

# A PASSCAL Instrument Center Perspective on Time Management for Seismological Fieldwork

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# Motivation

To highlight common pitfalls, for both experienced and novice users, that can waste precious time during seismological fieldwork.

# It All Takes Time

- Pre-Experiment Planning
- Shipping
- In Country Setup & Mobilization
- Installation
- Service/De-mobilization
- Data Offload & QC
- Packing & Return Shipment

# Pre-experiment Planning: A Visit to the PIC

- Learn about the equipment you will be assigned
  - Operation
  - Size, weight & volume
  - Field needs and expectations



# Shipping

- Get expert advice on shipping nuances
  - Each country is different
  - Customs is the biggest hang-up
  - Know your fees
    - The right paperwork can save you time and money
  - Work with in-country colleagues
- Pre-Planning saves time



# Shipping: People

- Every country is different
- Are passports current and valid for proper duration
- Business vs Tourist visas
  - Are letters of invitation required?
  - Potential to restrict travel if incorrect
  - Expedited visa service is expensive



# In Country Setup & Mobilization

- Know how much space & time you need for a huddle



Controlled source experiments can require large, open spaces



# In Country Setup & Mobilization

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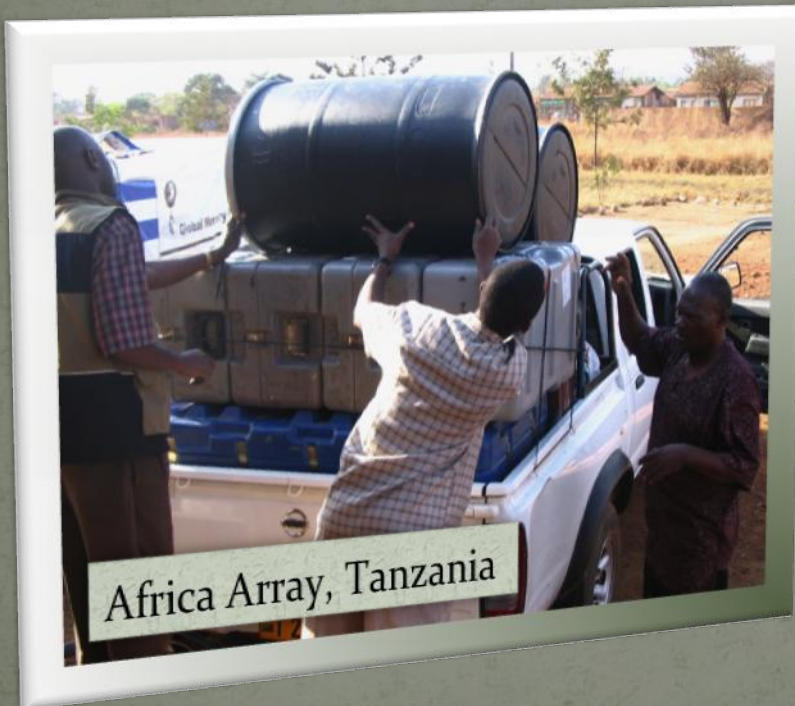
Broadband experiments require protected and undisturbed spaces





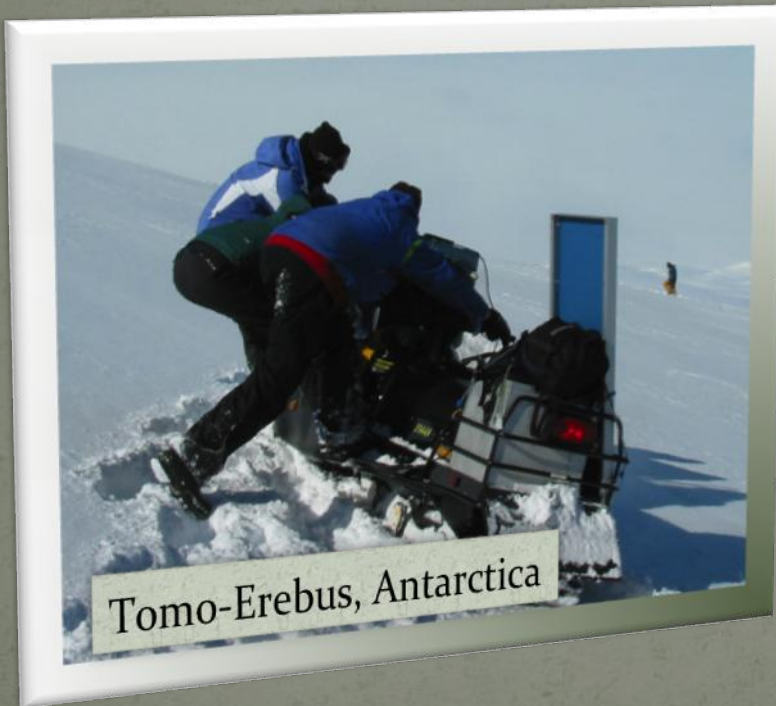
# In Country Setup & Mobilization

- Know how your equipment is going to move.



