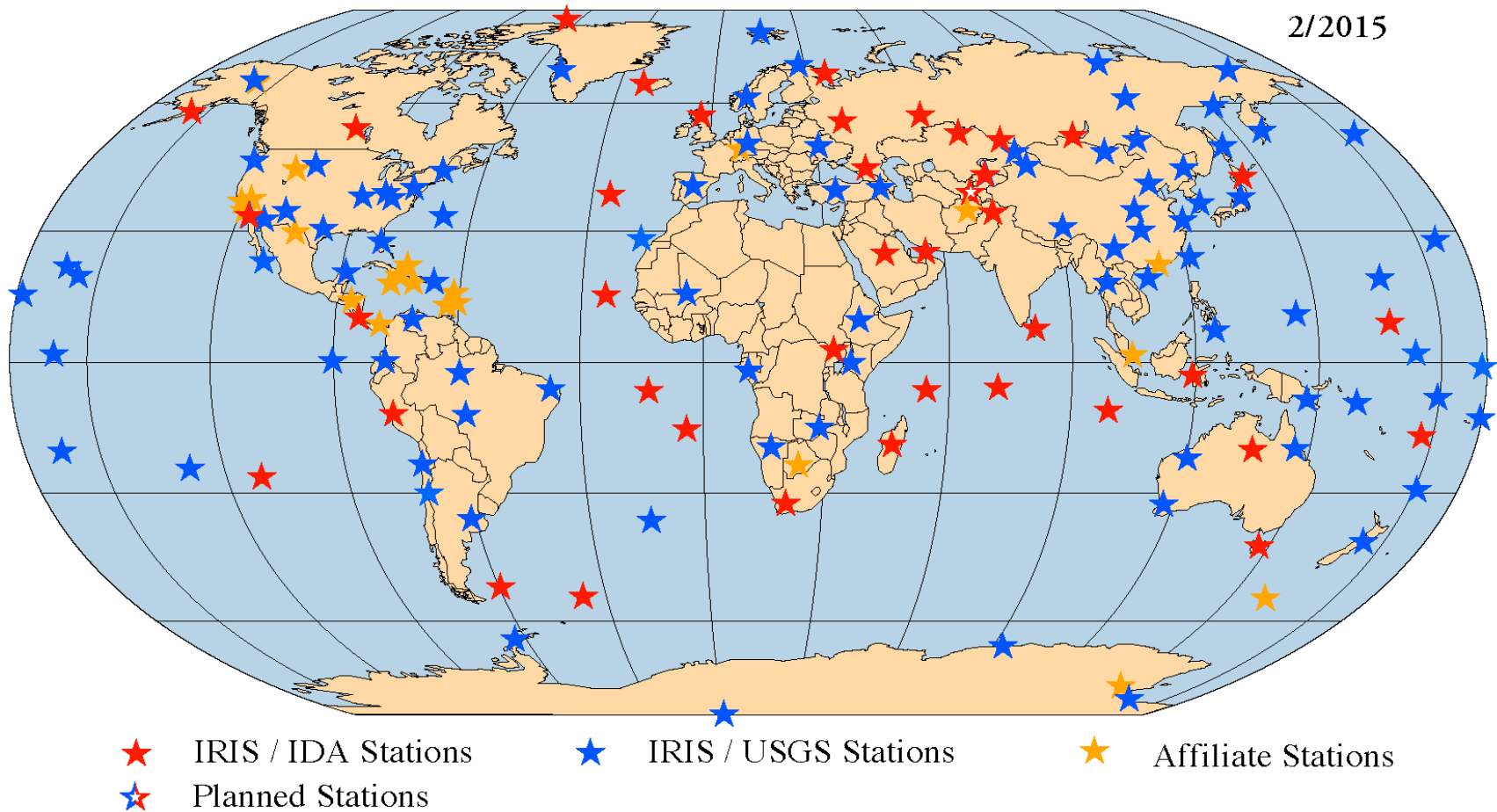


The Global Seismic Network (GSN)

