Appendix X

The Academic Research Fleet Review: Committee Membership

Roland Schmitt, Chair

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Charge from Assistant Director, Geosciences

- **Review and evaluate the current Academic Research Fleet**
- **Review and evaluate management structure, existing capabilities and services and possible future changes**
- **Recommend actions to improve the organization, management and cost effective operation of the fleet**

Academic Fleet Review Report

"The goal of any research facility should be to find the optimum path to satisfy the needs of the research enterprise."

Major themes

- UNOLS system should be retained with increased emphasis on science support and continuous quality improvement
- technology and facilities support requirements for science programs continue to evolve and modify patterns of use of research vessels, including need for special capabilities from non-UNOLS institution ships
- capability, reliability, and technical support for shared-use shipboard systems are major user concerns
- quality-based systems for ship operations, instrumentation support, and technical services should be adopted fleet-wide, along with rigorous evaluations of performance
- entire UNOLS and operator system needs to be infused with an orientation toward continuous improvement and formal quality control programs
- ***UNOLS appears to be a well-suited vehicle to institute and evaluate such efforts in conjunction with the federal agencies.***

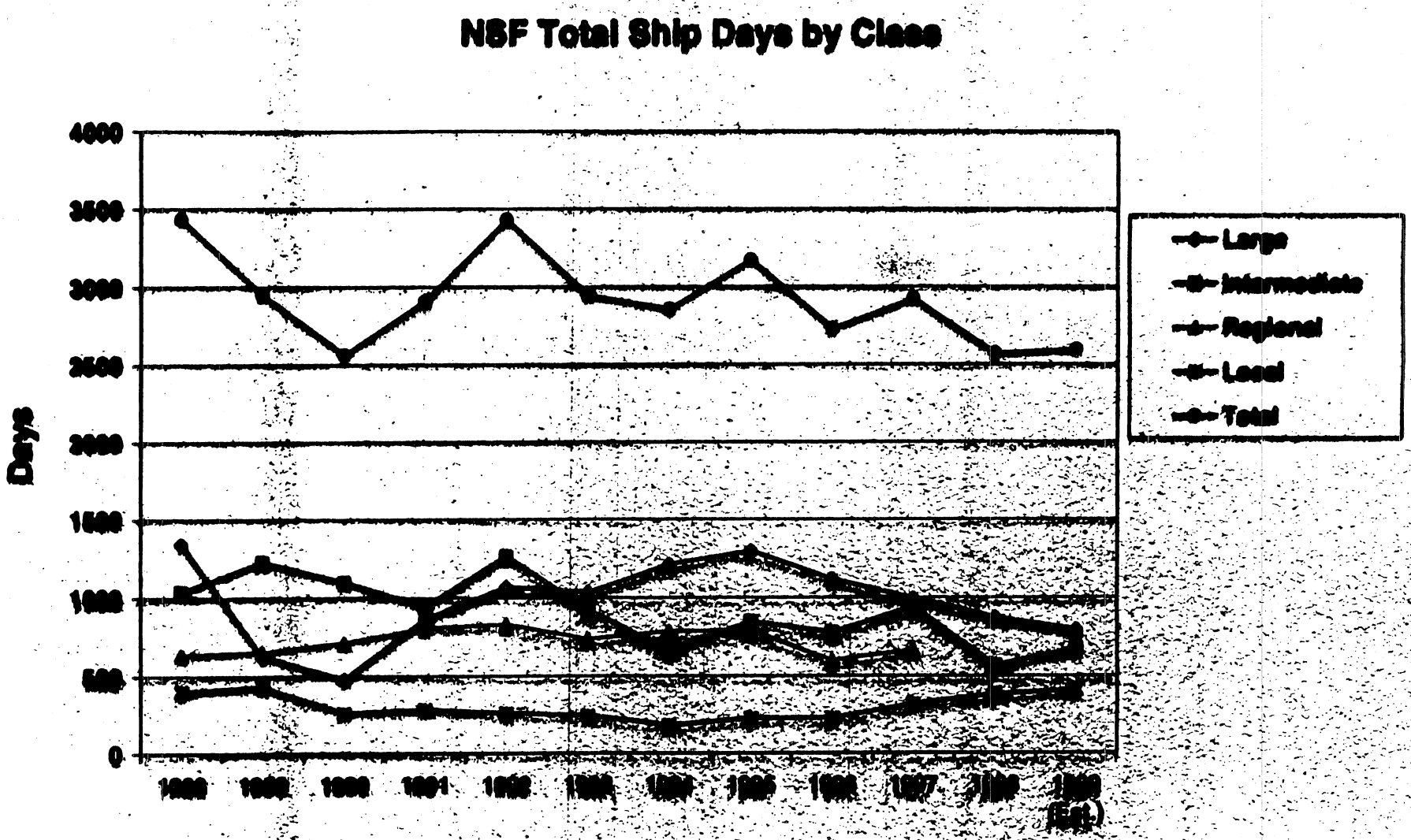

Figure 8. UNOLS annual operating days by ship class to support sea-going projects sponsored by NSF

