

# IDA GSN Overview

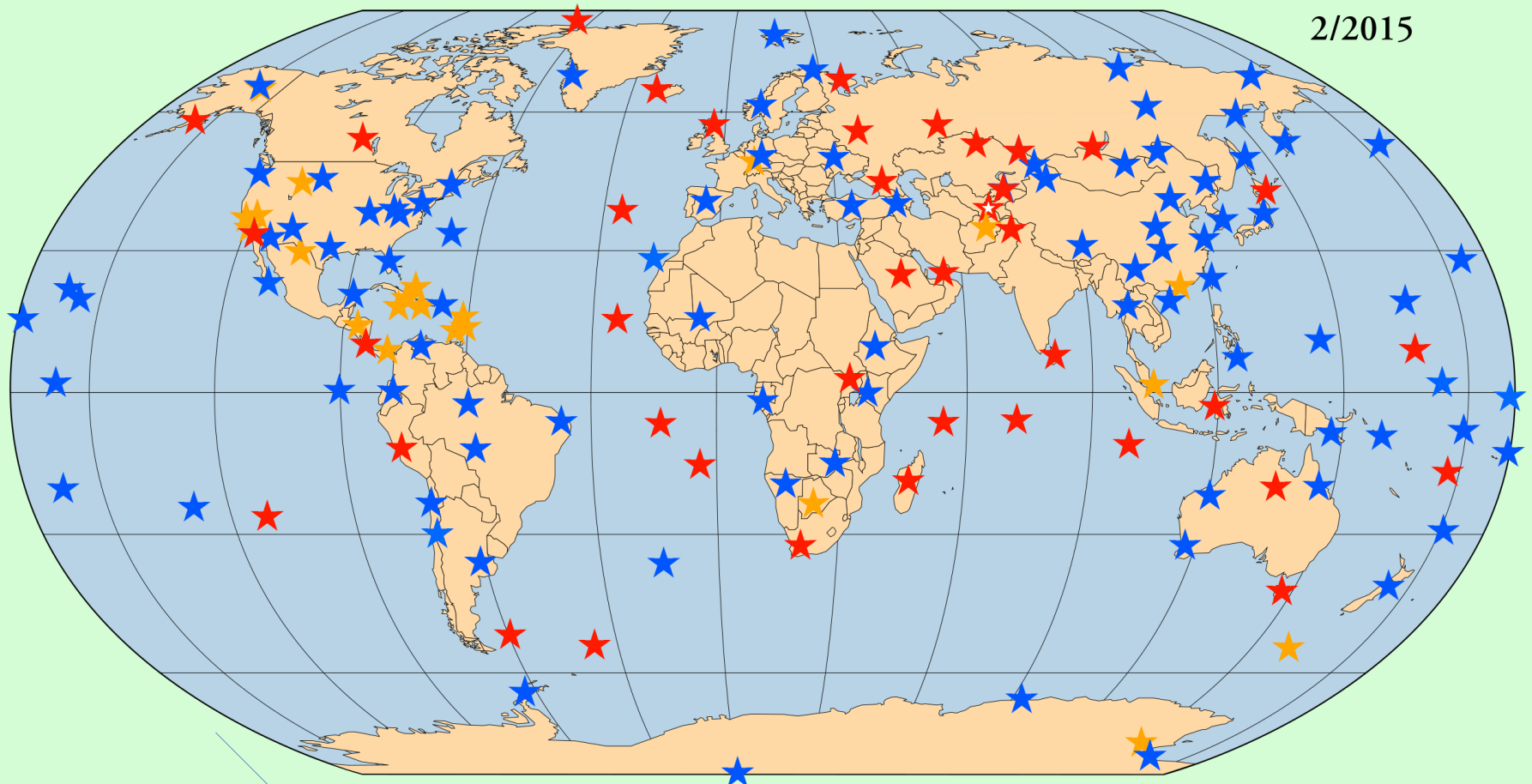


Carl Ebeling, IGPP

INTERNATIONAL DEPLOYMENT OF ACCELEROMETERS

# The Global Seismographic Network

2/2015



★ IRIS / IDA Stations

★ IRIS / USGS Stations

