



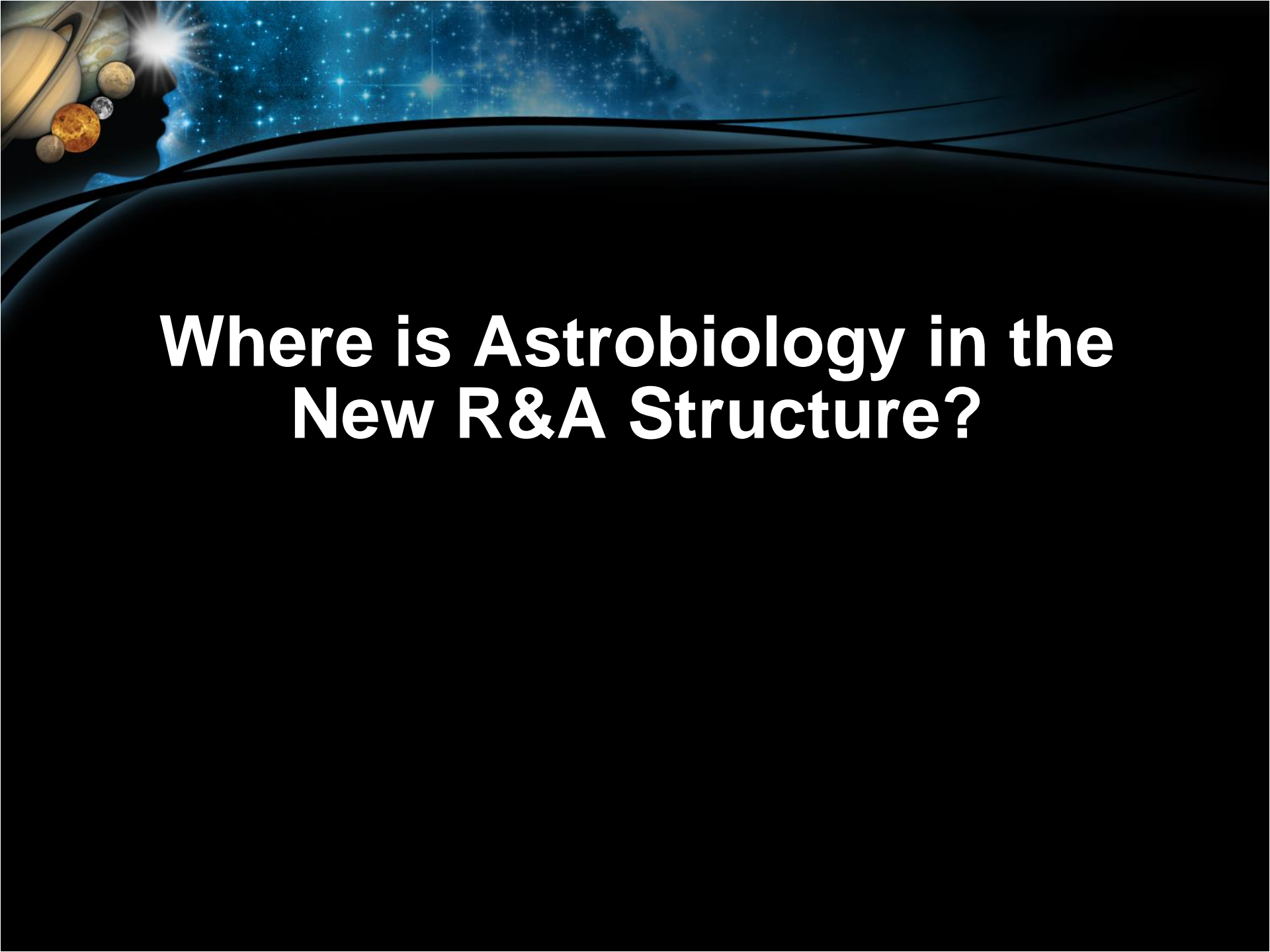
Update from NASA Astrobiology Program

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CAPS Meeting

Washington, DC 03/03/2014



Where is Astrobiology in the New R&A Structure?