Katrin Hafner – GSN Program Manager

**IRIS Instrumentation Services Technical Interchange Meeting
April 27-28, 2015
Hotel Andaluz, Albuquerque, New Mexico**

GSN GLOBAL STATION COVERAGE



THE GLOBAL SEISMOGRAPHIC NETWORK

- High dynamic range
- Broadband (hrs to ~ 10 Hz)
- Quiet instruments / sites / installations
- Real-time telemetry
- Global distribution at ~ 2000 km spacing
- Have primary and secondary sensors, and strong motion stations
- 100 m boreholes & vaults



Multi-use

- Basic Earth science research
- Monitoring applications such as earthquakes, tsunamis, and nuclear testing

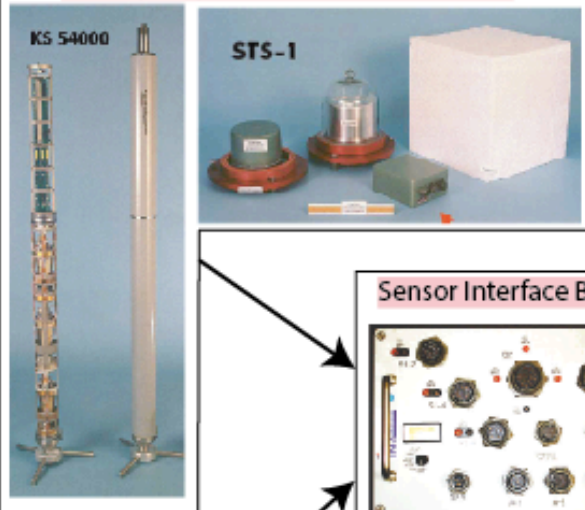


GSN INSTRUMENTATION

Components of the Next Generation GSN System



Primary Very Broadband (VBB) Sensors



Ancillary Sensors



