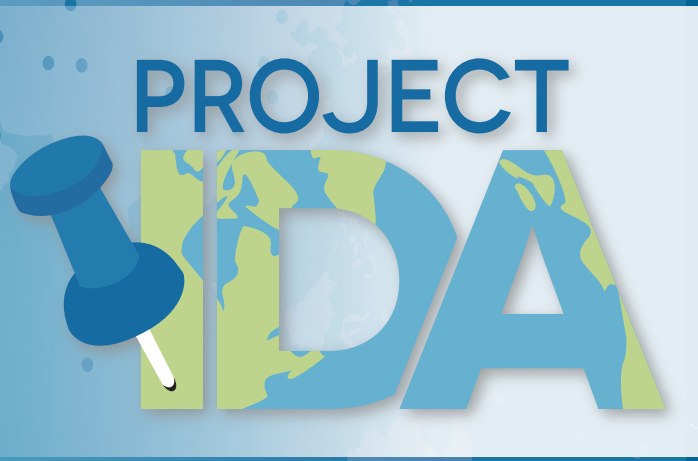
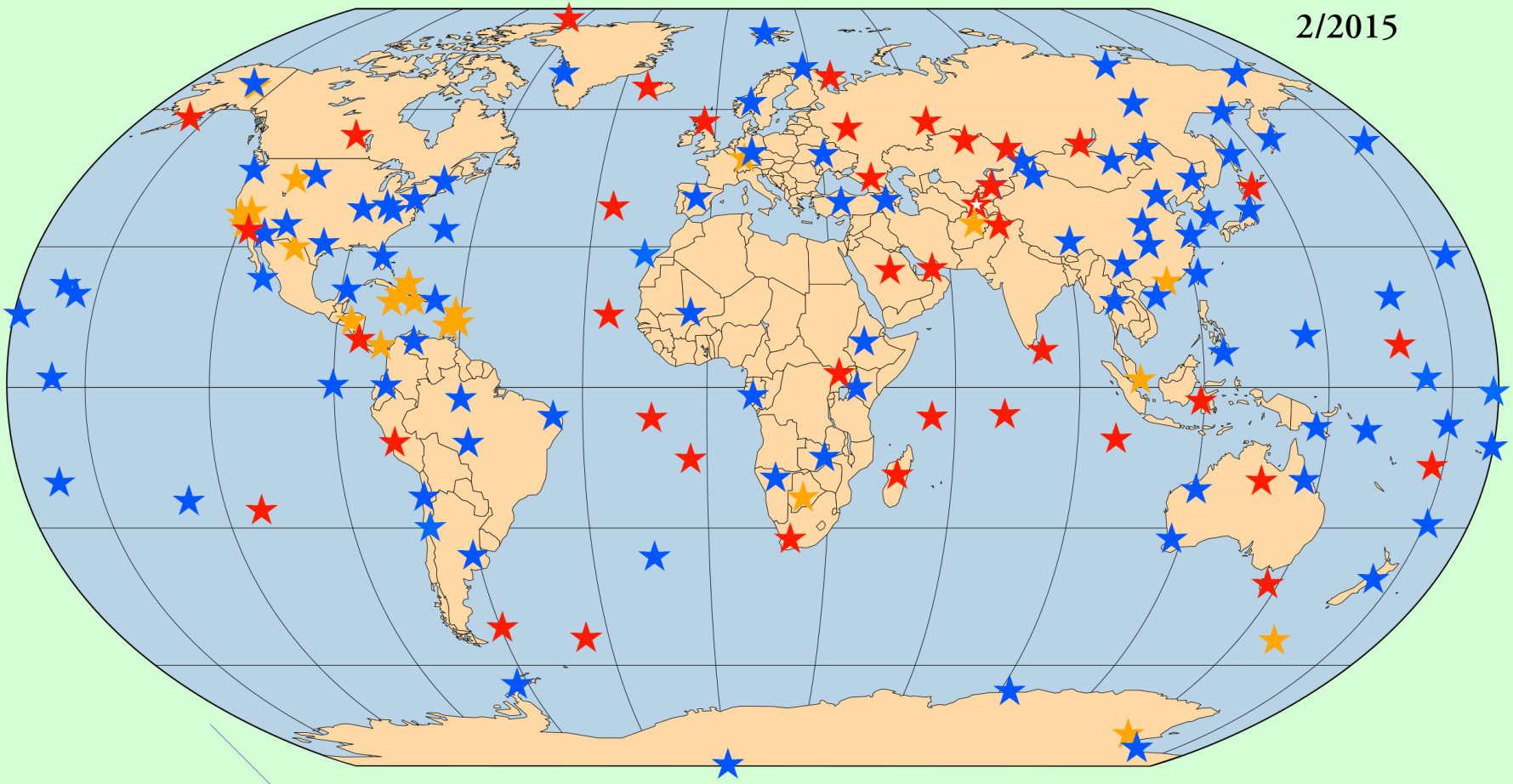
IDA GSN Overview