New Core Research Programs

How did the Sun's family of planets, satellites, and minor bodies form and evolve?



Emerging Worlds

How do the chemical and physical processes active in our solar system operate, interact and evolve?



**Solar System
Workings**

What are the characteristics of the solar system that lead to habitable environments?



Habitable Worlds

How did life originate and evolve here on Earth and can that guide our search for life elsewhere?



Exobiology

What are characteristics of planetary objects and environments that pose threats to, or offer potential resources for, humans as we expand our presence into the solar system?



**Solar System
Observations (NEOO
& PAST)**



Emerging Worlds

Solar systems origins and formation

Topics covered by this program element include, but are not limited to:

- Protoplanetary disks
- Formation of planets and planetary systems
- Dynamics of early planets and planetary systems
- Primitive Solar System materials
- Presolar grains
- Early processes on small bodies
- Global-scale differentiation of planetary bodies following formation
- Formation and delivery of volatiles, organic compounds, and other materials to planetary bodies



Exobiology

How did life originate and evolve on Earth?

Topics covered by this program element include, but are not limited to:

- Prebiotic evolution
- Early evolution of life and the biosphere
- Adaptations for life in extreme environments
- Evolution of advanced life (Eukaryotes and multicellularity)
- Causes and biological responses to mass extinctions



Habitable Worlds

Characteristics and distribution of habitable environments in the Solar System and beyond

Target bodies for this program element include, but are not limited to:

- Mars
- Icy Worlds
- Exoplanets



Exoplanets

Cross-division program between Planetary Science and Astrophysics

Topics covered by this program element include, but are not limited to:

Astrophysics

- Investigations to detect exoplanets
- Characterization that aids in the detection of new exoplanets

Planetary Sciences

- Explain observations of exoplanets
- Understand the chemical and physical processes occurring on exoplanets
- Improve understanding to the origins of exoplanetary systems

Proposals pertaining to the conditions for habitability of exoplanets are solicited in the Habitable Worlds call.



