SnT 2025 8 SEPTEMBER ONLINE DAY 9 TO 12 SEPTEMBER AT HOFBURG PALACE, VIENNA & ONLINE
CTBT: SCIENCE AND TECHNOLOGY CONFERENCE

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Enhanced seismic monitoring integrating DAS analysis with conventional seismological analysis

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INTRODUCTION AND MAIN RESULTS

Distributed Acoustic Sensing (DAS) can contribute with many data points from previously challenging places such as the seabed. DAS data are in their nature different from the three-component data recorded by traditional seismographs making integration non-trivial. Furthermore, a Broad-Band seismograph typically generates on the order of 2 Gb of data per month, while DAS data from a single cable easily reaches 1 Tb a day. We show examples of events recorded by both seismographs and DAS.

Side event on DAS Friday 9:00-10:00 in Forum!

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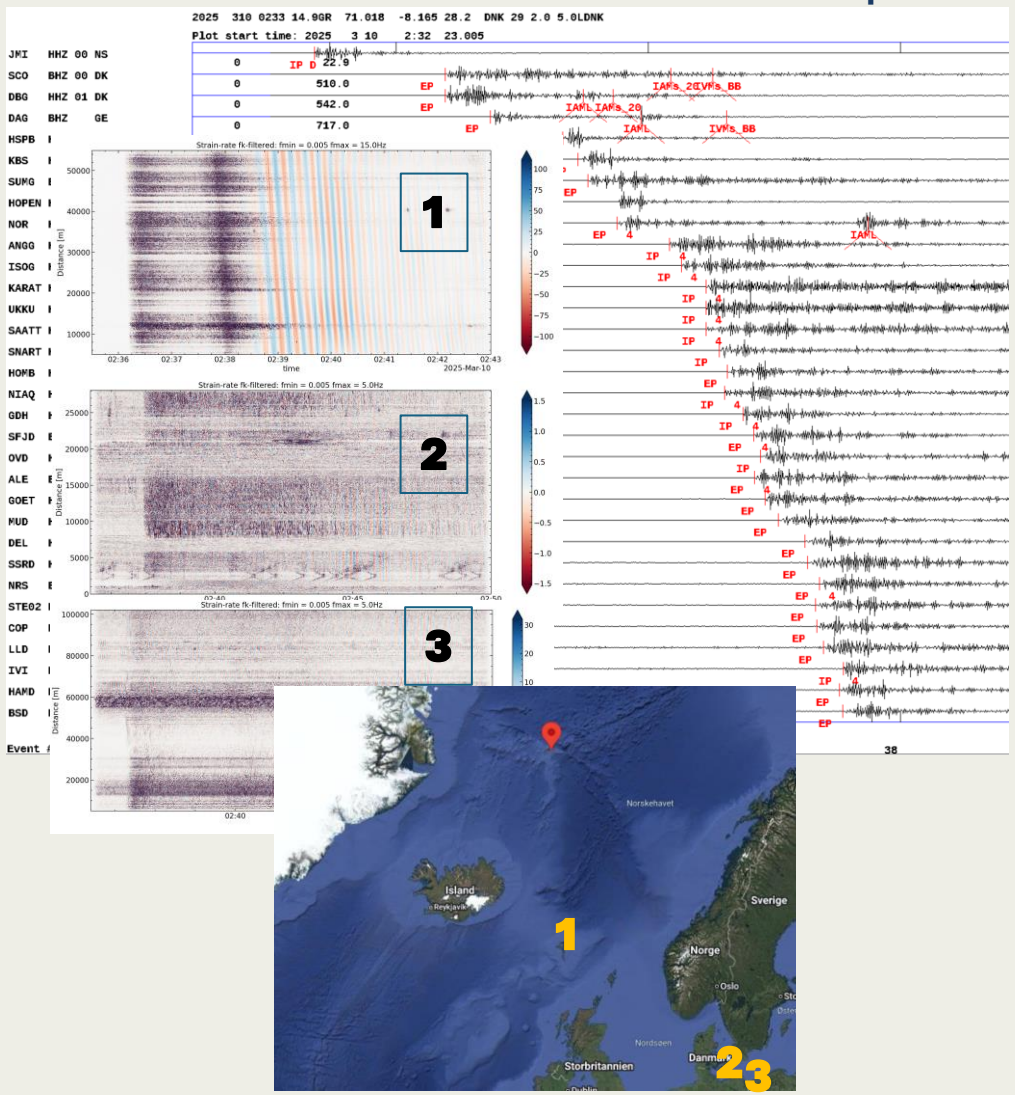
M6.5 earthquake north of Jan Mayen on seismometers and three subsea cables far apart



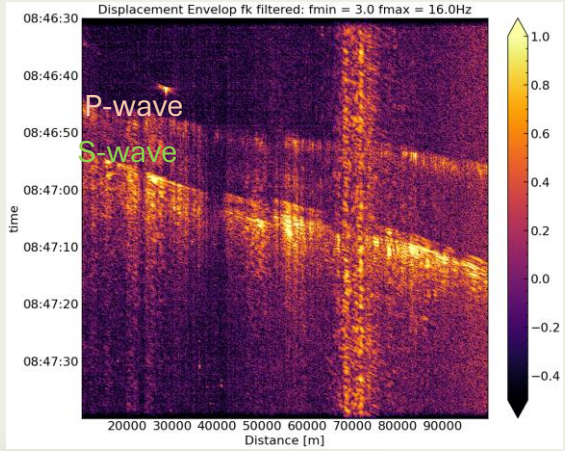
Conclusion

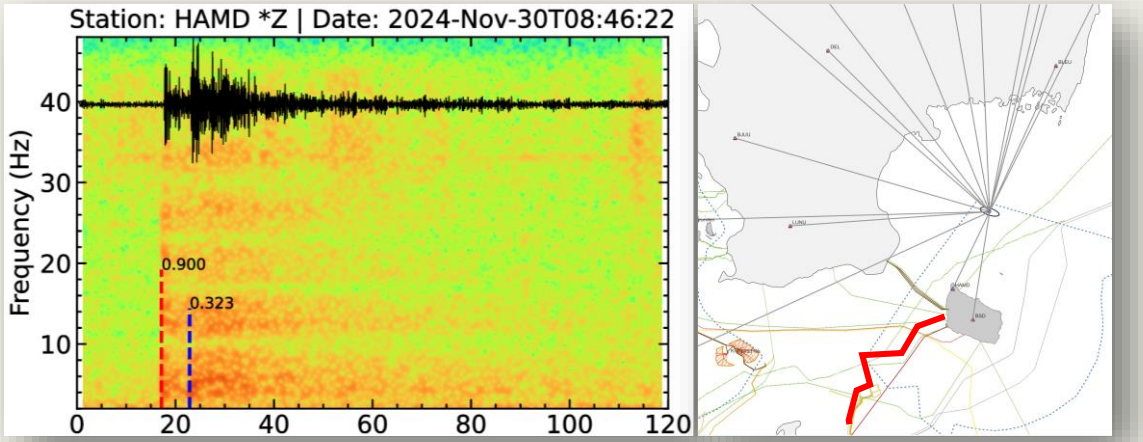
We show two examples of events recorded by DAS and seismic networks

The DAS data show very varying noice levels and frequency content

Integrating analysis of data from conventional seismograph networks with DAS data from submarine cables has the potential to improve detection level as well as accuracy for subsea events. Strong collaboration between neighboring countries is also important.

Explosion north of Bornholm on seismometers and one subsea cable





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