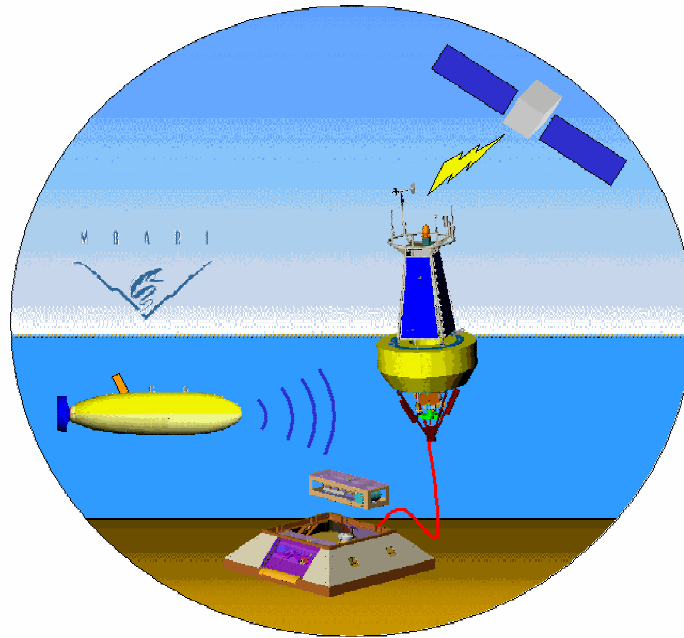


Instrument Puck and SIAM Design Review



November 17-18, 2003

Review agenda

- Monday AM: Instrument pucks
 - Plug-and-work, puck concepts
 - Hardware and software design
 - Demonstration of plug-and-work mooring instruments
 - Discussion with instrument vendors

Review agenda

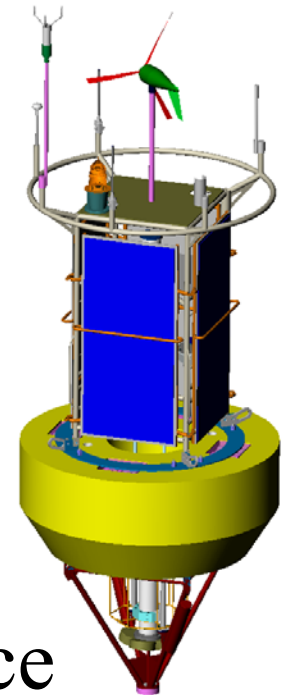
- Monday PM - Tuesday AM: SIAM
 - Development strategies, requirements
 - Architectural overview
 - Data acquisition, logging, metadata, telemetry
 - User interfaces, transition to operations
 - Power management, event propagation
 - Multi-node architecture, fault-tolerance

Review forms

- Please make notes on slide outline forms
- Put your name on your paper
- Indicate on paper if you'd like a copy
- We'll collect notes following puck review and SIAM review