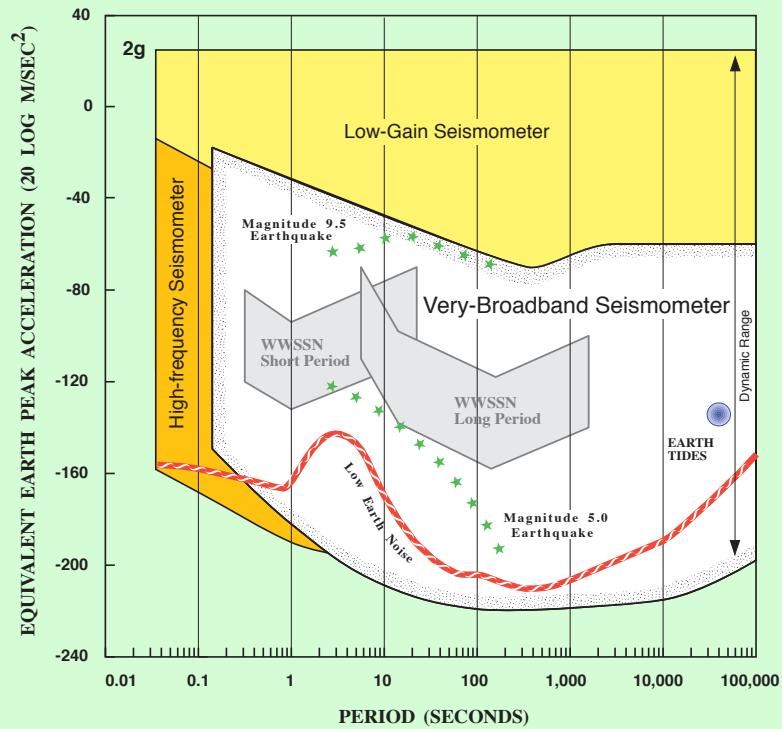
★ Affiliate Stations

★ Planned Stations

# 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  $> 0.01\text{s}$

## IRIS GSN SYSTEM



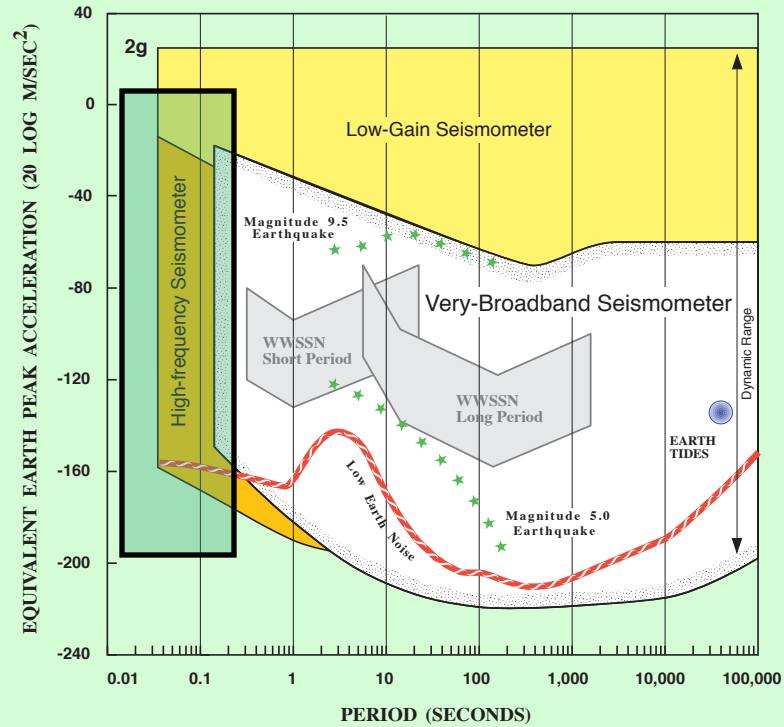
Teledyne KS-54000-I



Streckeisen STS-1