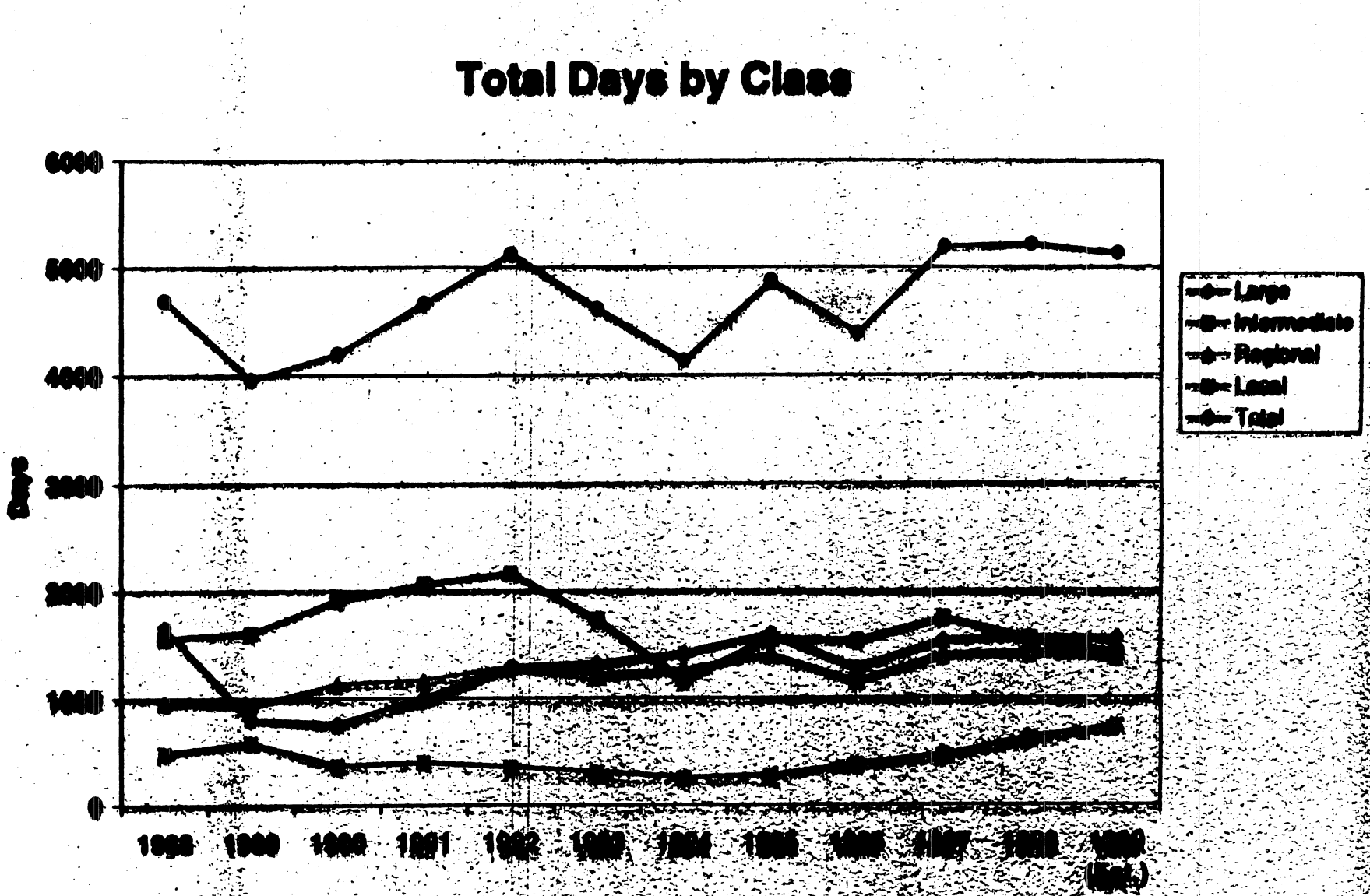

Fig. 7 UNOLS annual operating days by ship class to support sea-going projects by all research sponsors