Future of ASTEP

ASTEP

20-40
proposals/yr
\$7-14M/yr

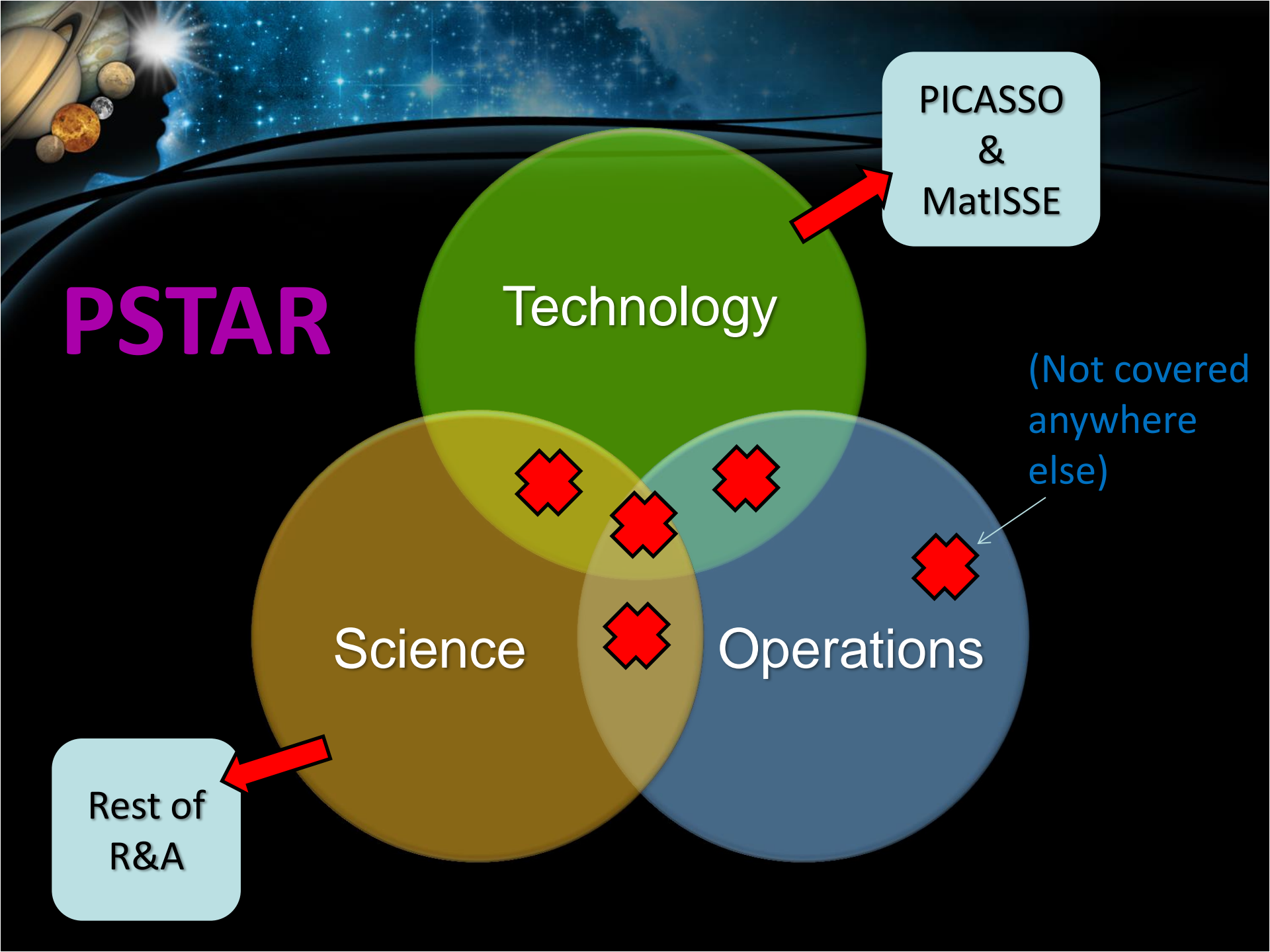


MMAMA

~30 proposals/yr
<\$1M/yr

PSTAR

Planetary Science and
Technology & Analog
Research



Current & Upcoming Solicitations

- EXOB proposals were due 14 June 2013,
 - Received 150/ selected 26
- PICASSO was offered for 1st time Due Date Sept 2013 (~100).
- ROSES-14 released in February.



CAN-7

New process for CAN-7 – two-step

Received 56 Proposals

Encourage 38

Discouraged 18

Plan on selecting 6-7 teams from CAN-7.

Any changes will maintain a multi-disciplinary institute but we want more focused, inter-disciplinary teams.

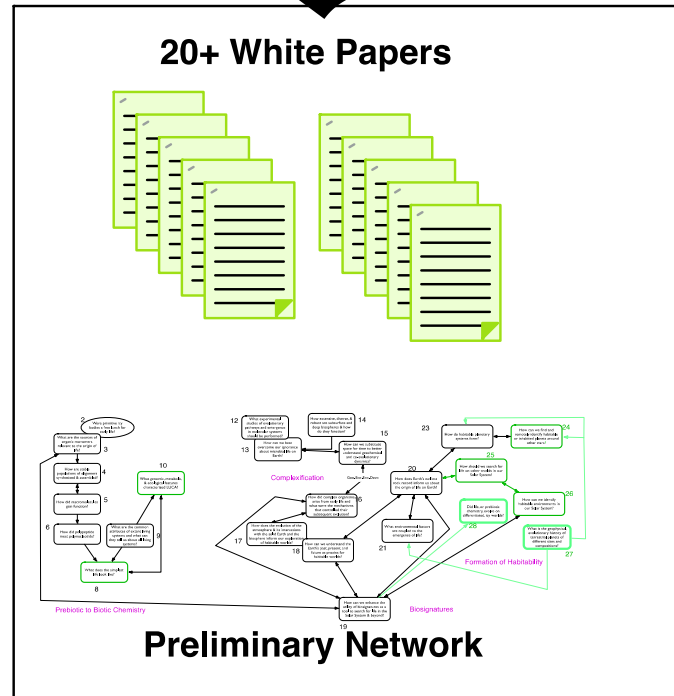
New requirements Data Management and sample registration

