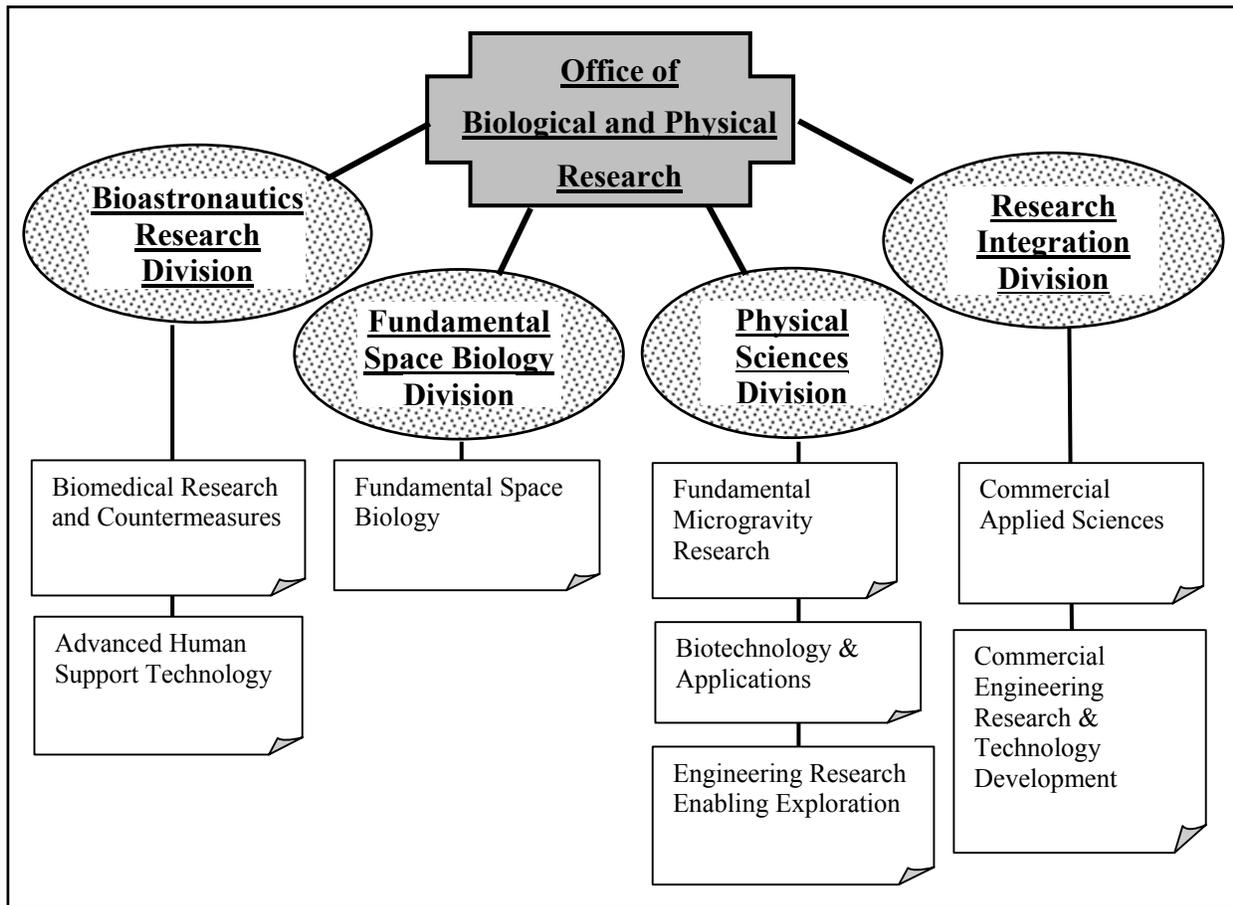


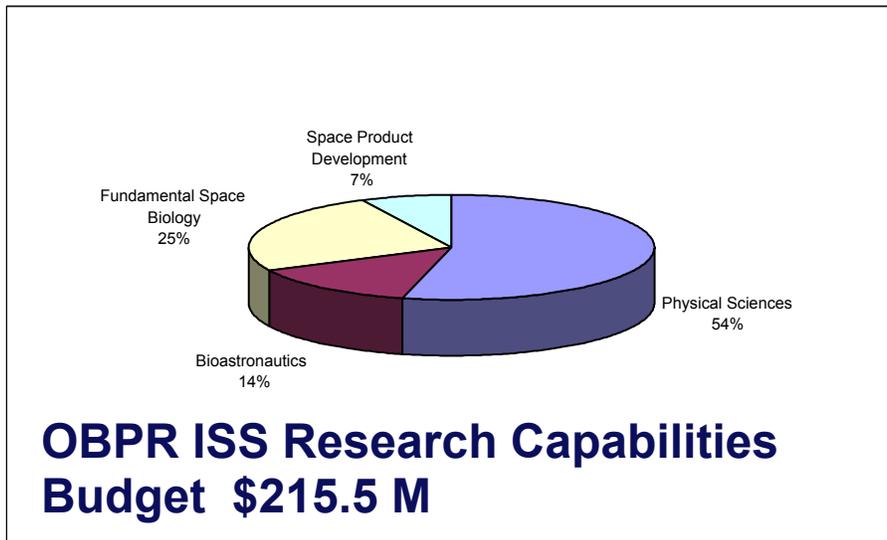
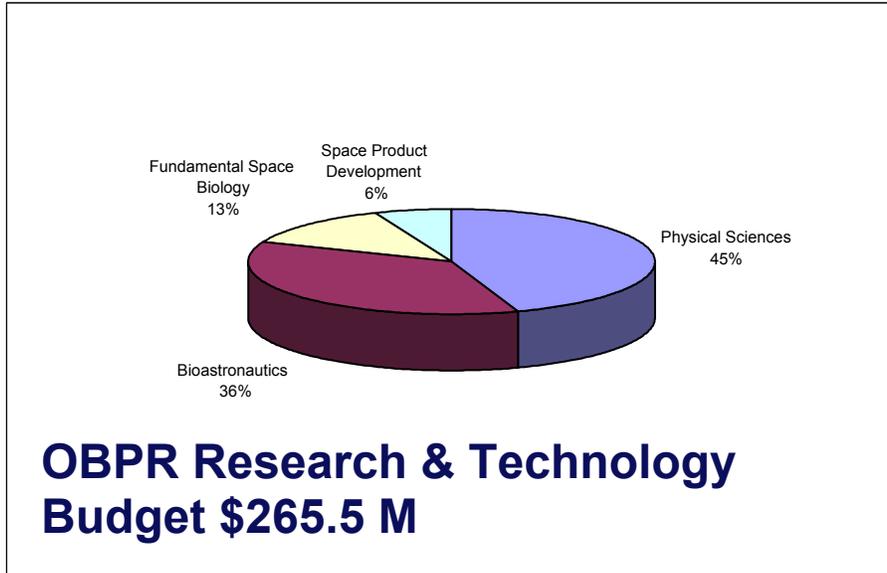
4.0 ReMAP Organization and Process

OBPR Divisions and Research Thrusts

NASA presented the research of the 4 Divisions of the Office of Biological and Physical Research (OBPR) to the Task Force as comprising 8 primary theme areas, integrated organizationally as shown below.

- ReMAP Task Force members focused their activities on their areas of expertise. The expertise of Task Force members is shown on the list of panel members on page 42.

