Naval ISR Capabilities

- UxS provide added capacity and capability “from the sea” to current force structure
- Have shown tremendous maturity in UAVs
- UUVs are the next challenge
  - Strong S&T efforts across a number of focus areas
  - Time to “pull it together” both technologically and operationally
  - Need ONR’s help to get the “front end” technology effort mature
  - Not necessarily entire end-to-end solutions, but they must be integrated
- Need to keep getting vehicles wet and build reliability!
High-Level Direction

• **Unmanned Vehicles** are SECNAV’s No. 2 Priority

• **CNO Direction: Move Boldly...**
  – Into **Unmanned**, machine autonomous technologies
  – Creating a Fully-Integrated Intel, C2, Cyber & Networks Capability
  – Improve **sea-based** mid-range **unmanned ISR** capability
  – Sustain PR-11 increases in long-range persistent **sea-based unmanned ISR and strike**

• **CNO Aspirations**
  – **UUV “Fleet”** by the end of the decade
  – **Fund UUV Power & Endurance** first then fund UUV Sensors, C3, Networks and Autonomy
UUV Technology Needs

• **Mission Endurance**
  – Long endurance energy (weeks to months)
  – Reliability
  – Survivability

• **Autonomy**
  – Platform independent (potentially shore based)
  – Threat detection & avoidance
  – Onboard information processing

• **Communications**
  – High bandwidth
  – Connectivity on demand

• **ASW sensors**

**Greatest UUV Technology Need is Energy Sources Which Enable Multi Week Missions**