

# エジプトにおけるALIS評価実験

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佐藤 源之

## エジプト側参加者

National Research Institute of Astronomy & Geophysics  
Ministry of Electricity and Energy:  
Nuclear Materials Authority

## 日本側 参加者

九州大学

牛島 グループ: 電気探査

後藤グループ: 飛行船 + 磁気探査

東北大学

佐藤グループ: ALIS (GPR+MD)





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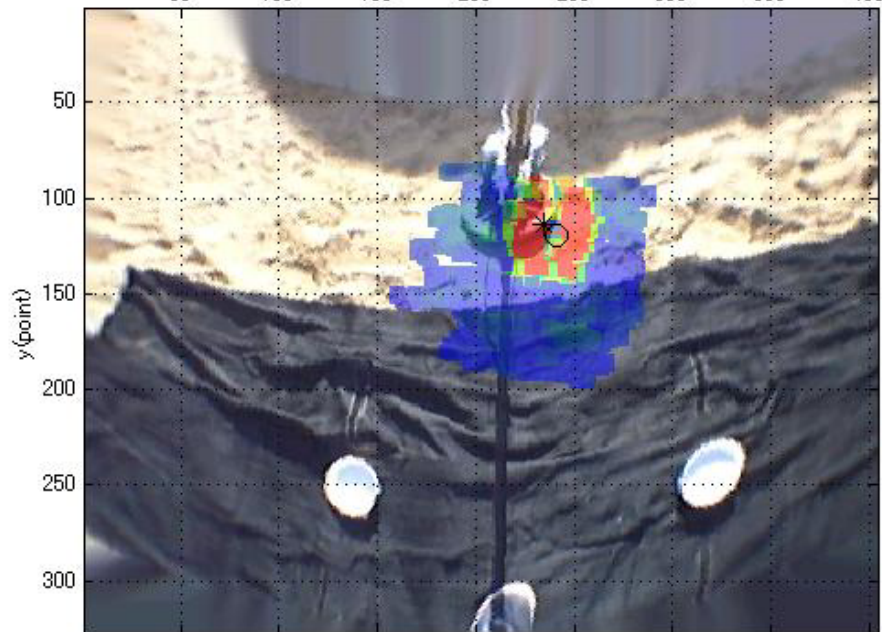
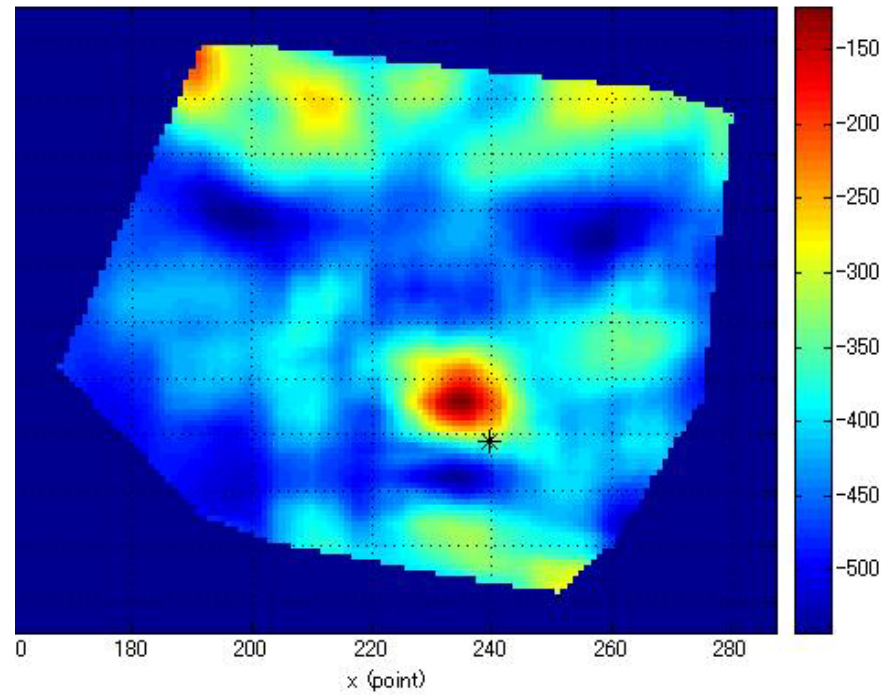
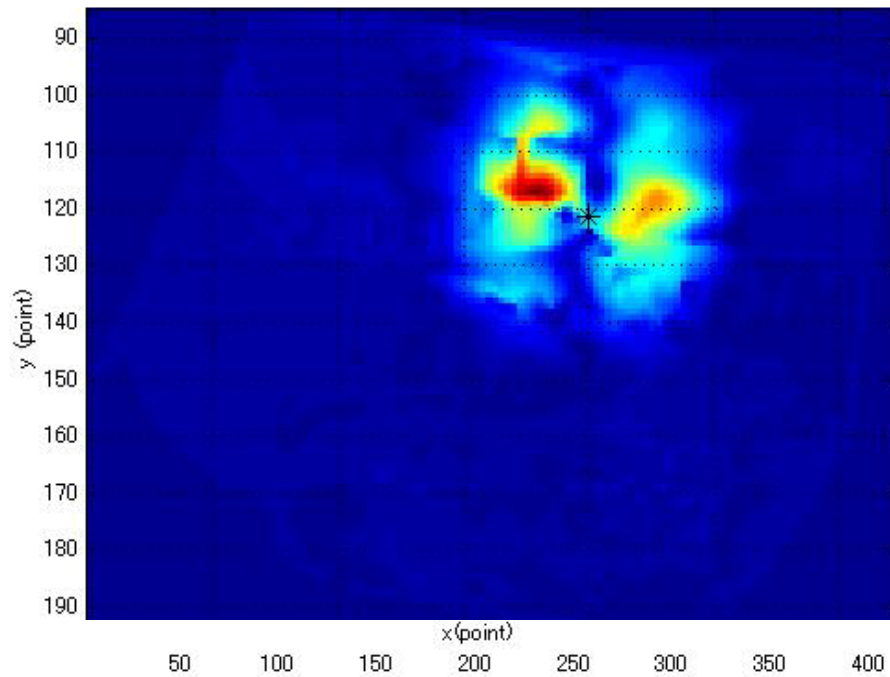






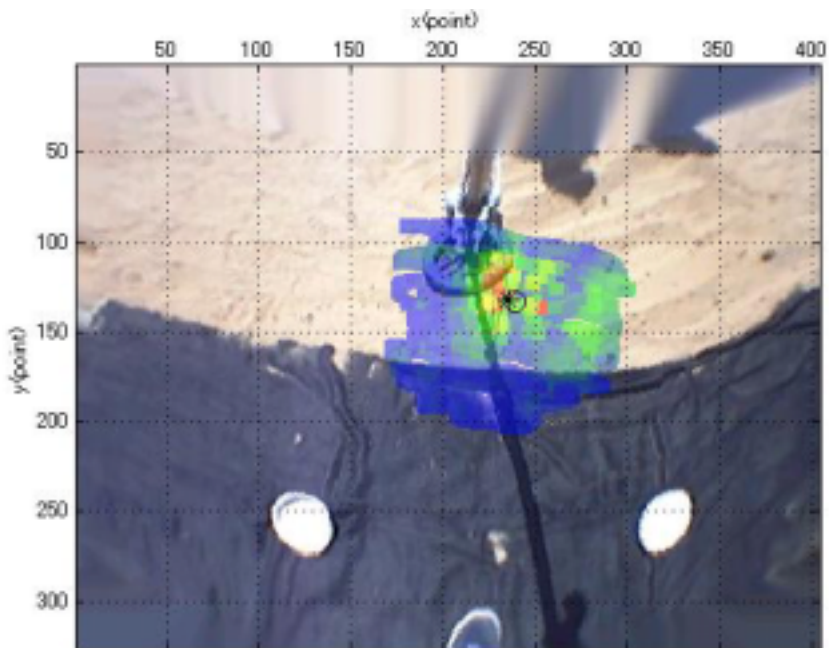
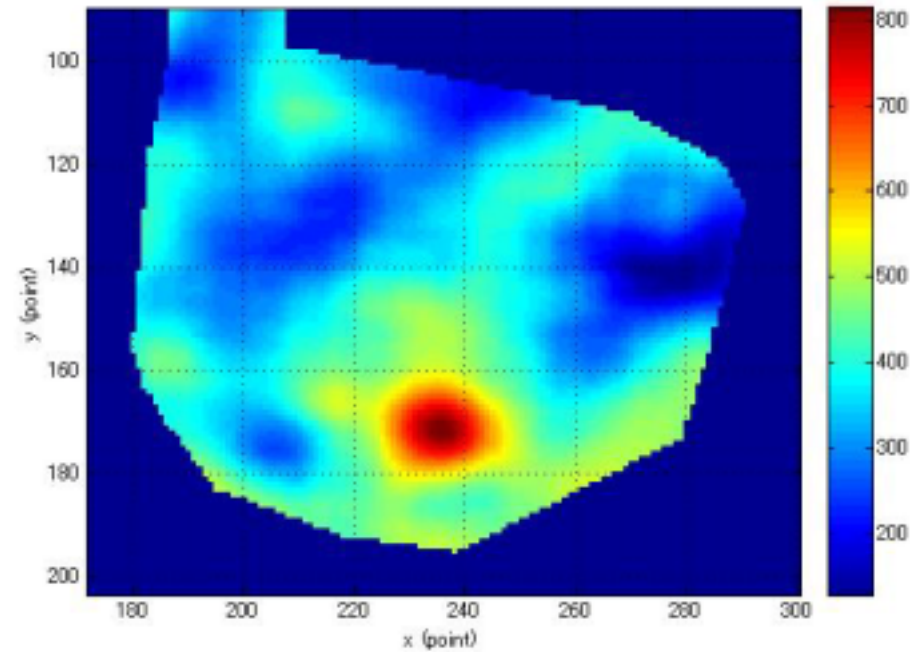
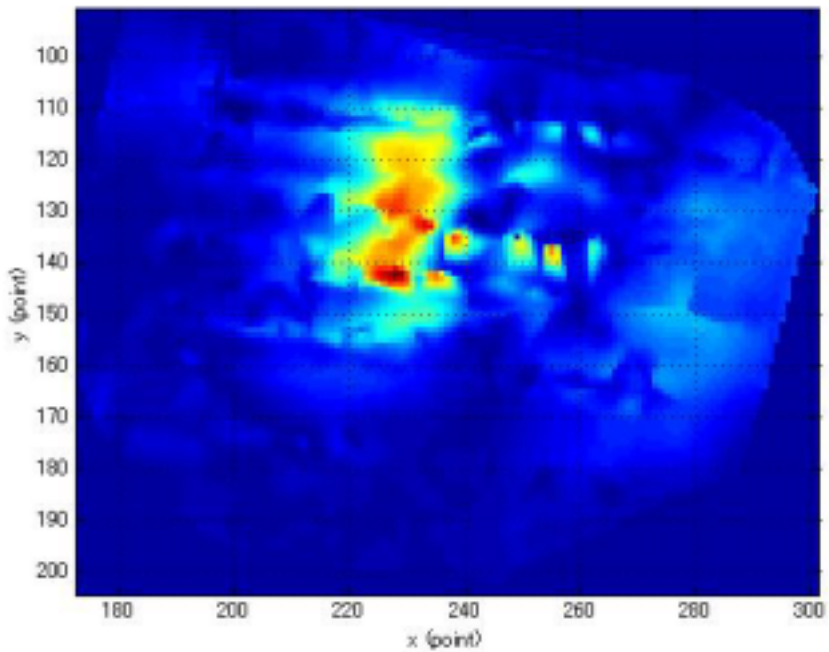
# TS-50