UCSD-SIO-IGPP

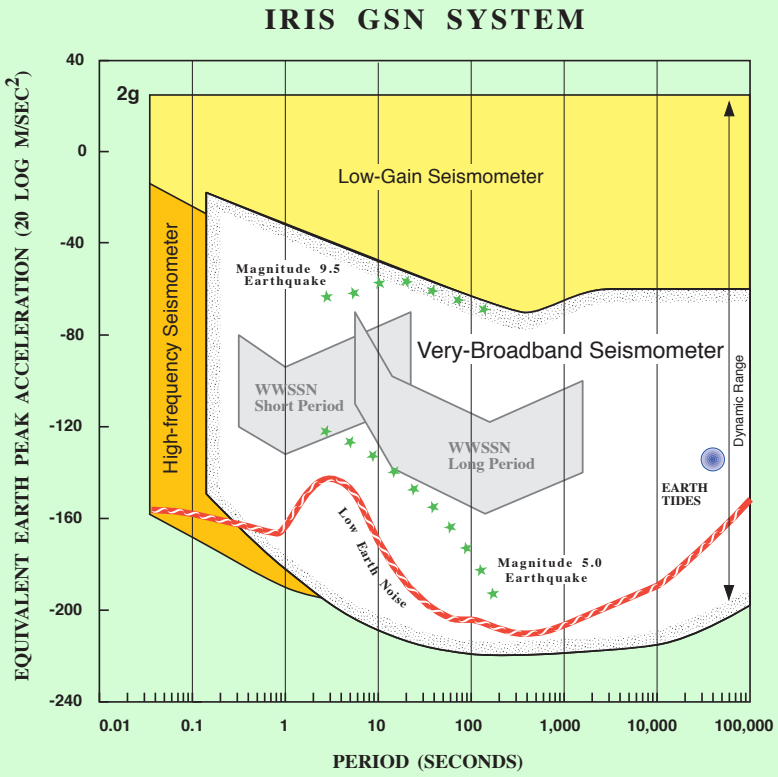
INTERNATIONAL DEPLOYMENT OF ACCELEROMETERS

The Global Seismographic Network



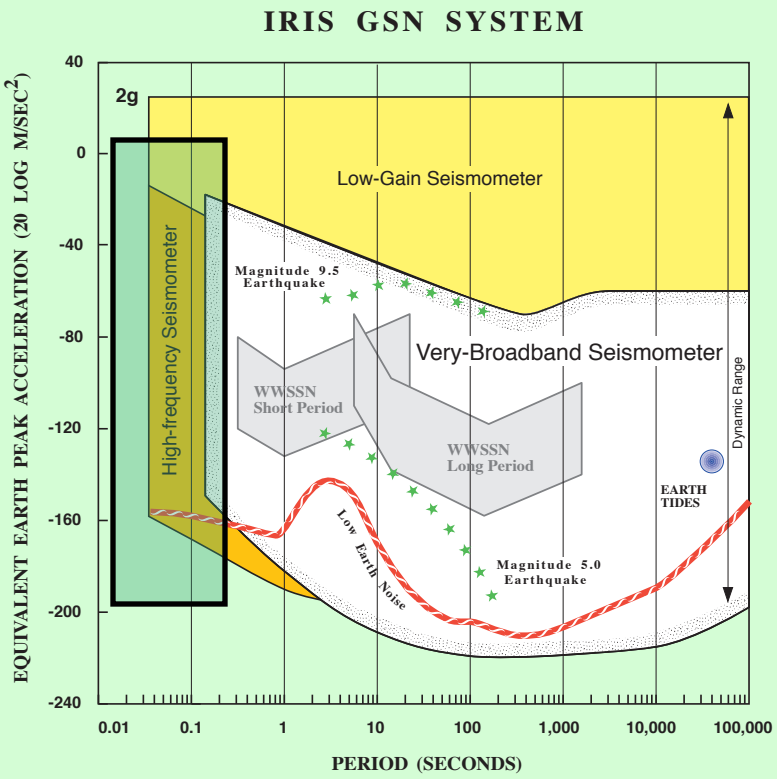
Design Goals of the GSN:

