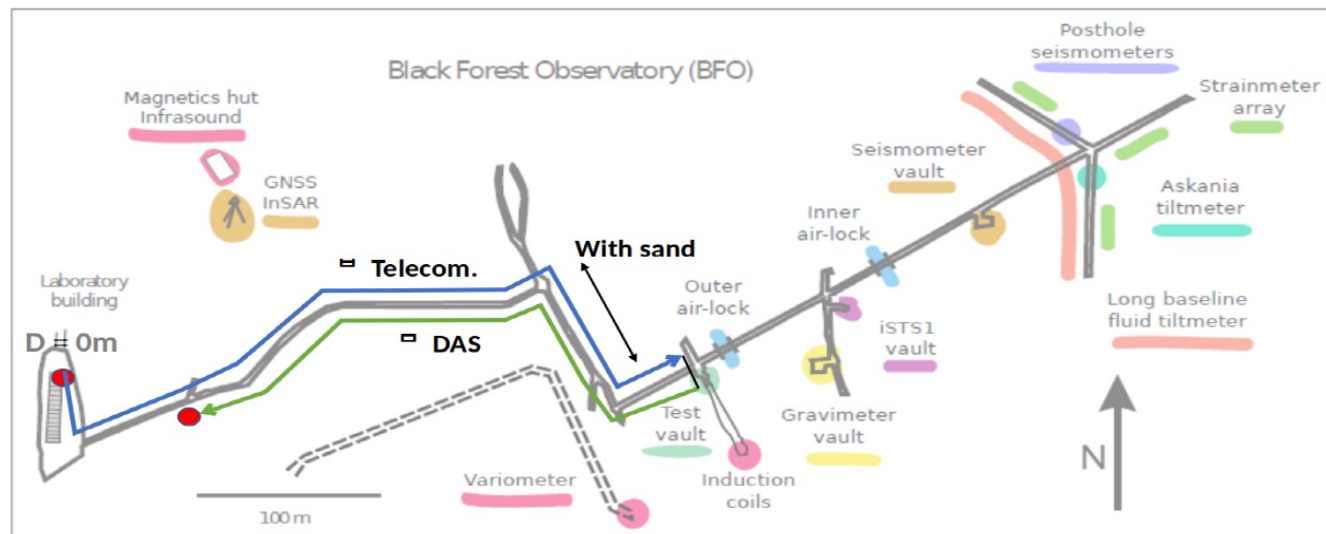


DAS measurements at P2 and P3 sites

First look at the data

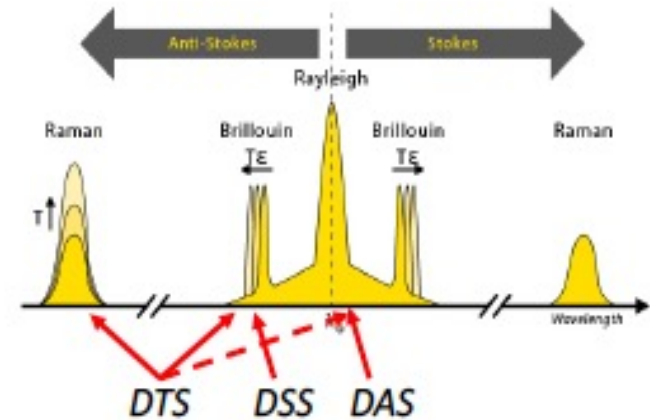
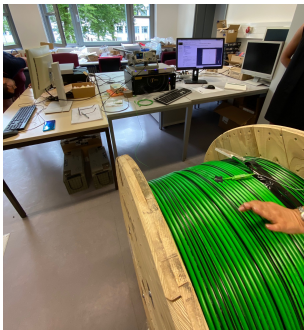