TS-50 Depth: 5cm

TS-50

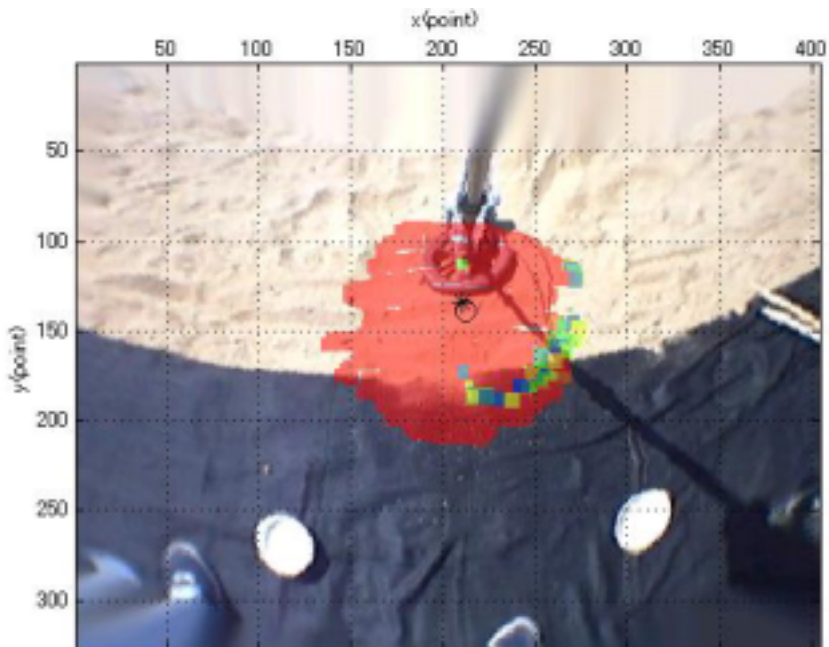
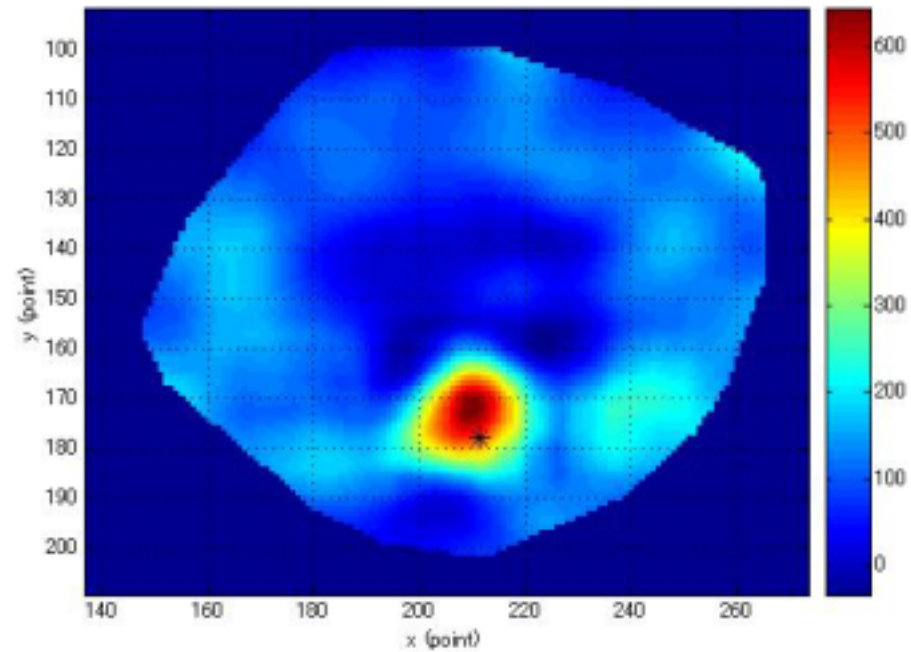
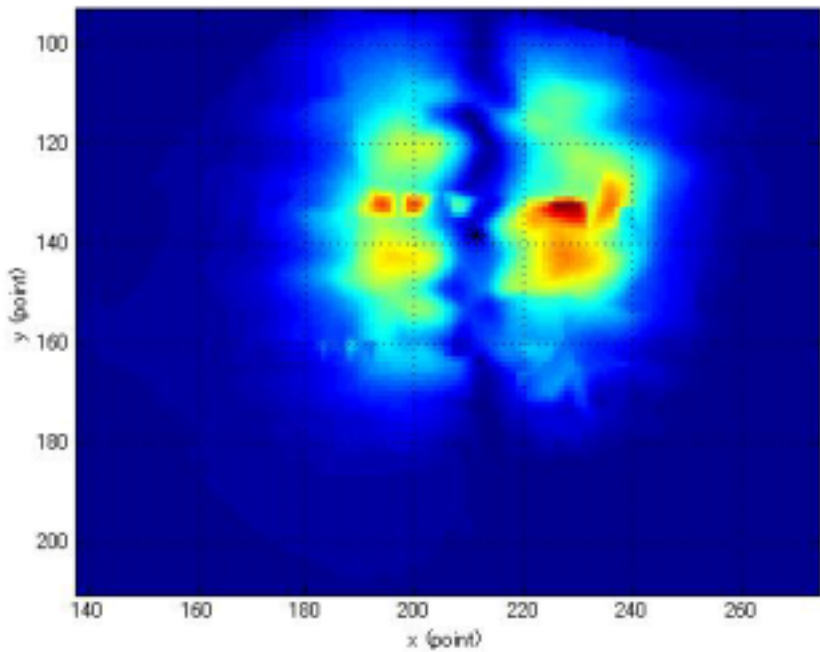


TS-50 Depth: 10cm

TS-50

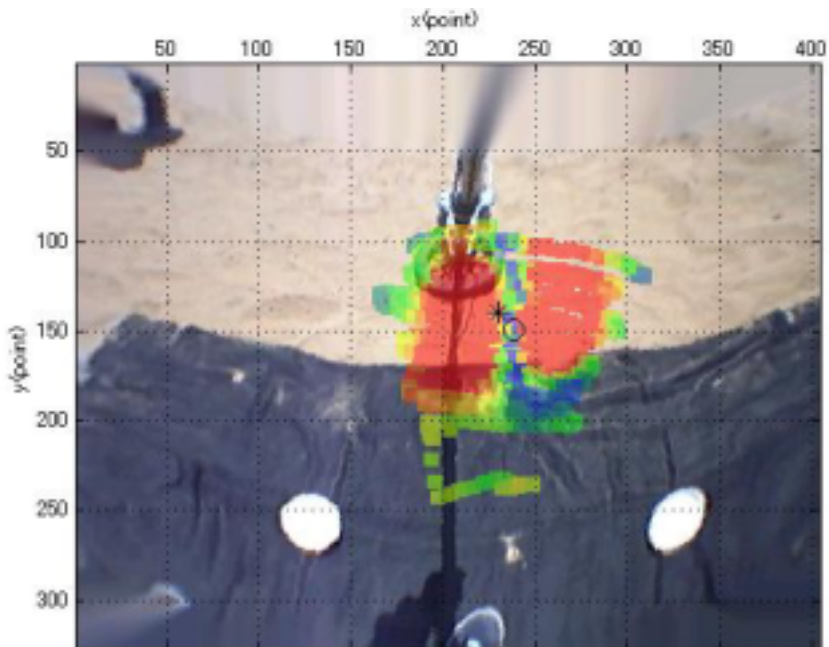
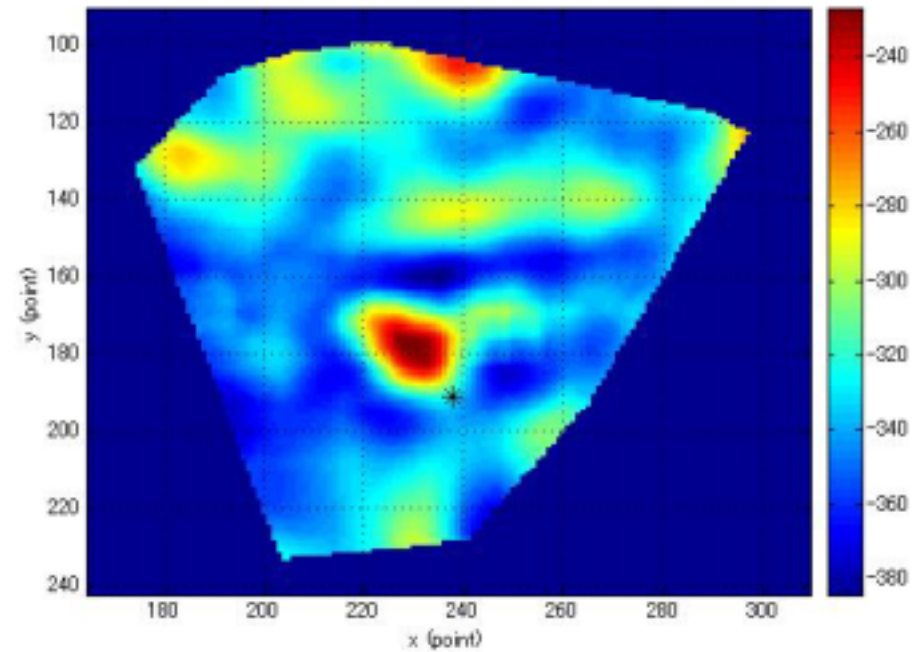
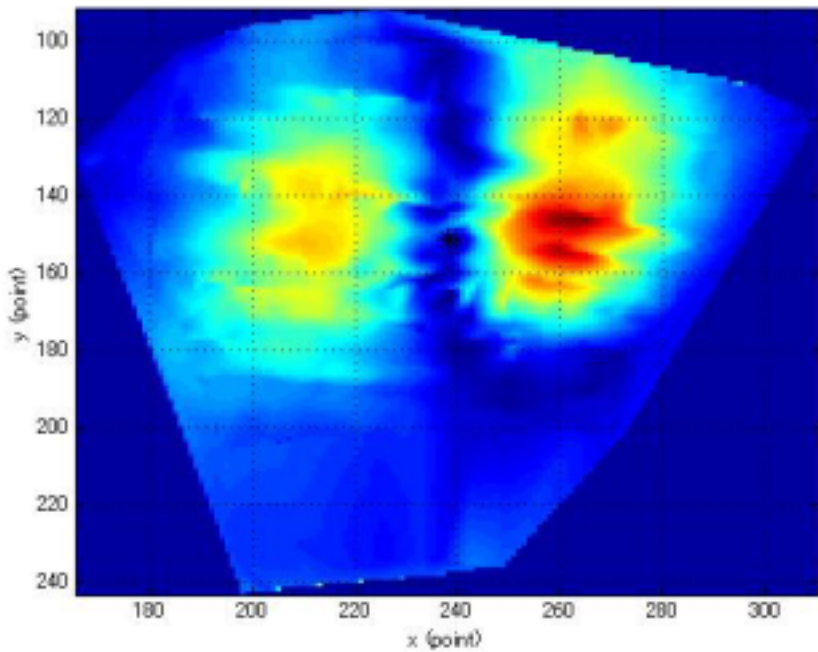
# Bacalit (UK)





Bacalit Israil Depth: 5cm

Bacalit



Bacalit Israil Depth: 20cm

Bacalit



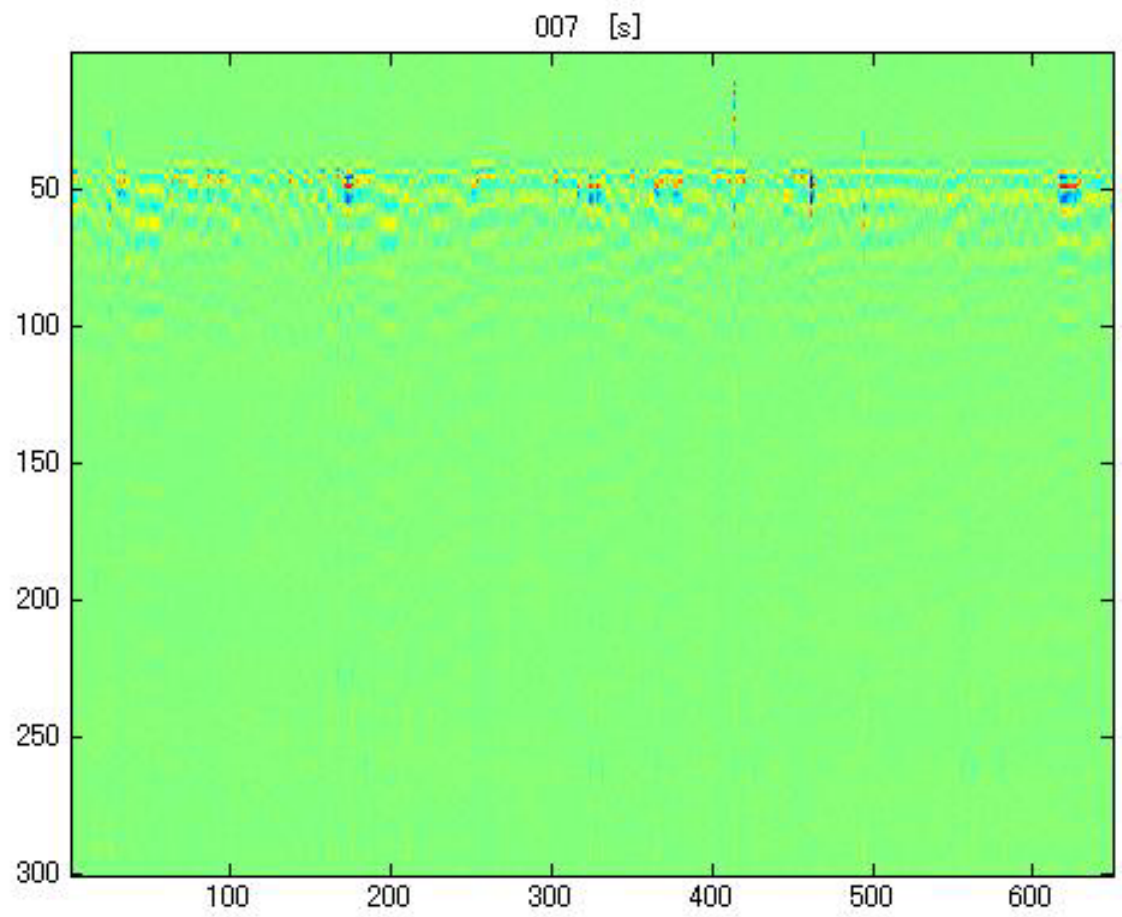
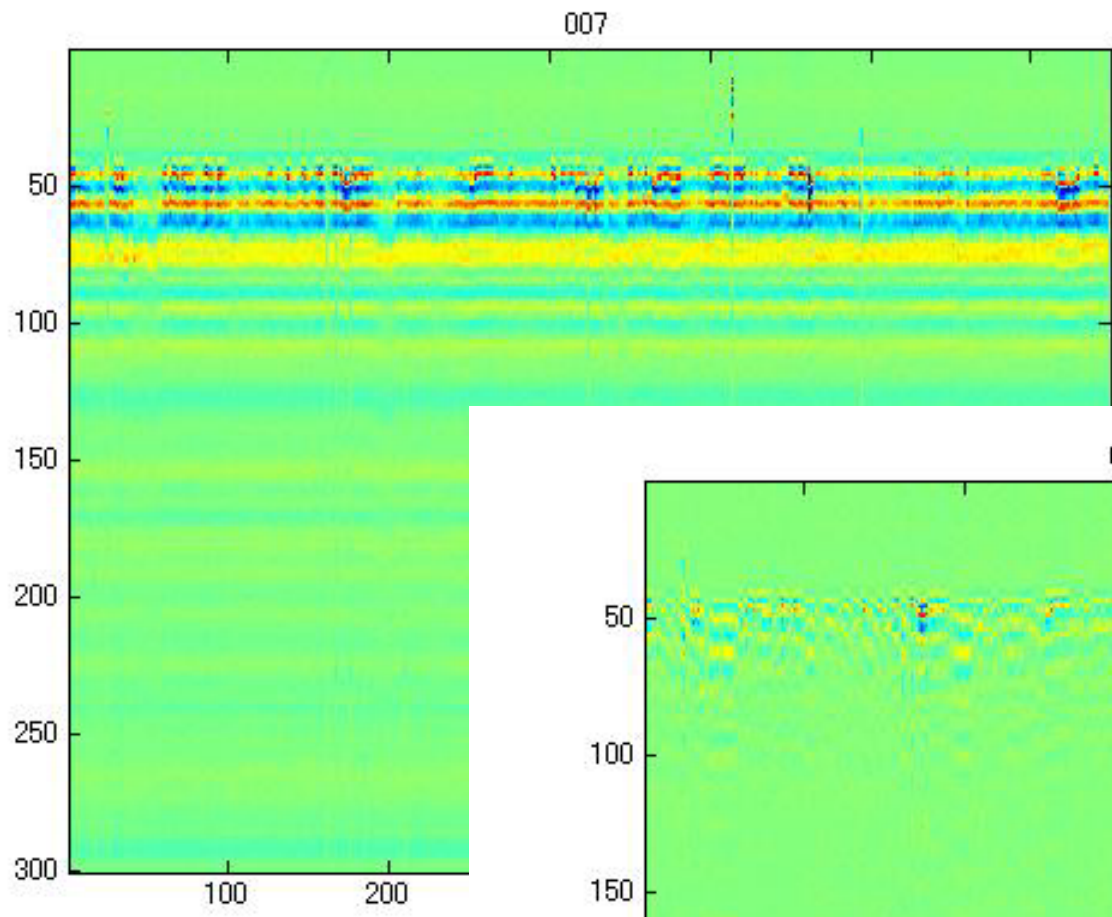
# AT mine (T80) detection test at the long calibration lane





