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DIVISION III PLANETARY SYSTEMS SCIENCE

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PARTICIPATING COMMISSIONS

Commission 15	**Physical Study of Comets and Minor Planets**
Commission 16	**Physical Study of Planets and Satellites**
Commission 20	**Positions and Motions of Minor Planets, Comets and Satellites**
Commission 21	**Light of the Night Sky**
Commission 22	**Meteors, Meteorites, and Interplanetary Dust**
Commission 51	**Bioastronomy**
Commission 53	**Extrasolar Planets**

DIVISION WORKING GROUPS

Physical Study of Comets
Physical Study of Minor Planets
Motions of Comets
Distant Objects
Meteor Shower Nomenclature
Professional-Amateur Cooperation in Meteors
Small Bodies Nomenclature
Planetary Systems Nomenclature

SERVICES

Minor Planet Center

Minor Planet Center Advisory Committee

INTER DIVISION WORKING GROUPS

Division III / Division I	**Near-Earth Objects (WGNEOs)**
Division III / Division I	**Cartographic Coordinates and Rotational Elements of Planets and Satellites**

PROCEEDINGS BUSINESS SESSIONS, Monday 10 August 2009

1. Introduction

The meeting was opened by Ted Bowell, president, at 11 am. The 2006 Division III meetings were reviewed by Guy Consolmagno, secretary; as the minutes of those meetings have already been published, they were assumed to be approved.

2. Division III Structure

Bowell reviewed the new membership applications (by Commission): Commission 15 (Physical Study of Comets and Minor Planets) has 47 new applicants, Commission 16 (Physical Study of Planets and Satellites) 47, Commission 20 (Positions and Motions of Minor Planets, Comets and Satellites) 25, Commission 21 (Light of the Night Sky) 5, Commission 22 (Meteors, Meteorites and Interplanetary Dust) 22, Commission 51 (Bioastronomy) 27 , and Commission 53 (Extrasolar Planets) has 72 new applicants. As it is likely that applicants have joined more than one commission, all that can be concluded is that the total number of new members of Division III ranges from somewhere between 72 and 245 new members; probably the number is around 150, which would represent a 15% increase in Division III membership. At present, the officers of the Division include the Division Board, consisting in total of 17 members including the President, Vice President, Past President, Secretary, Organizing Committee. The IAU guidelines recommend that the board membership be between 8 and 12 members; however, this is just a guideline and the previous larger board was accepted by the Executive Committee. We are the third largest of the twelve divisions and we have an unusually large number of commissions; and so, to have presidents on the board we're bound to have a complex structure. There are seven Commissions, five Commission Working Groups (which are expected to last longer than a triennium), several Commission Task Force/Groups (which are expected to go away after a fixed time), one Division Service, one Division Advisory Committee, two Division Working Groups, and two Interdivisional Working Groups.

These are the commissions and working groups:

Commission 15: Physical Study of Comets and Minor Planets
WG Physical Study of Comets
WG Physical Study of Minor Planets
Commission 16: Physical Study of Planets and Satellites
Commission 20: Positions and Motions of Minor Planets, Comets, and Satellites
WG Motions of Comets
WG Distant Objects
Commission 21: Light of the Night Sky
Commission 22: Meteors, Meteorites, and Interplanetary Dust
TF Meteor Shower Nomenclature
WG Professional-Amateur Cooperation in Meteors
Commission 51: Bioastronomy
Commission 53: Extrasolar Planets
Service: Minor Planet Center
Advisory Committee: Minor Planet Center
WG: Committee on Small Bodies Nomenclature
WG: Planetary System Nomenclature
IWG: Cartographic Coordinates and Rotational Elements of Planets and Satellites (jointly with Division I: Fundamental Astronomy)
IWG: Natural Planetary Satellites (jointly with Division I)

