

# AnySeis™

**Eliminates  
spread cables:**

- *Any* geophone spacing
- *Any* number of channels
- *Any* array configuration



***Geostuff***

# Cable-Free Seismic System

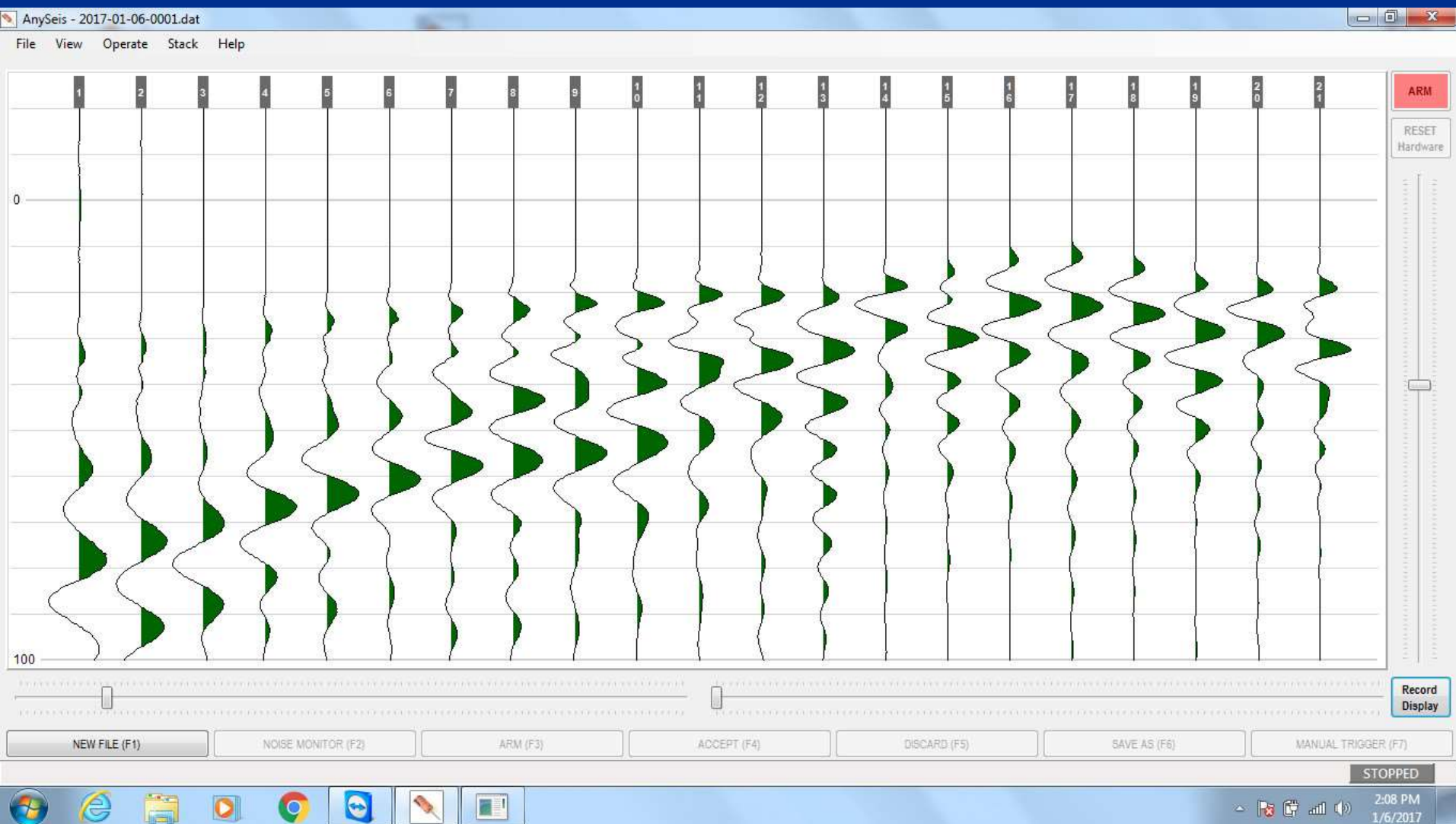
- Eliminates spread cables
- Geophone and A/D in individual modules
- Locate stations anywhere on 2-conductor wire
- Operates with standard computer
- Faster surveys with less effort