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# Lane 7

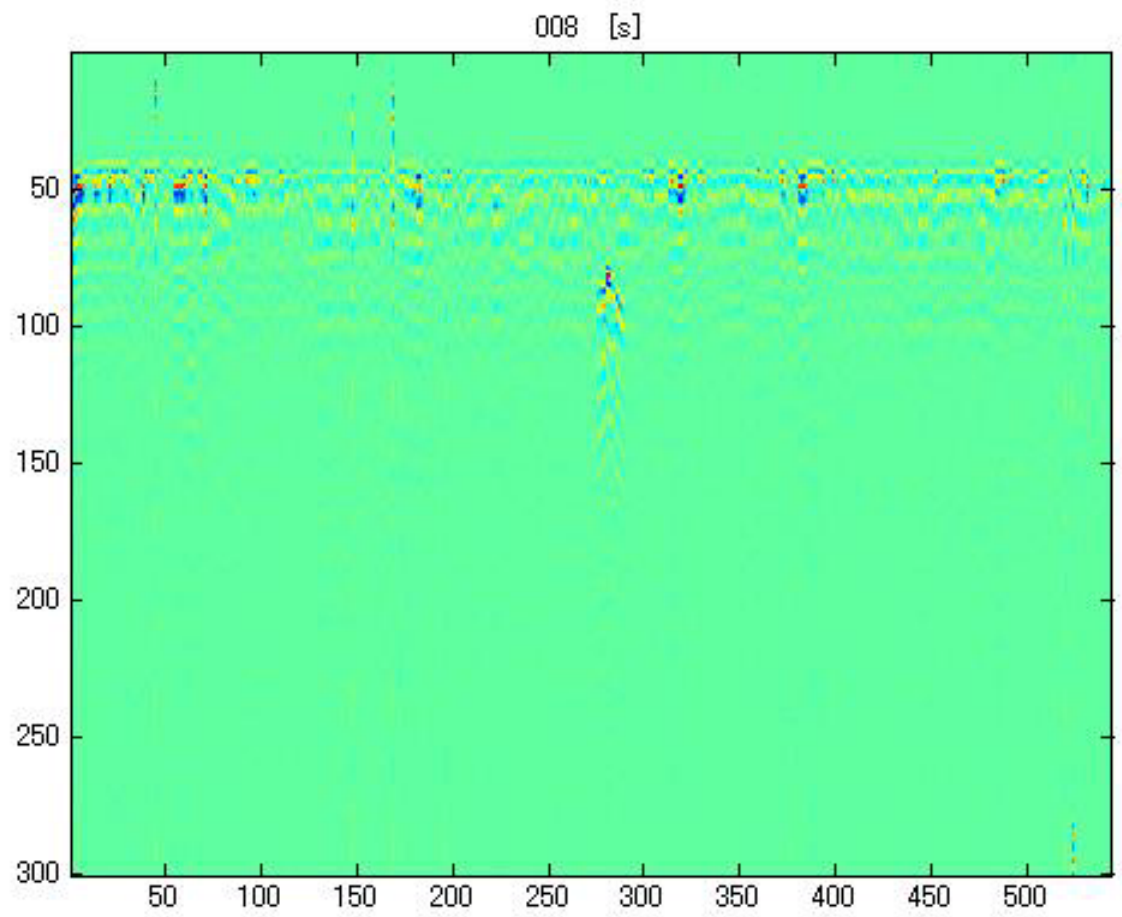
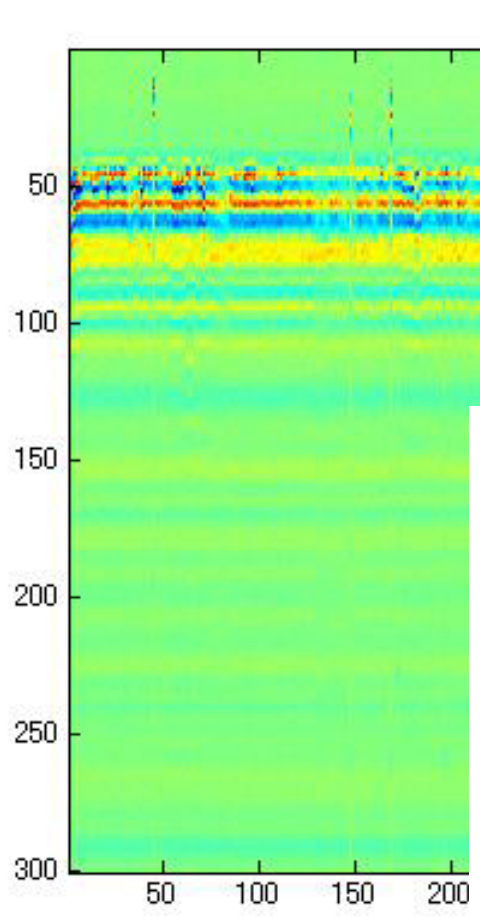


- T76
- T76
- Bakalit from Israil
- Pomz - 2
- Pomz - 2



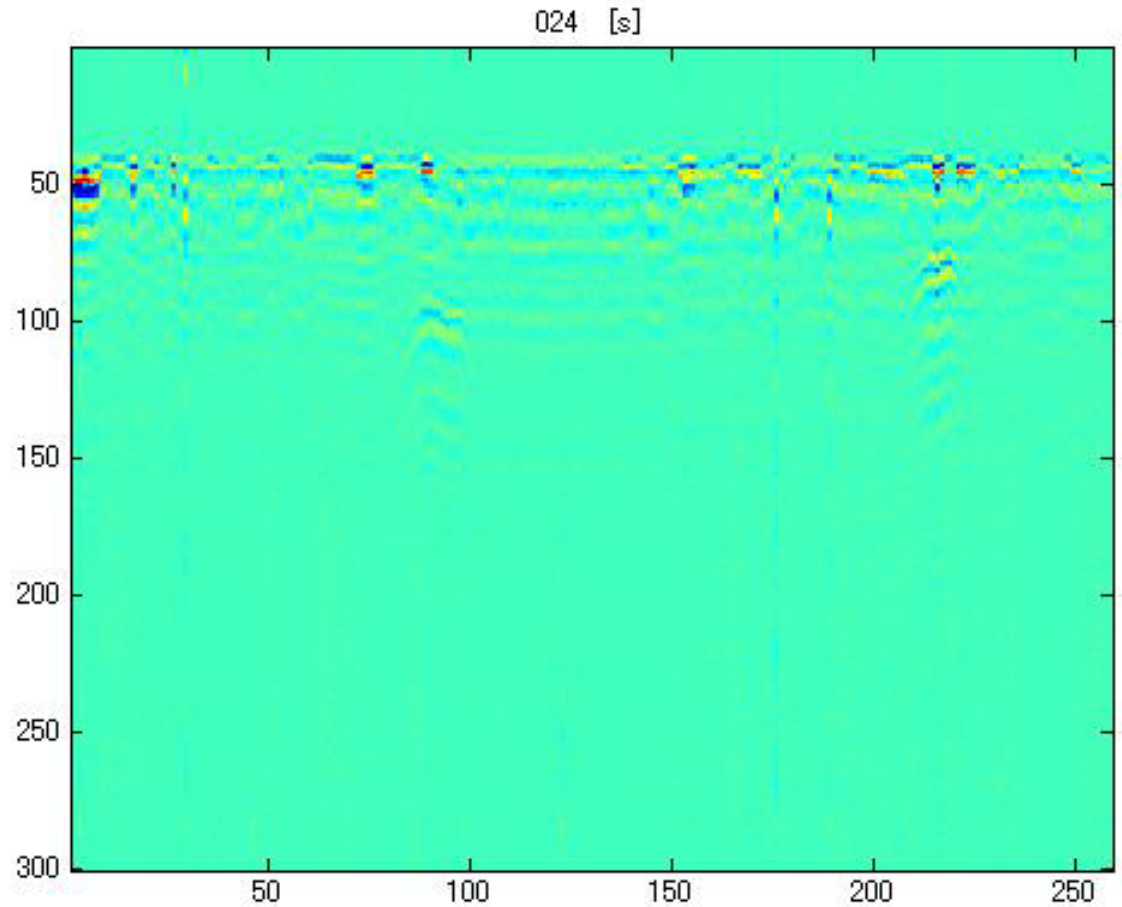
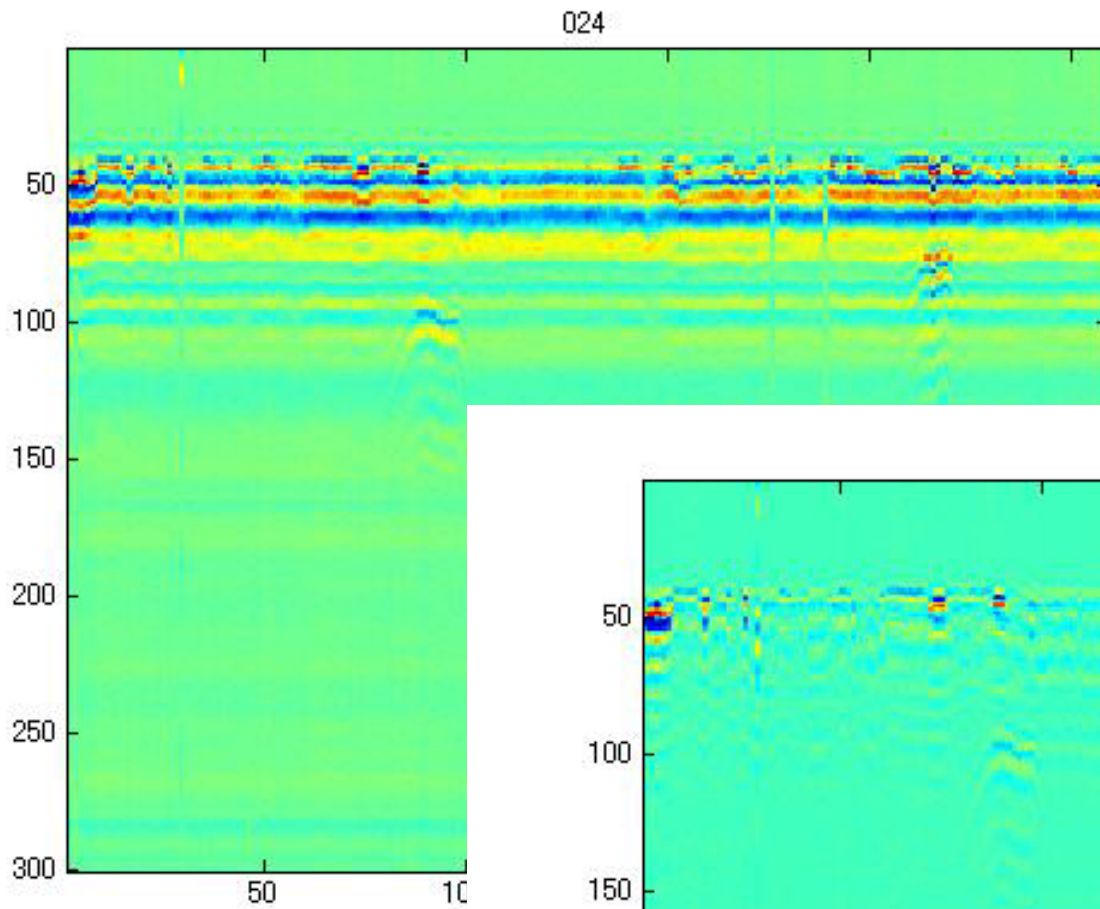
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# Lane 8



