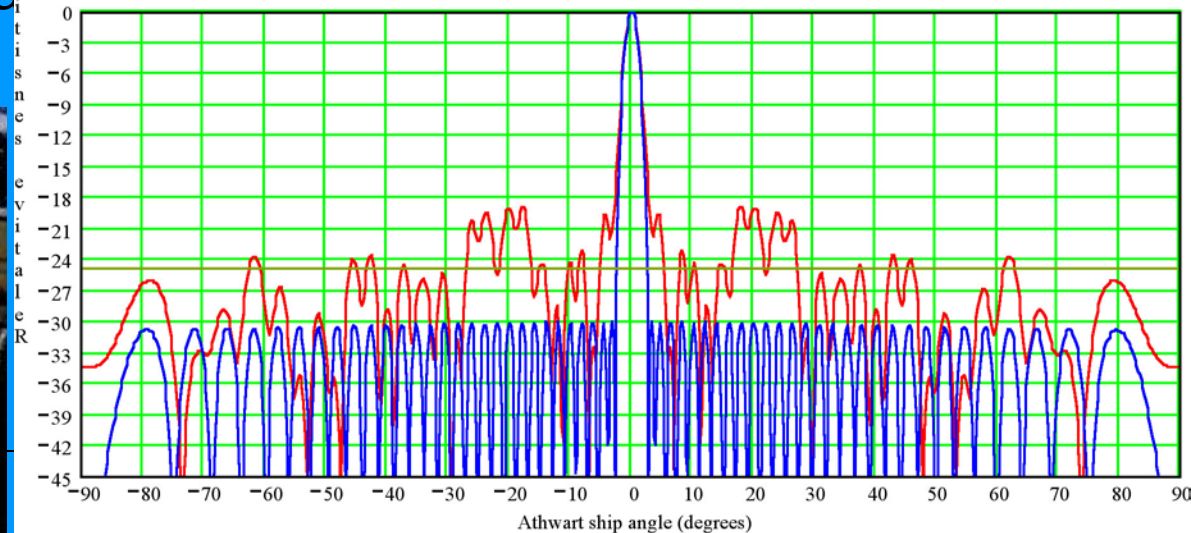
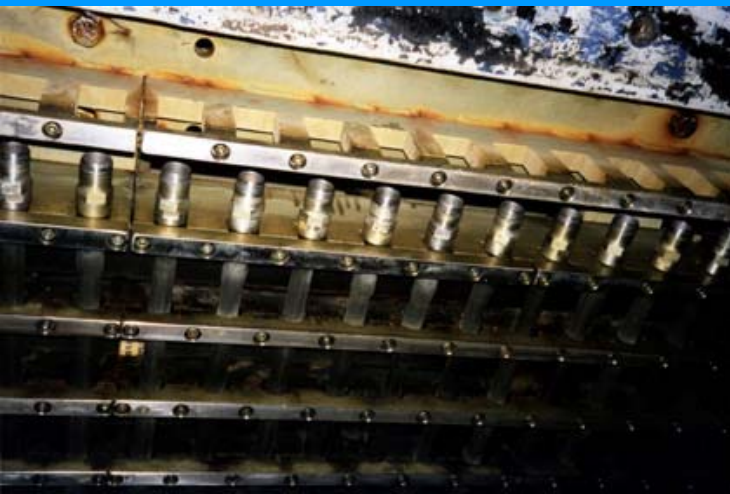


Healy Multibeam Options

- Current status
- Short Term (this year)
- Long Term (> 3 years?)

Summer '03 Underhull Status

- At least 17 failed hydrophones (found annual check)
 - Probably happened during HLY02 or DF03
- Multibeam and subbottom profiler head tanks non-functional
- Remedial effort in a few weeks
- Must understand the failure mode(s)
- Possible failure modes:
 - Manufacturing failure
 - Window strength
 - Exceptional event
 - ?
- Need post remedial evaluation



Hydrophone Array Beam Pattern Athwart Ship

Dry Dock (now)

- Replace failed hydrophones/cables
- Check hydrophones, projectors and cables
- Check window (replace if necessary)
- Evaluate failure mode(s)
- Fix multibeam head tank system
- Fix subbottom profiler head tank system
- Offset survey

Current Integration status

- Heading and attitude reference needs to be replaced
- Navigation input is unstable (bridge system issues)
- Proposal has been submitted via Fastlane
- Ship's onboard processing system for multibeam is marginal and not spared

Longer term multibeam issues

- The current system does not work well in water depths less than ~250m (much of Healy's turf)
- Manufacturer is unable to supply some spares due to component availability
- There have been response time issues for vendor support
- The current system is currently a full generation out of date now and likely to be at least two generations old by the time it is updated

Options

- Upgrade the existing sonar (SB2112)
 - Incrementally
 - In one shot
- Replace the existing sonar
- Issues for either:
 - Changes to the underhull
 - Strength of windows
 - Integration with ship's systems
 - Re-training
 - Operational support