**Complete system is compact and lightweight**



Data is displayed on laptop computer. AGC, digital filters, variable area bring out subtle features in data



# Why do we hate spread cables?

- Fixed geophone interval
  - Require multiple sizes
  - Limited field flexibility
- Expensive to buy
- Heavy
  - Layout effort
  - Shipping costs
- Fragile
  - Many tiny conductors
  - Repairs are difficult

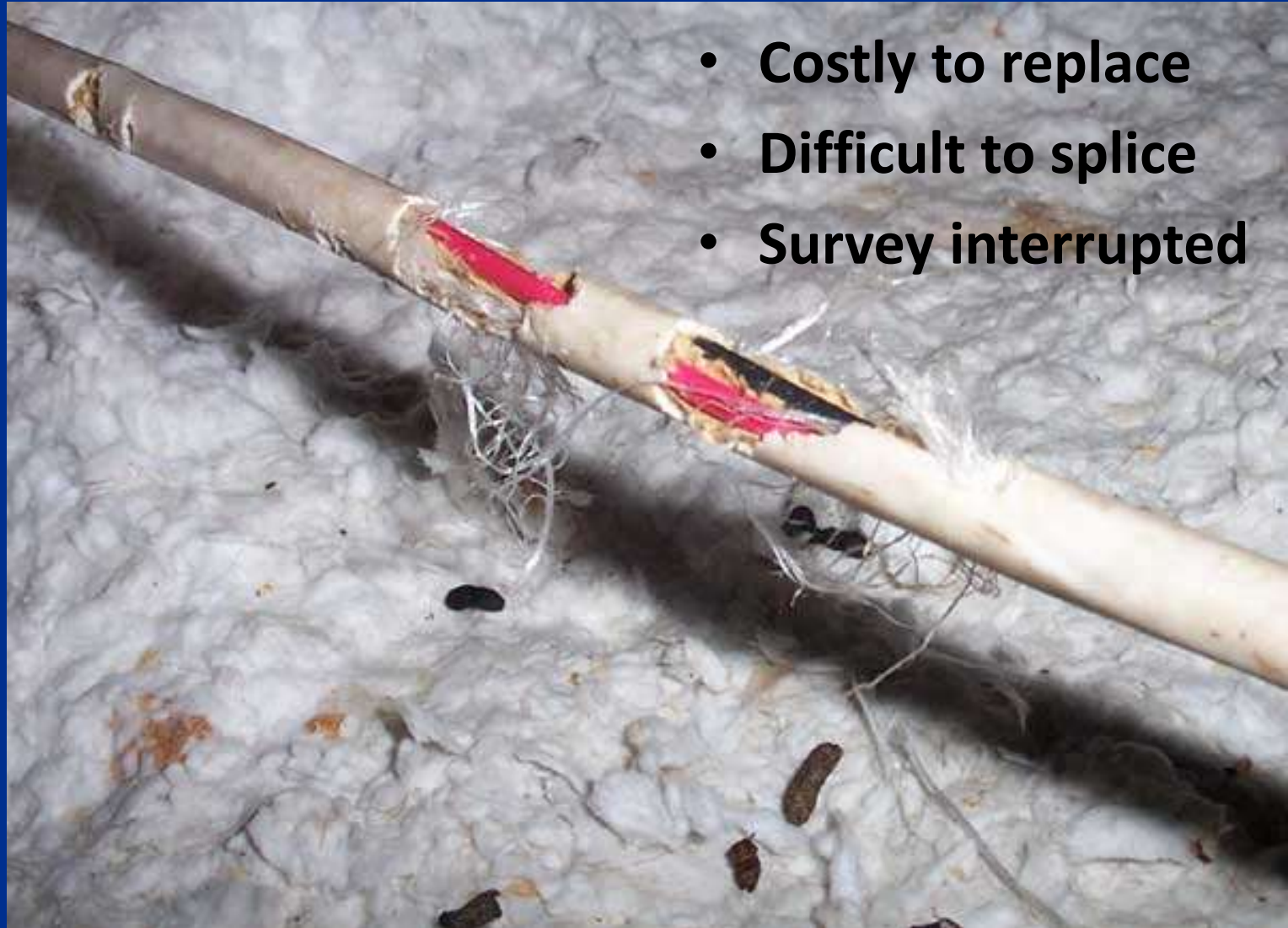


# Why do we hate spread cables, continued

- Rollalong requires additional hardware:
  - Rollalong Switch
  - Multiple geophone cables
  - Extension cables
- System Expansion is costly
  - To add channels to system, new cables are required