- Distribute stations at 2000 km intervals globally in as uniform a pattern as possible
- Be able to record on-scale a Mw 9.5 earthquake at a distance of 30 degrees
- Provide timing accurate to > 0.01s



Streckeisen STS-1

Teledyne KS-54000-I



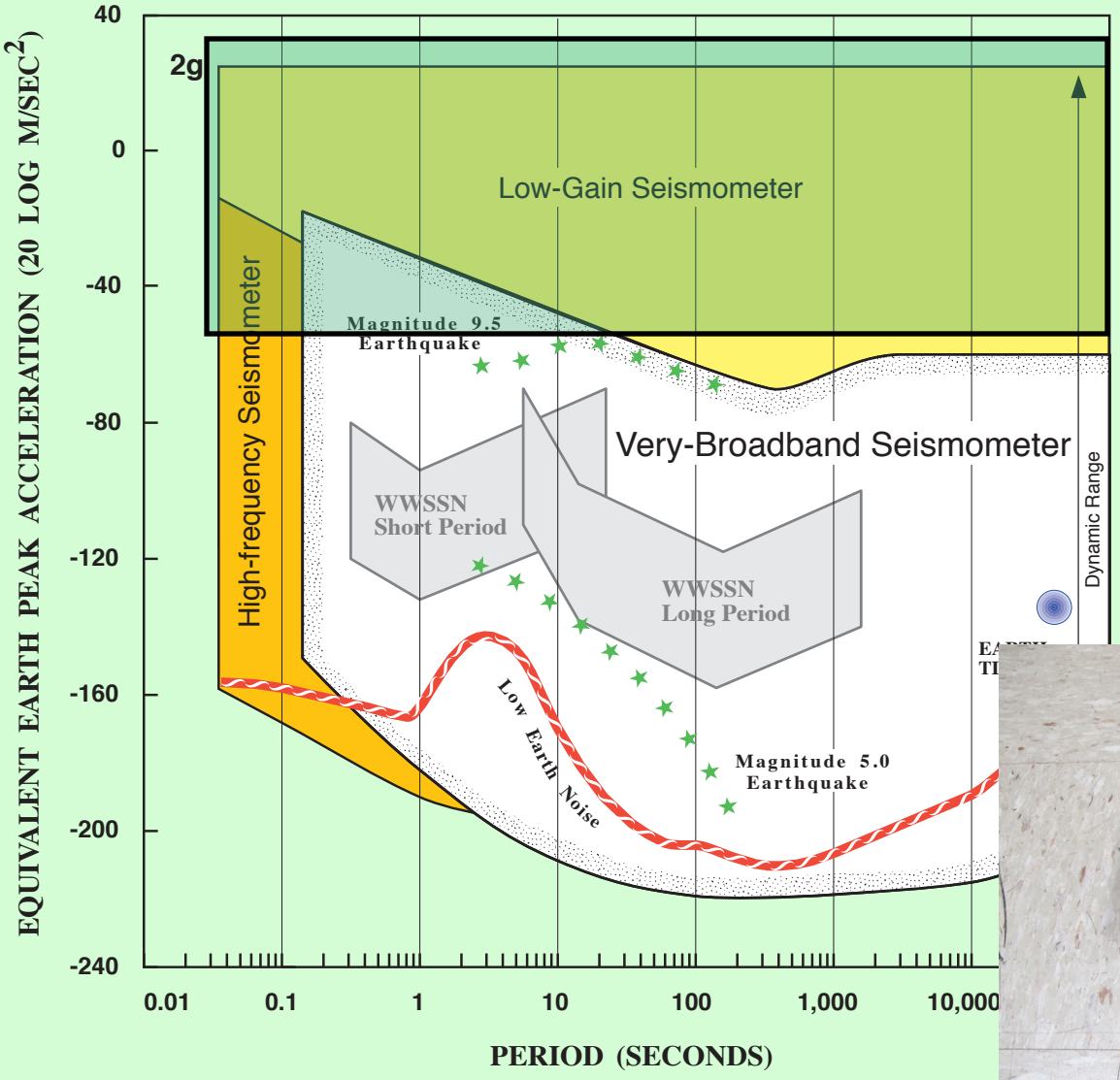
STS 2 / 2.5

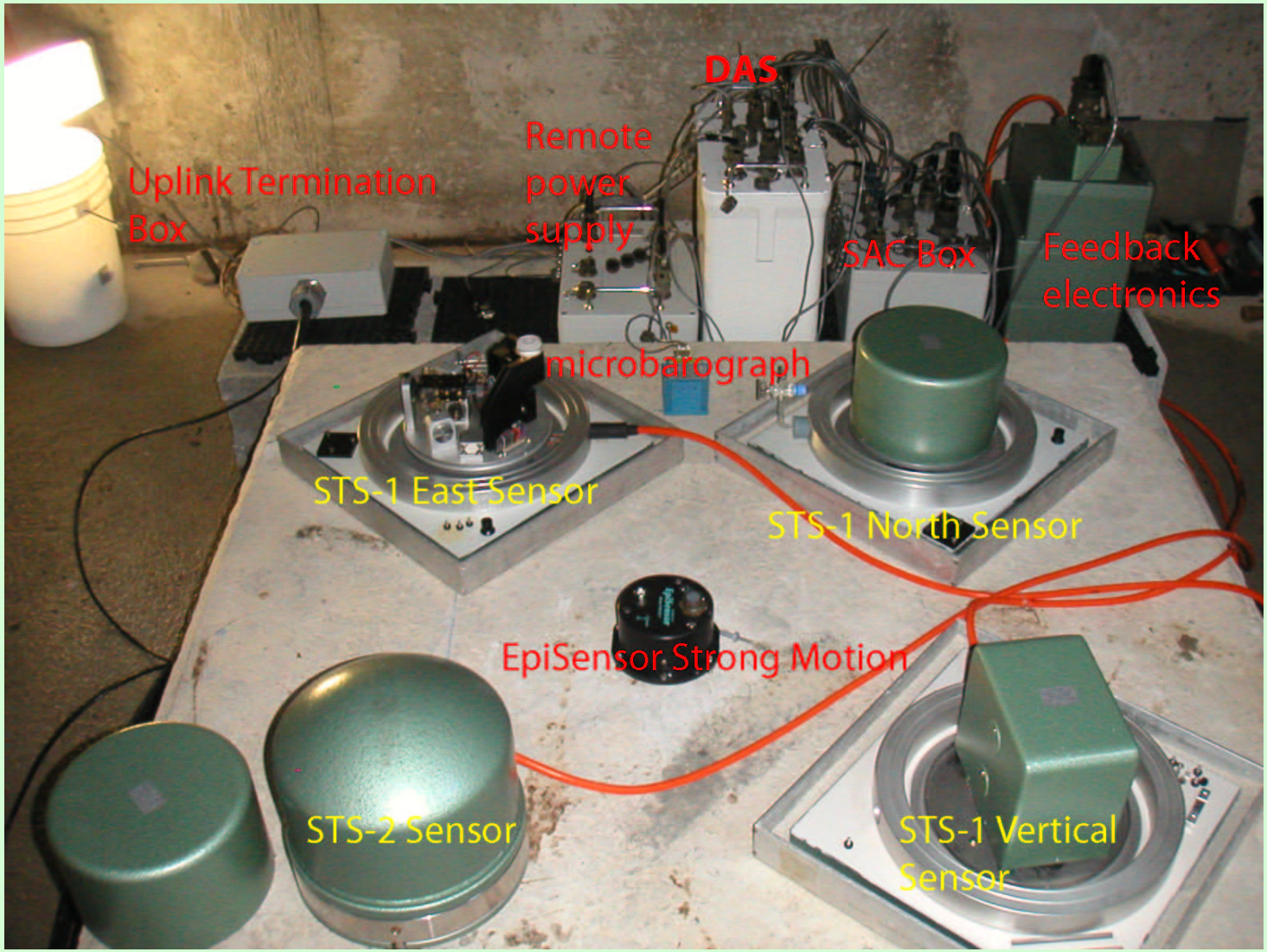
Trillium 240

CMG-3T

