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

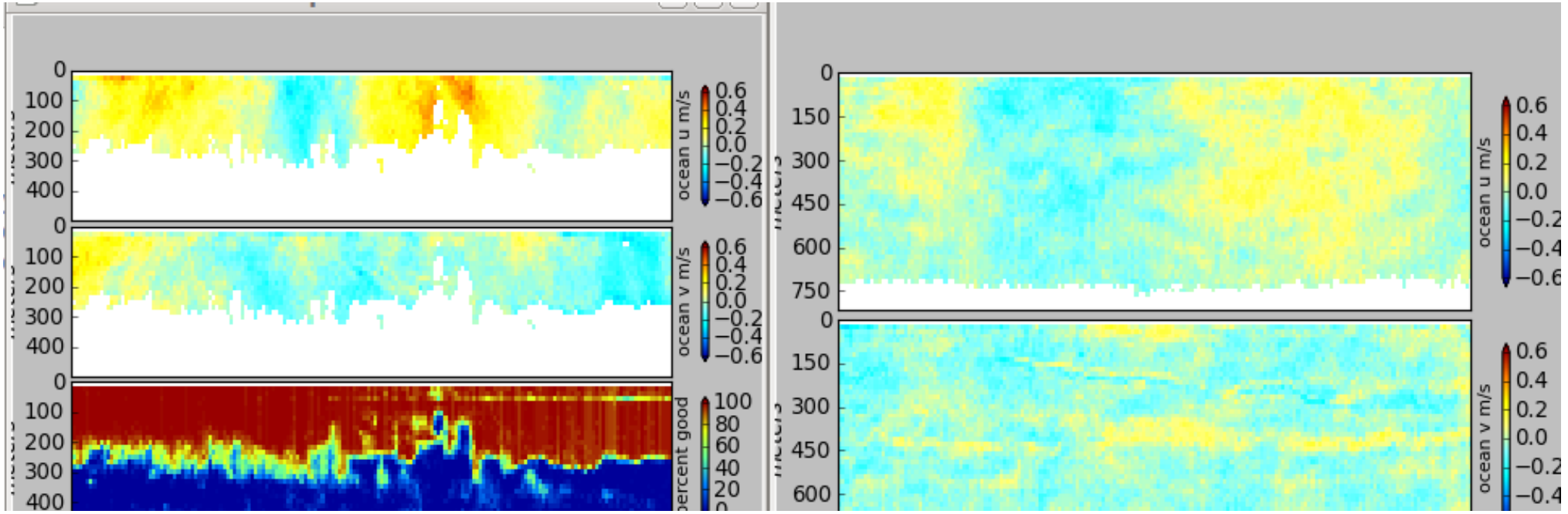
Improvements (continued)

- 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

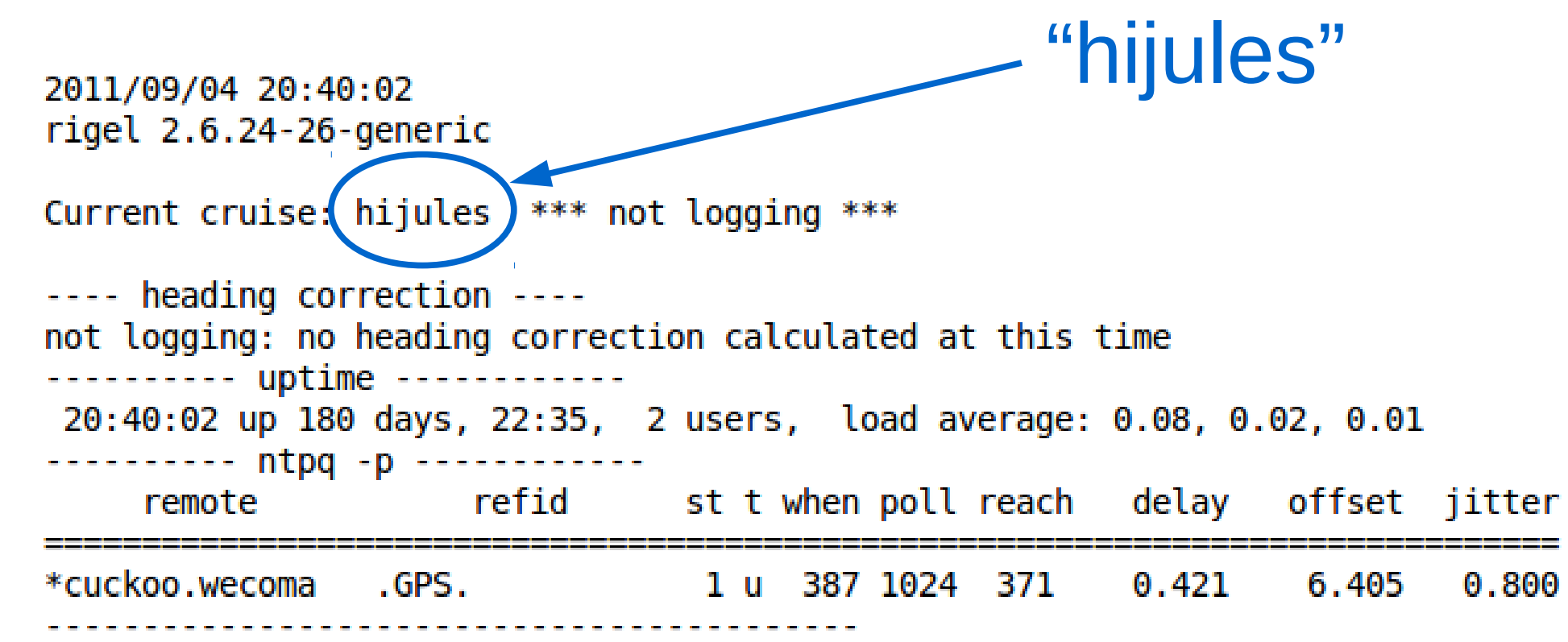
- Update to Python Processing:
  - nbp, lmg, en, km, kn, mv, nh, rr, ka, hly, kk
- New UHDAS Installations
  - Sproul (NB300) replaced DAS2.48
  - Langseth (new ADCP)
- New Instruments
  - Temporary only: Oceanus and Melville (WH300)

Dramatic Improvement Award: Healy



- Range increased (doubled)
- Electrical interference greatly reduced

Best cruise name



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