Redactions of all Salary information

E/PO proposals will be solicited from winning teams and funding mechanism TBD

Development of the new Astrobiology Strategy: An Update

The Process Up to Now



Some Details

- 691 Members of astrobiologyfuture.org from around the world!
 - 91 discussions
 - 651 posts
 - Videos of all webinars available for viewing
 - YouTube astrobiology channel
- Entering integration workshop are 26 concept papers

Integration

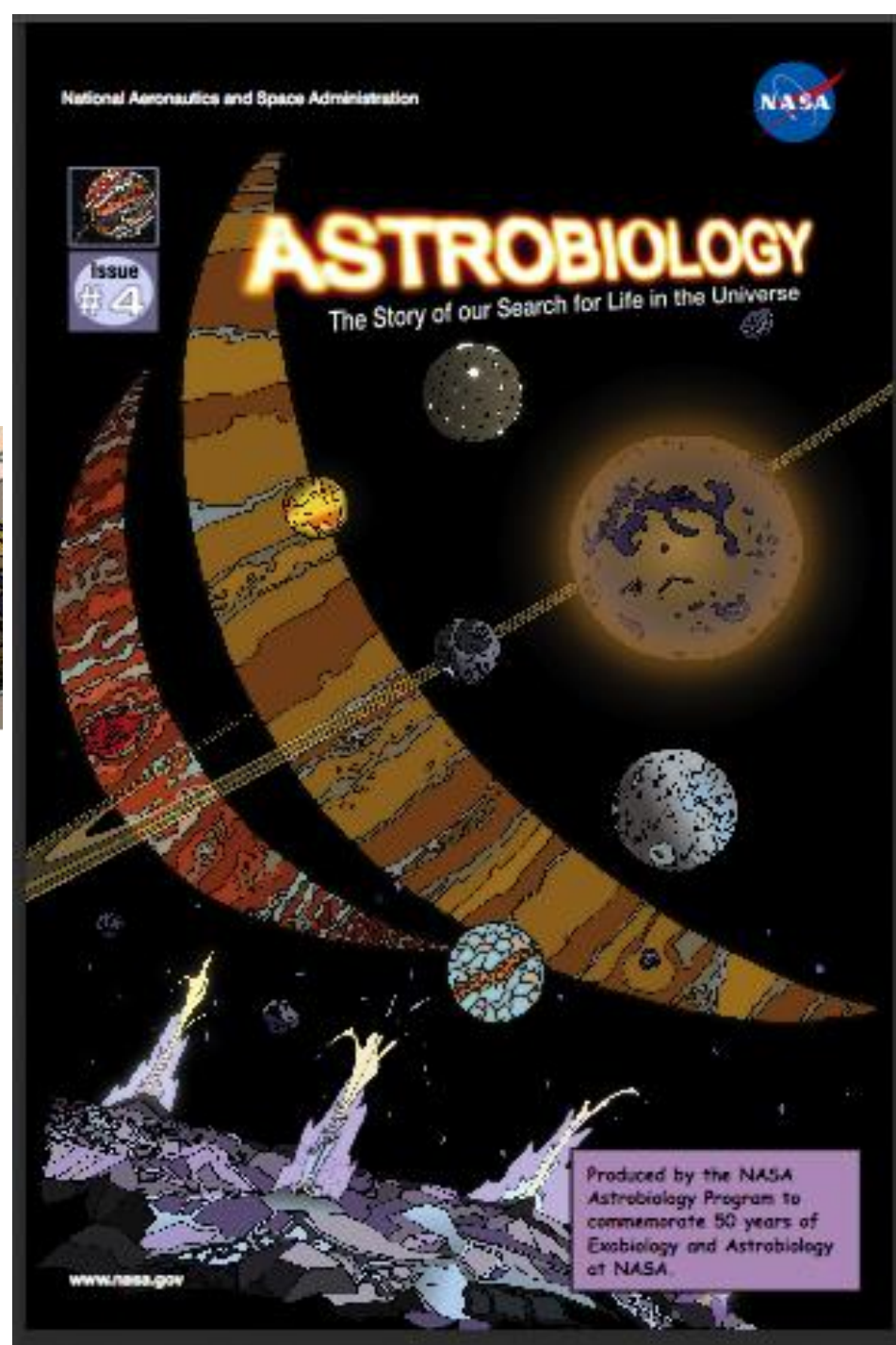
- At workshop, concepts will be grouped into themes.
 - Theme introductions will be drafted.
 - Connections between concepts within a theme and across themes will be enumerated
- Goal is to have a working draft of the Strategy.
- An editor/writer has been retained to aid in integration