The status of Commission 21, Light of the Night Sky, was discussed. (Note this commission is not to be confused with the commission on light pollution.) In 2006 it had been recommended that the future status of this commission be reviewed. As it happens, only about ten percent of the membership of C21 works in the field of planetary systems. Most C21 members are working on various aspects of diffuse or integrated galactic and extragalactic backgrounds. Thus C21, as currently constituted, does not really fit within DIII. Therefore it is proposed that the present Commission 21 "Light of the Night Sky", as it currently exists within IAU Division III "Planetary Systems Sciences", be dissolved; a new Commission 21 with the designation "Galactic and

Extragalactic Background Radiation" will be formed; the new Commission 21 will be located within IAU Division IX: "Optical and Infrared Techniques"; and these changes shall go into effect with the conclusion of the 2009 IAU General Assembly in Rio de Janeiro. Those members of C21 working on planetary systems science will be welcomed into C22 (Meteors, Meteorites and Interplanetary Dust), where their interests will be well served. The proposed action has been approved by the DIII and DIX Boards, and by the IAU Executive Committee.
Merging Commissions 15 and 20 was discussed. The merger was first suggested because of the apparent overlap in the science interests of C15 (Physical Study of Comets and Minor Planets) and C20 (Positions and Motions of Minor Planets, Comets and Satellites). However, further discussion between the Organizing Committees of C15 and C20 and with the DIII Board indicated that there is in fact little science overlap between the two Commissions. Only about 50 people, out of a total of some 600, are members of both C15 and C20. Consequently, the Executive Committee was asked not to merge C15 and C20, and they have accepted this position.

3. Executive Committee/Division III matters

Bowell reported on the three Executive Committee meetings he had attended in the last triennium; there include one in Prague, after the close of the General Assembly in 2006, in Oslo in May 2008 and in Rio de Janeiro, preceding the General Assembly in 2009. The following main areas of interest to Division III were discussed at these meetings: choosing IAU-sponsored Symposia and Joint Discussions, choosing a group name for trans-Neptunian dwarf planets, the naming of dwarf planets and starting mornings at the Rio General Assembly with plenary session reviews. Concerning the choosing IAU-sponsored Symposia, Joint Discussions, and Special Sessions, Bowell noted that in the IAU as a whole, the science interests of Division III are often overshadowed by those of stellar and galactic astronomers. Even though we are one of the larger divisions, we are represented by only one Division President. We make up 1200 members of a membership of ten thousand IAU membership total. Commission VIII has another 300 planetary people, plus others in other commissions, so we are about 15% of the total IAU. Therefore, in any vote among Division Presidents to choose among competing Symposia, Joint Discussions, and Special Sessions, Division III can be at a disadvantage. The Executive Committee recognizes this, and also recognizes that many planetary science astronomers will not attend the General Assembly if there is not a Symposium, Special Session, or Joint Discussion in their field. Consequently, Division III's interests are in fact well represented at GAs and during inter-GA years.
Sessions at the Rio GA of interest to Division III members and co-sponsored by Division III Commissions include:
Symposium 263: Icy bodies of the solar system (5 days)
Special Session 6: Planetary systems as potential sites for life (2 days)
Invited Discourse 2: Water on planets (James F. Bell III)
Plenary Review: Icy bodies of the solar system (David Jewitt)

Concerning dwarf planets, Bowell recalled that at the close of the Prague GA in 2006, we had a definition for planet, and we were using the term dwarf planet for bodies massive enough to be in hydrostatic equilibrium ("near round"), but not massive enough to clear their orbital zones. We were still lacking at least three items: A group name to replace dwarf planet; quantitative thresholds to define the boundaries between the different groups; and a group name for transneptunian dwarf planets.