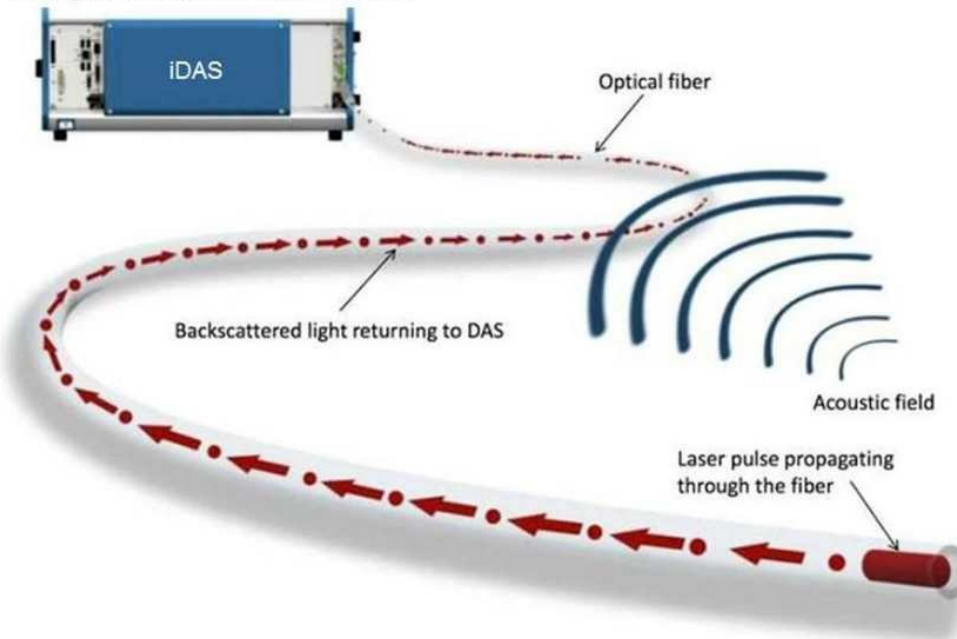
A. Rietbrock, N. Karam Zadeh, J. Azzola, T. Forbriger, R. Widmer-Schmid, C. Giunchi, M. Frietsch, E. Gaucher