## IRIS GSN SYSTEM



STS 2 / 2.5



Trillium 240

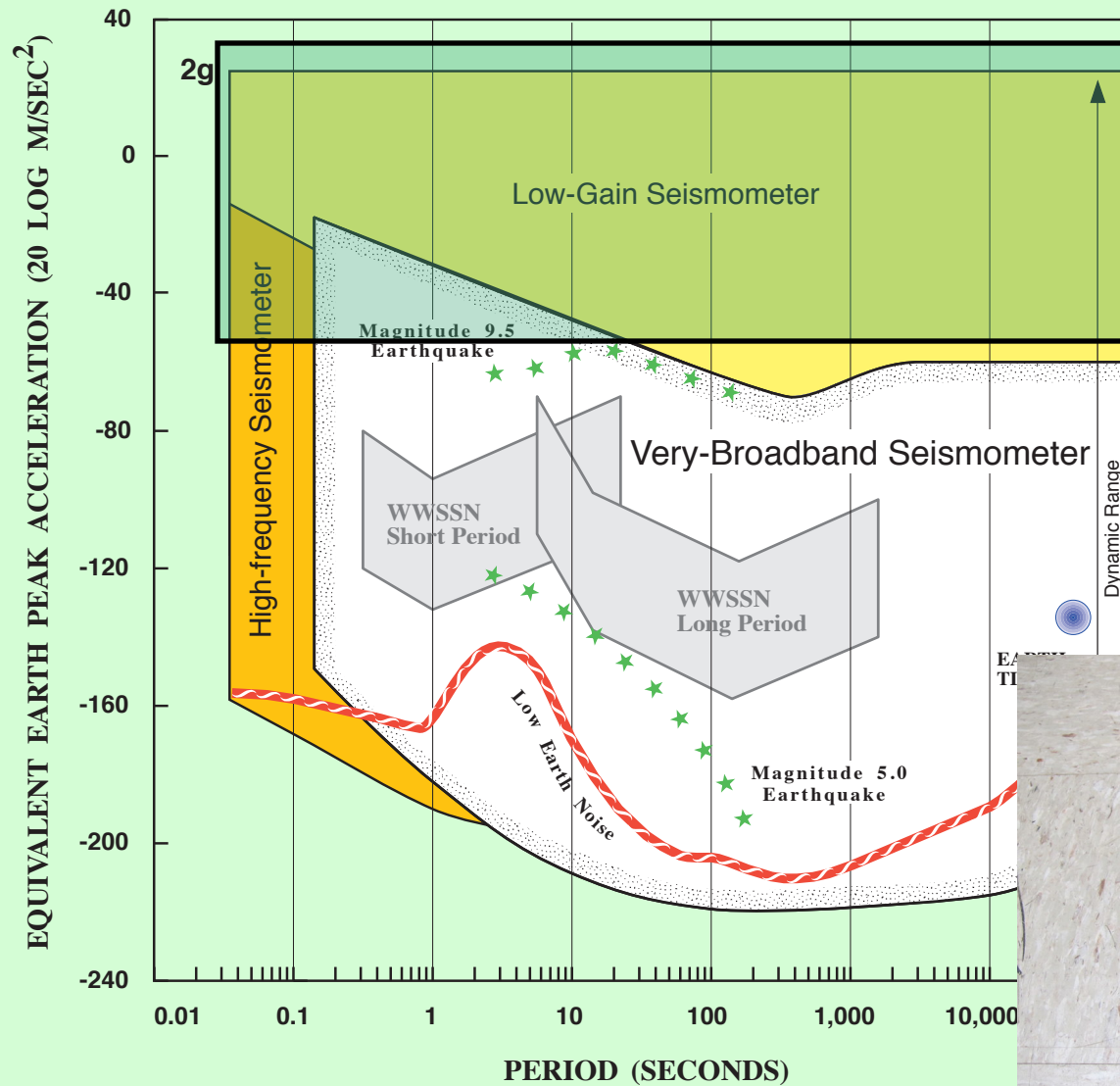


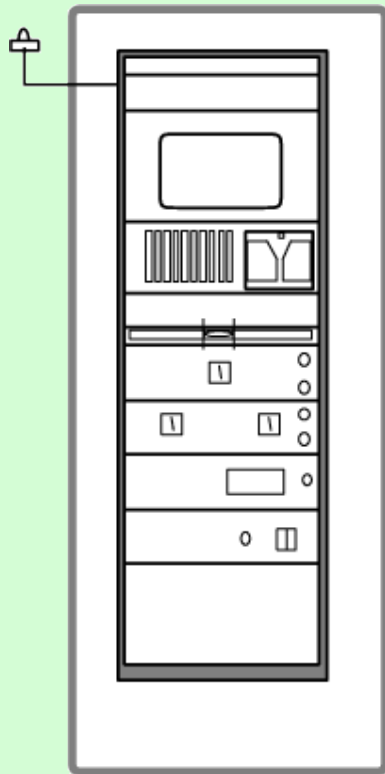
CMG-3T



Trillium 120PH

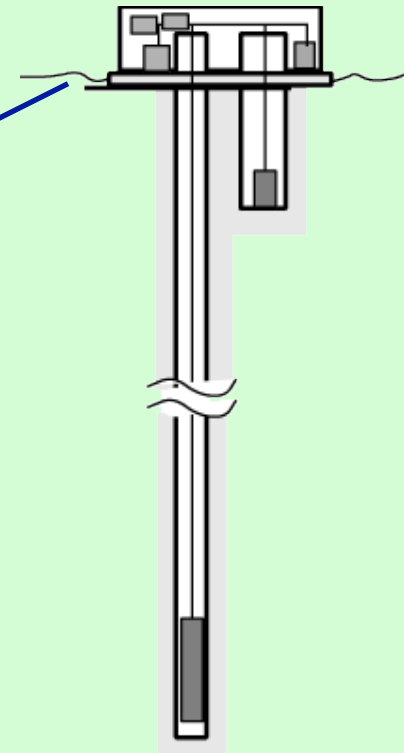
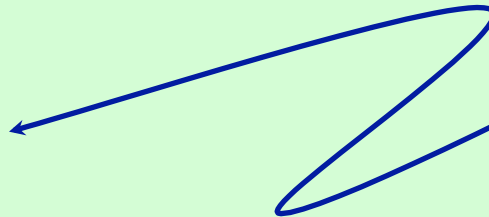
