A Wide Range of Instrumentation Activities

- Temporary to Permanent
- Vaults
- Temporary
- Harsh Environments
- Ocean Bottom
Alaska Transportable Array

- Beginning first major season in Alaska
- Key technologies
  - Power systems
  - Communications
  - Posthole sensor emplacement techniques
- Teams in Anchorage, New Mexico, and San Diego
L48 and CEUSN

• Rolling up the final TA footprint in the northeast

• Converting ~159 stations to long term operation as part of the Central and Eastern US Network
  – Over 125 stations converted
Global Seismographic Network

- 153 globally distributed stations
- Just completed major, decadal review
- A new generation borehole Streckeisen sensor being developed
- Completed a major upgrade of all dataloggers
- Key efforts at USGS Albuquerque Seismological laboratory and Project IDA at UCSD
PASSCAL

- Deployments on every continent for three decades
- Support for wide range of experiments, from broadband to active source
- Specialized support for Polar deployments
- A key topic: Sustainability analysis of instrument pool
- Team at PASSCAL Instrument Center at New Mexico Tech
Magnetotellurics

- Support for both Transportable Array and Flexible Array MT activities
- MT-TA is continuing the SE US footprint
- Challenges with older instruments
- Team at Oregon State University
Ocean Bottom Seismograph Instrument Pool

- Support experiments worldwide
- Broadband and short period
- Just completed 3rd year review of OBSIP Management Office

- Key technologies
  - Packaging
  - Power systems
  - Timing

Aside from Abalones units, entire fleet showing signs of deterioration with age
- many units over 10 years old
- some replacement components not available (mainly electronics)
- some datalogger replacements/upgrades in progress
- more equipment upgrades and datalogger replacement required
- syntactic floatation upgrades!
Facilitate – Collaborate – Educate

Cascadia Initiative

• 27 TA stations on shore

• Four years of OBS campaigns

• Follow-ons in other parts of the world?
Other IS Activities

• Greenland Ice Sheet Monitoring network (GLISN)
  – Ongoing O&M of six stations
  – Highly leveraged – data from 32 stations

• GEOICE
  – Important project – developing Large N / Wavefields enabling technology
  – Testing in the lab and field (Antarctica)
  – Testing sensor-datalogger combo
Emerging Activities

• Large N / Wavefields
  – Deploying instruments in larger numbers (large N) to observe wavefields without aliasing
  – Prototype activities underway

• Amphibious Array Future
  – Possible follow-on deployments to Cascadia Initiative

• Subduction Zone Observatory
  – Targeting a workshop in winter 2016

• RAMP
  – Exciting new technologies are out there
Our Funding and Support

- SAGE, OBSIP, GLISN, GEOICE all at different stages of multi-year awards
- Funding generally strong, but generally flat (trend in federal funding)
- Although flat funding is stressful, we (IRIS) are still funded at over $30 million / year of public funding
- Solid expectation of stable funding through 2018
Technical Interchange Meeting

• IRIS’ first face-to-face Technical Interchange Meeting

• Goal: Share knowledge and experience
  • Gain efficiency
  • Enhance quality

• Contribute open and freely

• Meet your colleagues

• Provide feedback on how we should maintain momentum
Summary

• Collectively executing a wide-range of instrumentation activities

• A mix of stable, well established activities and new activities

• Your efforts and your expertise are key to the success of the activities highlighted here – Thank You!