Acoustic mapping of water column, applications

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MBES water column data can be very useful in mapping and monitoring underwater environment but its analysis is not straighforward

1. Data collection – limited disk space or computational capacity

2. WC data extraction – professional software needed (QINSY, CARIS) or ‘secret’ knowledge from the producers

3. WC data processing – corrections and positioning

MBES water column data extraction and processing

Norbit iWBMS

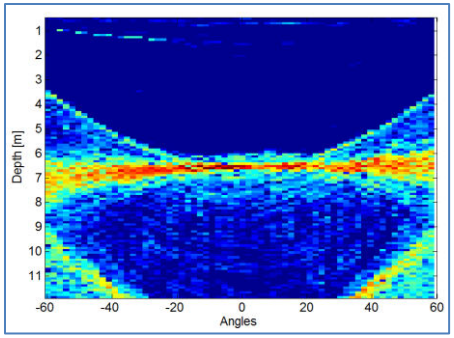
QINSY based (db)

GUI based (.wbn or .s7k)
External navigation file needed !

Fledermaus FMMidwater convertion to .gwc

Matlab .wbn processing

FMMidwater S7k combined with .gsf file

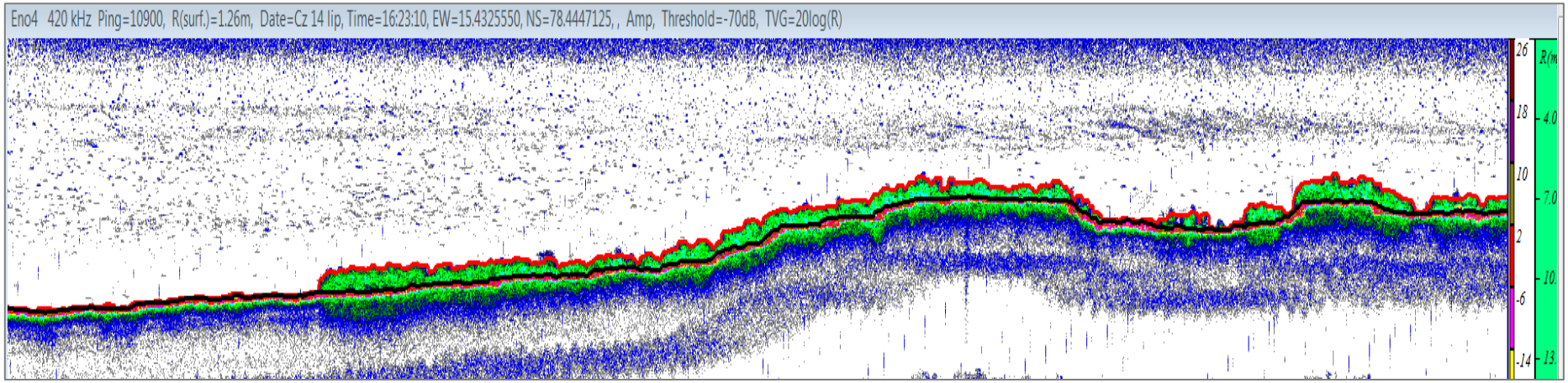


Data export to ascii or SD
Curtain, stack or ping by ping

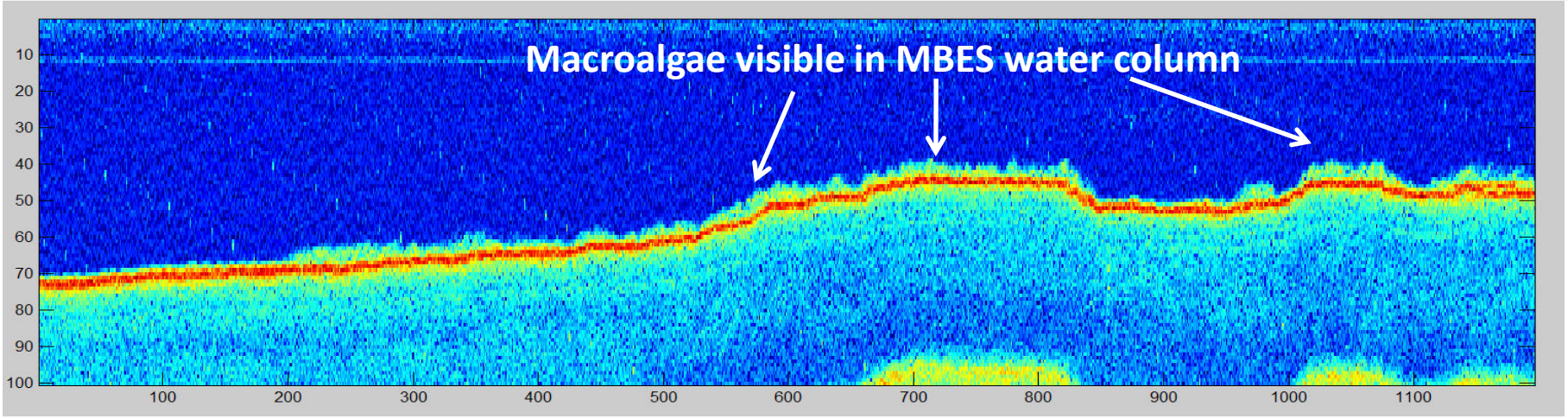
Eventualy bespoke data processing routiness

