

# Field test 210109 new array and DAQ at Gunpowder mill

New array:

Two electronic cards in series with 8 channels each ( $dx=0.0225$  m)

Cables and connectors to the new DAQ

Frame/holder in black hard plastic

12 Volt power supply



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New attachment on old bicycle stand:

Source and receiver array are separated as much as possible for vibration insulation and individual height adjustment

Wood is replaced with more rigid steel but all connections include rubber insulation to minimize vibrations in the frame

The white cloth is just a temporary protection of the electronics from dirt and water

MEMS microphones about 0.10 m above surface and the distance between source and first microphone is about 0.15 m

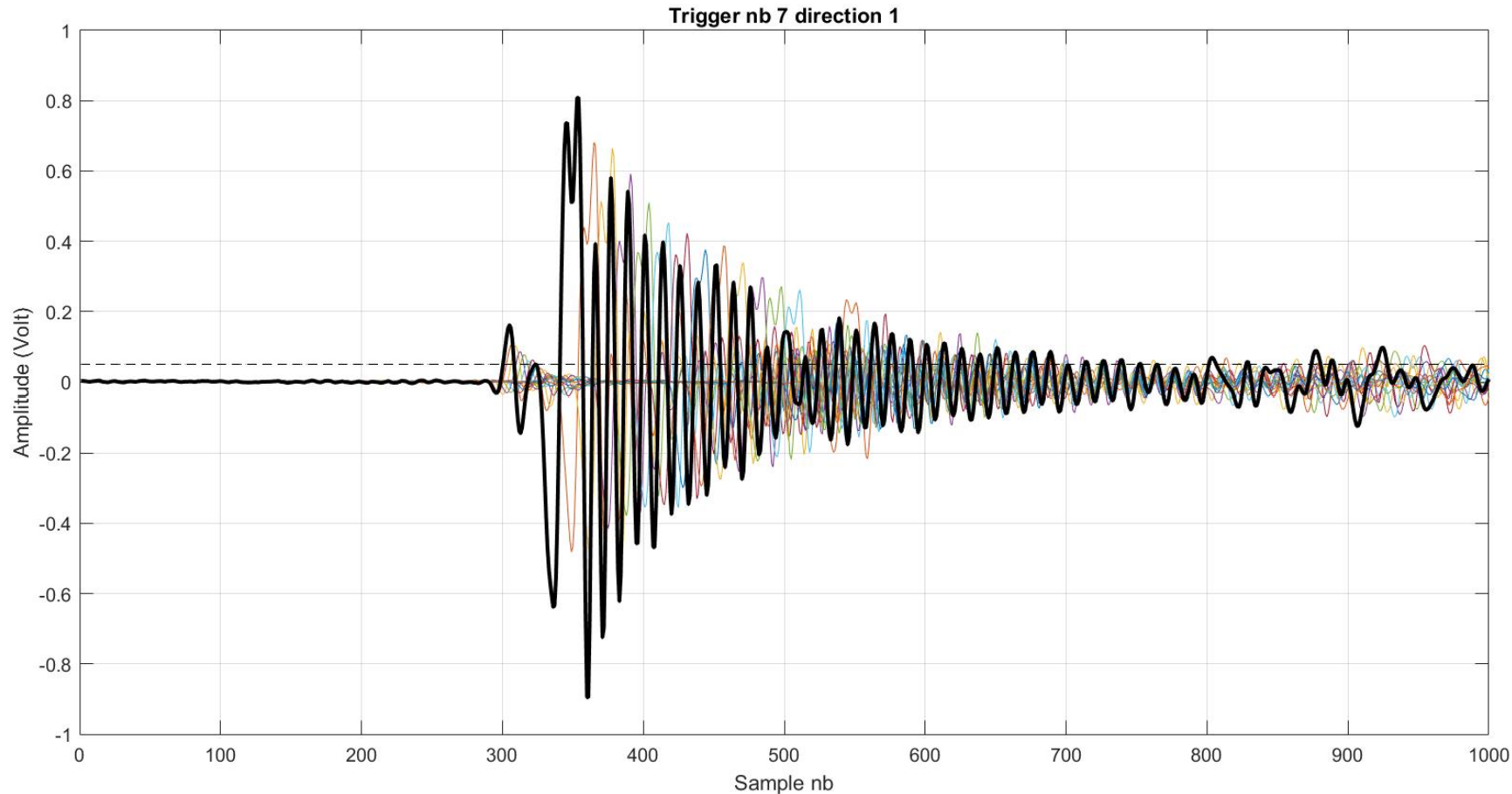


# Field test 210109, record nb 7 in tdms file T210109\_25

Example data set at low speed about **15 km/h**

Similar data as before but now with about 30 times higher amplitudes (from more amplification but also colder and stiffer asphalt)