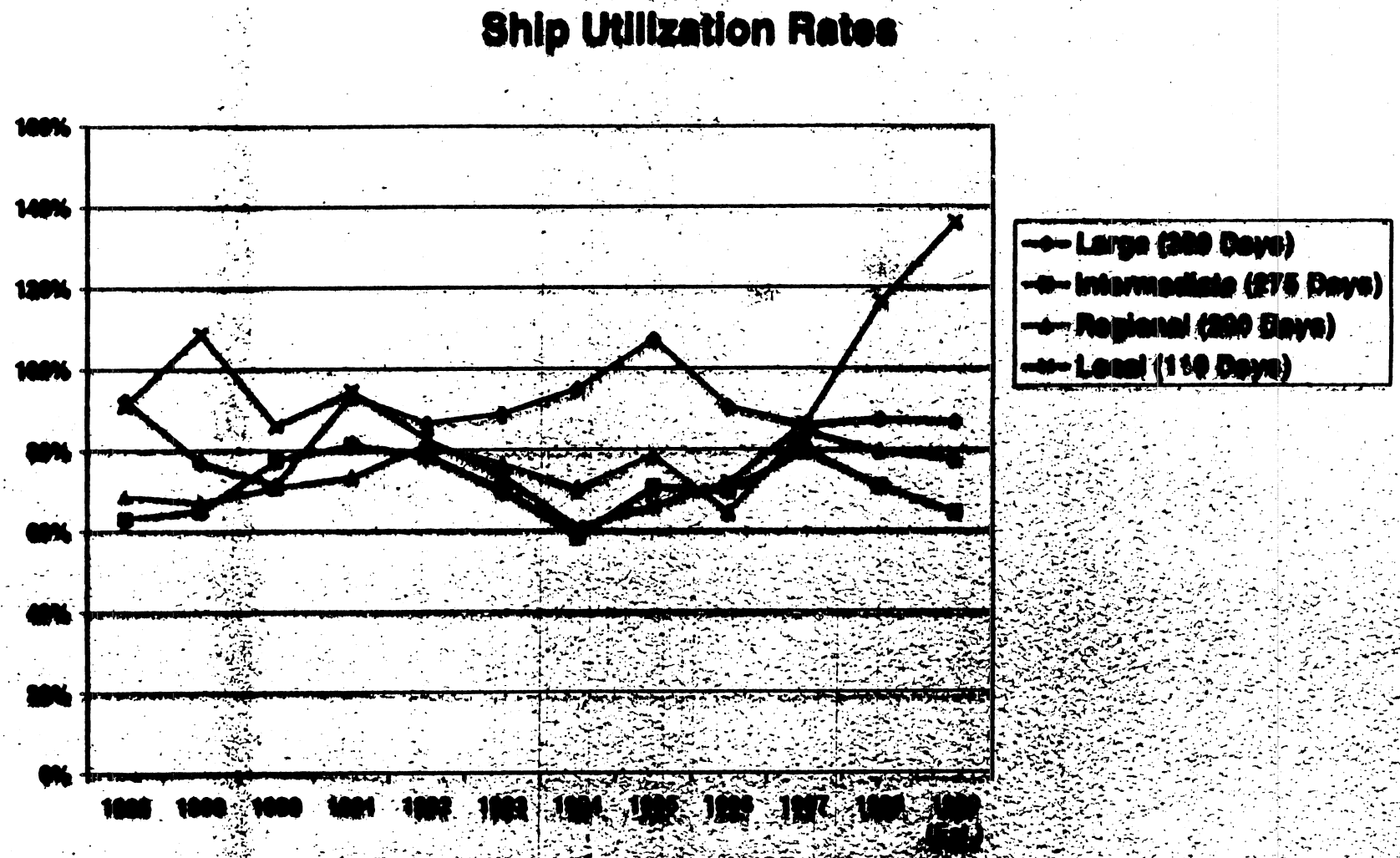

Figure 8. Academic Fleet Utilization as percentage of NSF-recommended standard operating year

Academic Fleet Review

Principal Findings:

- **Current practices provide excellent access to the sea for U.S. researchers**
- **UNOLS services are meeting community needs and costs are comparable to other government and commercial operators.**

Recommendation:

- **The UNOLS system should be retained.**

Academic Fleet Review

Programmatic findings:

- **Potential for near-term period of reduced use of UNOLS fleet by NSF grantees**
- **Need for strong continuing program of new technology introduction, improvement of existing capabilities, and more systematic approach to maintenance and upgrades**
- **Need to enhance quality control, training and safety procedures, and develop even higher standards for shared use facilities.**

Recommendation:

- **Launch a significant campaign to upgrade and strengthen the fleet to prepare for increasing technological sophistication and improve future productivity and quality of fleet operations.**

Academic Fleet Review

Operational findings:

- **Continue practice of competing the management of the UNOLS Office**
- **Need for specialized capabilities are met in special circumstances from outside the UNOLS system**

Recommendations:

- **Use a cooperative agreement for support of the UNOLS Office to ensure necessary management oversight.**
- **Consider a trial including some commercial ship operators as UNOLS non-member operators to provide unique fleet capabilities.**

Academic Fleet Review

Planning Findings:

- **Ocean scientists must assess the future needs and opportunities of the field to establish priorities. A broad vision is essential to anticipate future fleet requirements.**
- **Federal agencies must improve long range planning for facilities with twenty to thirty year life spans, beyond the scope of NSF and UNOLS alone.**

Recommendations:

- **NSF must accelerate and expand efforts to articulate a broadly-based vision for the future of ocean science and technology**
- **Federal agencies sponsoring research in oceanography should develop a long range plan for modernization and composition of the oceanographic research fleet that reaches well into the 21st century.**

Agree implementing Committee recommendations will enhance operations of the academic research fleet.

Initial actions

- **Developing new cooperative agreements for ship operators, with increased emphasis on quality control and standards.**
- **Revising guidelines, reviews and management of shared-use instrumentation to improve technology.**
- **Sponsoring workshops focused on emerging technology, specialized capabilities and improvements to basic systems.**
- **Recompeting UNOLS Office award as a cooperative agreement.**

Developing actions

- **Acceleration and expansion of science planning activities**
- **Long range planning for the modernization and composition of the fleet**
- **Trial participation of commercial operators to provide unique capabilities**