Outline of Strategy

- Introduction
- Overview of Progress Since 2003/2008 Roadmaps
- Statement of Astrobiology's Principles
- THEME SECTIONS
- The Future
- Appendix: How this strategy came to be
- Appendix: Astrobiology Issues and the Humanities
- Appendix: List of Authors

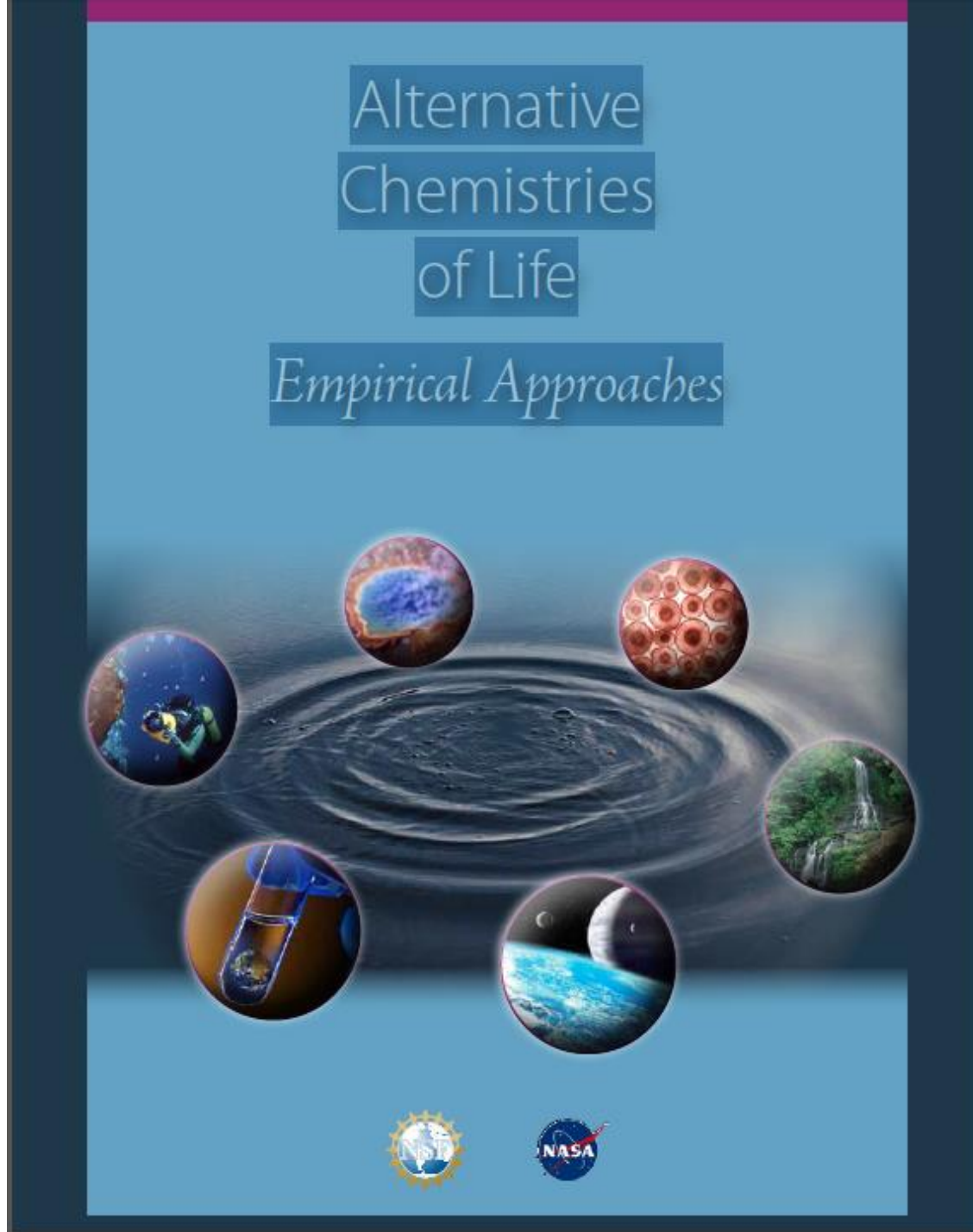
Astrobiology Graphic History – Issue #4

Missions to the Outer Solar System