The sense at Prague had been that "dwarf planet" was a term most people didn't like. Two main candidate names were discussed (nanoplanet and subplanet), but neither gained traction. Furthermore, since that time the term "dwarf planet" has entered the public consciousness and like it or not, it would be very difficult to change it now. It is now probably too late to reopen this discussion. At the time of the Prague GA, there were no refereed publications of direct relevance to the issue of defining quantitative thresholds for the boundaries between planets, dwarf planets, and small solar system objects, and so creating task groups to attack these problems would have been premature. Since then, Soter (Astron. J. 132, 2513) has discussed planetary orbit clearing by accretion and ejection of lesser bodies; and Tancredi and Favre (Icarus 195, 851) have quantified the lower diameter limits for icy and rocky dwarf planets. Thus, material for the basis of a discussion on quantitative thresholds is now available. That discussion has not yet taken place; whether it should is a matter for the incoming President. Concerning a "group name" for transneptunian dwarf planets, Bowell recalled that it was a resolution of the GA in

2006 that such a name be determined at some future time, and the Executive Committee wished Division III to act on this matter. The Committee on Small Bodies Nomenclature's preference was for the term plutoid; he transmitted this name to the Executive Committee in Oslo 2008, and the term was accepted. However, in part because of a communications failure, Division III's other naming group (the Working Group on Planetary System Nomenclature) was not consulted. A post facto vote of WGPSN members indicated that they would not have approved the term plutoid. All in all, the President took the blame for this slip up, and offered apologies for everyone. Even on the CSBN there were many against this name; the argument was that new names like this were unnecessary, and there was a possibility of confusing it with other terms. It is not clear that this name will be used by the community in the future. It was noted that most astronomical terms come from the community, and are not imposed from above.

Shortly after the Prague GA, there was urgency to name (136199) 2003 UB313 and its satellite. The CSBN and WGPSN joined forces to undertake the naming, and accepted the discoverer's suggestion of Eris for the primary body and Dysnomia for the secondary body. A press release and thematic web page were developed to explain this choice. Later, there was urgency to name two additional candidate dwarf planets [(136472) 2005 FY9 and (136108) 2003 EL61]. Still lacking quantitative thresholds for dwarf planethood, the Executive Committee decided to adopt the following recommendation (from the Division III Board and President Elect Bob Williams):

Any solar system body having (a) a semimajor axis greater than that of Neptune, and (b) absolute magnitude brighter than H = +1 mag shall be considered for naming purposes to be a dwarf planet and named jointly by the WGPSN and CSBN. Name(s) proposed by the discoverer(s) will be given deference. Note that H = +1 mag implies diameter 850 km (p = 1) ¡ D ¡ 5000 km (p = 0.03).

Using this definition, (136472) was named Makemake (creator god from Rapa Nui mythology) and (136108) was named Haumea; its two satellites were named Hi'iaka and Namaka (Hawaiian goddess and children). Bowell noted that it is not critically important even if such bodies are in future deemed not to be dwarf planets; they still have appropriate names.

Keith Noll noted that the working definition for naming may be overly restrictive at present; other planets already named may turn out to be dwarf planets. We need a working definition and we need to establish the rules for these names, perhaps less restrictive than the Kuiper Belt naming conventions. A further discussion on nomenclature raised the question of whether the names of C15 and C20 need to be changed, given the preference in 2006 for the term "small solar system bodies" in place of "minor planets". The decision at Prague was to continue to use "minor planet" for these commissions, and the idea that "minor planet" is not to be used was dropped. As above, the usage of the community itself will eventually determine what terms are most likely to be used.

The idea of starting mornings at the Rio GA with plenary session review talks was suggested to the Executive Committee by Bowell, and discussed extensively at the Executive Committee meeting in Oslo (in 2008). The idea was to start the day in a session involving attendees from many disciplines and to provide reviews of the Symposia intelligible to all GA attendees. Possible negative consequences are that it may reduce time for Commission and other meetings, which may result in increased overlap of meetings.

This has actually occurred, as can be seen in the cases of the Division III business meeting occurring during Special Session 6, the simultaneous meetings of C15 and the CSBN, and a possible overlap of Division III and Commission 20 meetings. On the other hand, the plenary reviews have been very much appreciated. One attendee stated that they were "one of the best parts of the meeting." One suggestion was that division business meetings might be held during these plenary sessions, but it was noted that this would run counter to the desire for a plenary where everyone can participate.