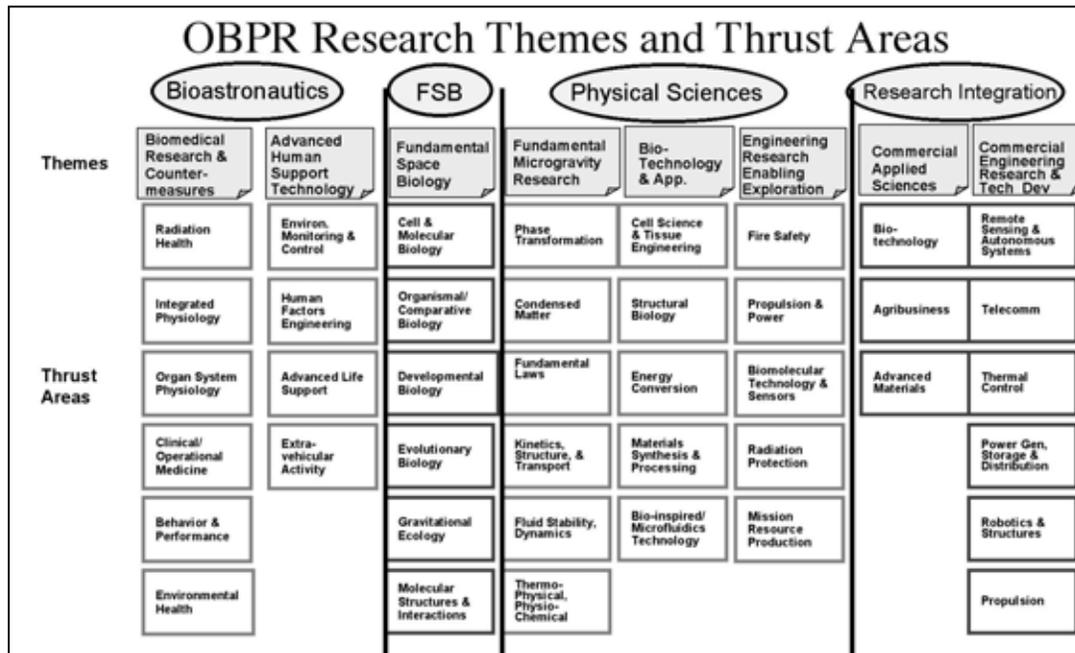




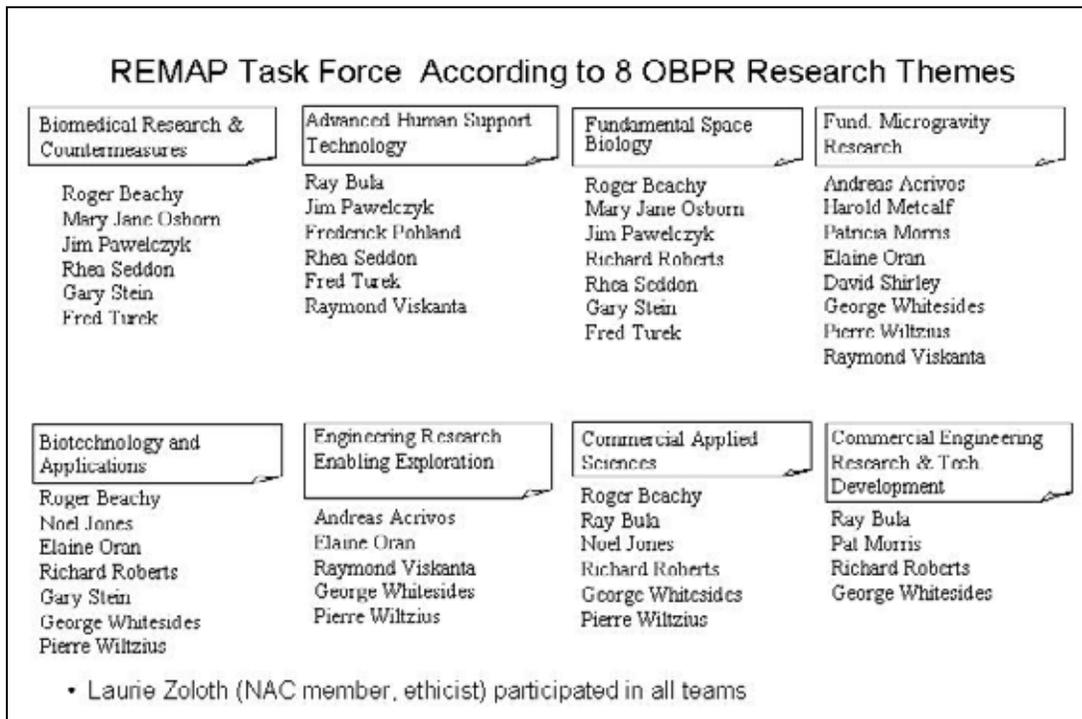
Relationship of ISS Budget to OBPR Budget

- The OBPR Research and Technology budget is a separate Enterprise allocation within NASA.
- The Congressionally mandated annual budget for ISS includes the OBPR ISS Research Capability Budget that supports the research hardware development.
- ReMAP did not review budgetary issues, though it did note where there were gaps in the implementation of high priority research (i.e., plant and animal habitats).
- OBPR research funding includes ISS-based research as well as research implemented on the shuttle, and the ground. ReMAP did not review this level of budget detail when deliberating the research areas.