# Rats eat your spread cables



- Costly to replace
- Difficult to splice
- Survey interrupted

# AnySeis™ eliminates the geophone cable with a simple, 2-conductor wire

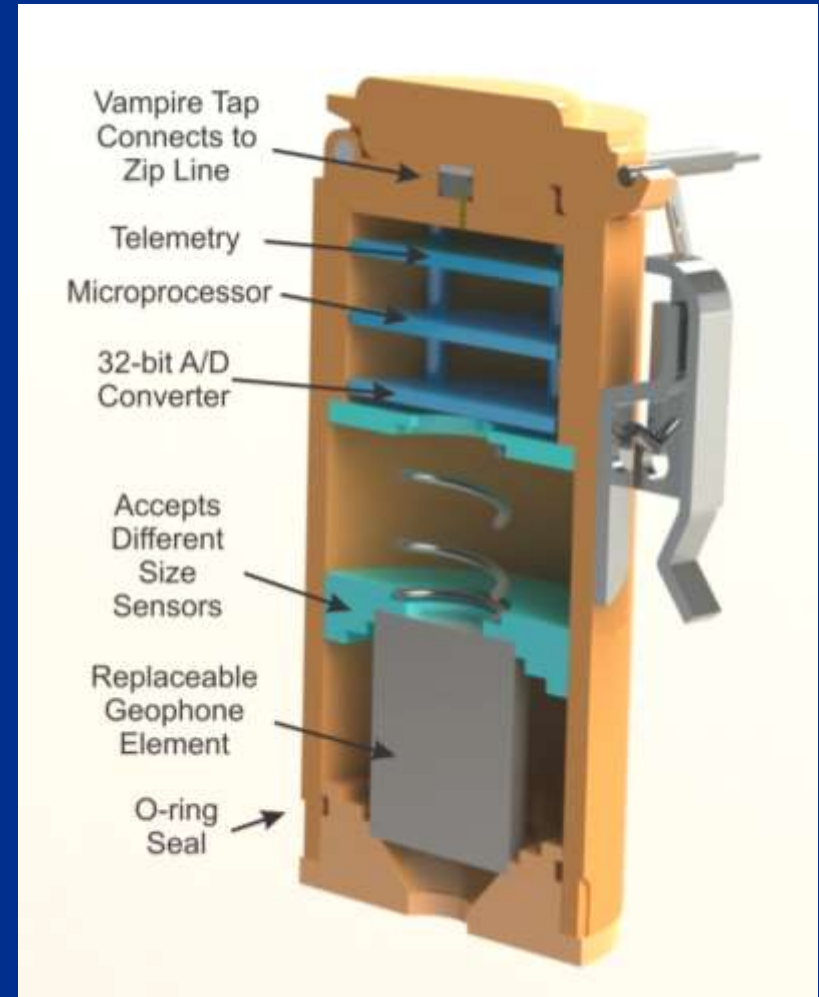
- Connection is made anywhere on the wire with a “vampire” tap
- Power is sent down the wire
- Seismic data comes back up the same cord
- Flashing LED seismic noise monitor confirms connection and functioning data acquisition