It was noted that commission meetings are now much shorter than had been the tradition ten or twenty years ago. In the past, science was discussed at these commission meetings, but today they are almost entirely just business meetings.

The President was not consulted about the specifics of the General Assembly program; no draft program was given, and the final program was merely circulated three weeks before the meeting. He did request that the division meetings come after the commission meetings, so that the division could deal with such issues as might arise at the commission meetings; that didn't happen. The hope was expressed that an effort can be made to raise this issue and these complaints for the future; the incoming President will carry this forward.

Bowell reported on the most recent developments from the Executive Committee that impact Division III:
It is the desire of the Executive Committee that Working Group chairs serve for one triennium, or for a maximum of two triennia. This could in the future become an IAU Working Rule.
A new Executive Committee Working Group on Naming Dwarf Planets will be made up of all the members of CSBN and WGPSN.

There is ongoing discussion about whether CSBN and WGPSN will remain as Division III working groups or become Executive Committee working groups. The CSBN has not discussed this yet; the WGPSN would like to return to its original status as an Executive Committee working group. They argued that originally they reported to the Executive Committee because naming planetary features had a delicate political significance during the rivalry between the then Soviet Union and the United States, at the time when they were the only nations sending missions to other planets. By the 1990s, that issue had become moot. However, given the nature of space missions from many different countries and greater number of different national points of view today, we are returning to a situation where we need to accommodate a new complex set of political sensibilities. Furthermore, there have been communication errors ever since the WGPSN moved to Division III supervision, and it appears these have continued over several trienniums. They argued that would be more efficient if the WGPSN were informed directly by the Executive Committee about decisions that involve its work.

4. Appeals on suggested asteroid names rejected by the CSBN

The Committee for Small Body Nomenclature (CSBN) is, among other things, responsible for the naming of asteroids. Suggested names and brief explanatory "citations", mostly from asteroid discoverers, are distributed by the CSBN Secretary to CSBN members for review. Most are accepted, perhaps after modification, and are published approximately monthly in the Minor Planet Circulars. Some names are rejected by CSBN members, usually because they are thought to contravene the CSBN's guidelines. Examples of the CSBN's guidelines are that asteroid names will not be accepted if they are too similar to those of other asteroids or natural satellites, or are in questionable taste; names honoring persons or companies or products for no more than success in business are discouraged; names that resemble advertising will not be accepted. Individuals or events principally known for political or military activities are unsuitable until 100 years after the death of the individual or occurrence of the event. (A current list of these guidelines can be found at the web site http://www.ss.astro.umd.edu/IAU/csbn/mpnames.shtml). The rationale for these guidelines is to avoid value judgments not related to astronomy, and to avoid offending people or countries. These guidelines are not rules, and therefore can be overruled by majority decision of CSBN or Division III. The appeals process states: *Any decision of the CSBN with which a[n asteroid name] proposer disagrees may be appealed by the proposer. [T]hat appeal should be addressed, by electronic mail or by letter, to the President of Division III, for action by the [Division] membership at the following General Assembly.* In practice, appeals to Division III are quite rare. Three asteroid names and citations had been rejected by the CSBN on the ground that each violated the guideline against individual or events principally known for political or military activities within the past 100 years, and these rejections were appealed by the proposers of the names. In all three cases, it is noted, votes by CSBN members, for or against, were close. The three names and citations under appeal were:

(64000) Aungsansuukyi = 2001 SD115
Discovered 2001 Sept. 20 by W. K. Y. Yeung at the Desert Eagle Observatory.
Aung San Suu Kyi (b. 1945) is a pro-democracy activist in Burma and a noted prisoner of conscience and advocate of non-violent resistance. She won the Rafto Prize and the Sakharov Prize for Freedom of Thought in 1990 and the Nobel Peace Prize in 1991.

