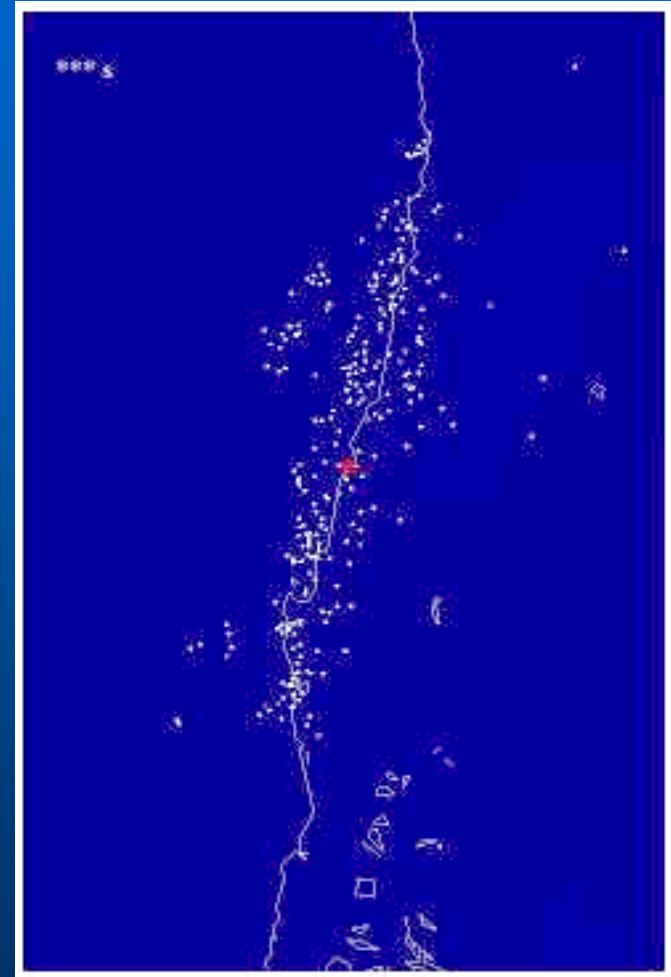
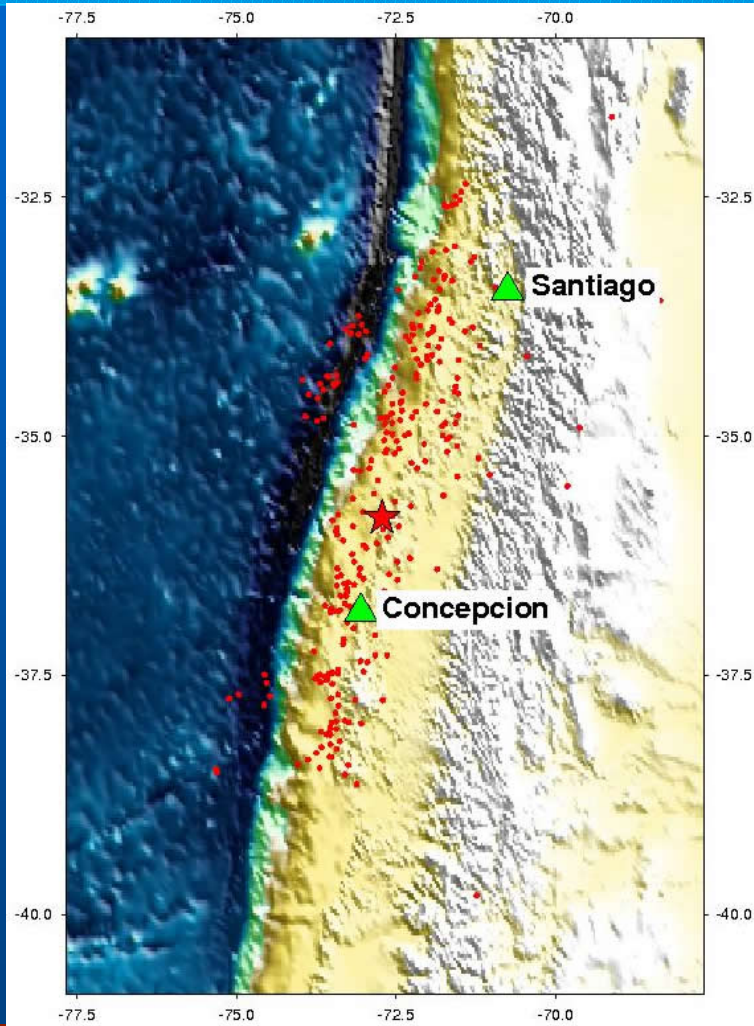