Geophysical Institute



DAS - Fundamentals

intelligent Distributed Acoustic Sensor

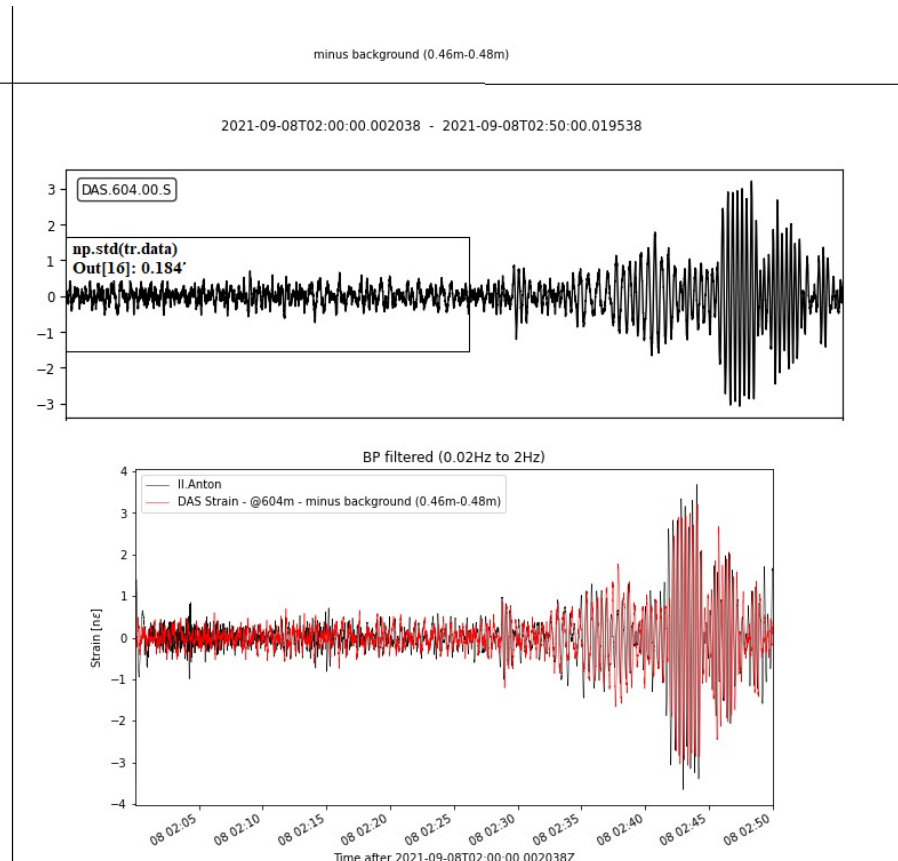
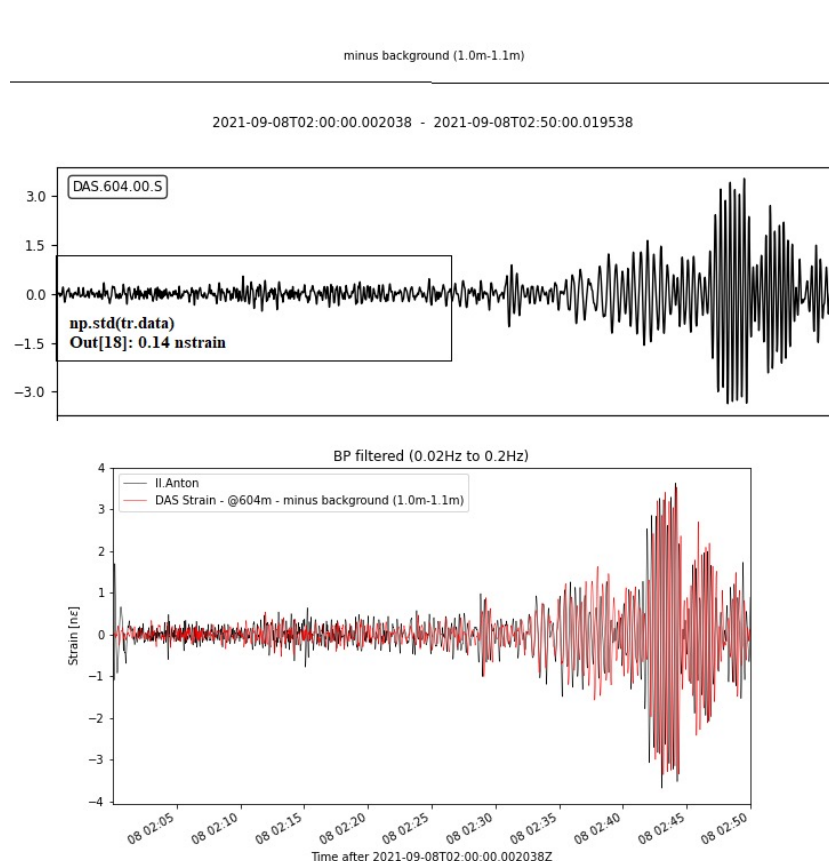


- *DTS: Distributed Temperature Sensing*
- *DSS: Distributed Strain Sensing*
- *DAS: Distributed Acoustic Sensing*

