

RVTEC 2011 – UHDAS/ADCP

UHDAS Goals

- Acquisition: reliable, robust, duplicate feeds
- Monitoring and **remote troubleshooting**
- Processing
 - Balance real-time output and post-cruise recovery
 - Minimal effort to “touch up”
 - Portable code and **documentation**
- Happy Scientists
- Happy Techs

UHDAS Installations

- **13 UNOLS ships:** Kilo Moana, M.G.Langseth, Thomas G. Thompson, Atlantis, Knorr, Oceanus, Wecoma, Endeavor, Atlantic Explorer, R.G.Sproul, Roger Revelle, New Horizon, Melville
- **3 polar ships:** Healy, L.M.Gould, N.B.Palmer
- **3 NOAA ships:** Hi`ialakai, Ka`imimoana, Ron Brown
- **1 “other” ship:** Ka`imikai O Kanaloa

Improvements since last RVTEC

- General
 - Started using elog
 - Consolidated all ship metadata
- Processing
 - **All python (no more matlab license fees)**
 - Interactive tools (editing, viewing)
- Reporting
 - Improvements in email message

Improvements (continued)

- UHDAS Installation
 - PXE network installer
 - More automated (more work to do)
- Documentation
 - Improved organization
 - Updated to include
 - installation for Python processing
 - Processing with new Python code

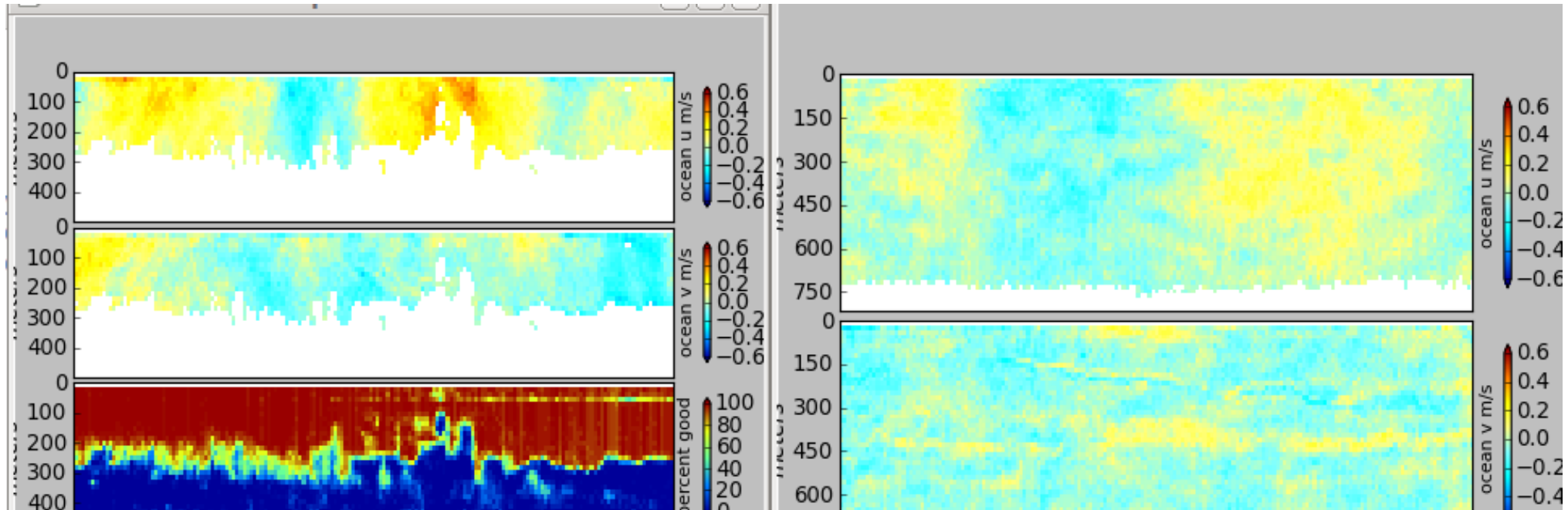
Improvements (continued)

- Processing VmDAS Data (RDI's Acquisition system)
 - Windows installation of Python processing
 - VmWare virtual machine (Ubuntu processing)
 - Python processing of LTA and ENR data
 - Evaluation tools improving (work in progress)

Installations since RVTEC

- Update to Python Processing:
 - nbp, lmg, en, km, kn, mv, nh, rr, ka, hly, kk
- New UHDAS Installations
 - Sproul (NB300) replaced DAS2.48
 - Langseth (new ADCP)
- New Instruments
 - Temporary only: Oceanus and Melville (WH300)

Dramatic Improvement Award: Healy



- Range increased (doubled)
- Electrical interference greatly reduced

Best cruise name

“hijules”

2011/09/04 20:40:02
rigel 2.6.24-26-generic

Current cruise: hijules *** not logging ***

---- heading correction ----

not logging: no heading correction calculated at this time

----- uptime -----

20:40:02 up 180 days, 22:35, 2 users, load average: 0.08, 0.02, 0.01

----- ntpq -p -----

| remote | refid | st | t | when | poll | reach | delay | offset | jitter |
|----------------|-------|----|---|------|------|-------|-------|--------|--------|
| *cuckoo.wecoma | .GPS. | 1 | u | 387 | 1024 | 371 | 0.421 | 6.405 | 0.800 |

Problems

- Minor
 - Ashtech (as usual)
 - Data feed failures (gyro, gps)
- Unexpected time sinks
 - Temporary instrument installations (require calib)
 - Windows users trying to install CODAS
 - Evaluation of pathological VmDAS datasets

Expectations for 2012

- Update rest of the ships to Python processing (try)
- 1 new installation (hope)
 - Pt Sur
- Challenge: new OS version in April
 - Serial ports
 - Software libraries/compatibility
- Work with R2R+NOAA regarding ADCP data

Continuing Request: Keep us in the loop regarding

- New ADCP (requires configuration, calibration)
 - Includes special needs by Science
- Changes in serial feeds
- New attitude devices (we like to evaluate them)
- changes in networking
 - route to ship
 - infrastructure on ship

Protocol

- Always run “End Cruise” before archiving
- If rsync (regular backup)
 - **ALWAYS** use complete cruise name

Final request

... as always:

Send your needy scientists to Jules

KICDAS

- **K**nowledgable
- **I**nteractive
- **C**ollaborative
- **D**ata
- **A**cquisition
- **S**ystem

How Scientists View Each Other

undergraduate

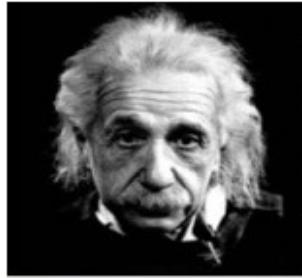
PhD student

postdoc

PI / Professor

technician

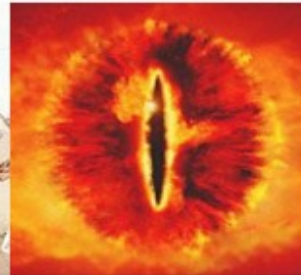
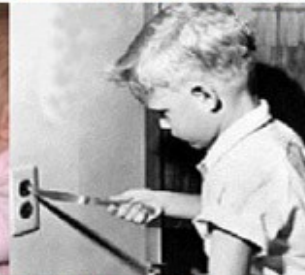
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undergraduate



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PhD student



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