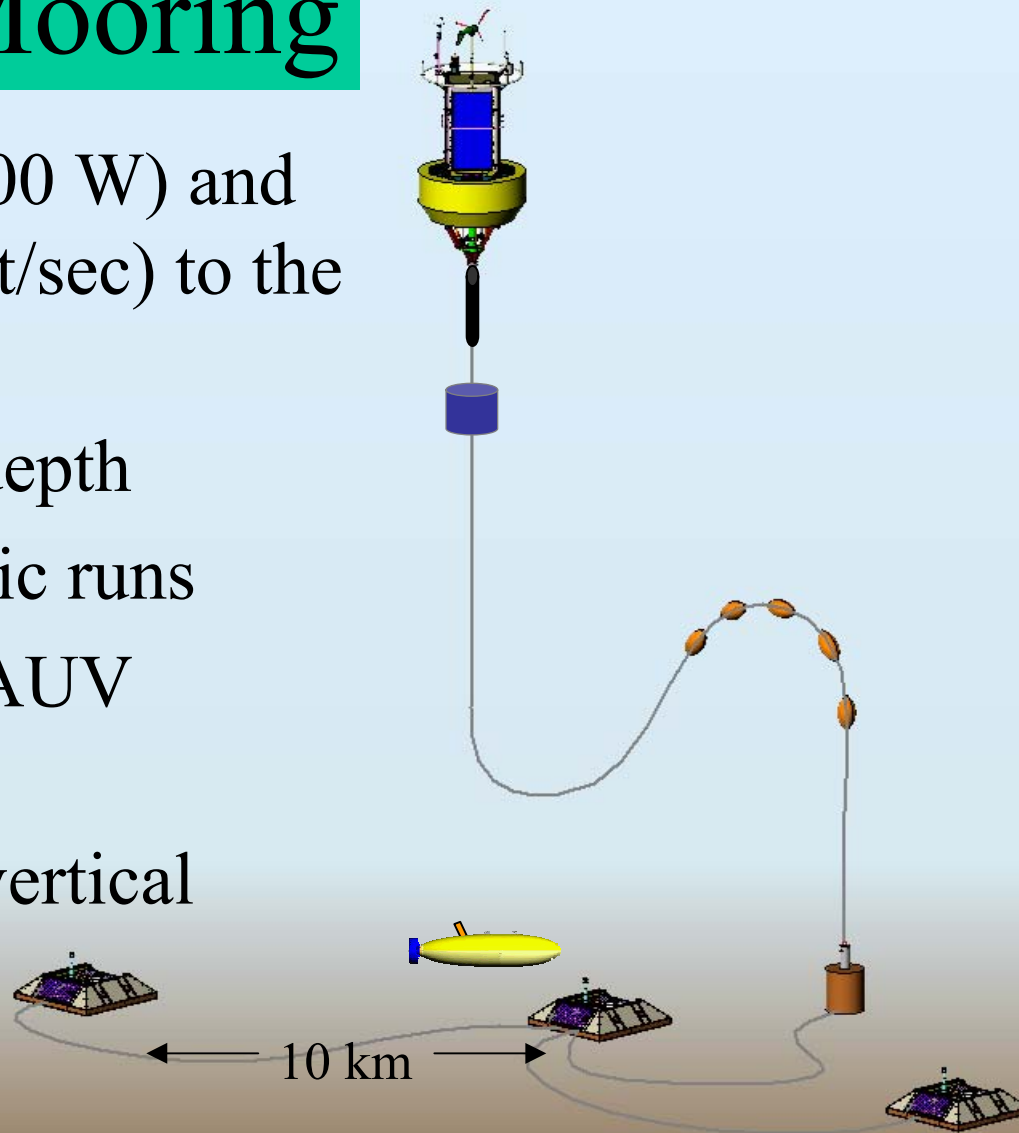
MOOS Mooring Project

- Multi-disciplinary science platform
 - Air-sea interface to sea-floor
- Near real-time telemetry to shore
- Event response
- Long-duration, high-availability
- High power and data rate from surface to seafloor



MOOS Mooring

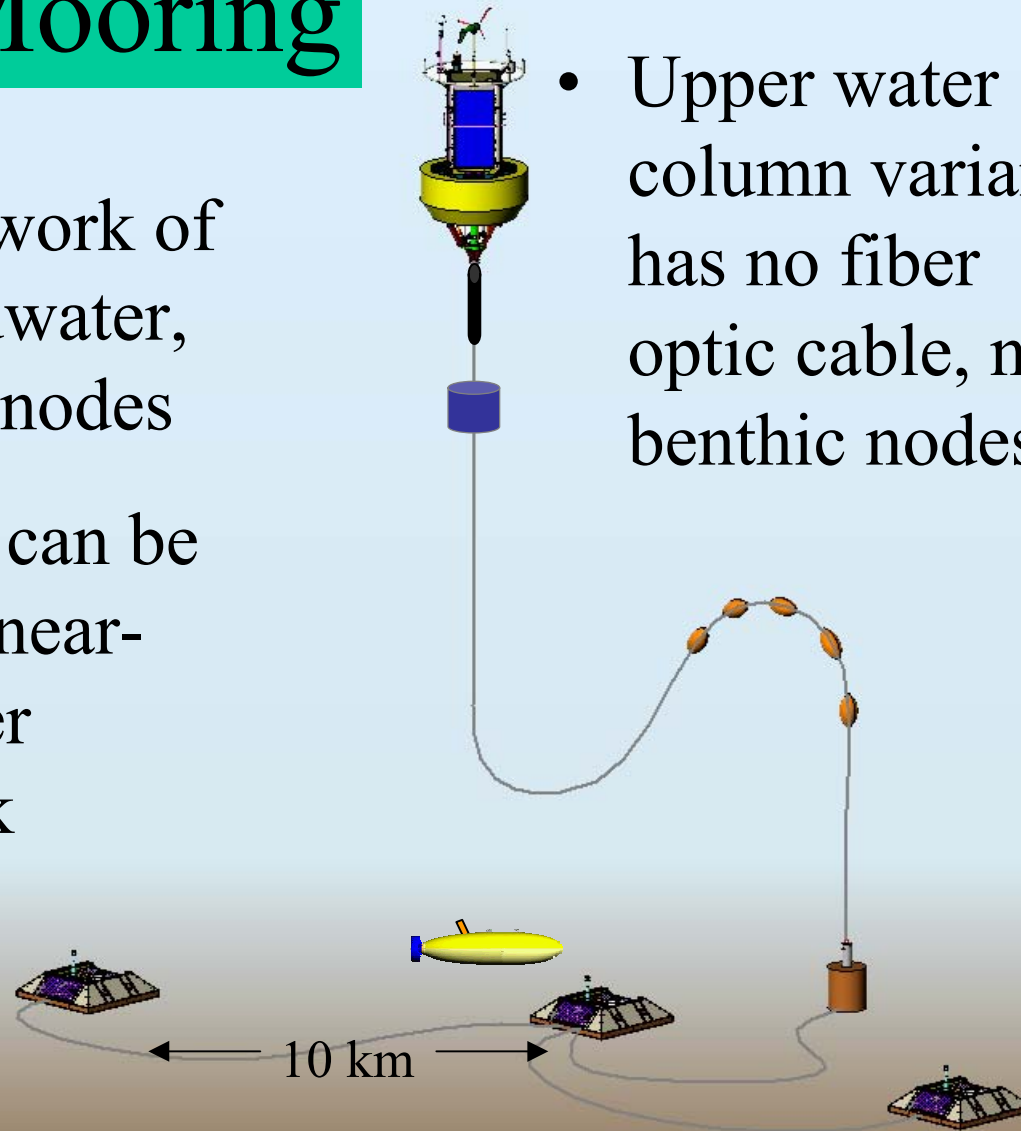
- Power (20-100 W) and data (10 Mbit/sec) to the seafloor
- 4000 meter depth
- 10 km Benthic runs
- Support for AUV docking
- Support for vertical profiler