Macroalgae detection in SBES and MBES water column data

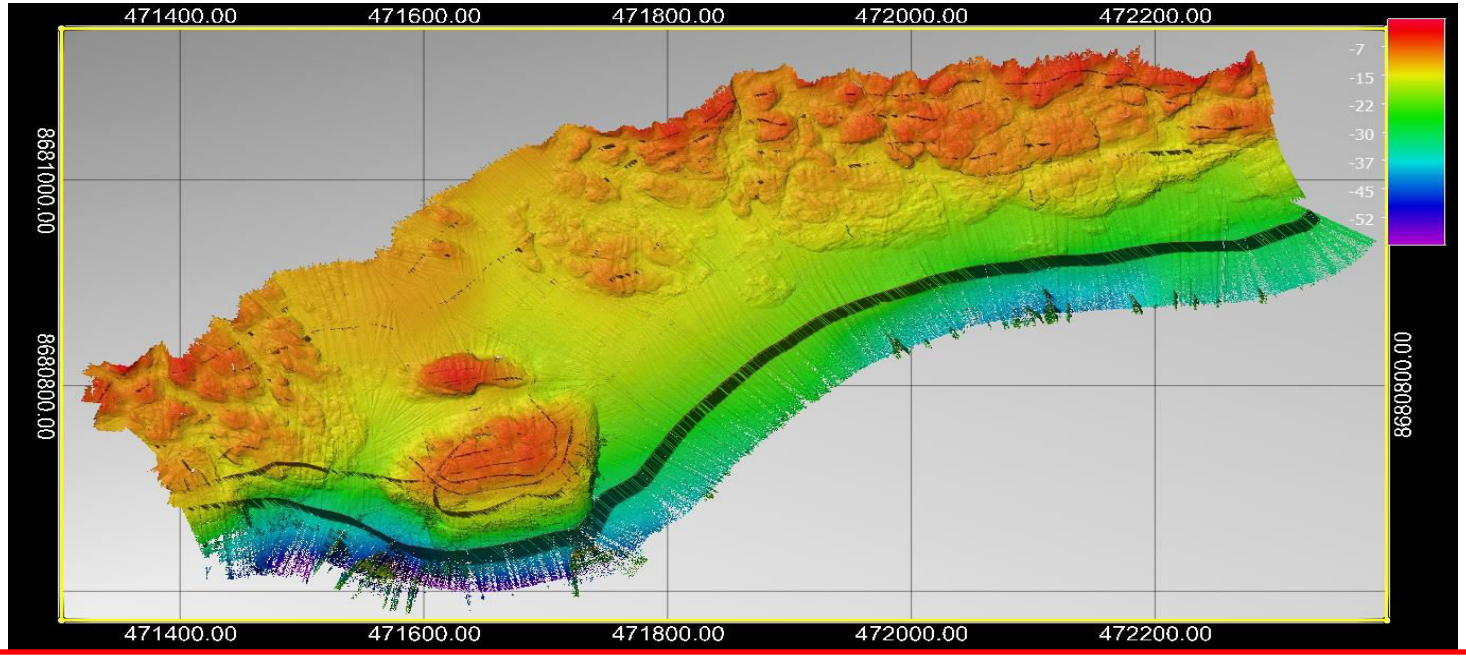
Singlebeam echosounder echogram with macroalgae detection line (red)



Norbit iWBMS water column data along a transect from the beam overlapping with SBES data