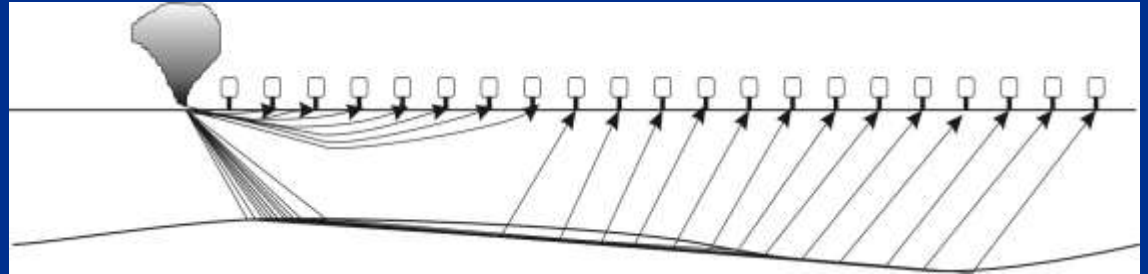
# Integrated Design

- Each unit is an independent acquisition channel with geophone and A/D converter
- Choice of geophones
  - Choice of natural frequency
  - Field swap for application
- Eliminates electrical noise
  - No analog cables
- Power and data goes through ordinary 2-conductor wire
- All units powered from a single battery at the controller

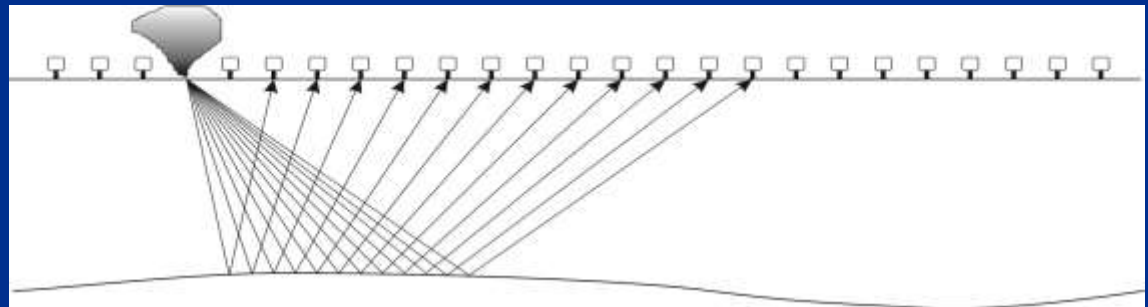


# Any kind of seismic survey

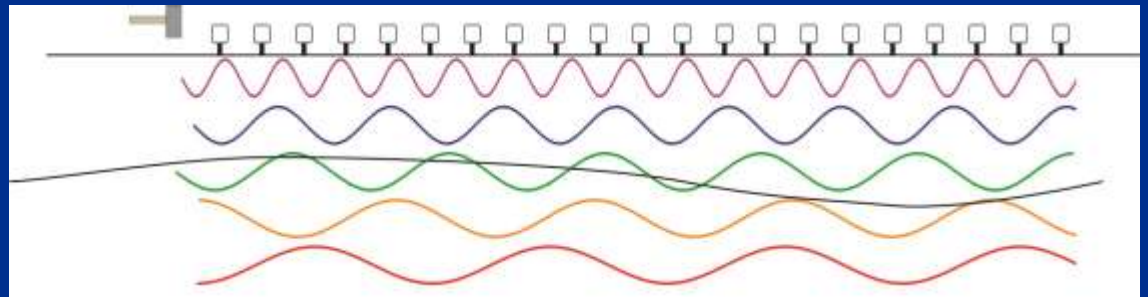
- Refraction
  - Double ended
  - GRM
  - Tomography



