

# 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**
- 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**
  - **Trans Neptunian Objects**

# Overview & Future Development I

- 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.



# Overview & Future Development II

- 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?