Noise level about 3 mV, peak surface wave about 0.2 V, peak direct air wave about 1.0 V



## DAQ parameters and temp

RecordLength = 1000 samples (5 ms)

TriggerLevel = 0.05 Volt (300 samples pre-trigg)

DynamicRange = 1 Volt

SampleRate = 200 kHz

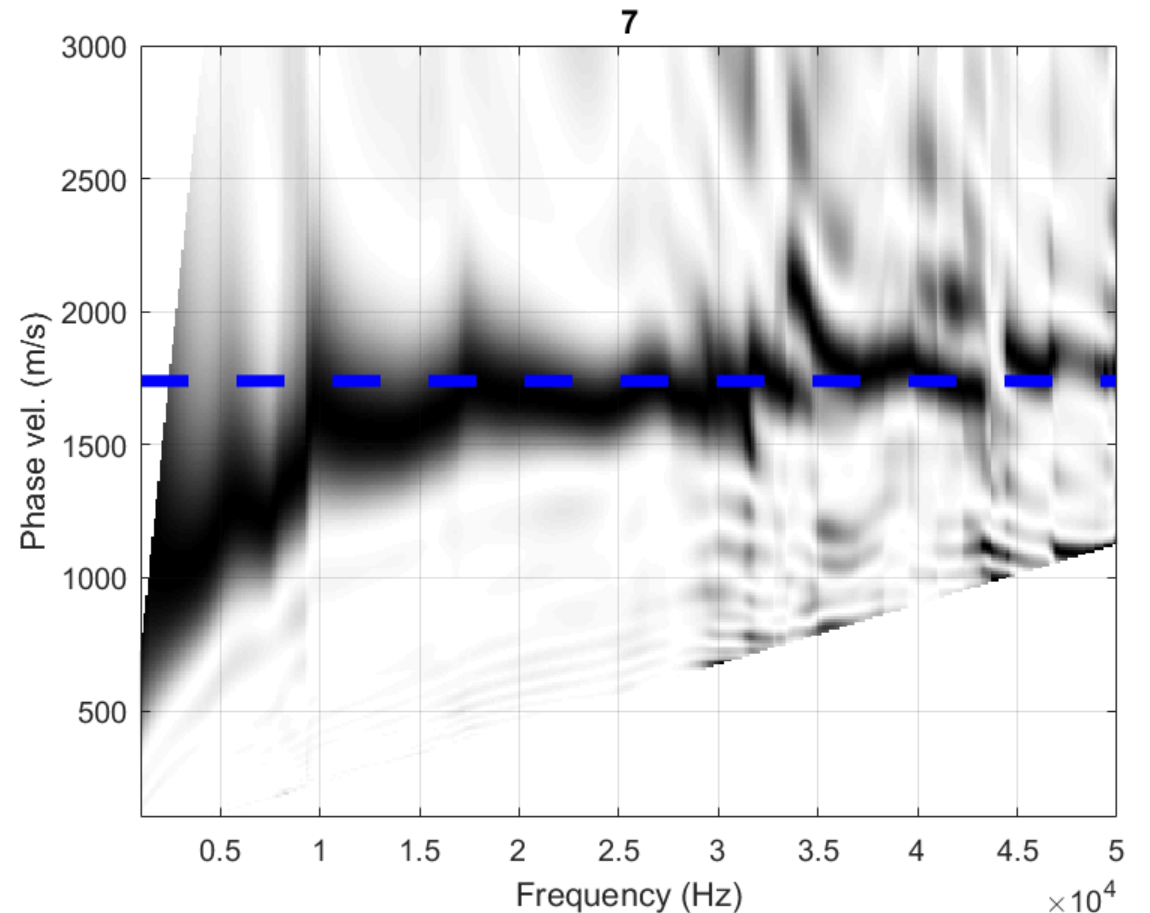
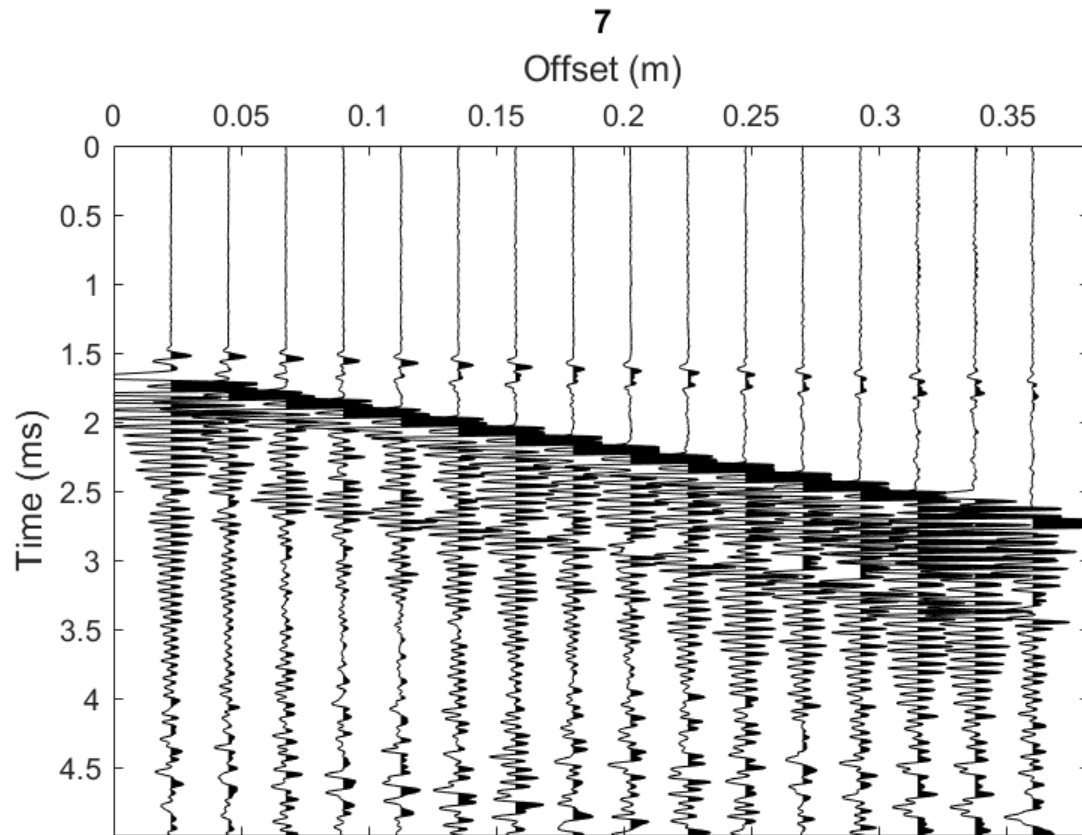
Temp = 1 deg C