(169568) Asanaviciute = 2002 FN6
Discovered 2002 Mar. 16 by K. Cernis and J. Zdanavicius at the Moletai Astronomical Observatory.
Together with thirteen other defenders of Lithuania's independence, Loreta Asanaviciute (1967-1991) was killed at the TV tower in Vilnius on the tragic night of 1991 Jan. 13, when tanks ploughed into a crowd of unarmed demonstrators.

(192293) Georgelser = 1990 TA2
Discovered 1990 Oct. 10 by F. Brngen and L. D. Schmadel at Tautenburg.
Carpenter Georg Elser (1903-1945) was opposed to Nazism from the beginning of the regime, feeling that it would plunge Germany into a major war. In order to prevent greater bloodshed, he made an unsuccessful attempt on the life of Hitler in Nov. 1939. The name was suggested by the first discoverer.

A significant discussion, lasting for nearly an hour, focused on the issues of whether the names proposed, or the citations as written were political in nature, or offensive to people or countries. It was noted that there are some names with political overtones that were approved in the past, including anti-Nazi activists; the name Sakharov was noted as an example, though it was also noted that he also qualified for an asteroid name as a prominent scientist. It was argued that to honor a person for non-violent humanitarian activities is much easier than for these cases. There was concern that the IAU was being called to make a political decision, rather than one in our field of expertise. It was also noted that the first and third names are for people noted for very recent events.
It was decided to adjourn the meeting at this point and delay the vote until the afternoon, thus allowing further reflection on the issue.

5. Reviews of Activities of Commissions and Working Groups

Because this meeting was running at the same time as the Special Session, the vote on the CSBN appeal was delayed so that those attending the Special Session could participate, and so commission reports were presented before the vote on the CSNB appeal.
C53: Extrasolar Planets (Alan Boss for Michel Mayor): The commission currently has 120 IAU members plus 30 non-IAU associates. The highlights of progress in the field: more than 350 Extrasolar Planets have now been discovered. The number of planets now discovered is beginning to be large enough to put constraints between theory and observation. Many of these planets were detected by transits; when a planet goes behind a star, one can find the temperature of the planet's atmosphere and determine low resolution spectra, which have allowed certain constituents to be identified. The transit method also allows a determination of the spin of the star and the orbital plane; most recently we have started to discover a lot of objects with a strong inclination of the orbital plane compared to star spin axis, which is interesting for understanding the origin of hot Jupiters. We are now seeing a new population, "super Earths" with sizes ranging up to Neptune (20 Earth mass) sized bodies; it appears that one third of every solar type star has this kind of low mass object. The record smallest such body discovered is 1.9 Earth masses so far. Three different teams have done images of distant planets, and the Hubble and Spitzer space telescopes have played important roles. During the past triennium, the commission sponsored two important symposia, in China and in Boston; they were extremely successful, with more than 200 participants each. At this meeting we are a cosponsor of Special Session on Planetary Systems as Potential Sites for Life; as evidence of its success, the room is too small to accommodate all those interested in attending this session.
C16: Physical Study of Planets and Satellites (Rgis Courtin): Planetary exploration is in a golden age. As evidence, we note the in-depth exploration of Saturn by Cassini, the number of missions to Mars, both from orbit and on the surface, Venus Express, which is about to end its nominal mission with a good number of results on atmospheric dynamics, the Messenger mission to Mercury, which has done two flybys leading to an upcoming orbital mission, and whose discoveries so far include major basins and primary craters, including the second largest crater, Beethoven, discovered last year, the New Horizons mission en route to Pluto mission, several Lunar missions, and many results from the ground. The commission has had a stable membership. At the last AAS-DPS meeting we had lunchtime meeting where we presented to a roomful of more than 100 people the activities of the IAU, and strongly encouraged young planetary scientists to join the IAU. There was an attempt to put together an electronic news bulletin, but given the launch of a separate Planetary Exploration Newsletter we decided not to duplicate that effort; instead, we are restricting the news bulletin to the business of the commission. We also joined with C51 and C53 to sponsor the Special Session on Planetary Systems as Potential Sites for Life. As indicated by the number of posters (45) and registrants, this has

been very successful.