# IRIS GSN SYSTEM





Recording Room

uplink circuit  
wire or radio



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



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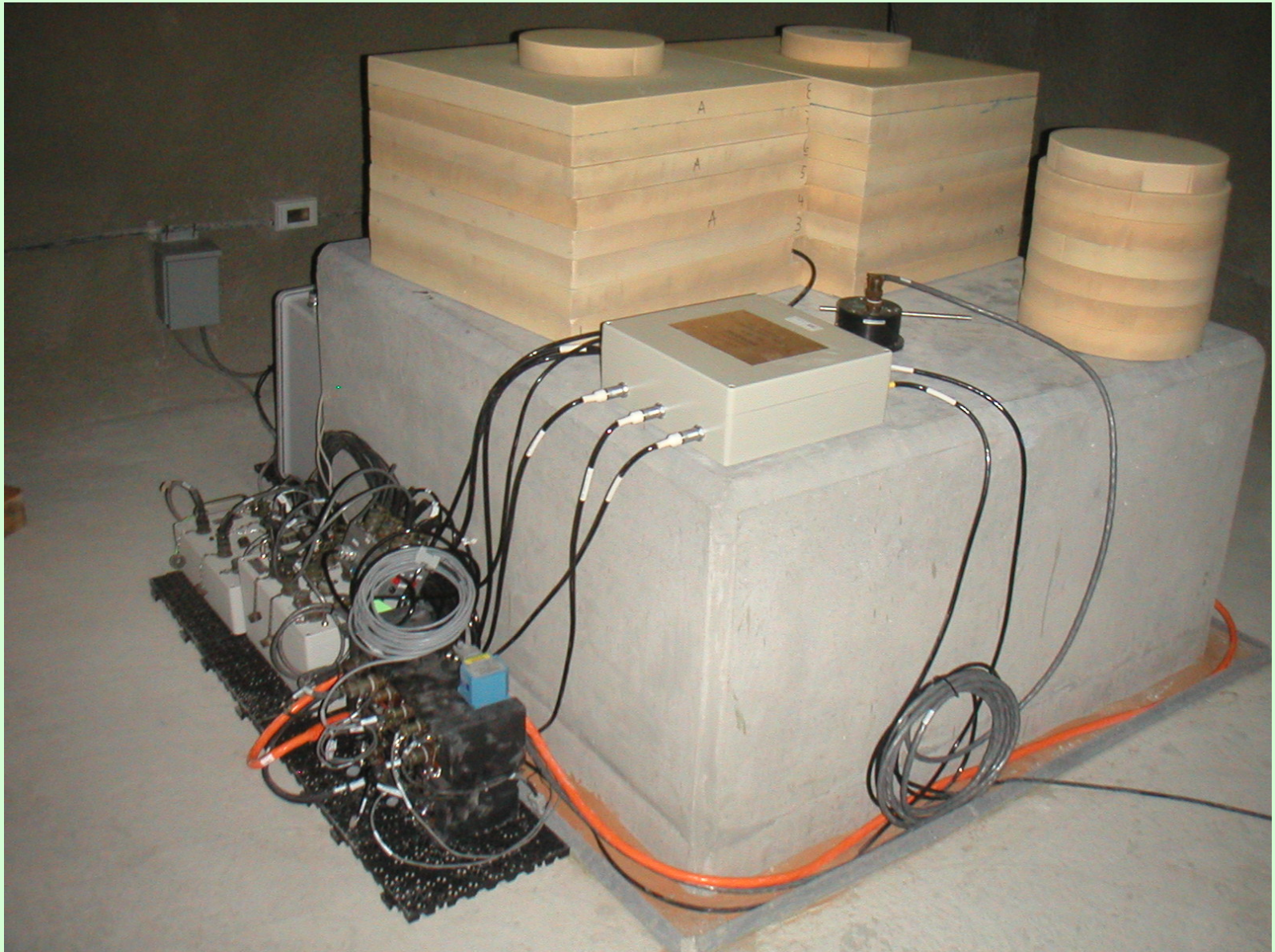