MOOS Mooring

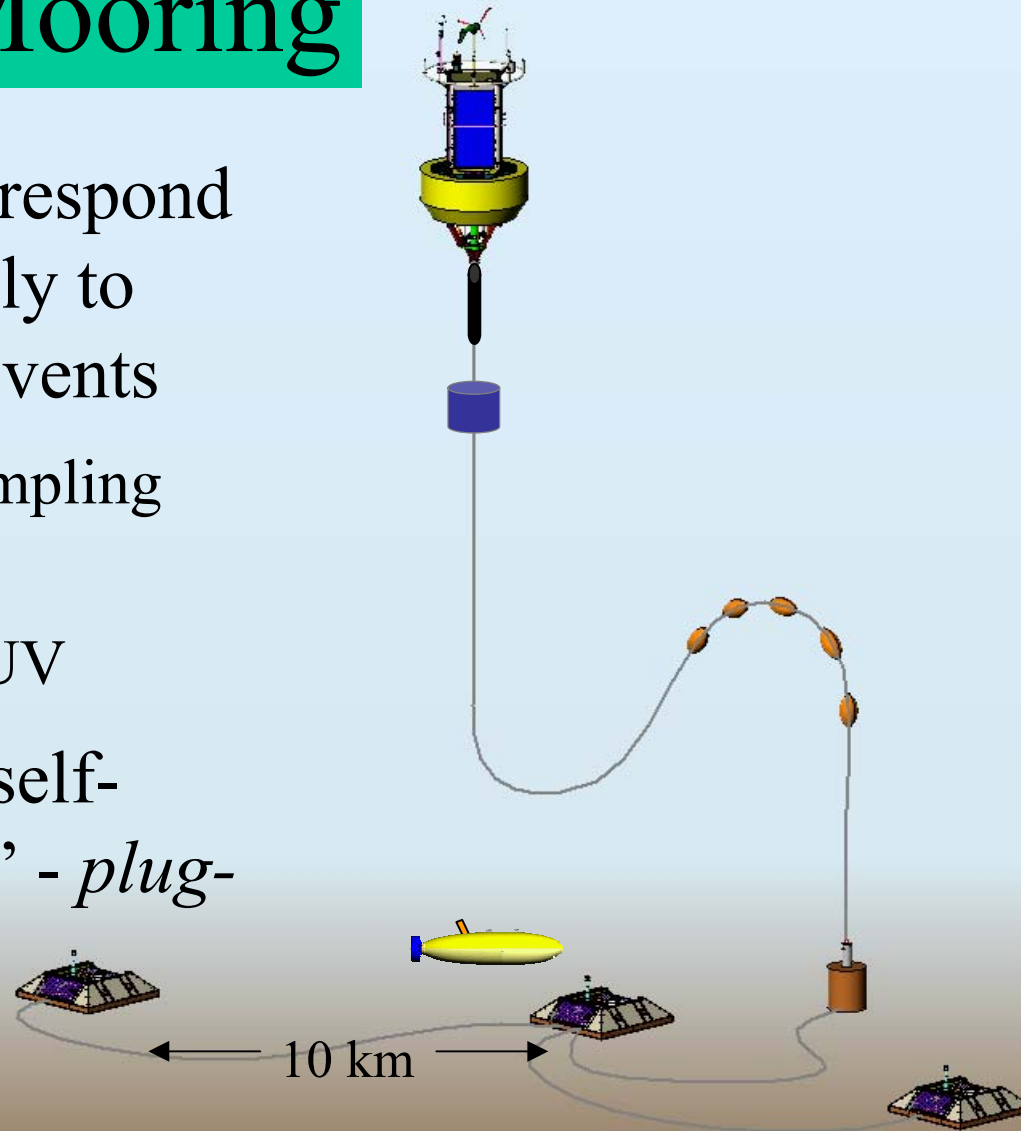
- Moored network of surface, midwater, and benthic nodes
- Instruments can be accessed in near-realtime over wireless link

