SBAG Roadmap: Science Issues

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Basic Structure of the Section

- The Science Issues section is still a Matrix:
  - Primitive Bodies
  - Specific Science Issues
- We now have an Introduction (~20 pages) that gives a brief overview of the entire report
- We have a series of Appendices containing more extensive information as well as references.
Science Issues I (unchanged)

- **Solar System Origins**: understanding the original composition of the nebula; the timing of events such as planet formation, differentiation and core formation and the chemical and isotopic evolution of the system with time.
- **Solar System Dynamics**: understanding nebular collapse and transport; planetesimal accretion, migration and mutual interactions; evolution of the solar system through time and the cratering history of the solar system.
- **Current State of the Solar System**: What is the size distribution and chemical composition of small bodies in the Solar System? How does this compare to extra-solar systems?
Science Issues II (unchanged)

- **ISRU**: What resources might be available to support human and robotic exploration of and human expansion into the solar system?
- **Hazards**: What is the internal structure and chemical composition of objects that might become an impact hazard to life on Earth?
- **Astrobiology**: What is the importance of this class of Object to the Origin of Life on Earth or to the broader questions concerning the potential for life elsewhere in universe.
Major Changes to the “Bodies”

- Meteorites, IDPs and Returned Samples
- Short and Long-Period Comets
- Near Earth Objects (Apollos, Atens & Amors)
- Phobos and Demos
- Main Belt Asteroids (and comets)
- Satellites of the Giant Planets
- Trojan Asteroids
- Centaurs and Trans Neptunian Objects
- Pluto and Kuiper-Belt Objects
- Small Bodies in the Oort Cloud

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Overview & Future Development

- Each “Body” write up consists of a ~2 page introduction plus a more extensive appendix.
- As structured, the report is modular.
- Each section can be updated independently without affecting other sections.
- Each section also has an “authors” attribution.
- These individuals should serve as ‘referees’ for future updates to individual sections.
Anyone interested in writing a section on a body not specifically covered – or already lumped into a larger section (e.g. Pluto – currently part of the TNO section) is welcomed to do so. It will be reviewed, then added.

Anyone interested in updating a section should contact Mark or me to ensure that an update is not already in the works (add that person to the team?).

Updates could (should?) contain an additional section as a catch all option: “Other Associated Issues”

Sections are updated every X years: What is X?