T84  
AT - 7 England  
M - 48  
Pomz - 2  
M - 48

# Lane 24 AT mine T80

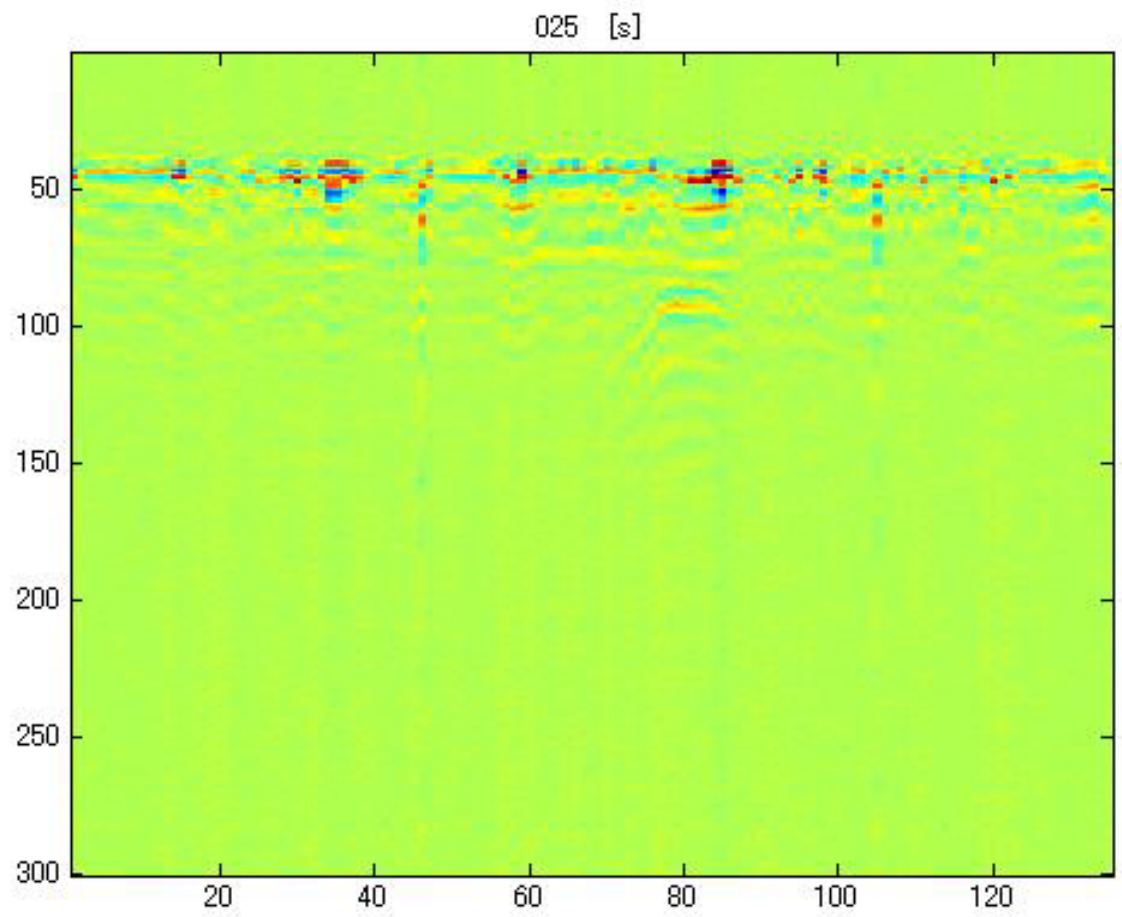
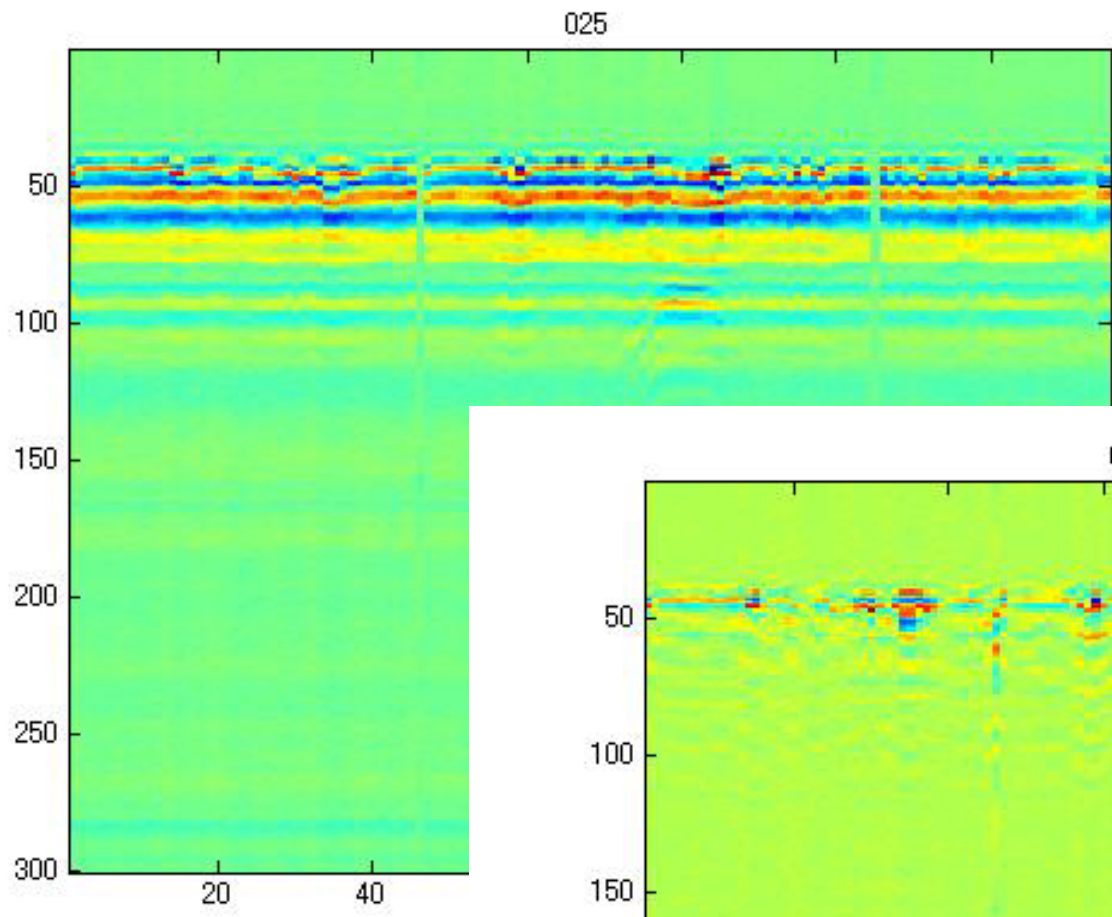


Depth= 20cm  
25cm



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# Lane 25

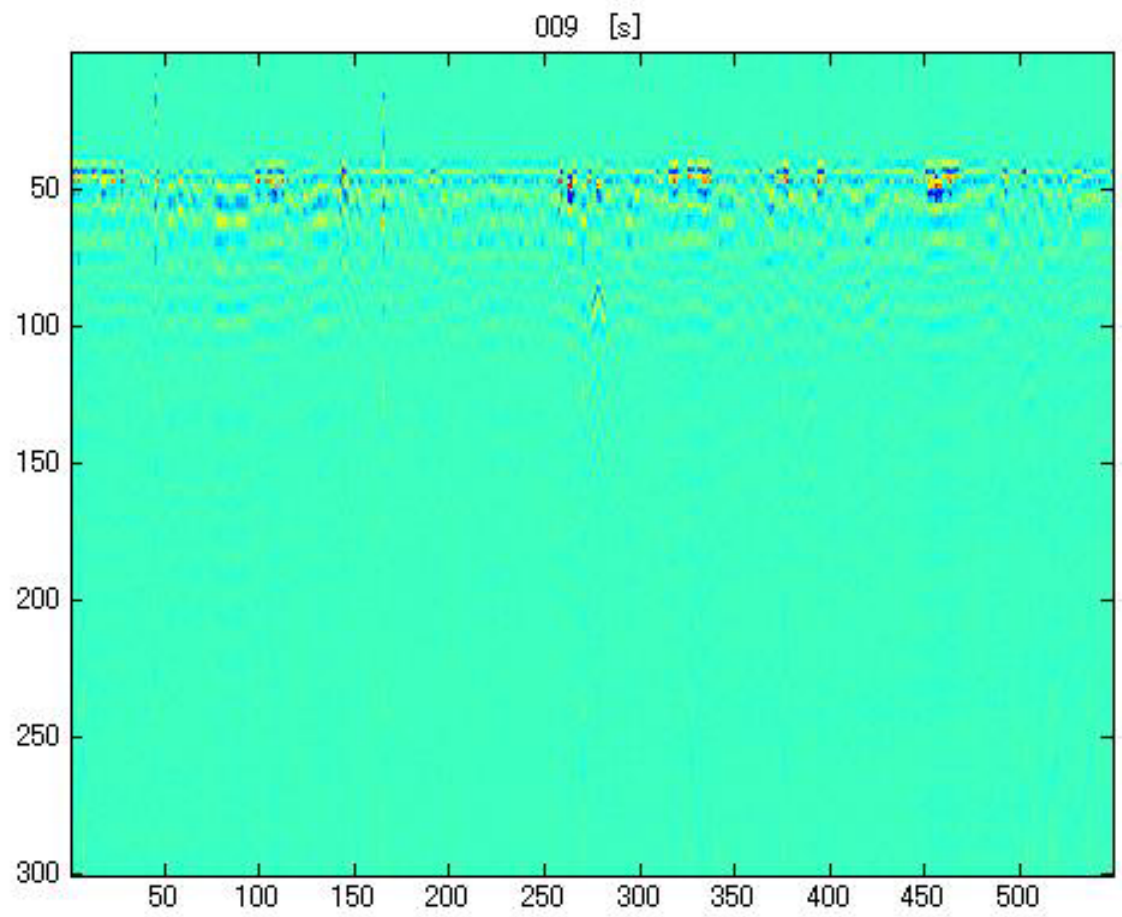
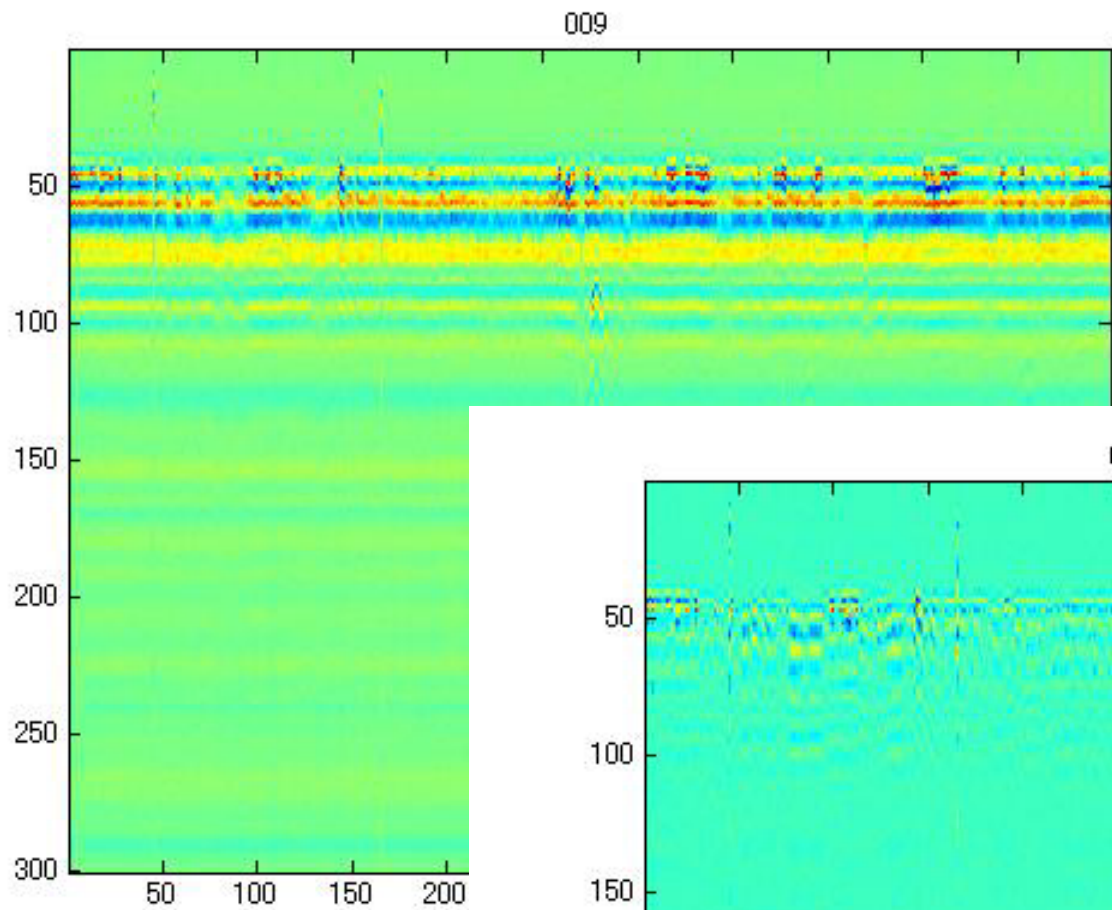