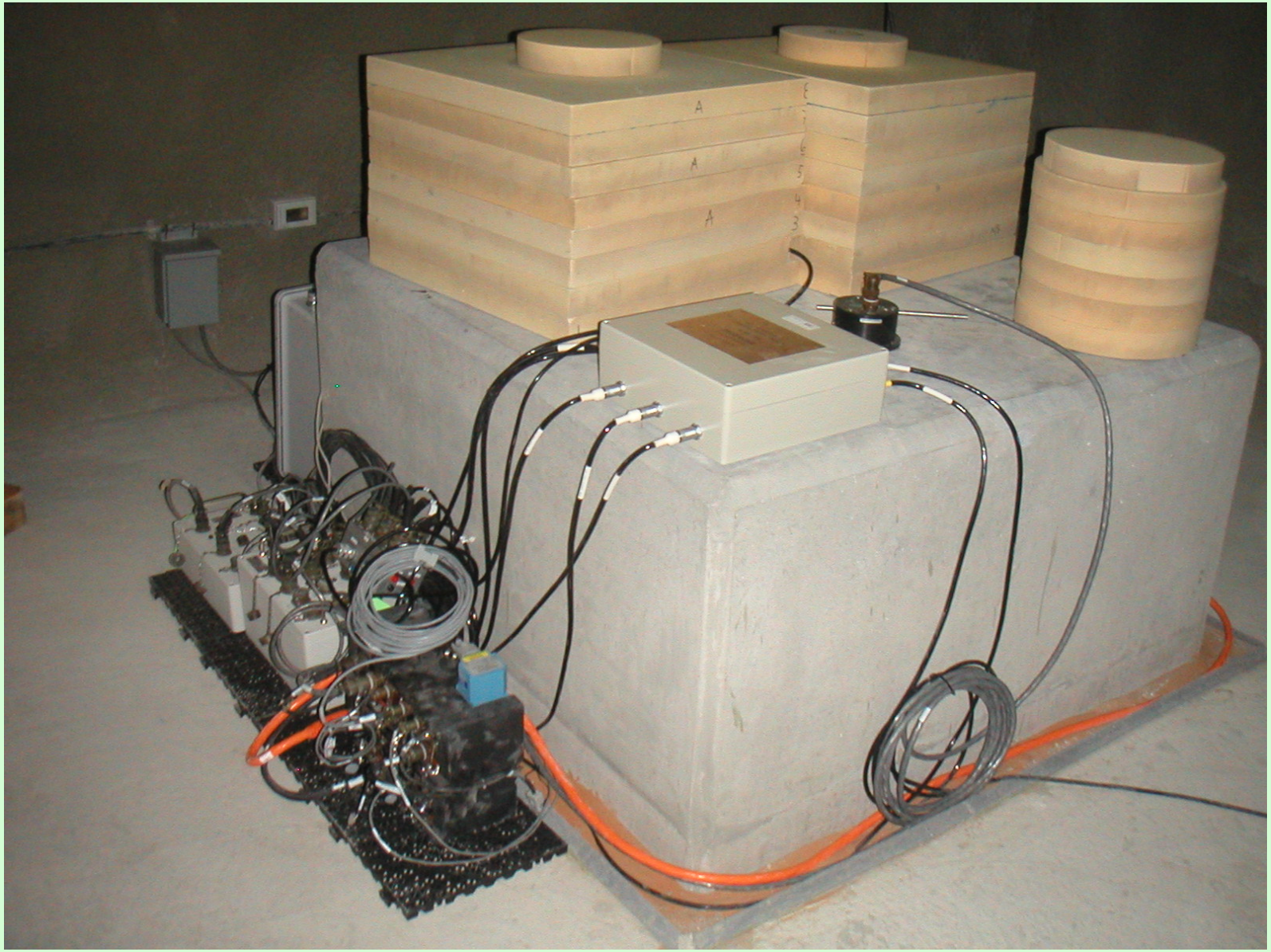
Trillium 120PH

IRIS GSN SYSTEM



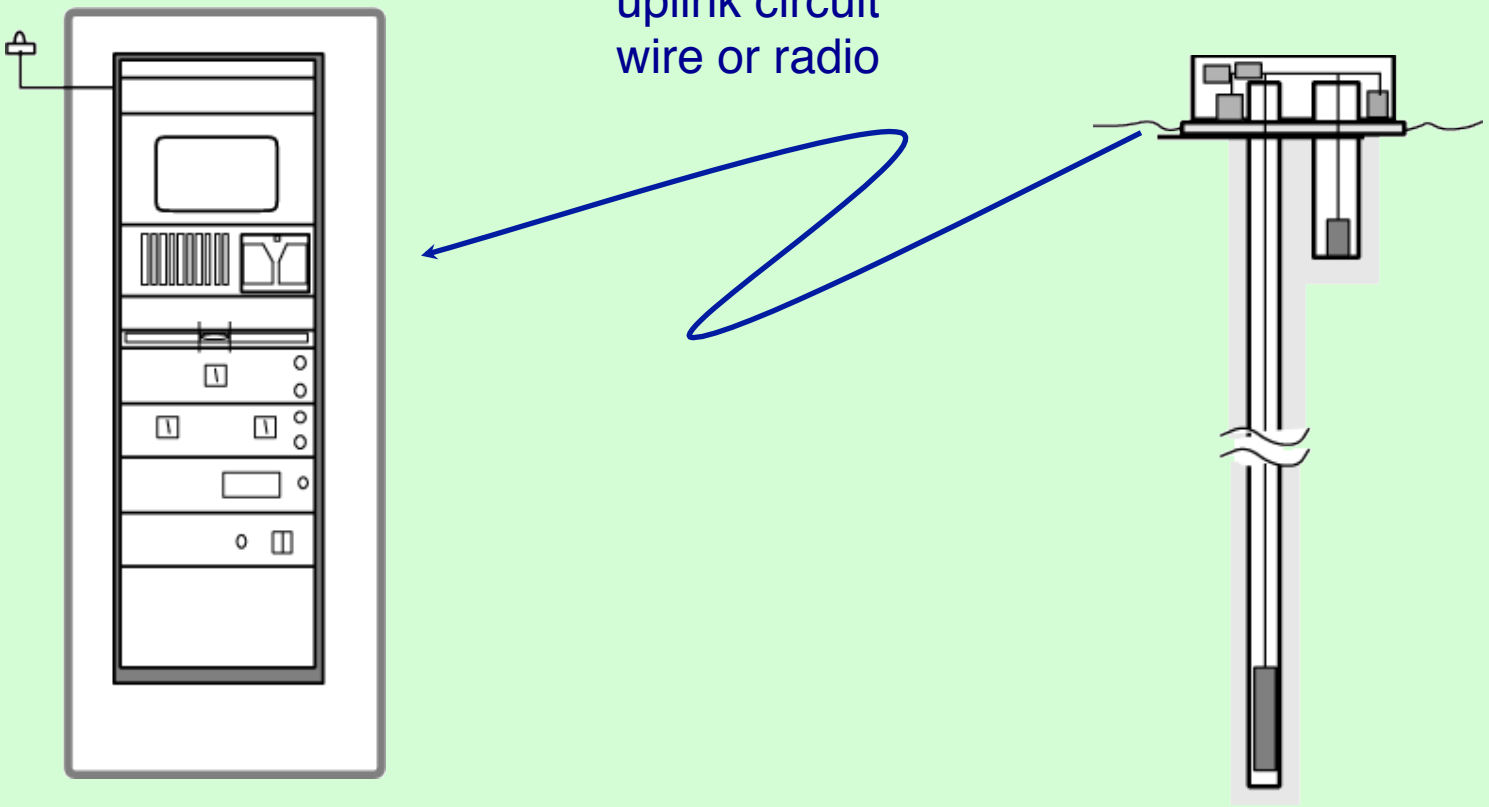

DAS
Uplink Termination Box
Remote power supply
SAC Box
Feedback electronics
microbarograph
STS-1 East Sensor
STS-1 North Sensor
EpiSensor Strong Motion
STS-2 Sensor
STS-1 Vertical Sensor

Todd Johnson aligns STS1s at UOSS (Sharjah, U.A.E.)