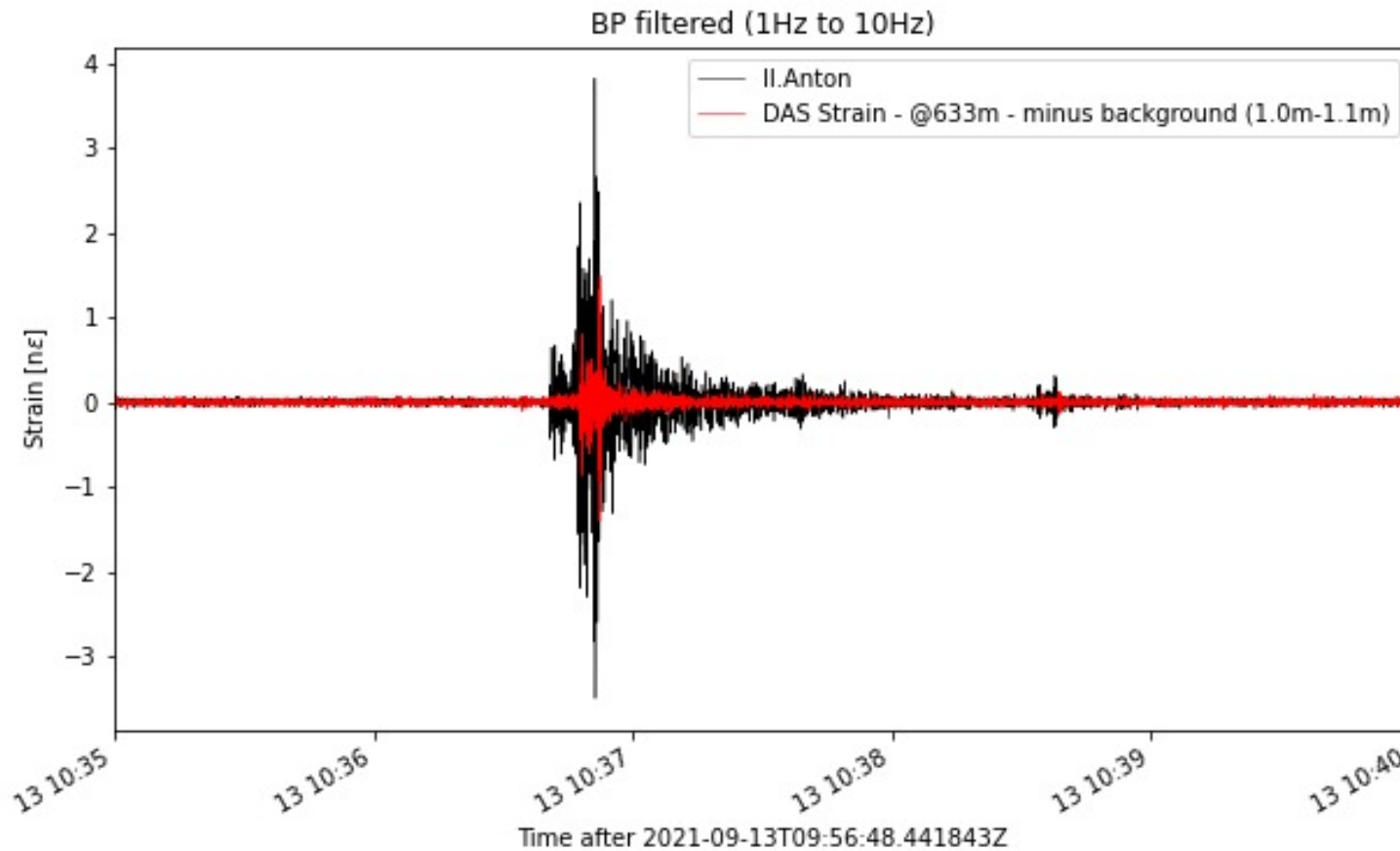
Test at the Black Forest Observatory (BFO)