Wellhead at COCO (Cocos-Keeling, Australia)

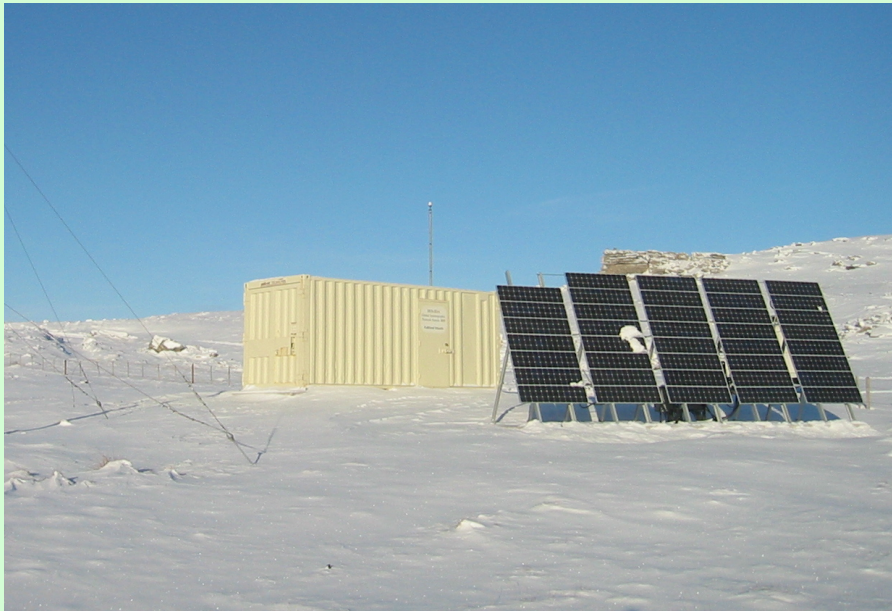


Todd Johnson aligns STS1s at UOSS (Sharjah, U.A.E.)





UOSS \*\*all buttoned up\*\*



Photovoltaic array  
EFI (East Falkland Island)

**Power:**

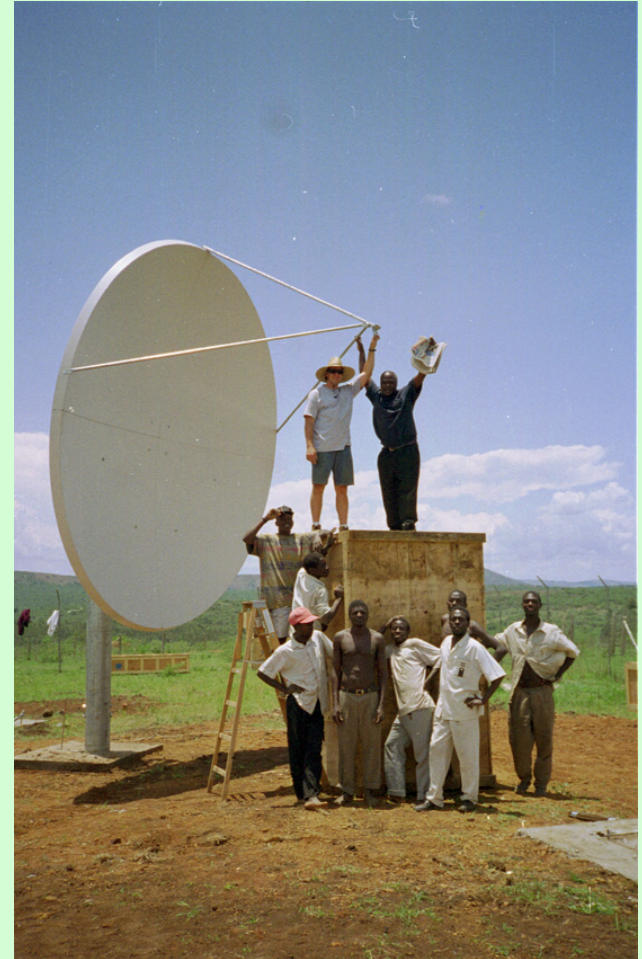
Thermoelectric generator  
KDAK (Kodiak, Alaska)