- Reflection
  - P wave
  - Shear wave
  - Rollalong

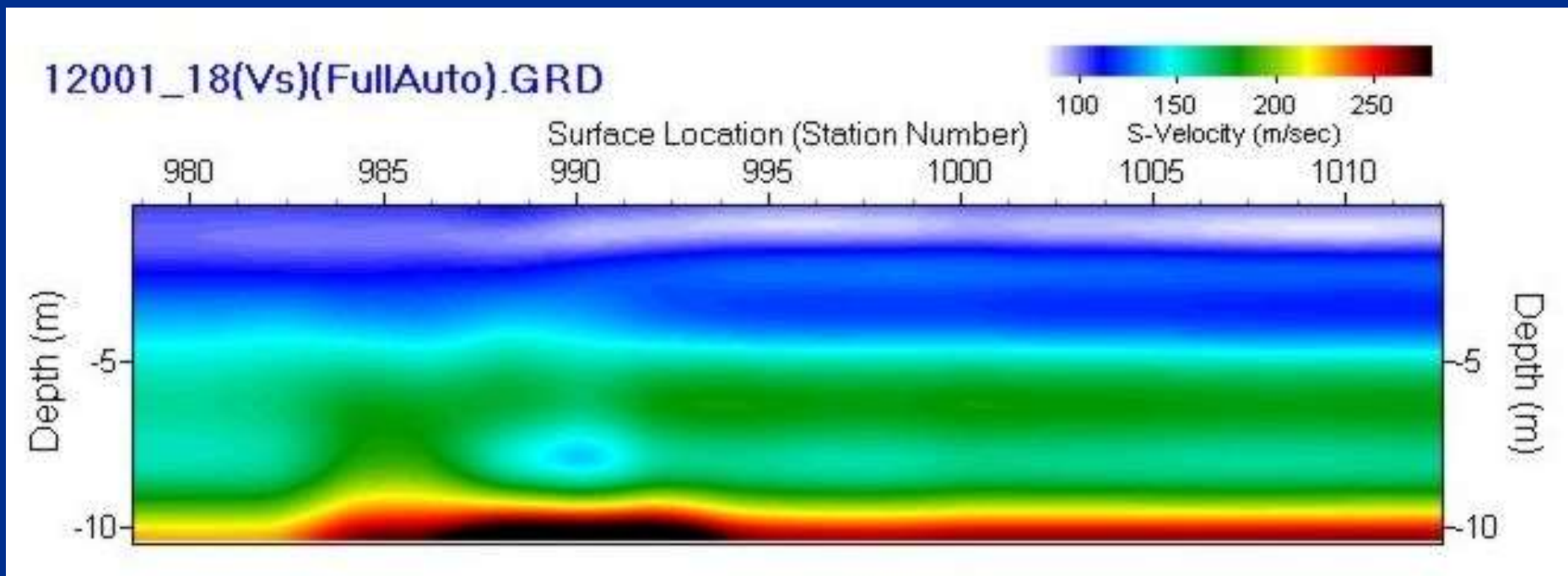


- MASW
  - Active Source
  - Microtremor



# MASW

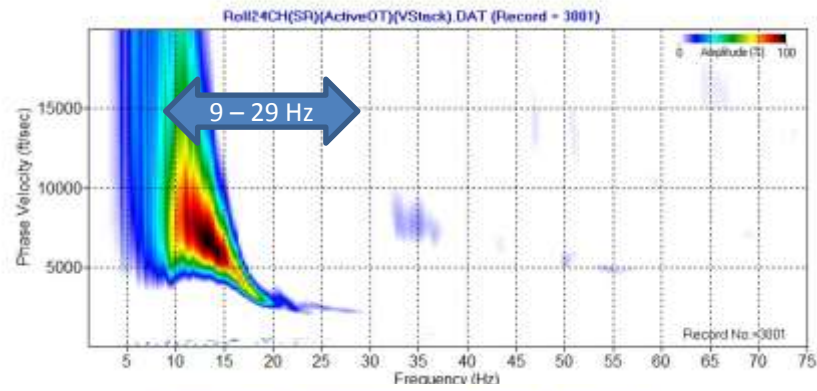
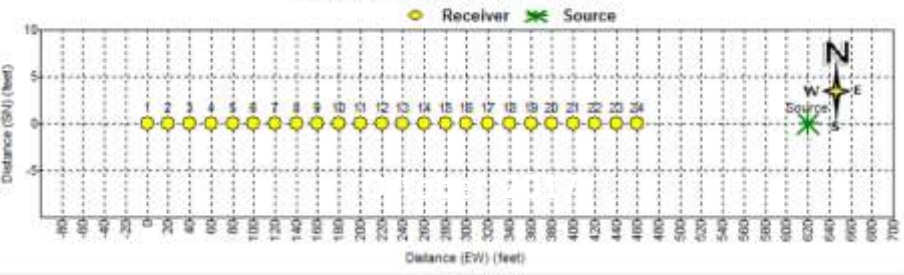
- Install low-frequency geophones for MASW
- Use linear spread for active source
- Easily deploy in nested arrays for micro-tremor