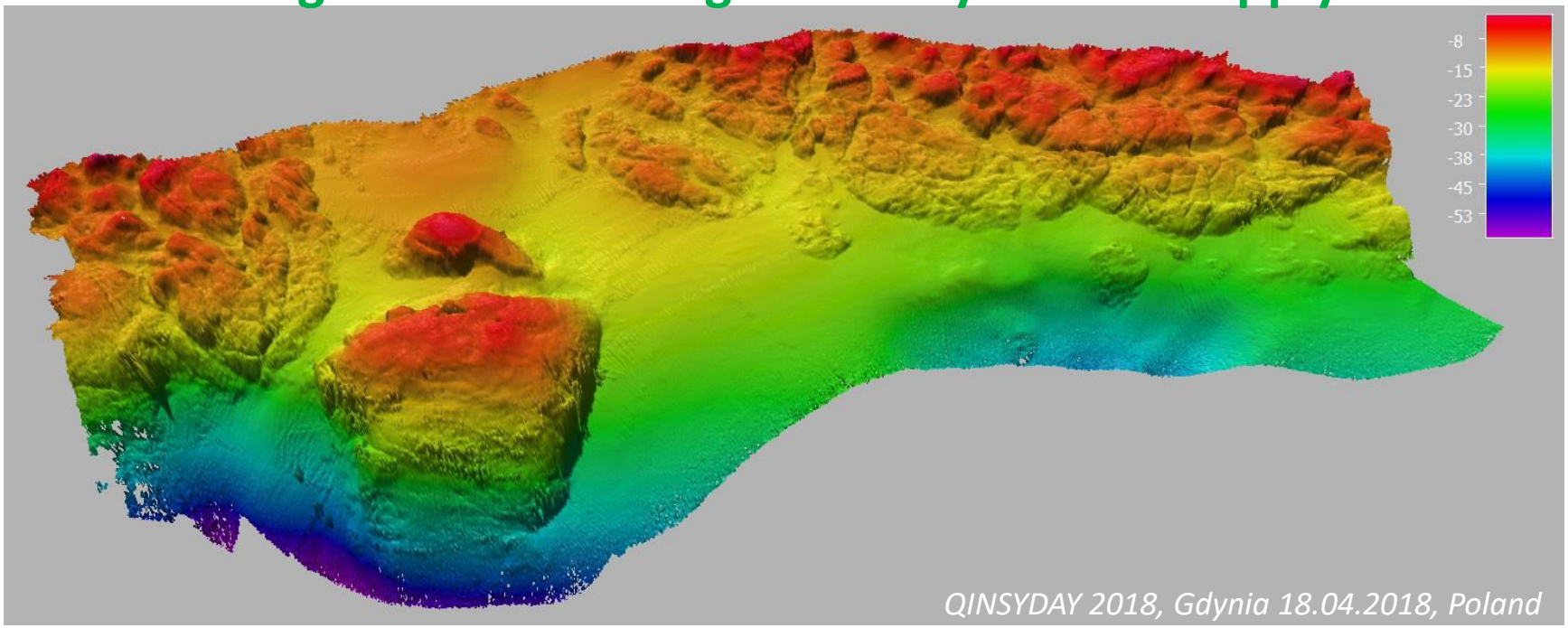


FMMidwater WC data, curtain, one angle along track beams

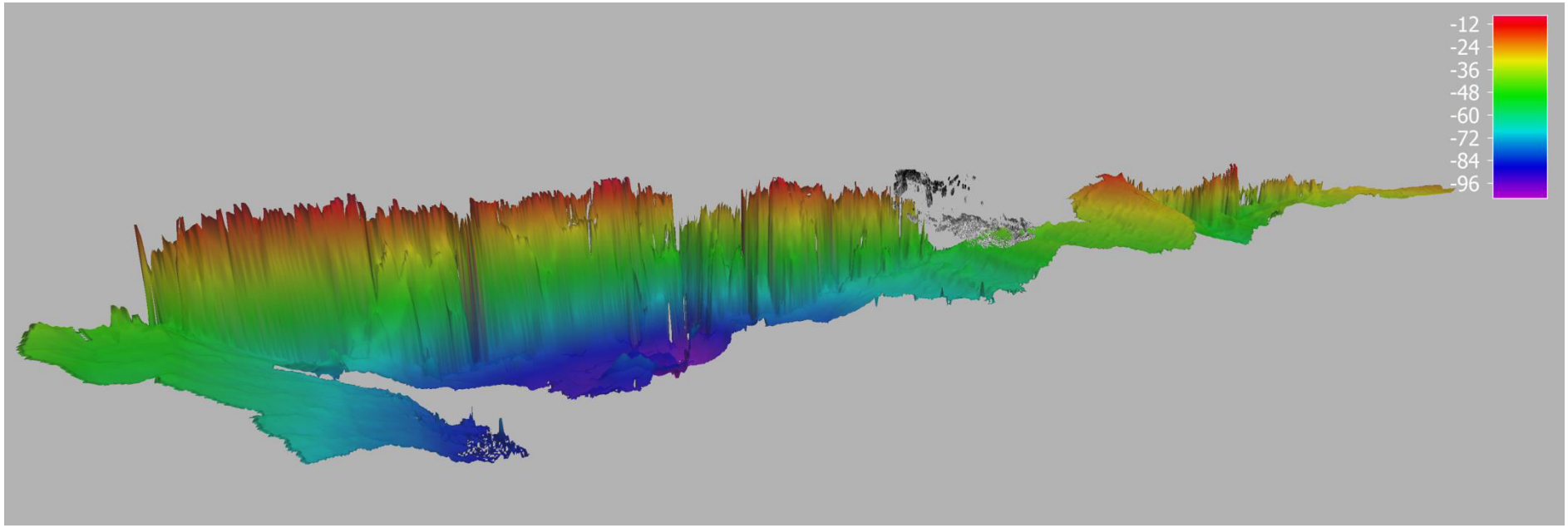


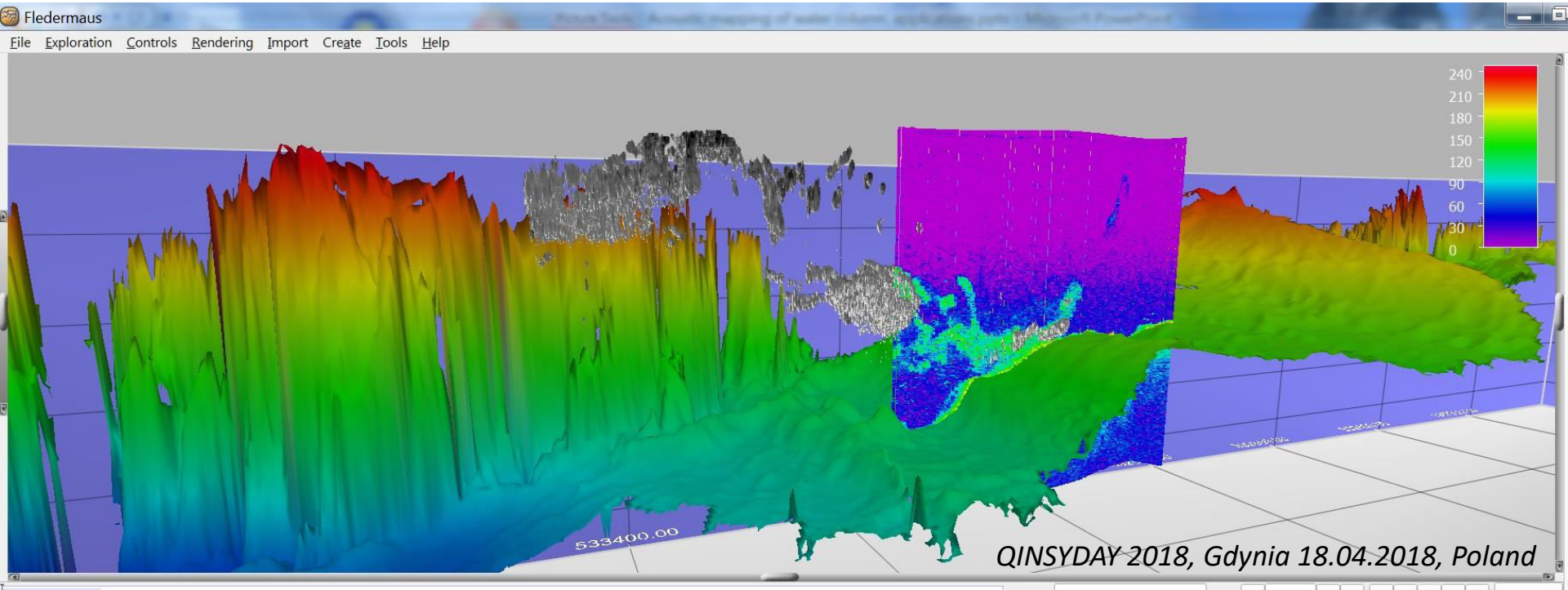
First grid artifacts visible

Final grid after cleaning and delayed heave applyed



Samarinbreen glacier in Hornsund fjord (Svalbard), sediment cloud in water column



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