Depth=25cm



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# Lane 9

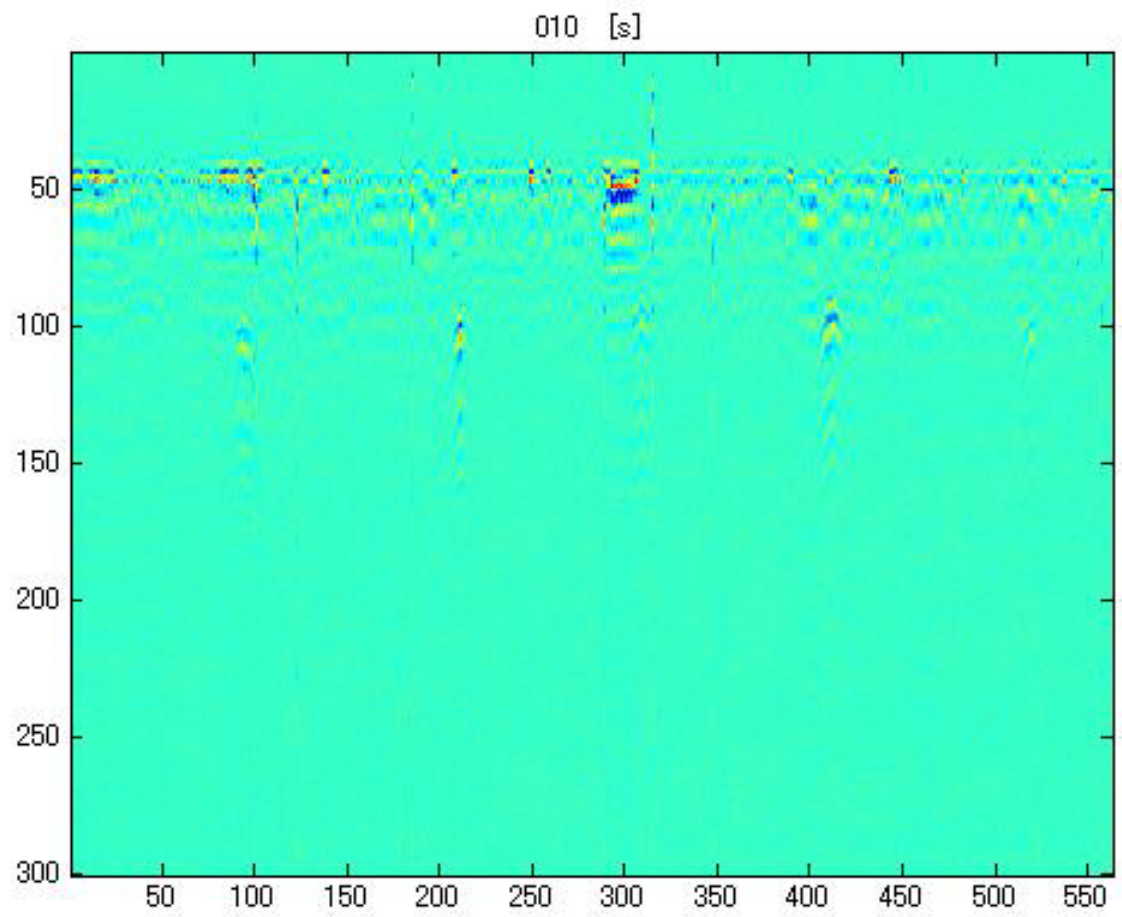
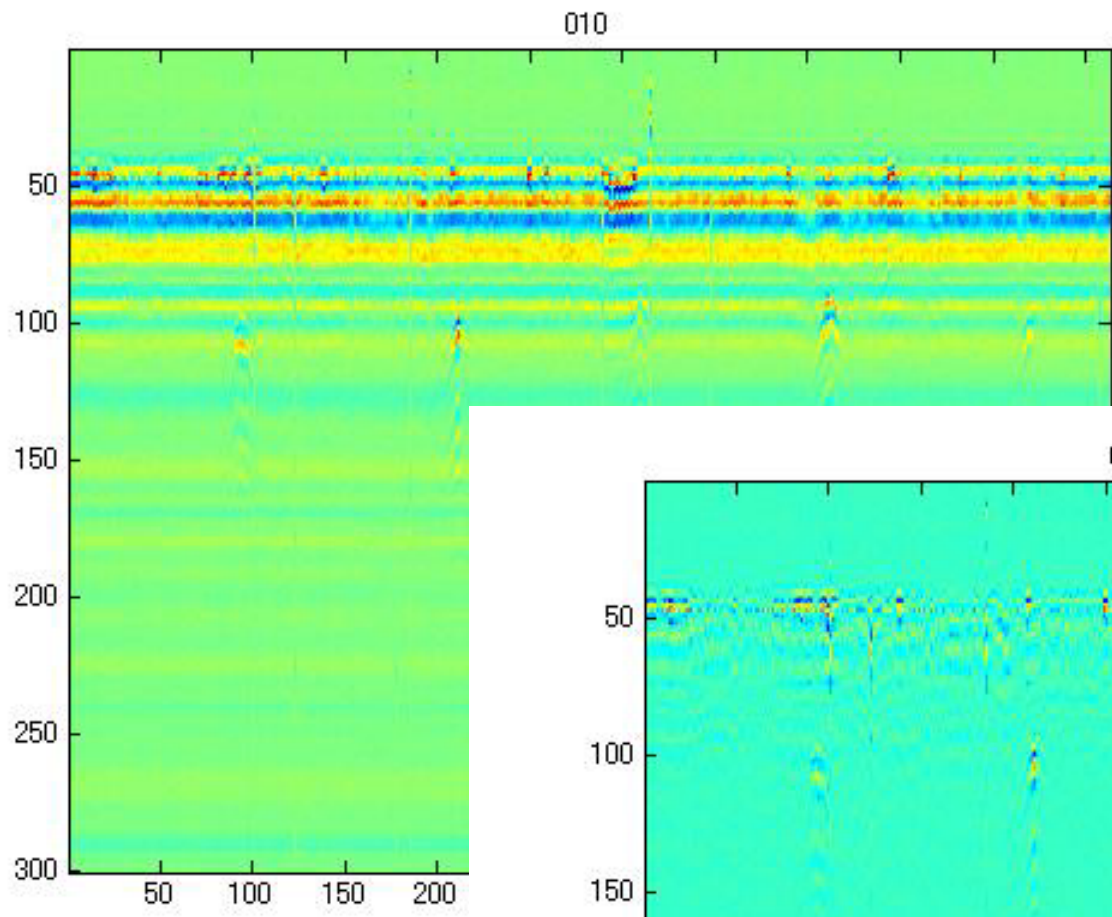


- 25
- 30
- 25
- 30
- 25



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# Lane 10

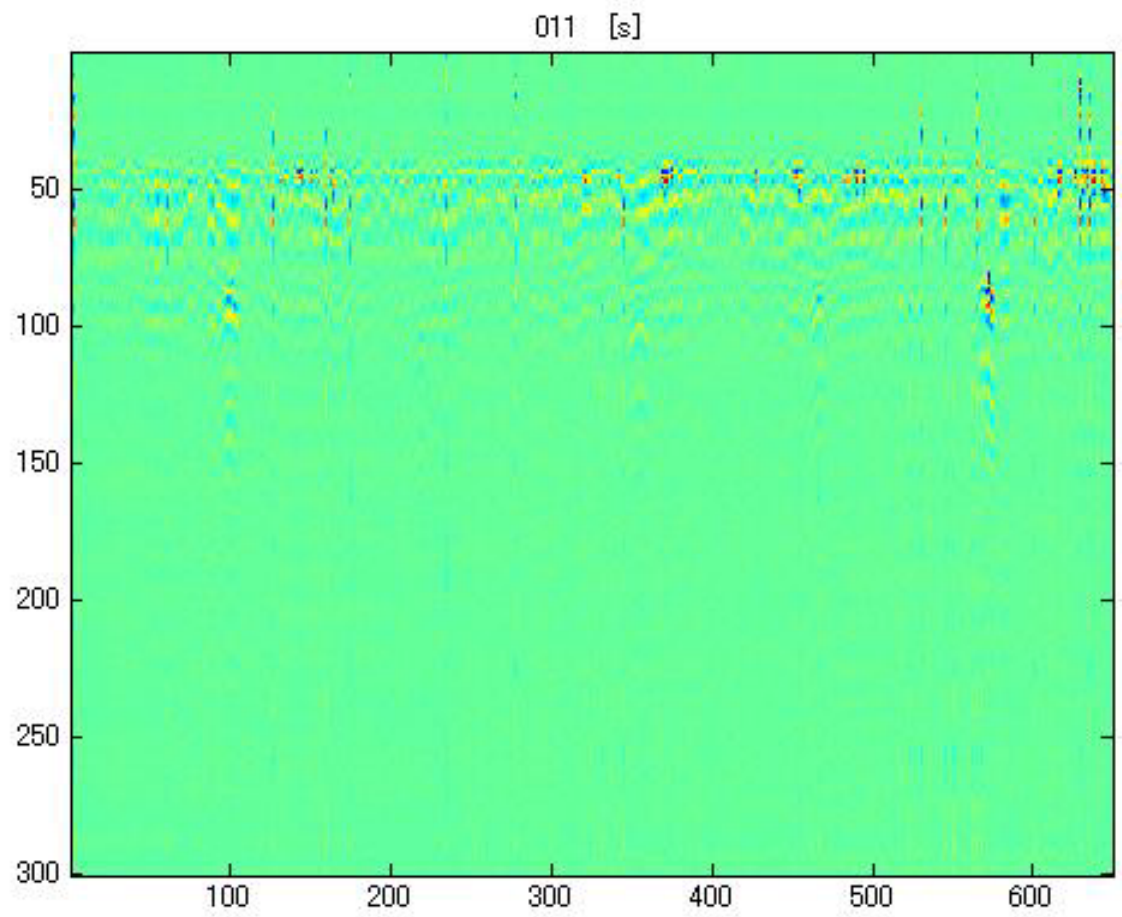
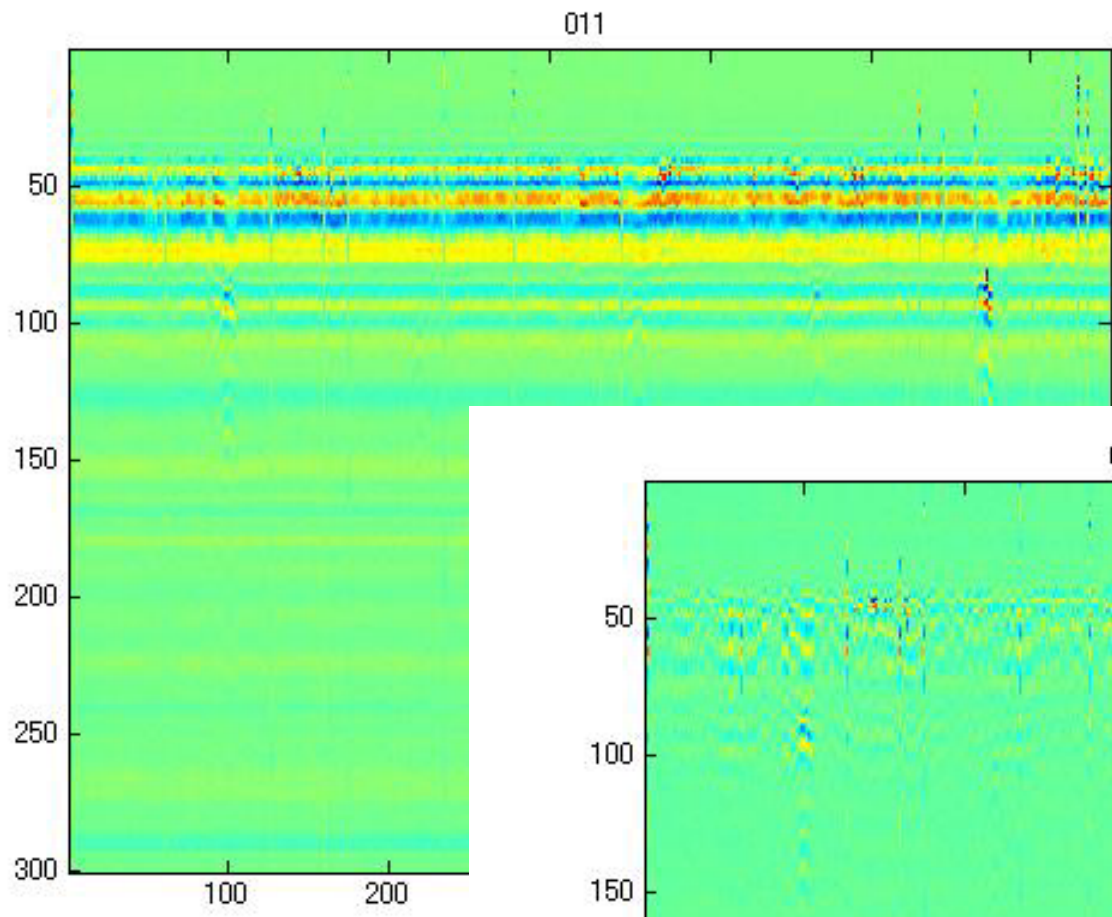


