

NDSF LBL Navigation Upgrade

- Recap Status
- Accomplishments to Date
- Immediate Plans



Status of Navigation Upgrade

- **Status as of last update (May '07)**
 - New DSP system, dubbed *n456*, developed at WHOI using WHOI OSL board as basis
 - Reported on successful “breadboard” test aboard *Kilo Moana*, November '06
 - Reported on test aboard *Atlantis*
 - Some successes (PRV mode on *Medea*), some issues (survey, *Jason* fixes)
 - Plan was for *Ron Brown* tests



Status of Navigation Upgrade

- **Activities since last report**
 - Initial 2007 tests on *Ron Brown*
 - *Jason* trip on *Atlantis*, August '07
 - n456 used exclusively for survey and PRV mode
 - Benthos 455 never used
 - *Jason* trip on *Kilo Moana*, Sep/Oct '07
 - n456 used exclusively, including relay mode
 - Benthos 455 never used



Status of Navigation Upgrade

- **Current Status**

- Prototype has proven itself during field trials
- Production board (16 channels, release codes) developed, tested in lab

- **Current Issues**

- Shipboard noise (power?) on *Atlantis*
 - Worked satisfactorily with battery
- Software emulation of Benthos 455 still in place
 - Software development necessary—LBL, survey in place, relay mode needed, changes for ROV use



Status of Navigation Upgrade

• 2008 Plans

- Implementation/testing on *Atlantis* in spring during engineering dive
- Full implementation for ROV use when new vans “debut” (*Atlantis*)
- Replacement of in-hull *Alvin* navigation system:
 - Timing
 - Packaging
- Integration into multiple vehicle navigation efforts
- ONR DURIP USBL system proposal submission