UOSS **all buttoned up**

Wellhead at COCO (Cocos-Keeling, Australia)


uplink circuit
wire or radio
Recording Room
Seismometer Borehole

Recording room rack (A/C power)

dual station computers

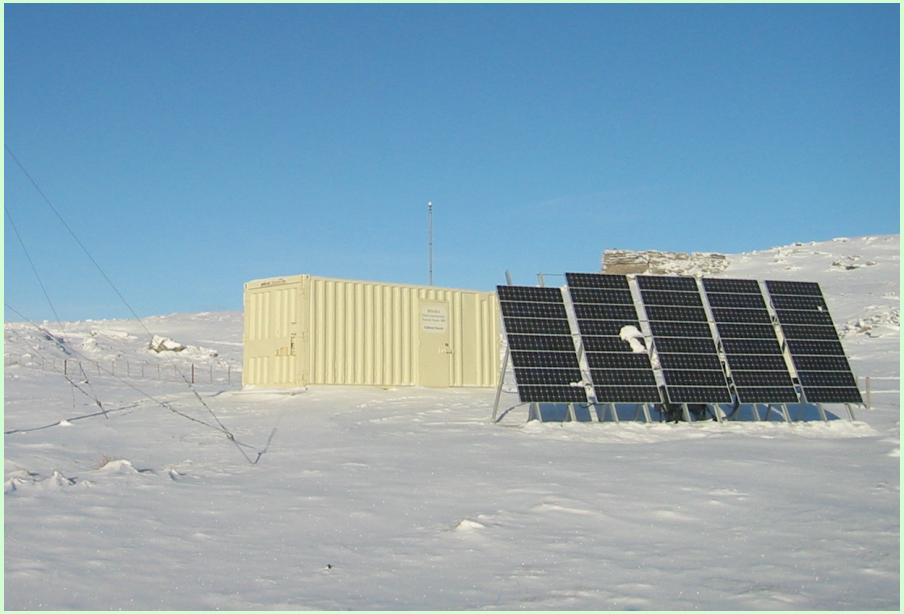
48-54 VDC total system power supply

DC bus

mains input (120-240 VAC, 50-60 Hz)

smart UPS

Isolation transformer, 120 VAC output



Photoelectric array

EFI (East Falkland Island)

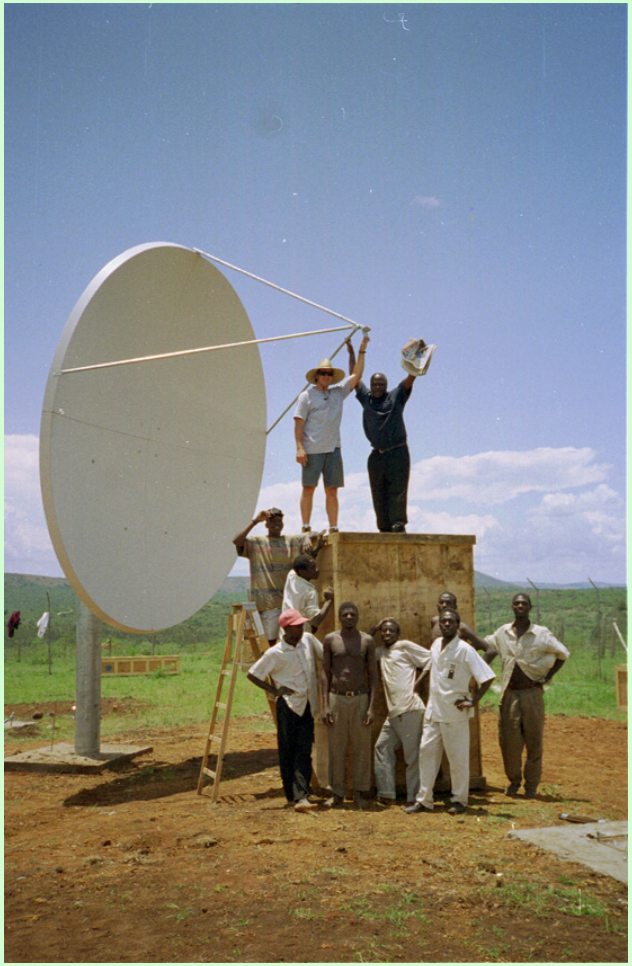
Thermoelectric generator

KDAK (Kodiak, Alaska)