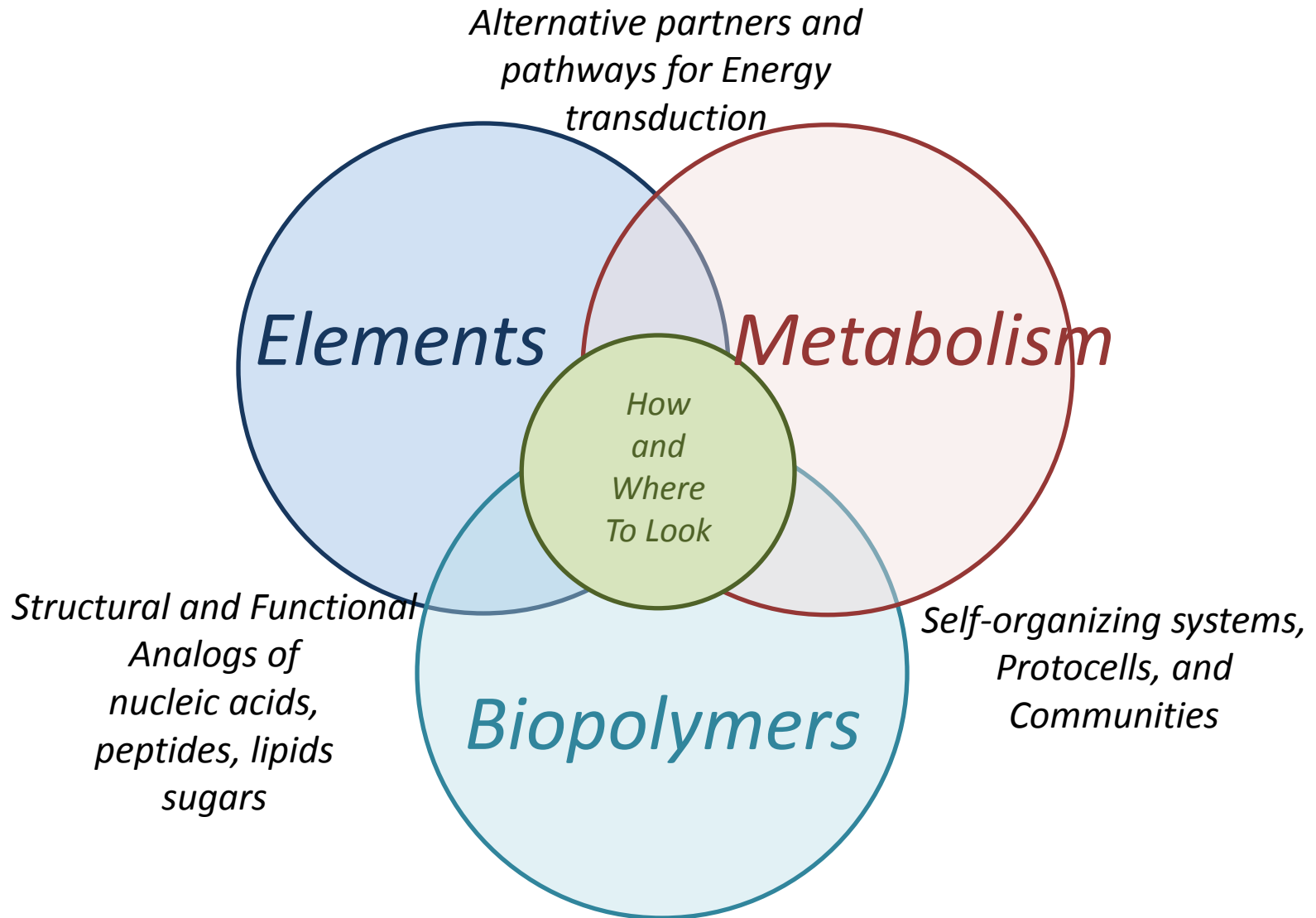


Workshop Report Hosted by NSF and NASA

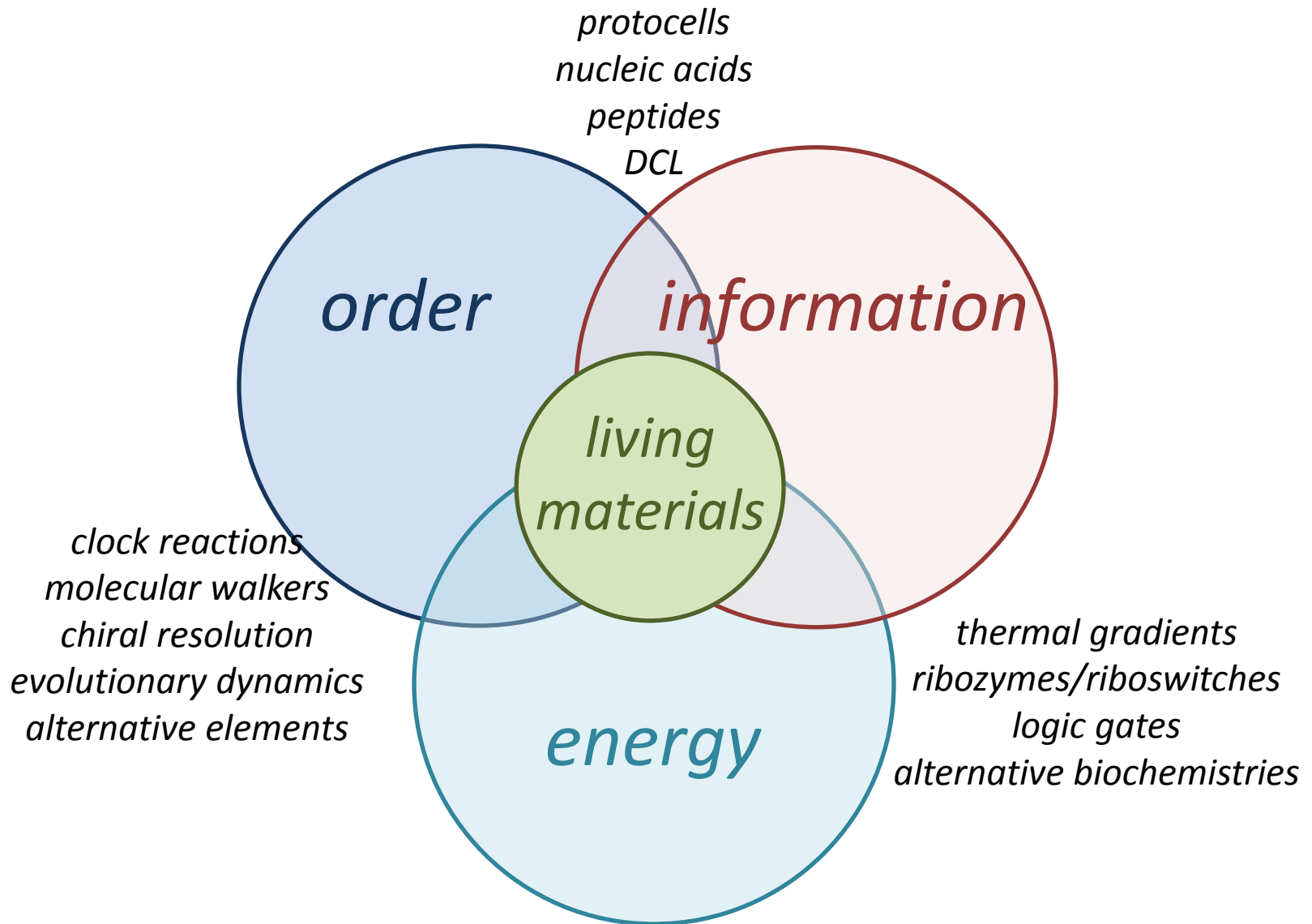
Chairs: David
Lynn, Cynthia
Burrows, Ginger
Armbrust