- 20
- 25
- 40
- 20
- 25



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# Lane 11



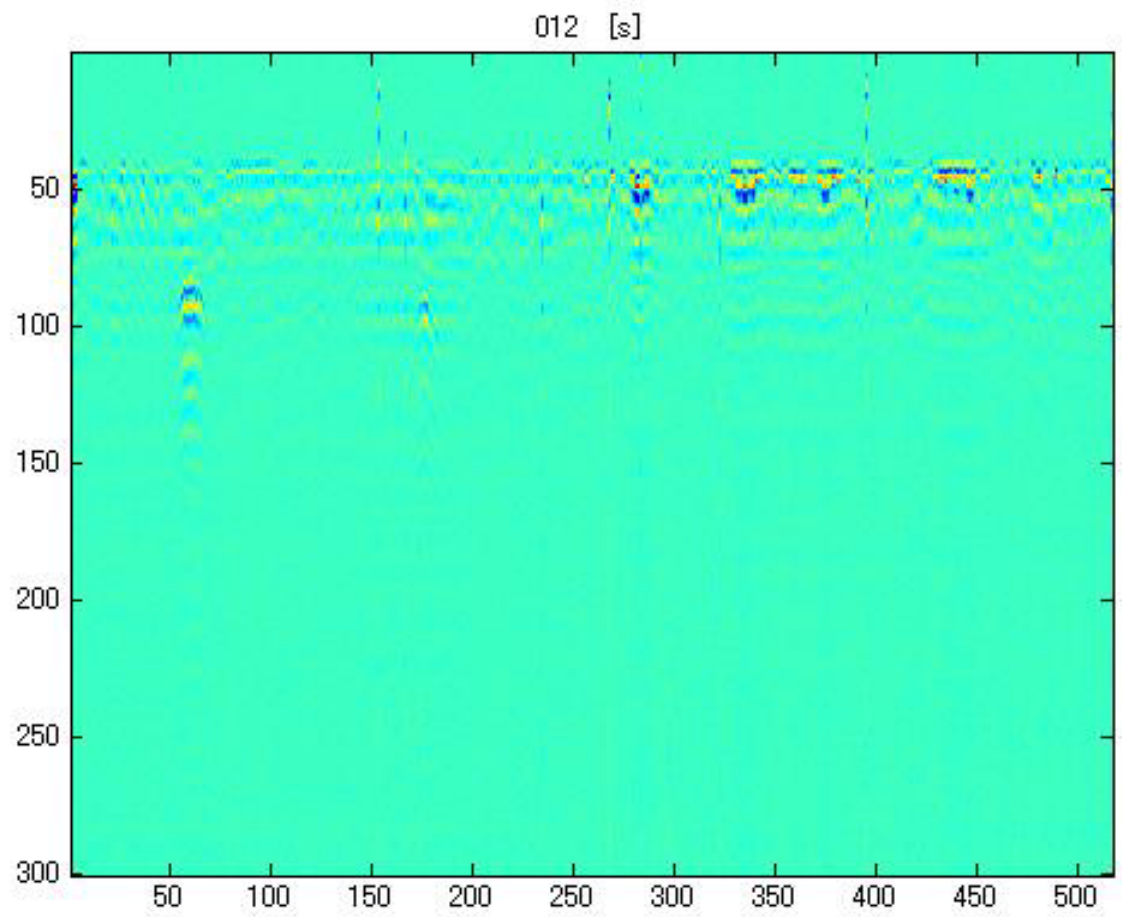
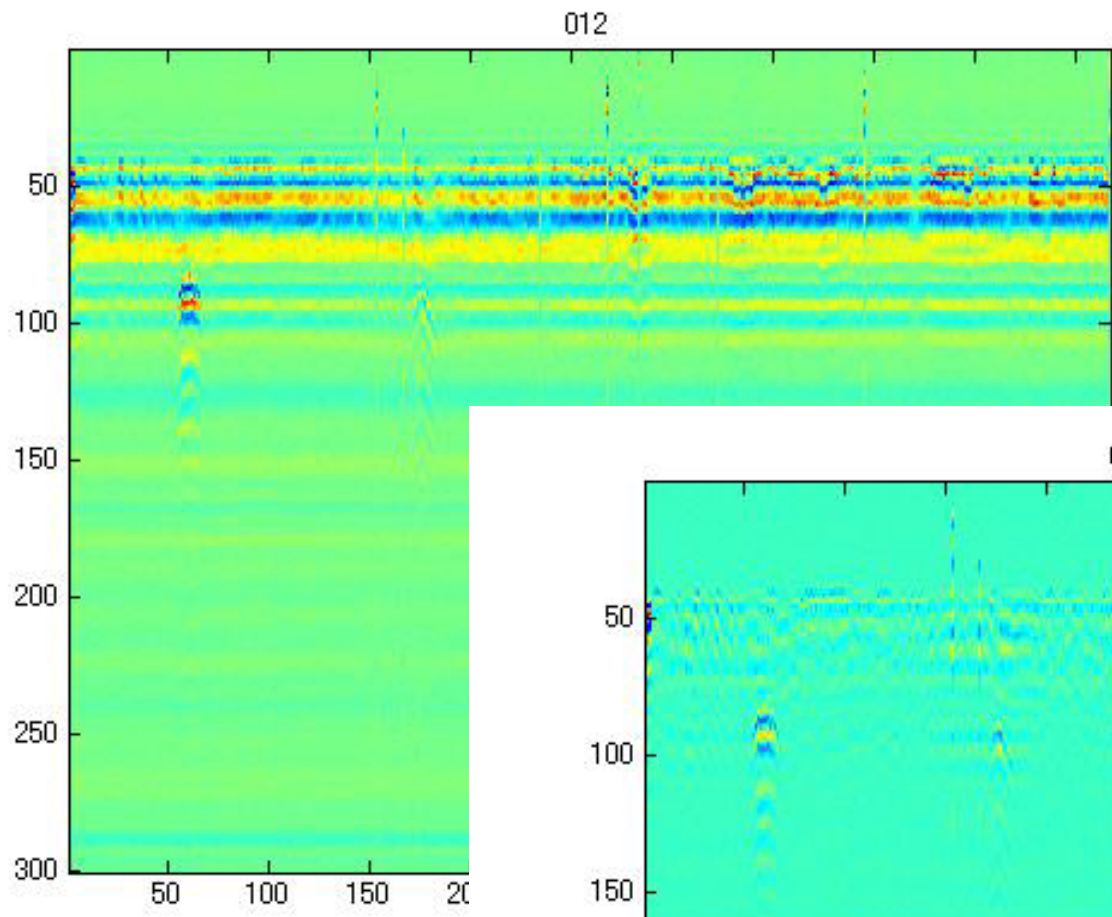
- 25
- 35
- 30
- 25
- 30





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# Lane 12

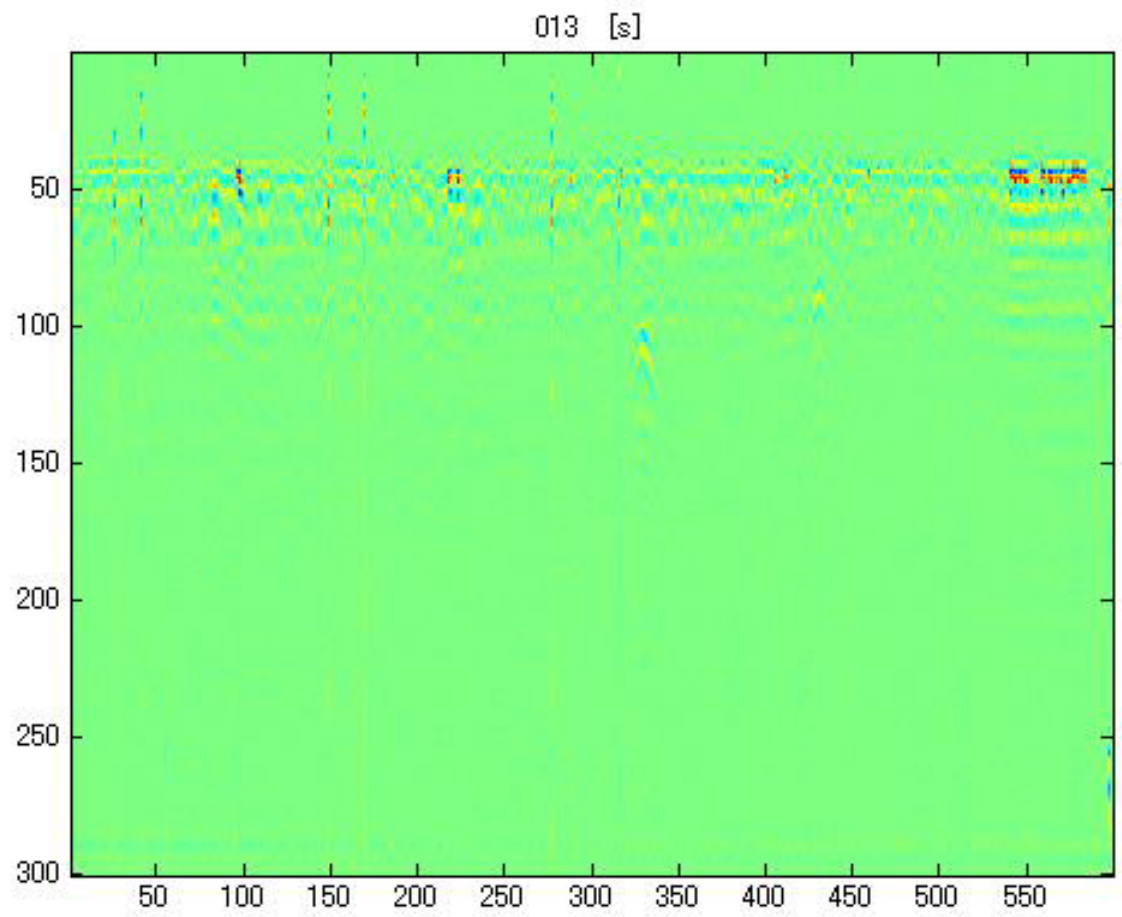
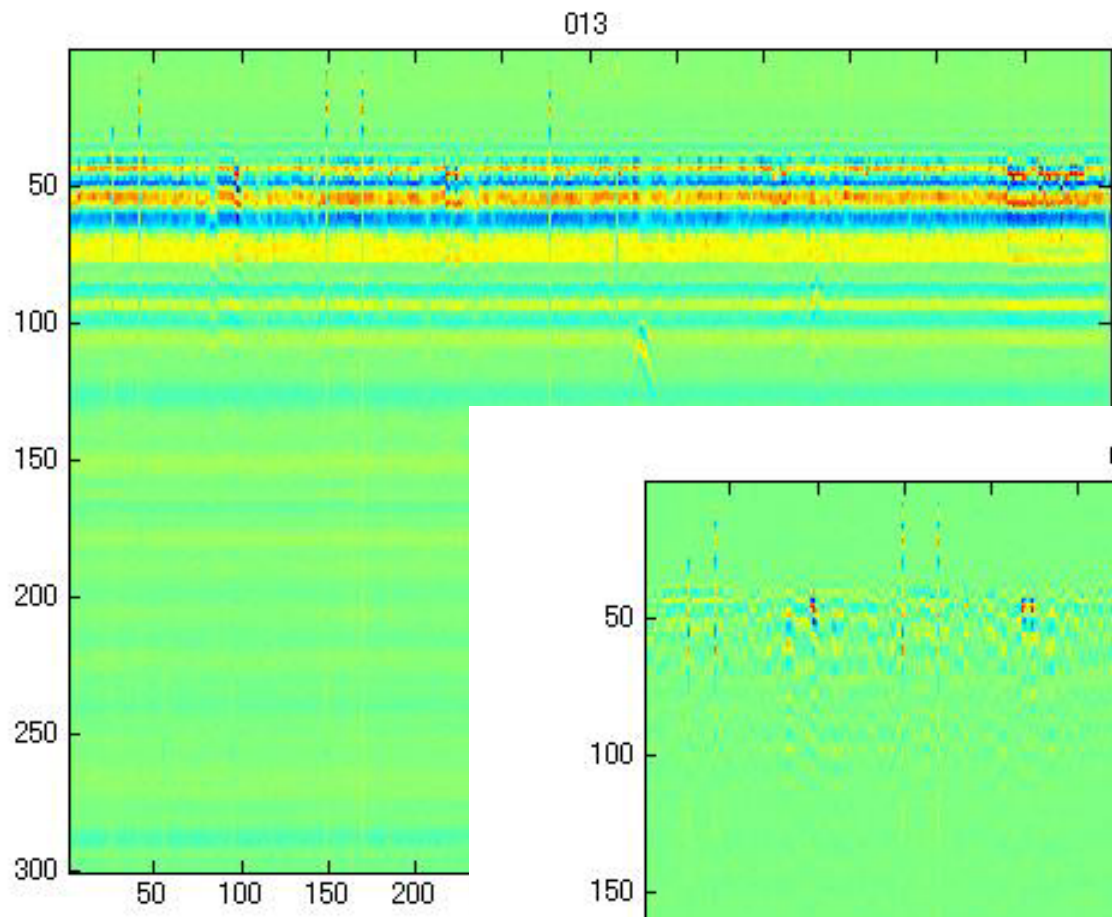