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- Know how your equipment is going to move.



# Expect the Unexpected



Venezuela

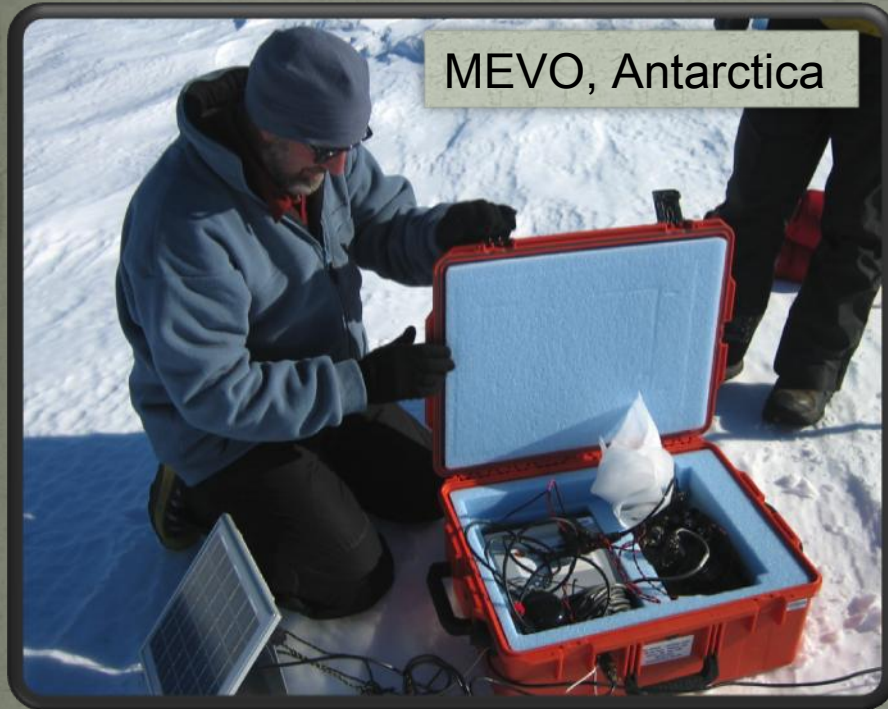
Accidents and unexpected delays will happen

Plan for weather days and crew down time. It is easier to leave early than have to extend.



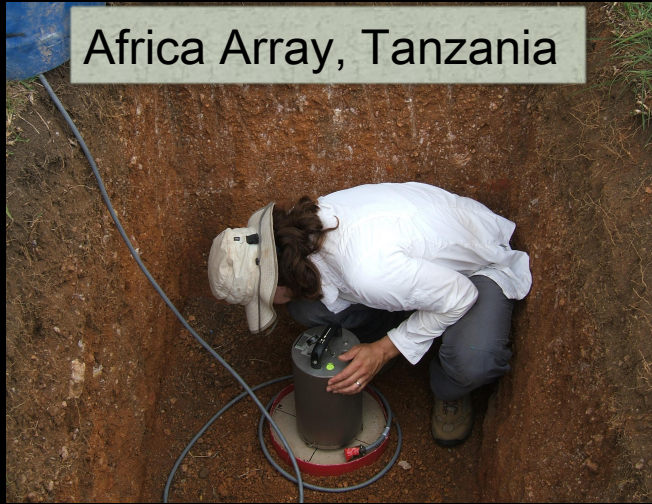
MANAS, Kyrgyzstan

# Installation: Quick & Easy



Minutes to hours

# Installation: Laborious



Africa Array, Tanzania



Tomo-Erebus, Antarctica



SLISE, Samoa

Hours to days

# Data Offload & QC

- Offload is not fast
  - A full 2GB RT130 CF card takes 10-40 minutes depending on the reader
  - A Q330 baler takes 25-40 minutes/GB
  - Texans take 1 man-minute per Texan if they are full (256MB)
- Field QC & backups of data are recommended – this takes time too!



# Packing and Return Shipment

- Clean it
- Coil it
- Pack it
- Ship it
- And don't leave country without it!



# Conclusion

“How long a minute is, depends on which side of the bathroom door you're on.” ~Zall's Second Law

“Time is what prevents everything from happening at once.” ~John Archibald Wheeler



PASSCAL has staff that can help during all phases of an experiment.

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