Alignment of Task Force Expertise with OBPR Divisions and Research Thrusts
 NASA presented the research of the 8 theme areas as comprising 3-6 “Research Thrusts” integrated organizationally and programmatically, as shown below.



To best use Task Force expertise to prioritize research, members broke into Discipline teams according to their self-identified expertise in each of the 8 Research Themes, as follows:



Prioritization within and among research themes:

- The OBPR program background, objectives, and descriptions of the research thrusts and theme areas were provided to the Task Force.
- OBPR developed a proposed set of criteria for evaluating OBPR research programs and presented this to the Task Force at the first meeting. These criteria were vetted by the Task Force and were agreed to be an appropriate starting point for evaluation of research priorities. The Task Force incorporated all of the above into their prioritization process, but went a level further in deciding the final priorities. Additional considerations for distinguishing between high, medium, and lower priorities were articulated by the Task Force (see Appendix L, ReMAP Prioritization Criteria and Justification).
- Each Disciplinary Team established priorities and presented their rationale for prioritization to the full Task Force for discussion. This included presentations by individuals or small groups within the Team summarizing the Task Force perspective on previous reviews and recommendations (“meta-analysis”) of NASA’s space research program in the theme area.
- Once within-theme priorities had been identified, the Task Force, as a body, analyzed the results across theme areas and developed a set of science-driven priorities for OBPR research.

The Task Force analysis was performed without regard to ISS facility constraints, in keeping with instructions from the Administrator.

- Following the establishment of priorities, ReMAP was provided with an analysis of the extent to which NASA can address the research priorities given the current and planned ISS capabilities. This information was not independently evaluated by ReMAP. While it did not affect ReMAP priorities, it was taken into account in the findings and recommendations.

The Task Force was charged to identify the best science that could be done by OBPR on the ISS and other platforms, and used the information made available in reports from previous review committees available for each of the OBPR divisions.

- The Task Force limited its analysis to the existing OBPR research portfolio.
- The Task Force noted the unique features of ISS (human tended, long duration [> 1 month], exposure to microgravity) and identified research that can only be conducted on the ISS.
- The Task Force noted that each OBPR division had been reviewed frequently and recently. Importantly, serial reviews of each division were consistent in their findings and recommendations lending confidence to ReMAP conclusions based on this information.

The Task Force process for prioritizing the research program of OBPR and ISS was informed by

- The Terms of Reference (see Appendix A) describe the charge given to the ReMAP Task Force.
- The NASA Administrator’s address to the group at the first and third meeting emphasized that the ReMAP Task Force should focus on defining the science research priorities without regard to budgetary and facility constraints.

Inputs to the Task Force

- **Structured Briefings:** Reviews of NASA vision and mission; OBPR research programs, priorities and criteria; background on the International Space Station; results of the International Space Station (ISS) Management and Cost Evaluation Task Force (IMCE) review; OBPR implementation analysis; OBPR science metrics presentation, Meeting with the International Partners (IP) and presentation to the committee by Peter Voorhees, Chair of the NRC Committee for Microgravity Research.
- **Formal Reports:** External research review reports (primarily studies conducted by the NRC) were made available to the Task Force. These previous reports played a key role in ReMAP deliberations. The committee received some of these reports from OBPR prior to the first meeting. Many more reports were made available to the Task Force as deliberations proceeded. The committee relied heavily on the expertise and time invested by hundreds of members of the scientific community in generating these reports. The analysis of previous reports contributed very significantly to the findings on research priorities and recommendations.