- Upper water column variant has no fiber optic cable, no benthic nodes



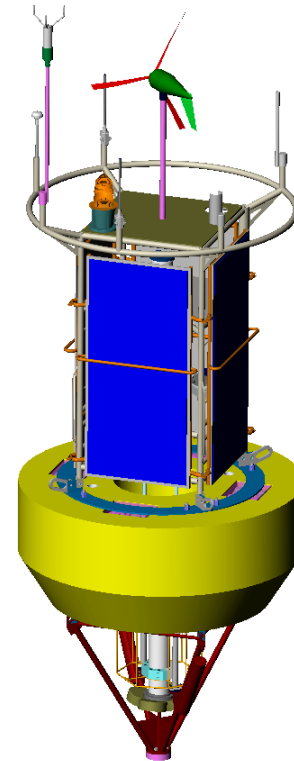
MOOS Mooring

- System can respond autonomously to interesting events
 - Modify sampling strategies
 - Launch AUV
- Nodes are “self-configuring” - *plug-and-work*



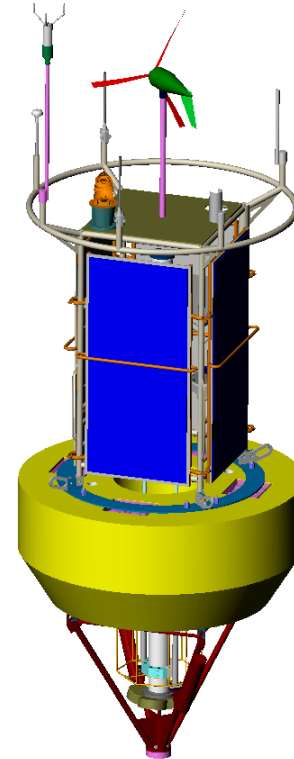
SIAM project

- *Software Infrastructure and Applications for MOOS*



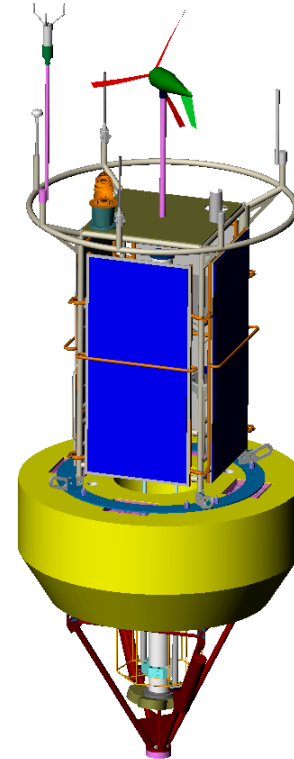
SIAM deliverables

- *Plug-and-work* self-describing instruments
- Autonomous mooring management
- Data acquisition and onboard logging
- Remote instrument control



SIAM deliverables

- Utilities for system integration, deployment, maintenance
- User interfaces for instrument and mooring access



SIAM deliverables

- SIAM does not include shore-side database
- SIAM provides well-defined interface to telemetry
- See MOOS *Shore-Side Data System* project