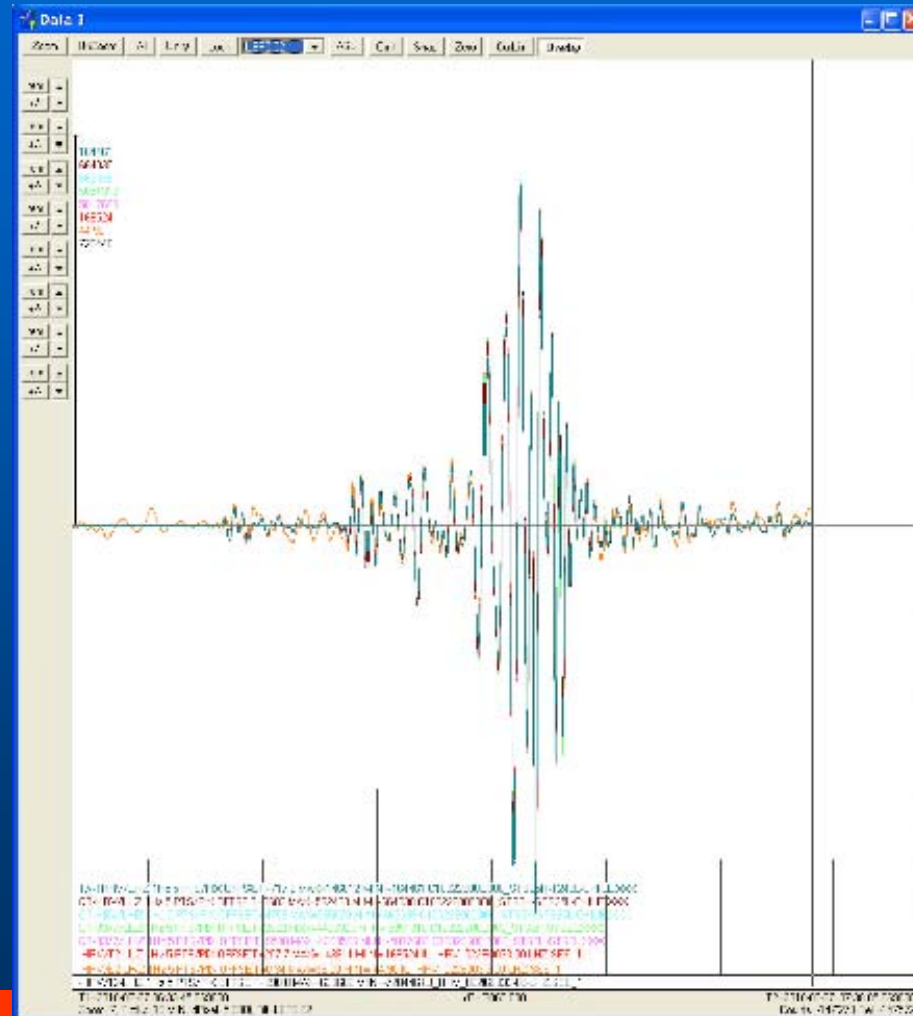