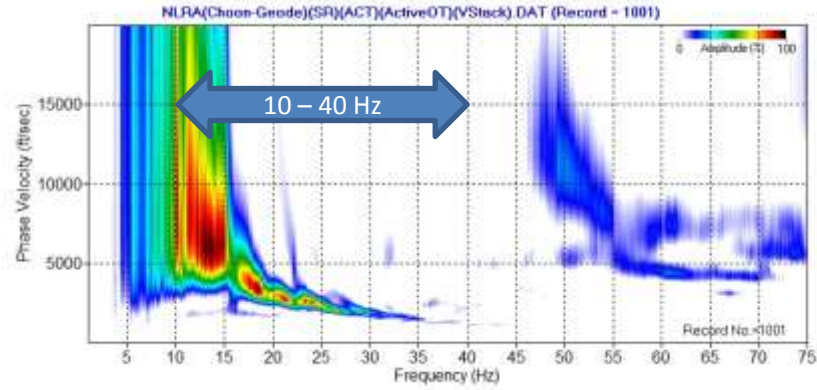
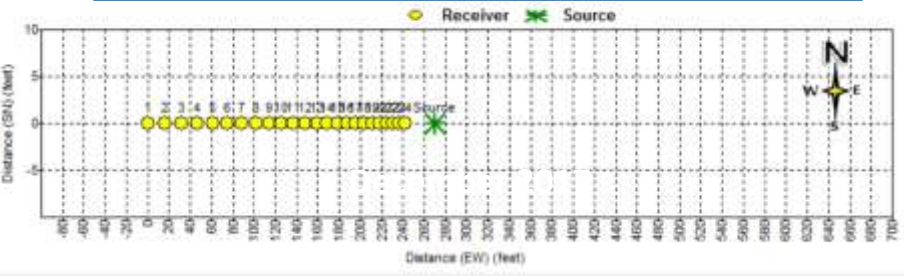
# Non-linear Arrays for MASW Widen Bandwidth

← Frequency Range of Fundamental Mode →

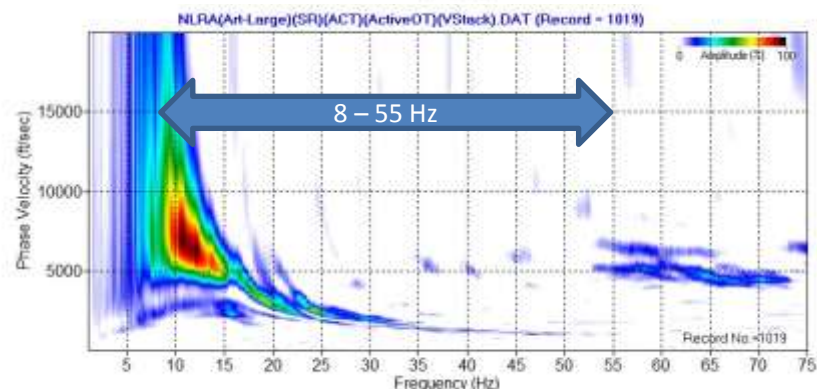
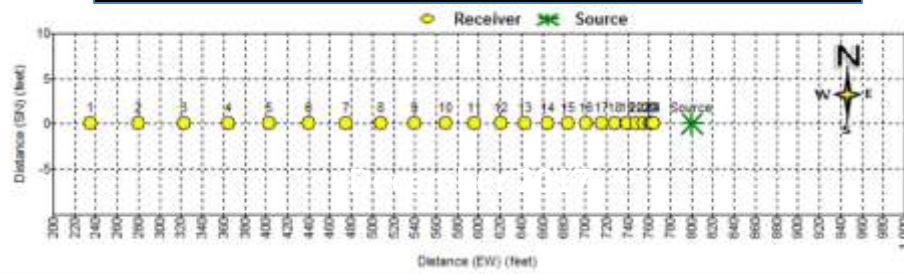
**Even 20-ft spacing (Total Length ≈ 460 ft)**