Acquisition System



Communications Infrastructure



Station Processor

Q330HR

PB14 Baler

Power Systems



Secondary Very Broadband (VBB) Sensors



Strong Motion Sensors

Episensor ES-T



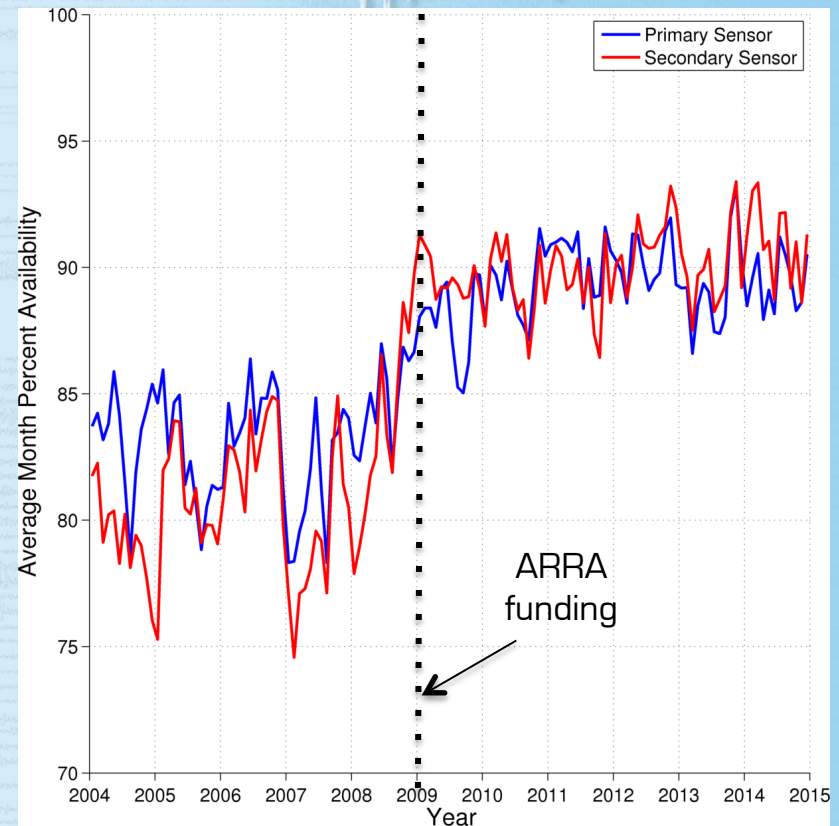
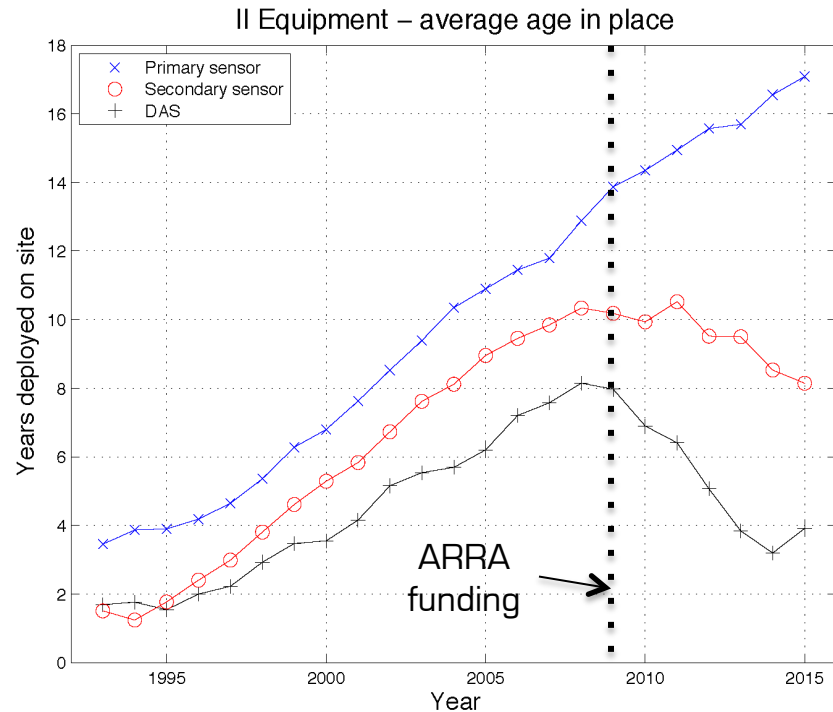
FBA-23



Power Distribution Box



EQUIPMENT AGE & DATA AVAILABILITY

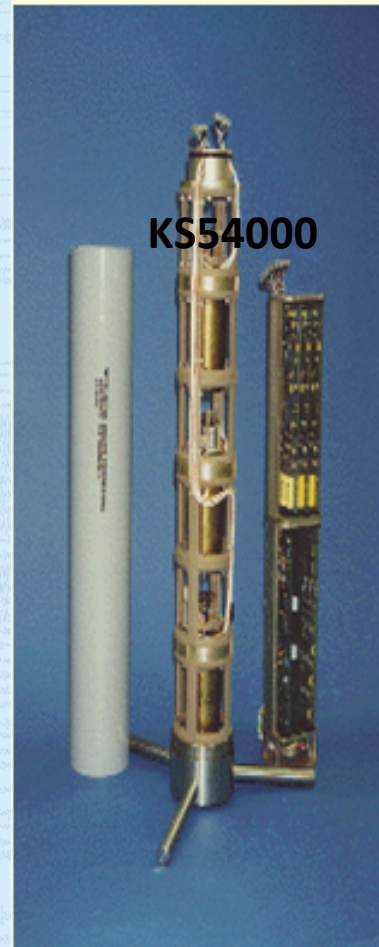


✧ An increase in network performance, i.e. data availability, can be correlated with the refurbishment of stations with the next generation data loggers and secondary sensors

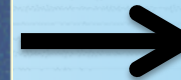
GSN INSTRUMENTATION DEVELOPMENTS



Prototype vault sensor being tested



VBB
Borehole
Seismometer
under
development



Also working on the integration of Atmospheric sensors