Alternative Chemistries of Life



emergence of living materials





CHELTEMHAM FESTIVALS
famelab.org



LPSC presents:

International **FameLab**

EXPLORING
EARTH & BEYOND

with NASA & National Geographic

PASSIONATE ABOUT SCIENCE? LOVE TO COMMUNICATE?

New frontiers await scientists in every field of research, whether on land, under the sea, or in space. From our origins as humans to the origins of our Solar System, from species' interactions in an ecosystem to Earth's interaction with the Sun, from climate change to the possibility of life elsewhere in the Universe, sheer curiosity and passion for knowledge will always keep us at the cutting edge of exploration.

In today's media-intensive environment, your ability to convey your science can reshape the face of scientific exploration and discovery.

FameLab asks...how are you exploring Earth and beyond?

GOT FAME?

- Hone your communication skills
- Interact with like-minded scientists
- Learn from science communicators and media professionals
- Network with the pros
- Everyone is a winner!

LET'S TALK SCIENTIFIC EXPLORATION!

At regional heats throughout the US over the next year, join early career scientists from across disciplines and compete to convey your research or related science concepts. Each contestant has the spotlight for only three minutes. No slides, no charts—just the power of words and any prop you can hold in your hands. A panel of experts in both science and science communication will do the judging.

Beyond the competition element, the heart of FameLab is to improve your communication skills! At each regional event there will be a workshop with training in the principles and practices of good communication.

Winners from the FameLab EEB regional competitions will face off in April, 2014 for a grand prize and the chance to compete with peers from around the world at the FameLab International Final in the UK in June, 2014.

Our next competition is at LPSC in March, 2013, so go to the website and sign up today...space is limited.

<http://famelab-eeb.arc.nasa.gov>



- NASA partnered with National Geographic and collaborated with science society meetings for “prelims”

– AGU, LPSC, Society of American Archaeology, Nat Geo Explorers, AGU (redux), YouTube

- Finals in April 2014 DC at National Geographic
-
- Future partner British Council

AbSciCon Update

- Cancelled in 2014 will resume in 2015.
- We are working the issues associated with recent rules for NASA supported conferences.
 - Monitoring LPSC-2014 as a model for what we'll have to do with AbSciCon
- Odd years will have AbSciCON
- Even years greater presence at LPSC

AbSciCon Update

LPSC 2014

92+ Astrobiology Abstracts

2 sessions (Habitable worlds/environments)



Contract with LPI

Host:

University of Illinois Chicago

Chair: Peter Doran