Chilean Earthquake



Chilean Earthquake – EPI & BB

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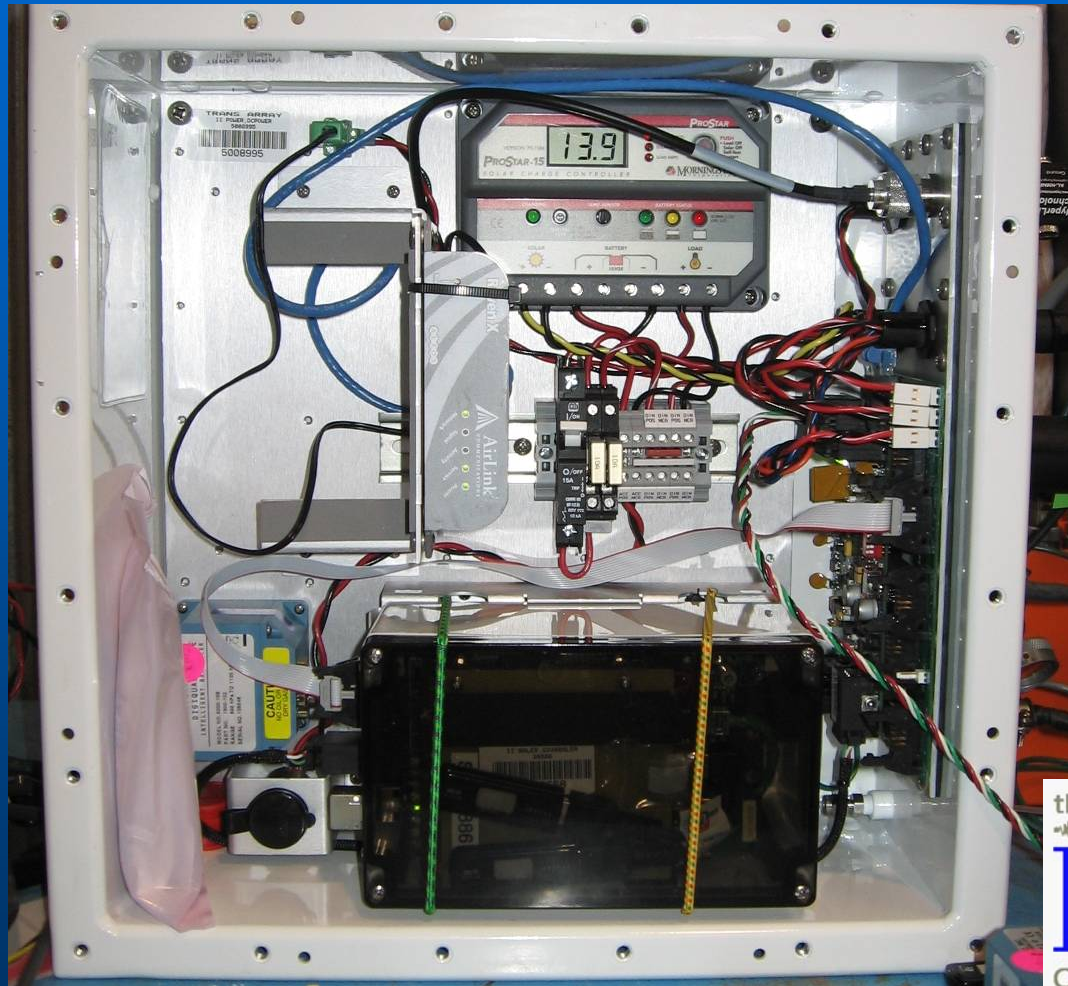


Vault Interface Enclosure

March, 2010
QUG, Prague
Mathias Franke



Vault Interface Enclosure (VIE)



the
IRIS
CONSORTIUM

SOLARCRAFT
POWER PRODUCTS

QUANTERRA, INC.

 **KINEMATICS INC.**

Kinematics, Inc.
1969 **40** 2009
Years of Excellence

QUANTERRA

Vault Interface Enclosure (VIE)

- **16x16x8” Enclosure, hangs inside vault.**
 - IP68, 0.5” Lexan Clear lid, bulletproof!
- **Q330 interfaces converted to industrial standard connections;**
 - IDC flat ribbon, RJ45.
- **Custom power regulation circuit**
 - Fault free switchover to alkaline backup battery
 - Signaling via existing data channels for power SOH
 - Sensor power regulation, filtered power for Q330 and Baler
 - High efficiency regulation, load shedding/mode switch on backup power
 - Independent fault isolation of powered devices.

Vault Interface Enclosure (VIE)

- **Station Integration**
 - Integration of new Baler44CT, Environmental sensor
 - Simplified Data collection via new Baler44
 - Reset power cycle for comms equipment
 - Remotely controlled power interrupt for sensor
 - Monitor and signaling of pump operation
- **Protected housing for electronics and auxiliary equipment-allowing better flexibility and increased reliability.**
 - Allows economical packaging choices for small ancillary devices
 - Protects commercial modems, charge controllers and circuit boards.
 - Simplifies troubleshooting, acts as a field replaceable unit.