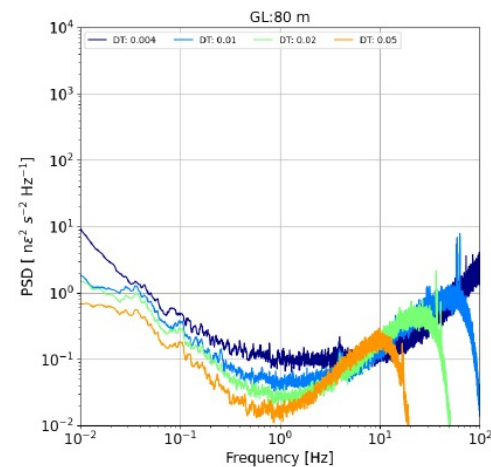
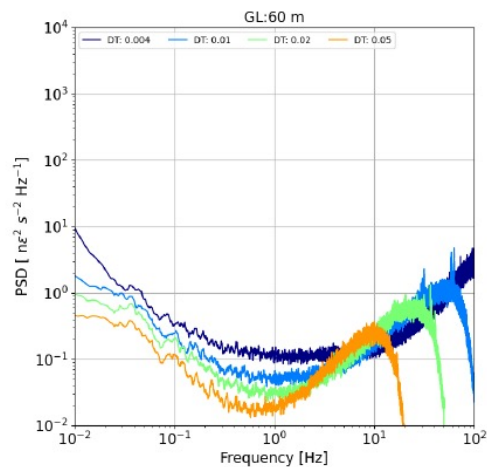
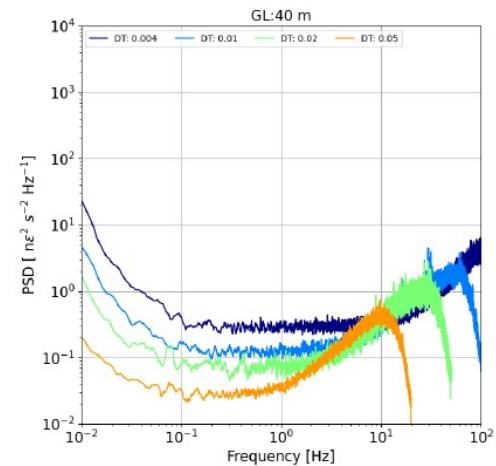
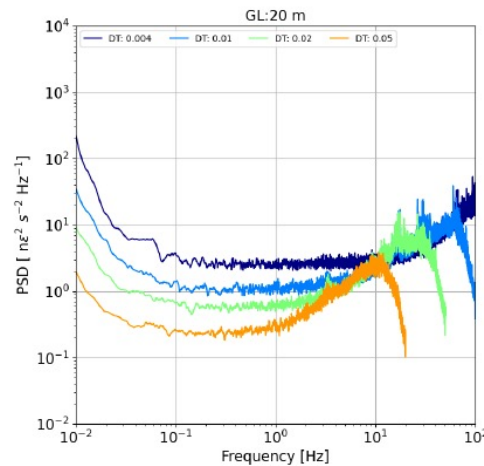
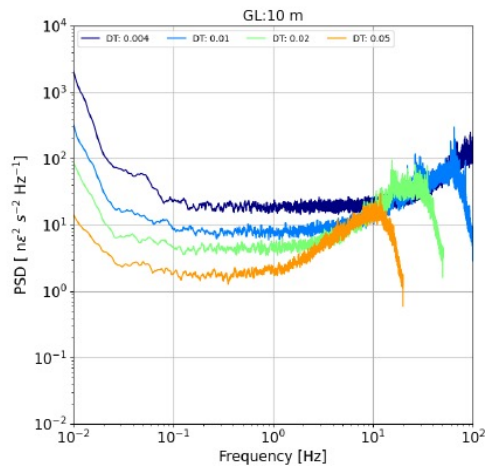
First observations 1: Accapulco event