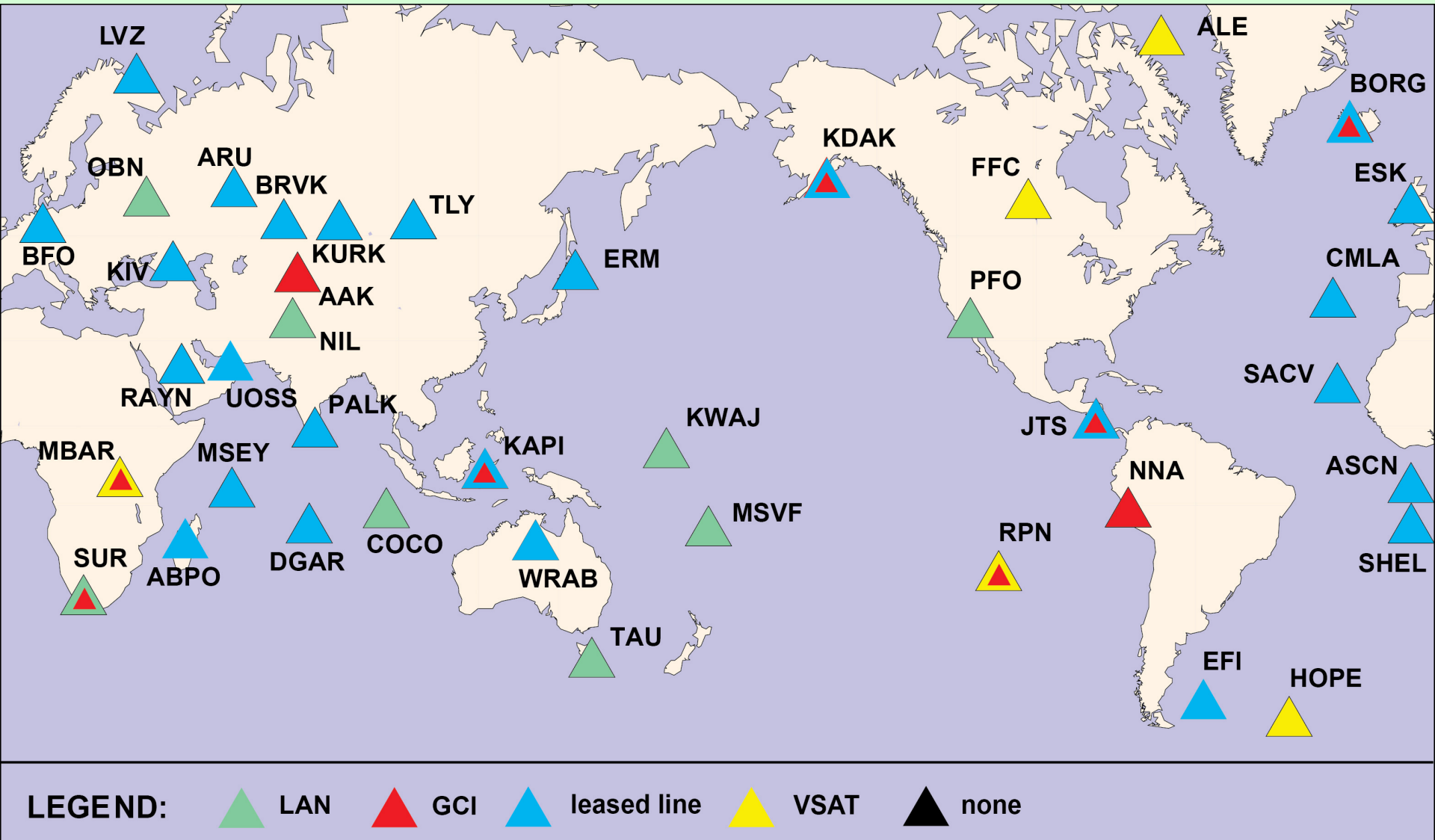


# Telemetry links:

- LAN
- leased lines / VSATs
- local ISP



# IRIS/IDA Telemetry Topology – March 2015





Costa Rica



Peru

Iceland