PLEASE NOTE: TRIGGER LEVEL WILL BE INCREASED NEXT TIME!

# Field test 210109, record nb 7 in tdms file T210109\_25

Example data set at low speed about **15 km/h**

Similar data as before but now with about 30 times higher amplitudes (from more amplification but also colder and stiffer asphalt)

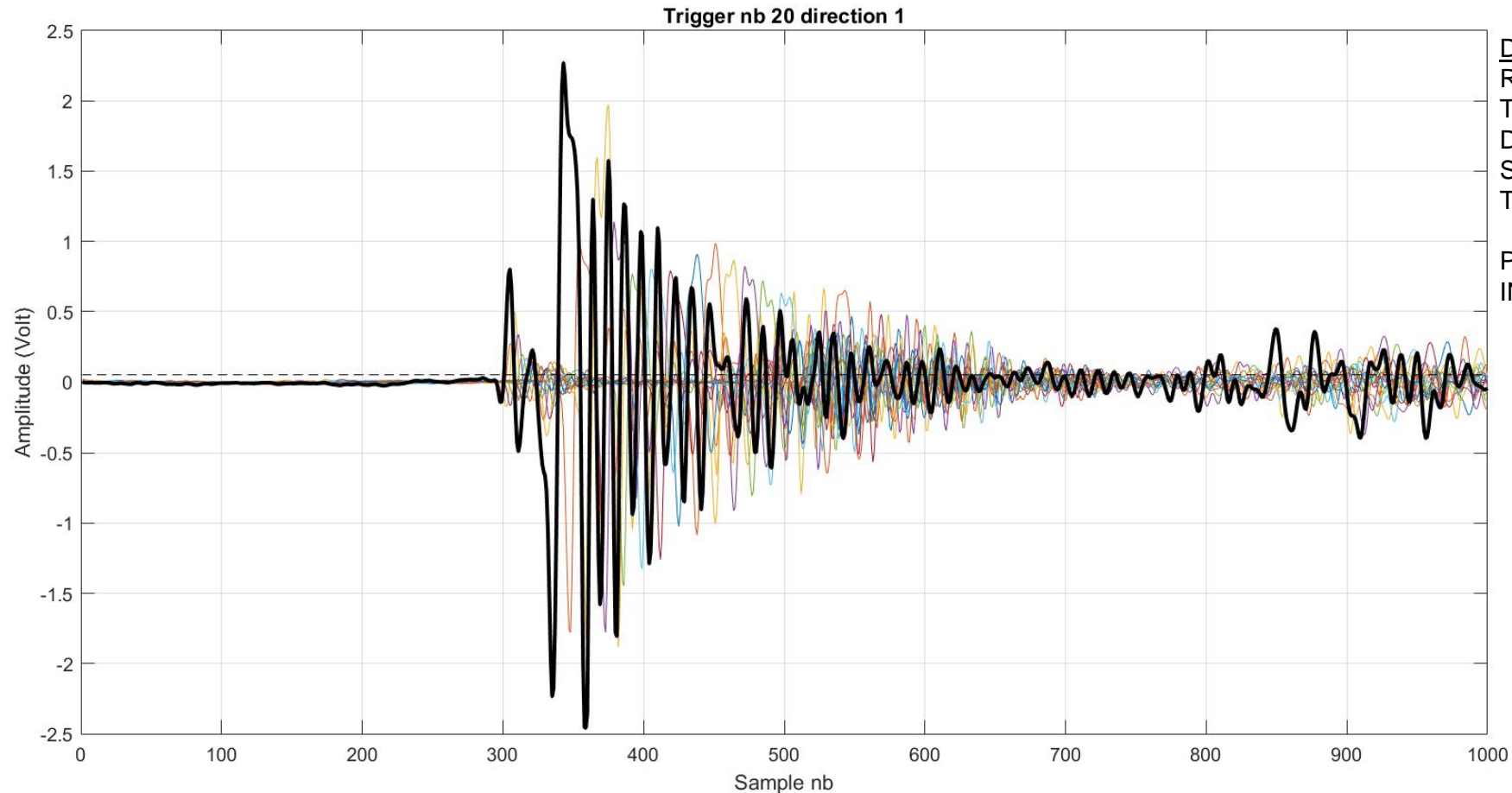


# Field test 210109, record nb 20 in tdms file T210109\_140

Example data set at higher speed about **45 km/h**

Similar data as before but now with about 80 times higher amplitudes (from more amplification but also colder and stiffer asphalt)

Noise level about 10 mV, peak surface wave about 0.8 V, peak direct air wave about 2.3 V



## DAQ parameters and temp

RecordLength = 1000 samples (5 ms)

TriggerLevel = 0.05 Volt (300 samples pre-trigg)

DynamicRange = 5 Volt

SampleRate = 200 kHz

Temp = 1 deg C

PLEASE NOTE: TRIGGER LEVEL WILL BE INCREASED NEXT TIME!

# Field test 210109, record nb 20 in tdms file T210109\_140

Example data set at low speed about **45 km/h**

Similar data as before but now with about 30 times higher amplitudes (from more amplification but also colder and stiffer asphalt)

