Flexible Array Flexible Array - Active Source Experiments **Purpose** High-resolution Images of Crustal Structure and Geologic Targets Flexible Source-receiver Geometries Digitizers/Recorders Digitizers/Recorders Source **Characteristics** High-density, Short-term Observations Natural or Artificial Sources Highly Portable High Frequency Autonomous Data Acquisition Flexible Array Sensors Equivalent Earth Peak Acceleration (20 log m/sec²) 0 -40 Geophone -80 -200 ____ 0.001 0.01 10 100 1,000 10,000 100,000 Period (Seconds)

Flexible Array montage showing schematic of field layout, amplitude vs. frequency response of sensors, instrumentation, and typical deployments. Each sensor has its own digitizer/recorder with internal batteries. The recorders can be set to start/stop recording if the time of a nearby man-made seismic source is known. The geophones may be laid out in linear arrays, with station spacing from a meter to kilometers. The amplitude response of the geophones is well-suited to recording the high-frequency, energetic signals from man-made sources. The lowermost photograph shows, from left-to-right, shipping box filled with geophone, 3-channel digitizer/recorder.