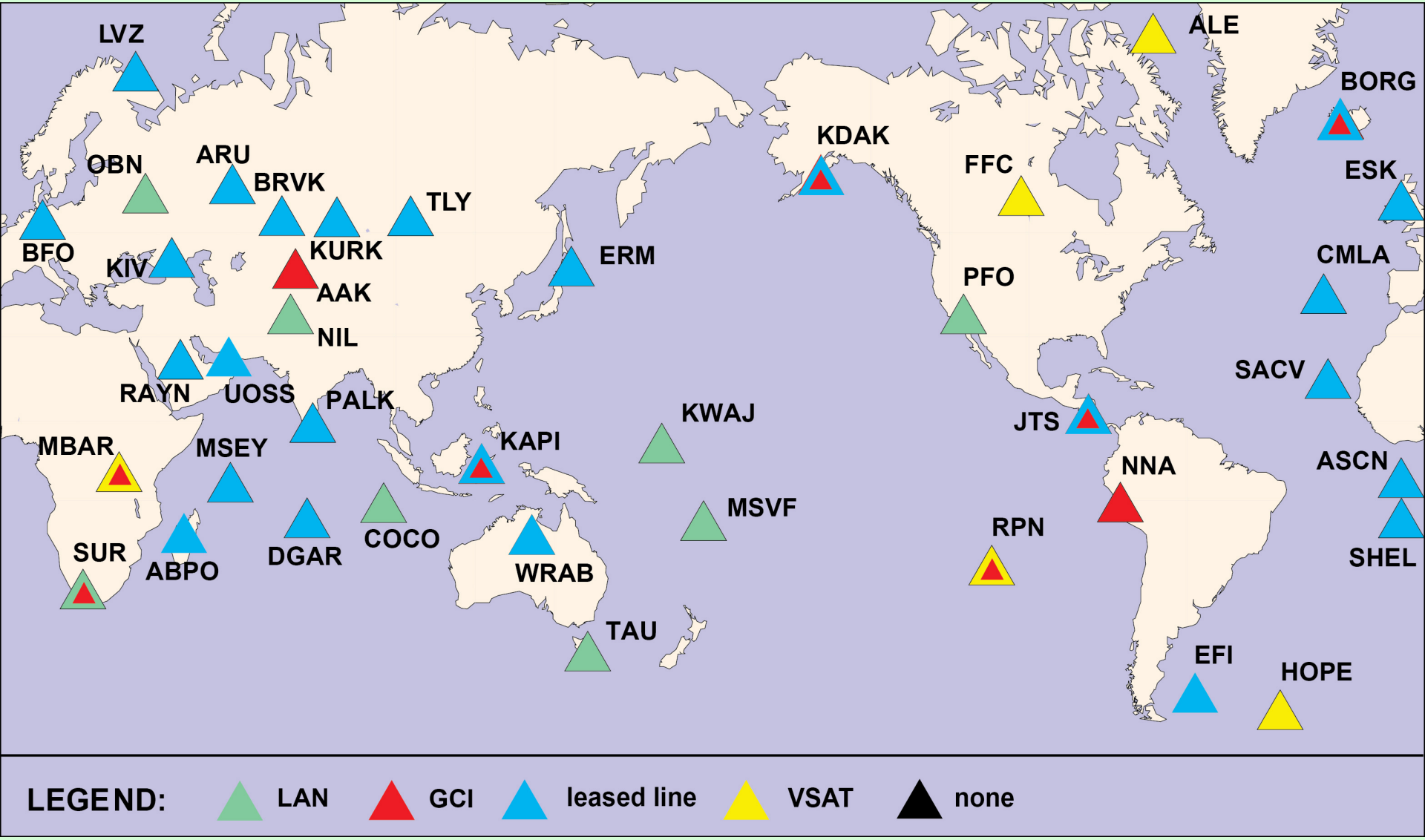
Power:

Telemetry links:

- LAN
- leased lines / VSATs
- local ISP



IRIS/IDA Telemetry Topology – March 2015



Costa Rica

Peru

Iceland