Vault Interface Enclosure (VIE)

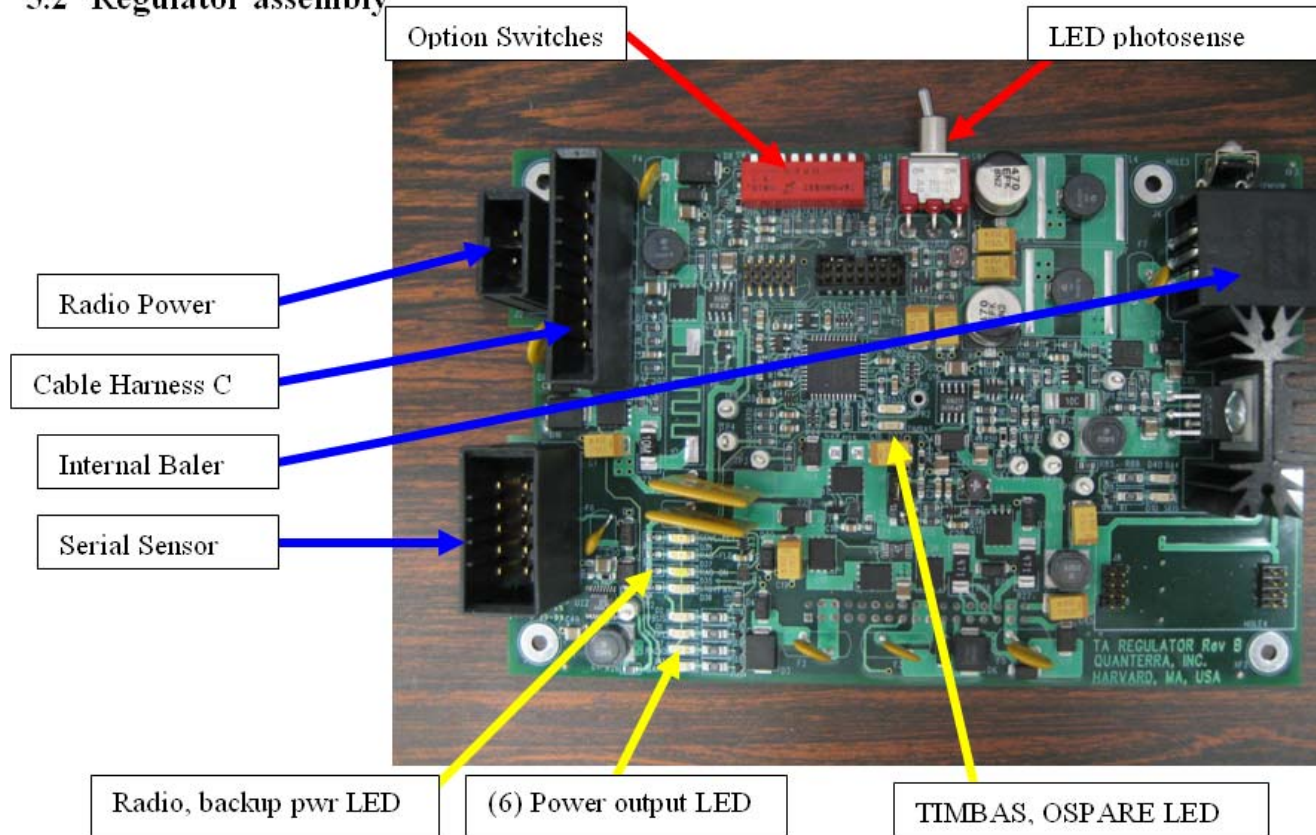
- **Uniform cabling for installation**
 - MS style connectors, molded termination
- **Commercial production in uniform runs; Enclosure, cables, PCB, testing, etc**
 - Custom cable fabrication, custom metal, factory assembly and testing.

