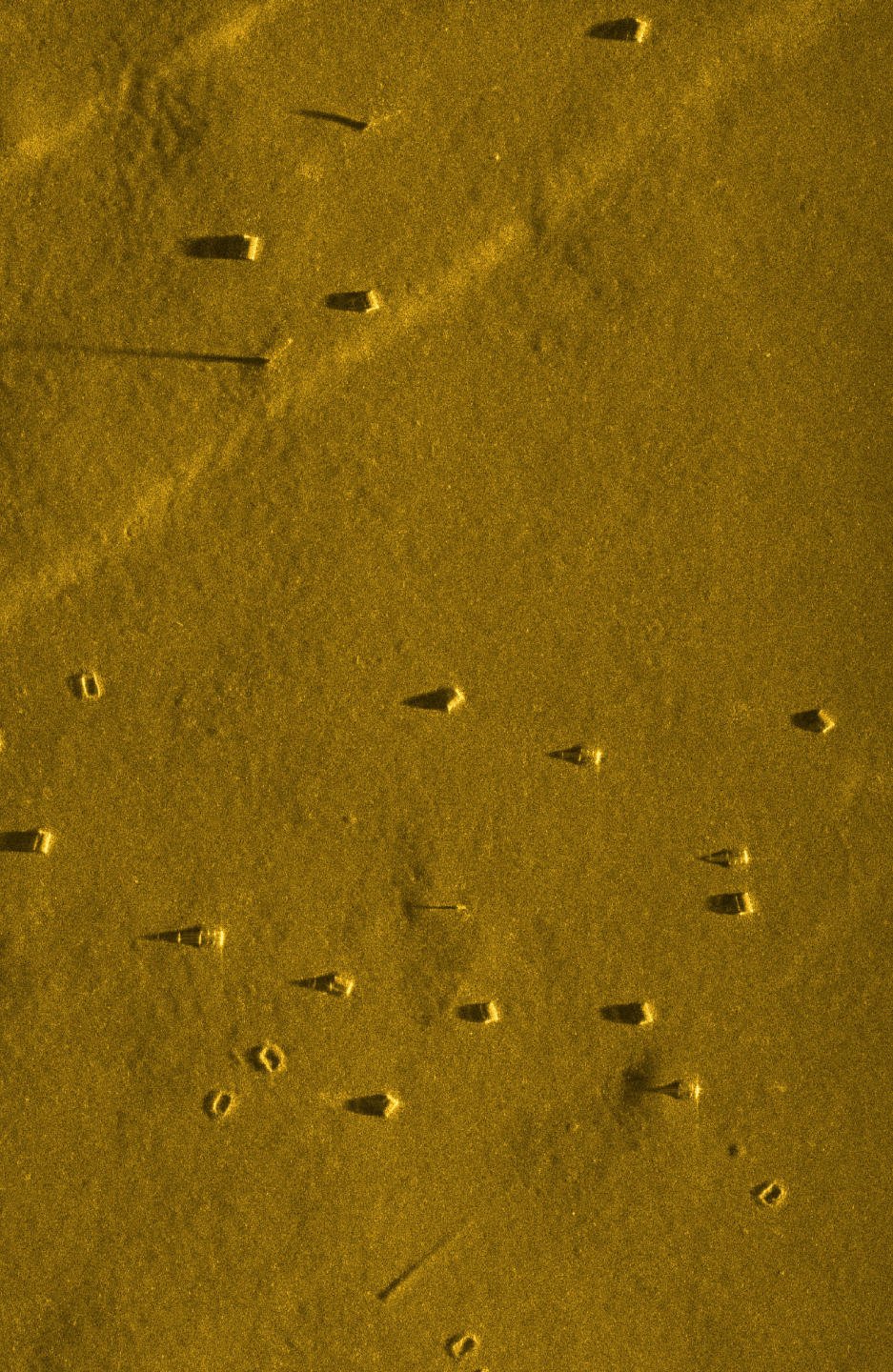
+230618-160613-C76

Krabbe i HiSAS data



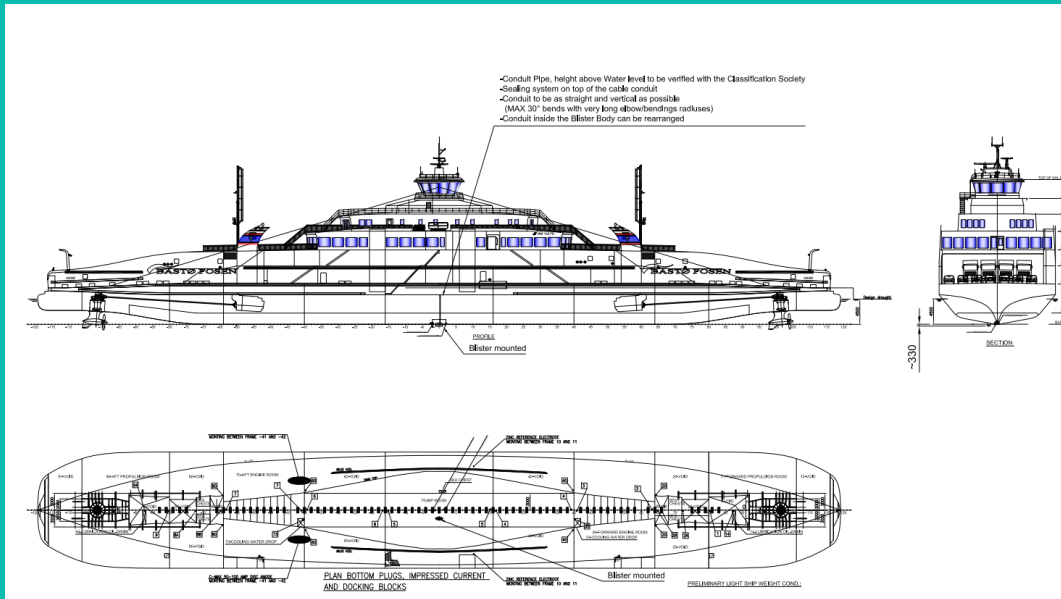






Echosounder (38/200)

# Vessels of Opportunity







KONGSBERG

[arne.hestnes@kd.kongsberg.com](mailto:arne.hestnes@kd.kongsberg.com)