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- 25
- 35
- 40



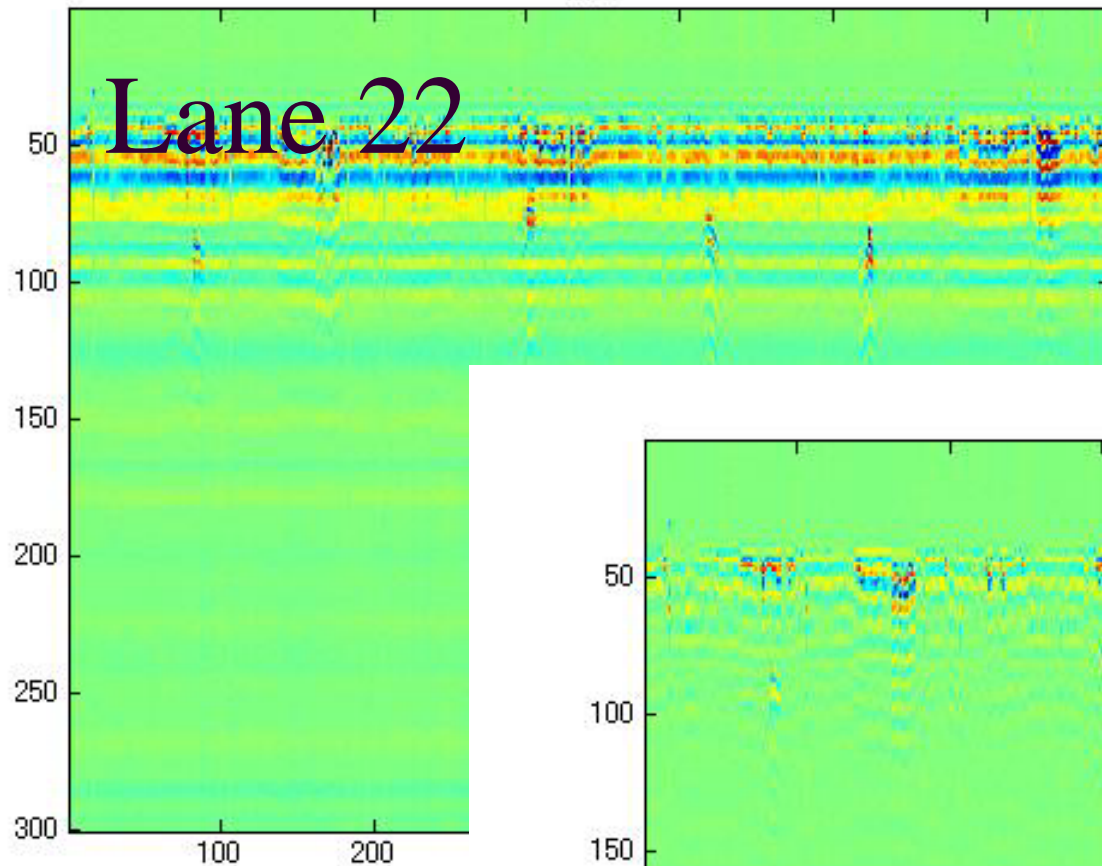
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# Lane 13



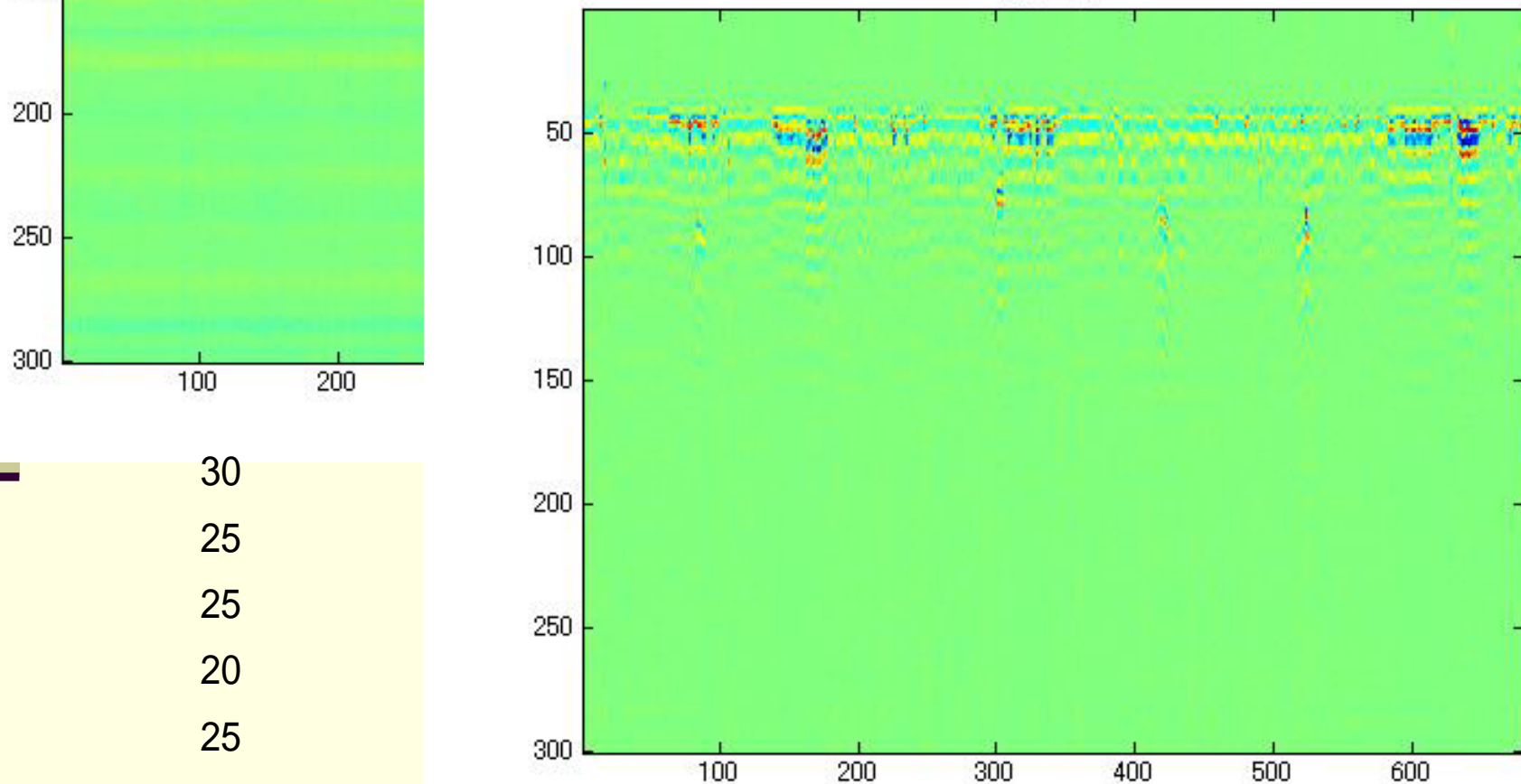
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- 30
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- 25
- 30

022



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022 [s]