VIE - Regulator

- *Custom Design*
- *Filtered Power: Q330, Baler44*
- *Regulated Sensor Power*
- *Seamless Backup Failover*
- *Protected I/O's: subsystem shutdown*
- *Radio Power Cycle*
- *Failover Power Conservation*
- *Sensor Power Control*

VIE - Regulator

5.2 Regulator assembly

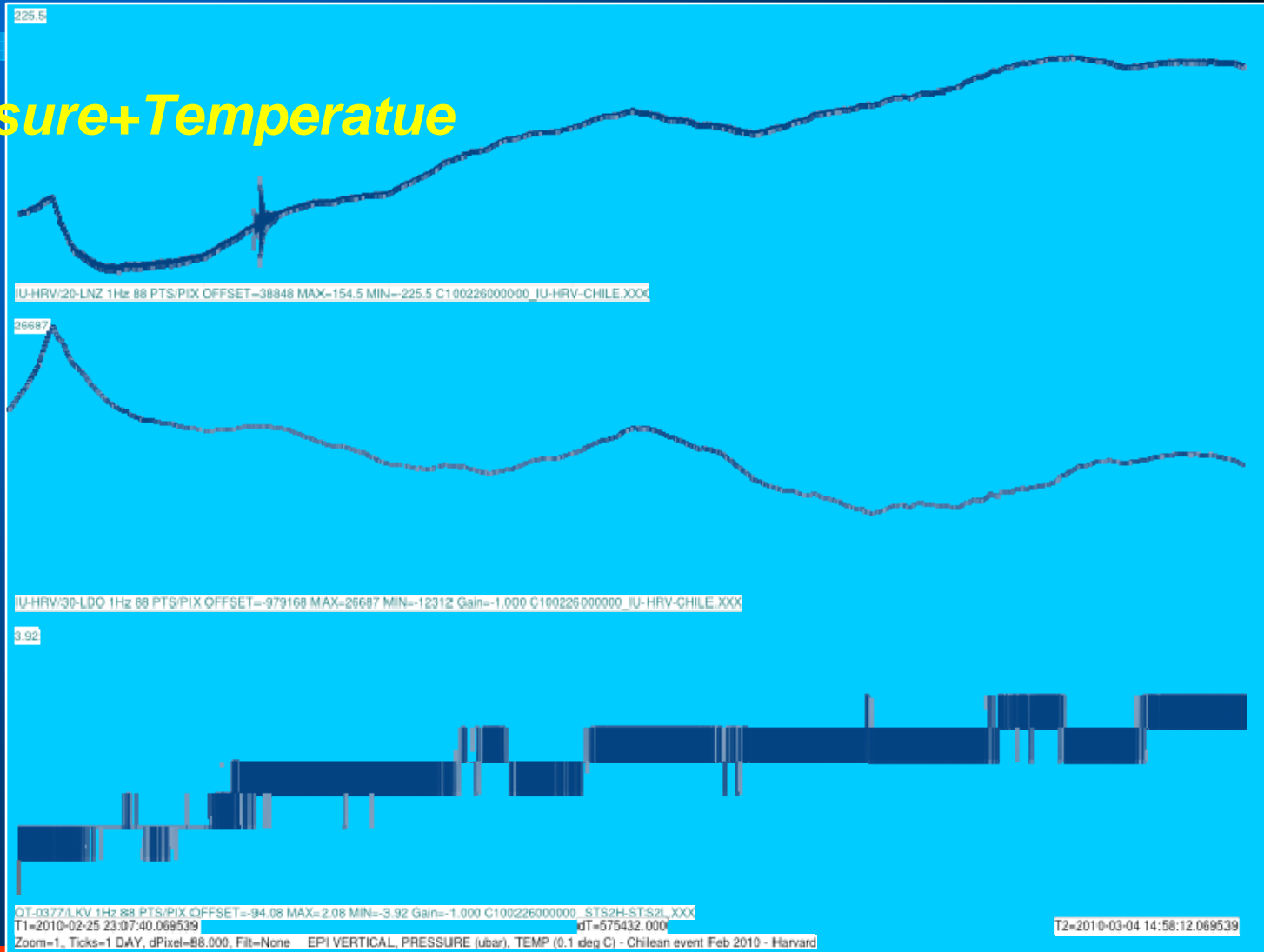


Environmental Processor

- *DSP-enhanced MEMS barometer*
- *0.1 deg Temperature*
- *Internal Humidity*
- *Optional 1 or 3-channel 24-bit “expander” channels up to 40sps*
- *Interface to SDI-12 meteorological devices, such as Vaisala WXT-520*
- *Precision Phase-Locked Timebase*
- *Serial Interface to Q330 includes precision timing and simultaneous sampling with Q330*
- *USArray TA being equipped. See the movie!*

Environmental Processor

EPI+Pressure+Temperature



Environmental Processor

6.2 Bougainville Region, Papua New Guinea

