

## README

### 1. Introductory information

- Title of dataset: `summary_results_Geophysics2018paper_Barnhoornetal_final.m`
- The file `summary_results_Geophysics2018paper_Barnhoornetal_final.m` contains the data that is used in the publication "Experimental identification of the transition from elasticity to inelasticity from ultrasonic attenuation analyses" by Barnhoorn et al. that is published in 2018 in the journal Geophysics. The doi for the journal article is: <https://library.seg.org/doi/10.1190/geo2017-0534.1>
- The file format is a .m Matlab script.
- For any questions please contact: [auke.barnhoorn@tudelft.nl](mailto:auke.barnhoorn@tudelft.nl)

### 2. Methodological information

- For all information on the method description and the data processing, please consult the journal article to which this dataset is related. The doi for the journal article is: <https://library.seg.org/doi/10.1190/geo2017-0534.1>

### 3. Data specific information

In the matlab script the data is listed for each experiment. Strain, stress, velocity and attenuation data for each experiment is listed in the script. We have performed both P- and S-wave measurements on sandstones, limestones and shales during an fracturing experiment. The sample names are mentioned for each variable name behind the underscore, with p-wave data on shales for sample numbers (22p,47p),s-wave data on shales for sample numbers (22s,29s,36s,47s),p-wave data on sandstones for sample numbers (004,006),s-wave data on sandstones for sample numbers (005,007) and p-wave data on limestones for sample numbers (004L),s-wave data on limestones for sample numbers (003L,005L).

The dataset for all experiment contains the following variables (with an underscore and sample number for the variable name):

`strain_` axial strain {unitless]  
`Sigma_` axial stress in MPa  
`Vel_` velocity of s- or p-wave in m/s  
`dV_` velocity uncertainty in m/s  
`Qinv_` attenuation of s- or p-wave [unitless]  
`dQinv_` attenuation uncertainty  
`error_V_` velocity uncertainty in % with respect to measured velocity  
`error_Qinv_` attenuation uncertainty in % with respect to measured attenuation

### 4. Sharing and Access information

- Licenses or restrictions placed on the data; Licenses allow you to specify the 'terms-of-use' for your data. The archive provides a license that is explained in its terms of use and applies this license as default selection. You can use this licensing wizard to help you to pick a more appropriate license for the use of your data. This license will then be displayed in the metadata.