**Choon's Uneven spacing (Total Length ≈ 240 ft)**

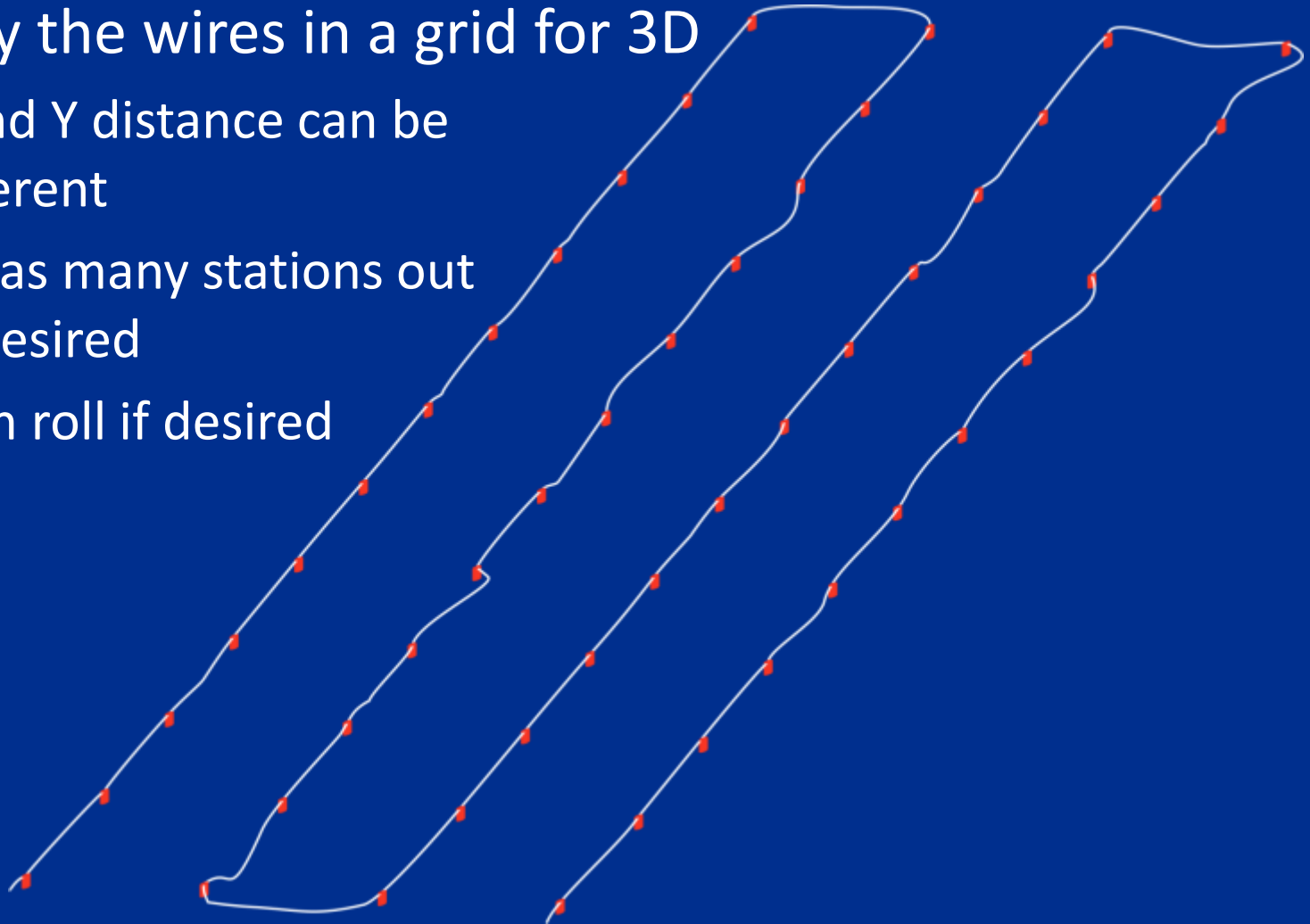


**Art's Uneven spacing (Total Length ≈ 530 ft)**



# 3D surveys

- Deploy the wires in a grid for 3D
  - X and Y distance can be different
  - Put as many stations out as desired
  - Even roll if desired