First observations 2: Local event in BW



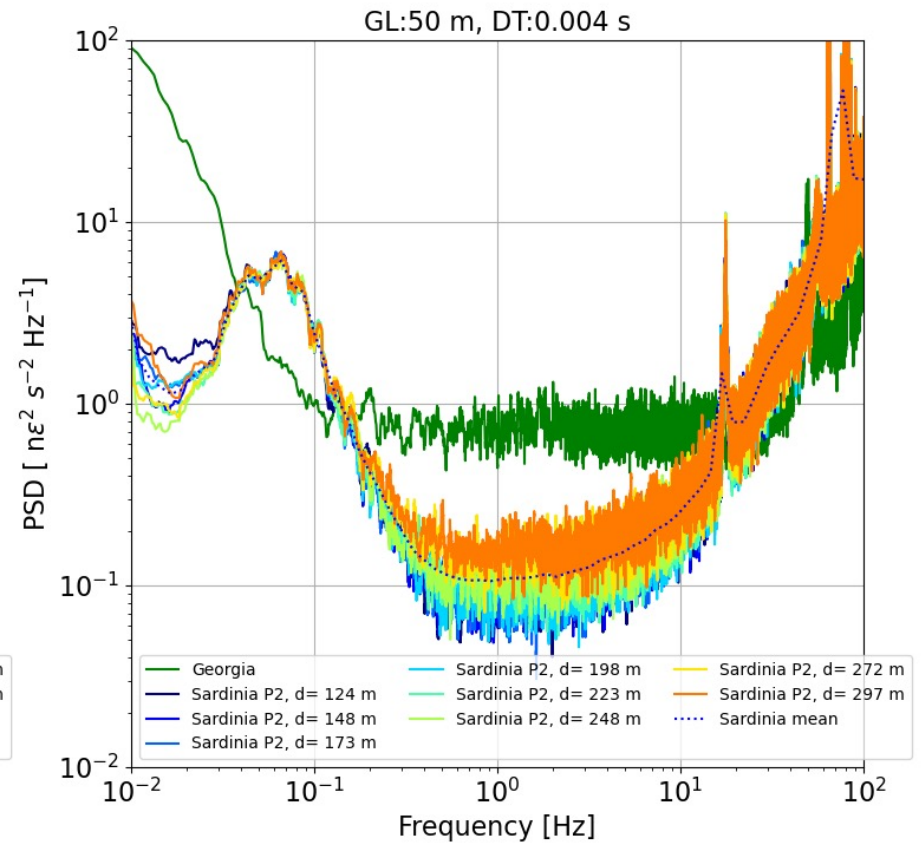
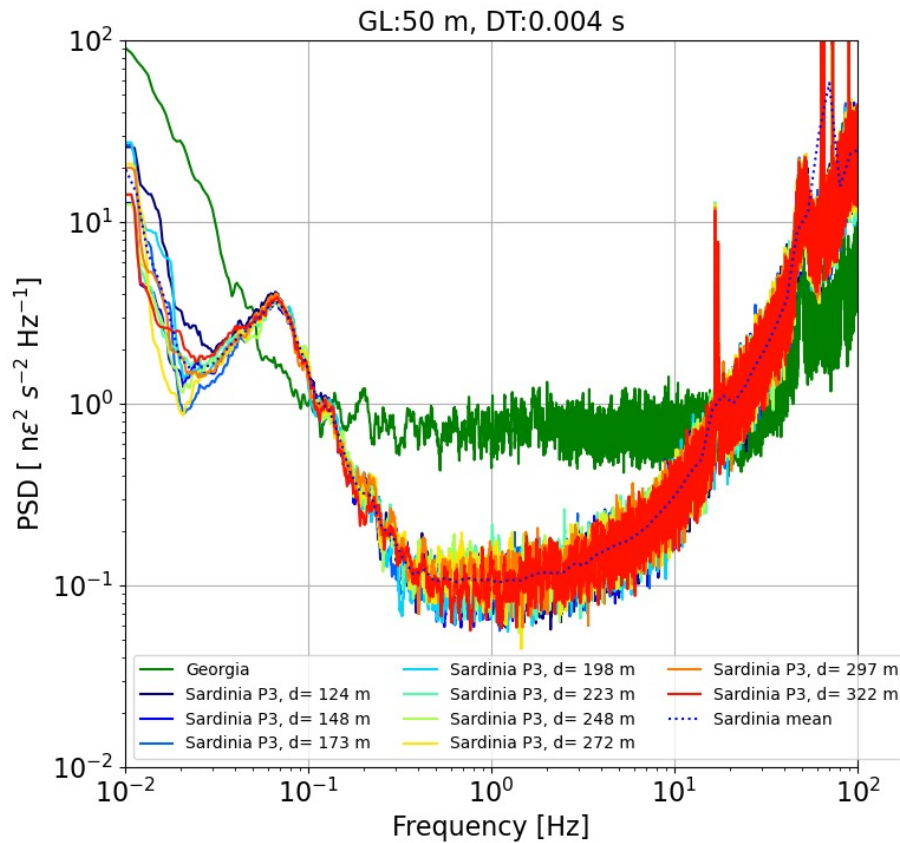
What do we measure?



Some images



Preliminary results: 1hr of data



Conclusions

- DAS measurements open up an exciting new possibility to measure strain at multiple locations at the same time
- Easy to install in boreholes or underground settings
- Coupling is one of the open questions?
- Optical noise reduction can be improved?
- Still more data and comparisons are needed