30

25

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20

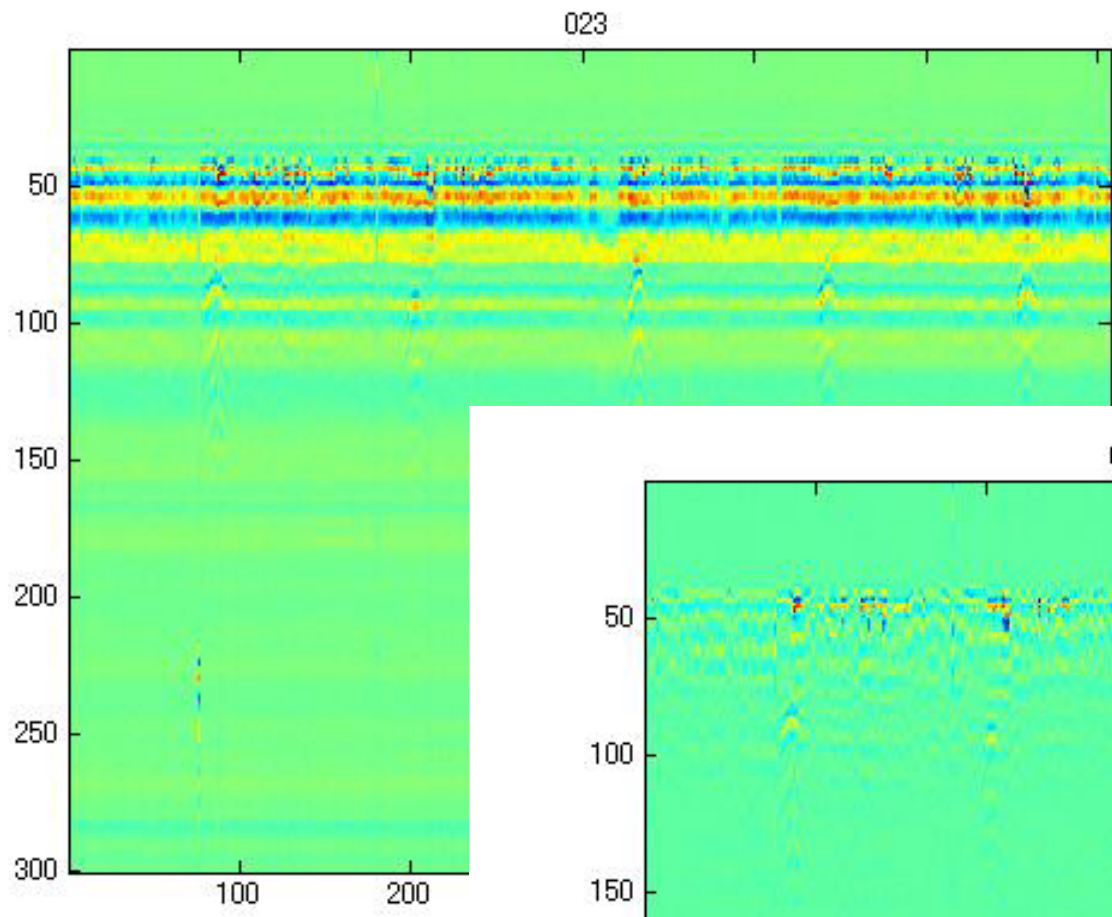
25

15

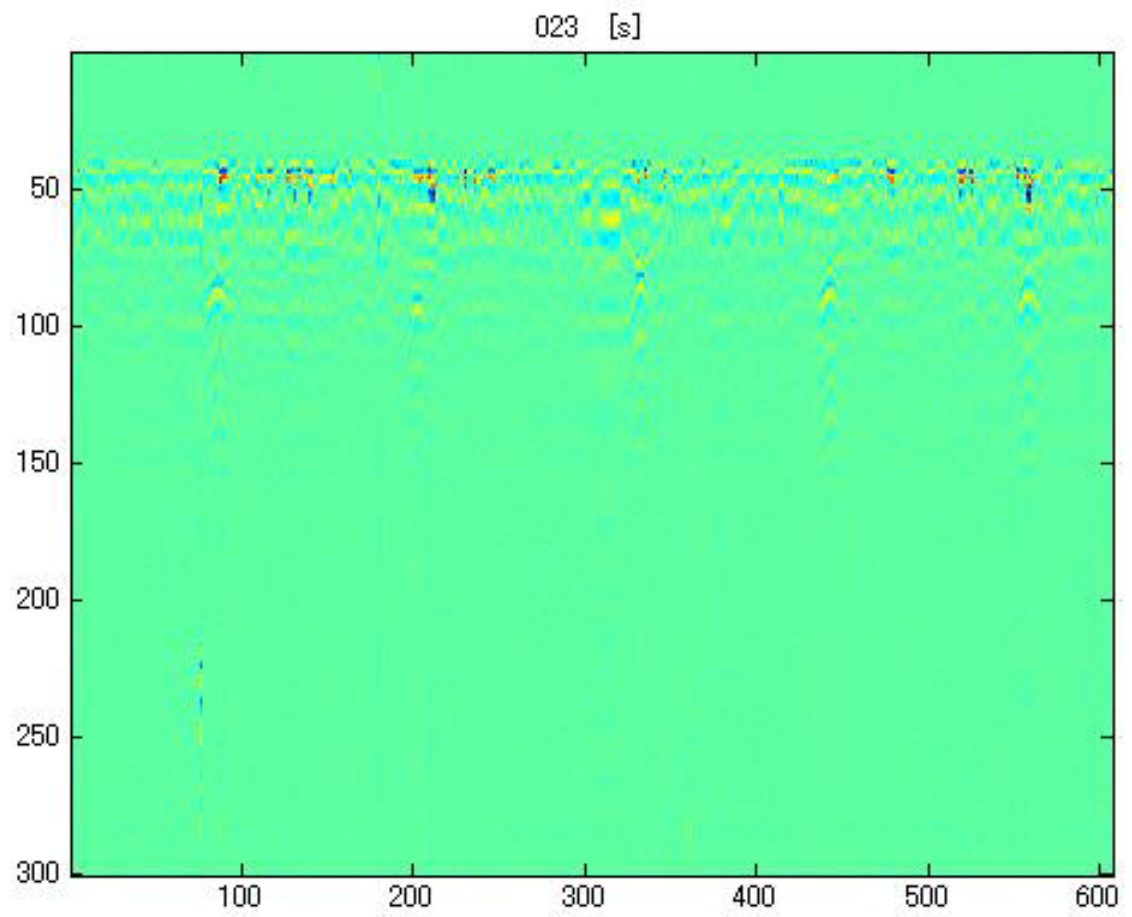


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# Lane 23



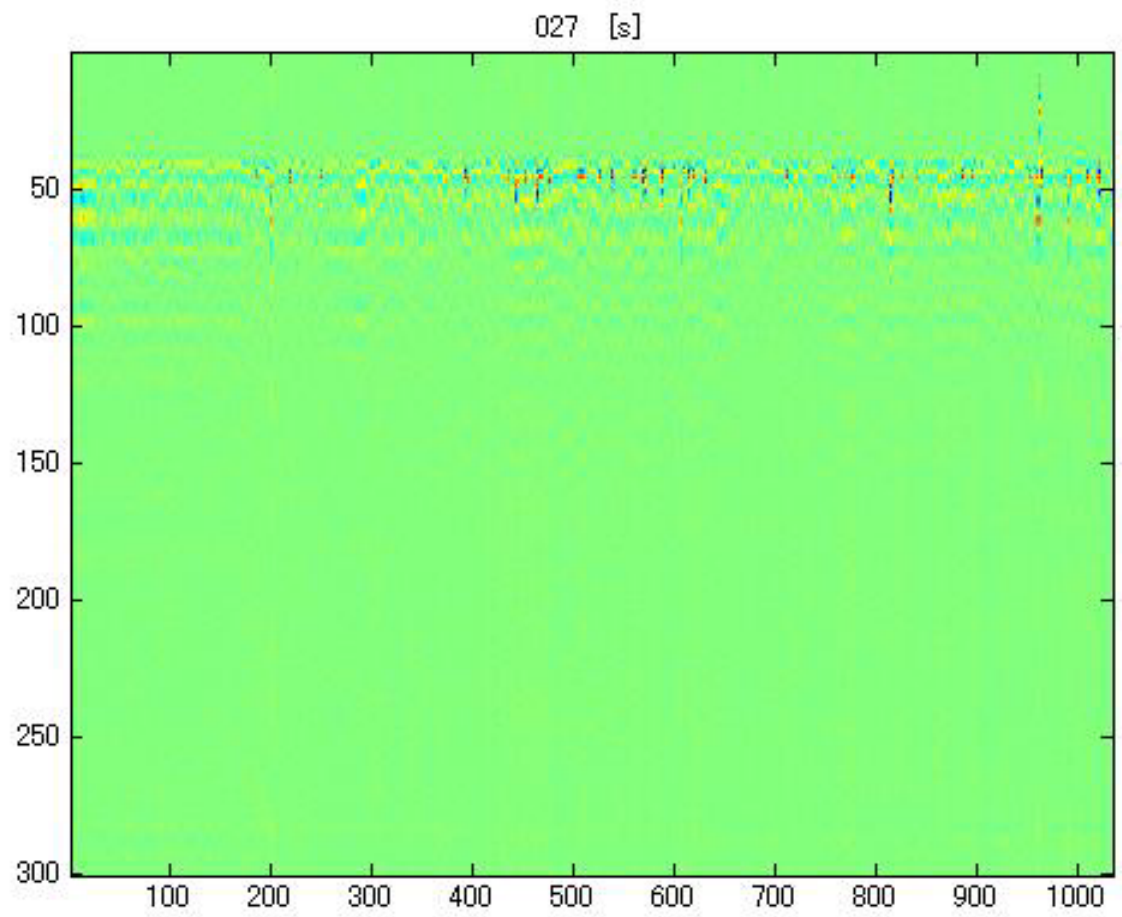
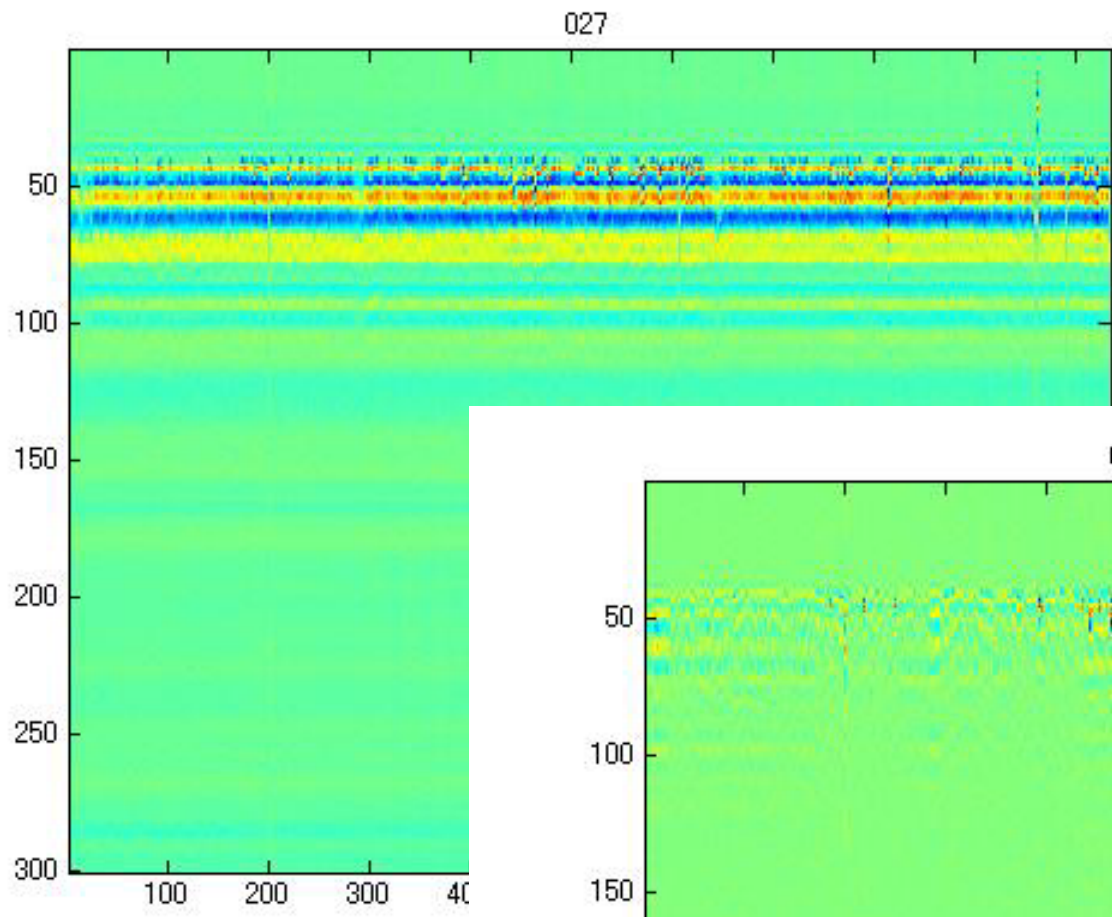
- 15
- 35
- 30
- 20
- 20





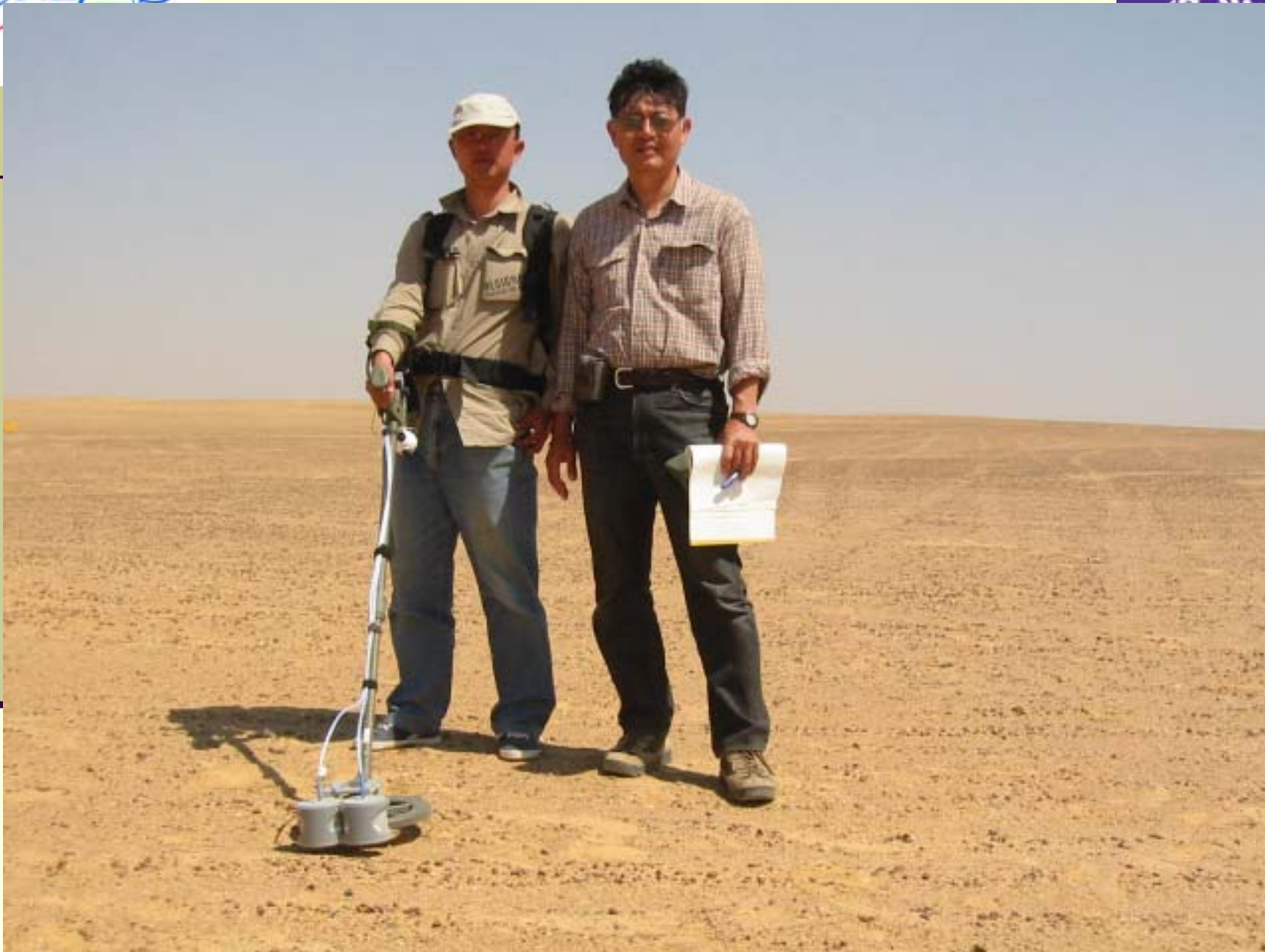
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# Lane 27 (Blind test)

























# Conclusion

- Sand in Egypt is suitable for GPR
- AP mines up to 20cm could be clearly detected
- AT mines up to 30cm could be detected by GPR, and 50cm by metal detector
- We think ALIS is detecting deeper objects
- Signal processing needs more time and final report will be provided soon