## Works great with Land Streamer

- Remove the spike and screw the units onto the standard top plate
- Simple 2-conductor wire instead of spread cable and connectors
- Easily adjust the interval to fit the desired survey depth and resolution
  - Difficult to do with standard spread cables



# Shear Waves

- AnySeis™ works with vertical or horizontal geophones
- The standard 15-Hz sensor works in vertical or horizontal orientation
- Or, install a horizontal sensor for lower frequencies



Optional right-angle bracket for shear waves (elevated to show dual spikes)  
Center hole attaches to land streamer

# Rollalong for reflection surveys

- No Roll Switch, no CDP cables, no extension cables required
  - Just shoot and move the near geophone to the far end of the line
  - Or for more efficiency, add a few extra geophones.
- For Example, break up your spread in groups:
  - Say five groups of 12 channels
    - Lay out 60 channels on the ground
    - Activate the first 48 channels in the laptop software
  - Fire the first shot
    - Roll the line one shot interval with the laptop software
    - Continue to move and shoot until the first 12 channels are off line
  - Pick up the first group of 12 on a hasp, move them to the far end of the line, deploy and attach with wire splices
    - Resume shooting until it's time to move the second 12
    - Continue until it's time to move the controller and laptop
    - Continue until done





# Splice the wire with twist-on connectors



# Expandable and flexible

- Add more stations when ready
  - Without spread cables, add as few or as many as desired
  - Multiples of 12, 24, or 48 not required
- Attach the geophones anywhere on the line
- Use non-linear arrays if needed
- Can split into two systems with a second controller

# Deal with obstructions

- Cross a gravel road or highway?
  - Splice in a section of rugged power cable
  - Or use the regular cord; you don't care if it gets run over
- Want to cross a creek?
  - Put a little grease on the tap to seal the wire
  - Stick the geophones in shallow water as desired
  - Even drag your land streamer through water
- Need to go around a structure?
  - Just add extra wire and loop around the obstacle



# Replaceable geophones

- Install sensors with different natural frequency and orientation
- Can be exchanged in the field
- Just open the bottom of the case and connect the new unit
- Geophone mount accepts different physical size elements



# External Geophone Option

- Also available with Kooter connector for use with external geophone
- Quick exchange in the field
- Use your existing geophones
- Adapters for geophones with wire-wrap or split ring takeout



# Computer Interface

- USB interface to computer
- Split spread
- Connects to standard hammer switch or source
- 12-volt battery powers line



# System is air mobile

- Compact and lightweight
  - 350 grams/module
- 48-channels can fit in a suitcase or backpack
  - Weight <40 lbs ( 17 kg)
  - Check as baggage\*
- Fly to your job with your gear
  - Buy a hammer when you arrive



\*Depending on suitcase weight

# Fail-safe operation

- No worries about equipment failure!
  - With AnySeis™, every station is independent
  - If one breaks, work with one less channel
  - Or replace it with your spare
  - A second controller can be purchased cheaply to provide 100% redundancy or a second system



# Comments

*“We used Geostuff’s AnySeis system on a 4-week job in Alaska’s Northwest Arctic throughout the month of July, 2016. The lightweight cable-free system allowed us to perform this job over rugged terrain in about half the allotted time, with two staff members instead of three.*

*Additionally, the simple ability to connect and disconnect the wire from the geophones allowed us to change the trace spacing on the fly, giving our client the flexibility of viewing different depths of stratigraphy.”*

Garnet Knopp  
Geophysicist/Geologist  
GeoTek Alaska, Inc.

# Specifications

- Sample Interval:
  - $\frac{1}{4}$ ,  $\frac{1}{2}$ , 1, 2, or 4 ms
- Power:
  - Single 12-volt battery at controller
  - Power consumption: 1/3 watt/channel
- 32-bit A/D converter
- Weight:
  - 350 grams/channel (with standard geophone)
- Choice of Geophone
  - 15 Hz omnidirectional (standard)
  - 2, 4.5, 10, 14, 28 or 40 Hz (vertical or horizontal)
  - Field replaceable
- Record length:
  - Selectable, or continuous depending on sample rate and number of channels
- File format: SEG-Y
  - Compatible with all processing software

# AnySeis™

Changing the world of  
near-surface seismic  
one more time!

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