



DIVISION ON ENGINEERING AND PHYSICAL SCIENCES
AERONAUTICS AND SPACE STUDIES BOARD

Committee on Biological and Physical Sciences in Space (CBPSS)

Disclaimer: These slides are a personal assessment of issues discussed during recent Committee on Biological and Physical Sciences in Space meetings, and should not be cited or quoted - as the views expressed do not necessarily reflect those of Committee, the SSB, the ASEB or the Academies.

CBPSS Status

- **Membership**
- **Mtgs: March 31 – Apr. 1, April 17**
- **Decadal Planning Status**
- **Top Level Issues**

CBPSS Membership

Robert J. Ferl, University of Florida (Co-Chair)

Dava J. Newman, Massachusetts Institute of Technology (Co-Chair)

Mary L. Bouxsein, Harvard Medical School

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Steven Collicott, Purdue University

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James A. Pawelczyk, The Pennsylvania State University

Marylyn D. Ritchie, University of Pennsylvania

Jessica Scott, Memorial Sloan Kettering Cancer Center

Pol D. Spanos, Rice University

Jana Stoudemire, Space Tango

James T'ien, Case Western Reserve University

Krystyn J. Van Vliet, Massachusetts Institute of Technology

Hai Wang, Stanford University

David Weitz, Harvard University

CBPSS Status

Meeting Mar. 31-Apr. 1: Spring Committee Meeting – Space Science Week

- Over 200 on-line participants, very active in chat box
- Complex symposium agenda was challenging to pull off virtually
- Day 1 Symposium “Preparing for the Future of Space Exploration: Life and Physical Sciences in Space”
- Three panels of presentations and discussions
 - Panel A focused on systems biology and precision health approaches to maintaining astronaut health during space exploration
 - Panel B looked at how physical sciences for space exploration benefits from recent advances in big data and artificial intelligence
 - ISS 20th Anniversary Panel looked at the science achievements of ISS and the future of international science cooperation in space
- On Day 2 the committee heard about SLPSA program activities and the status of both Decadal planning and the expected move of NASA life's and physical sciences to SMD



CBPSS Status

Meeting April 17: ISS National Laboratory Review and NASA Plans

- Short meeting, drew over 100 on-line participants
- Results of Independent Review Team (IRT) report on ISS National Laboratory (ISSNL), and NASA Plan plans for addressing review issues
- IRT was chaired by former CBPSS chair, Betsy Cantwell
- *Topic originally scheduled for SSW meeting, but delayed for the April release of IRT report and NASA response*
- IRT report focused on relationship between NASA and ISSNL, pointed to numerous improvements needed
- NASA is working with ISSNL to develop a new advisory process for addressing ISSNL/NASA priorities, streamlined communication channels, and a more transparent project evaluation process.
- ASGSR Board members and ISSNL representatives were invited to join the committee in raising issues for discussion at the meeting



CBPSS Status

Decadal Planning

- **Town Hall held at ASGSR meeting in November to update community on Decadal Survey planning and solicit input**
- **CBPSS website has links enabling community input to Decadal Survey planning, and these have been repeatedly publicized in the community**
- **Academies approved the Statement of Task for the Decadal Survey in March**
- **However, that charge is now being revised at NASA as part of the planned move of life and physical sciences to SMD**
- **The new charge will need to undergo the Academies approval process, and the move to SMD must also be competed at NASA before the Decadal can start.**
- **Currently, the Decadal is not expected to be initiated before the Fall.**



Top Level Issues for CBPSS

- **The transition of microgravity research from ISS to a post-ISS era continues to be a central issue**
 - **NASA planning for transition continues to mature, currently centralizing their management structure related to LEO commercialization**
 - **Commercial Crew--what will this mean for science on ISS going forward?**
- **Likely SLPSRA move to SMD is expected to bring significant changes to the program**
 - **Human Research Program will remain in HEOMD, only biology and physical sciences will move**
 - **Move from an engineering directorate to science directorate**
 - **SMD has different program alignments, planning horizons, etc.**
- **Role of ISSNL is being significantly redefined**

