CAPTEM concerns about the Planetary Science Division’s restructuring of R&A programs:

Given current funding levels, we recognize that the number of existing R&A programs has become unsupportable, and some streamlining may be necessary. However, the stated goals of the proposed reorganization of NASA’s planetary research programs into five “core programs” should be achieved without disrupting and totally restructuring the present organization, which has been extraordinarily successful in supporting cutting-edge science. The stated goals are: 1) explaining the structure of the R&A program to those outside NASA, 2) introducing more flexibility, and 3) encouraging interdisciplinary research. It would be better to critically examine each of the 20 existing programs to see whether its goals are aligned with the planetary science performance goals, whether the goals are being met, and how each program might most naturally align with others. It is particularly important that any restructuring preserve, and possibly expand, the capability of the scientific community to analyze extraterrestrial samples in the current collections (including the Apollo, Stardust, Genesis, stratospheric IDP, and Antarctic meteorite collections) and those from future sample return missions (such as OSIRIS-Rex and Mars sample return).

The five planetary science questions do not translate into five core programs suitable for reorganizing the planetary R&A programs. The five science questions provide appropriate goals for NASA (although they are too heavily weighted towards exobiology, which is specifically identified in 3 of the 5 programs) but do not constitute a workable management structure for R&A. How will existing programs be mapped onto this new structure? Will these five simplified core programs have any constancy, or will they change over time, adding confusion to an already complicated R&A system?

The study of extraterrestrial samples funded by current R&A programs (essentially Cosmochemistry) use a core set of analytical infrastructure and expertise (a substantial NASA investment built over many years) to address very diverse topics that span many of the five proposed core programs: e.g., martian meteorite recovery, curation, and research; formation of stardust and nucleosynthesis; composition of the Sun; characterizing NEOs; origin of the Earth’s water; impact processing of planetary materials, etc. These analytical laboratories cannot be created for each sample-return mission, and many of these laboratories have capabilities appropriate for a variety of missions. Infrastructure support will likely suffer if it is split into five different ”core programs” that focus on short-term tasks.

How would new funding levels compare with existing funding for R&A? A substantial decrease in R&A funding will drive young scientists out of the field, and many will never return. One of the reasons that there are so many R&A programs is that starting new programs has been the only way to increase overall R&A funding. With the reorganization, ways need to be found for funding to grow at a reasonable rate.

The breadth of subjects to be included in each of five areas will create nightmares in reviewing proposals and deciding on the relative merits of diverse proposals. Finding
unconflicted but knowledgeable panel members will be even more difficult with only five panels.

The timeline for the implementation of these changes is very fast, too fast for thoughtful input from the affected scientific communities. We recommend that the reorganization be made after the concerns raised by the communities have been carefully considered by NASA so that a thoughtfully restructured R&A program can be rolled out in FY2015.