C15: Physical Study of Comets and Minor Planets (Walter Huebner): Over the past three years we have seen several missions to comets and asteroids, including the Japanese mission to Itokawa, missions to Temple I, Wild 2, and the ongoing Rosetta mission to Comet 67 P/Churyumov-Gerasimenko with encounters past two asteroids, 2867 Steins (already occurred, in 2008) and 21 Lutetia (in 2010). We have two working groups, one on the Physical Studies of Comets (chaired by D. C. Boice) and one on the Physical Studies of Minor Planets (chaired by R. A. Gil-Hutton) We also have four task groups: the Task Group on Cometary Magnitudes (chaired by G. Tancredi) and the Task Group on Asteroid Magnitudes (chaired by E. Tedesco) to investigate the quality and accuracy of their respective magnitudes, the Task Group on Asteroid Polarimetry and Albedo Calibration (chaired by A. Cellino) to examine the calibration of the polarimetric slope/albedo relation for asteroids and the Task Group on the Physical Properties of Near Earth Objects (chaired by Karri Muinonen) to inventory the geological and geophysical properties of NEOs for study and mitigation. This last task group was set up just last year, and its task is not yet finished; it will continue into the next triennium. Chairs of the appropriate working groups are co-chairs of the four task groups. Each has its own web site. A new task group is being proposed to discuss countermeasures for potentially hazardous objects.

C 20: Positions and Motions of Minor Planets, Comets and Satellites (Julio Fernandez). We discussed the proposed merger with C 15, but the opinion of the majority of our members was to keep separate commissions as it is now. In this discussion, we reviewed the more general questions about our role as a commission. What are the main goals of a commission? What are the reasonable duties of a commission? How can we help the astronomical community who are working in these topics? We discussed the issue of revising the rules for obtaining credit for an asteroid or comet discovery. Arguments were made in favor of giving credit to the original discoverers, to those making the essential follow-up observations, and to the dynamicists who contribute to making the orbit reliable and useful. Most members felt it was best to maintain the current system where the credit for discovery and the preference for suggesting names are left only to the original discoverers. The commission cosponsored Symposium 263 at this General Assembly, and other meetings related to our field were discussed. Finally, for the future, we plan to maintain the current organization of the commission. In our scientific work, we note the need to find a way to promote the improvement of orbits for the numerous objects likely to be discovered by the new sky surveys coming on line in the next few years.

C 21: Light of the Night Sky (no report). This commission is to be renamed and moved to Division IX.

C 22: Meteors, Meteorites and Interplanetary Dust (Jun-Ichi Watanabe for Pavel Spurn). Membership of this commission has increased to 132. The Working Group on Professional/Amateur Cooperation in Meteors has been a great success; Ryabova will continue as chair. The Task Group Meteor Shower Nomenclature, chaired by Jenniskens, has come up with official names of 64 meteor showers, and these were approved at the C22 business meeting. This Task Group still has a working list of further 264 candidate showers to consider; because they have this ongoing work, they have proposed to become a Working Group of the Commission for the next triennium, and this was approved in the C22 business meeting. Its task will be to adapt the new meteor shower nomenclature rules for newly discovered showers, arbitrate proposed names from new surveys, and determine if candidate meteor showers should be accepted and named. The Commission sponsored three conferences during the past triennium: Meteoroids 2007 in Barcelona, Asteroids-Comets-Meteors (ACM) 2008 in Baltimore, and the Workshop on Bolides and Meteorites in Prague, 2009. Future conferences include the 2008 TC3 Workshop in the Sudan, to be held during December 5-6, 2009, Meteoroids 2010, in Colorado, and ACM 2011, in Japan.

C 51: Bioastronomy (Alan Boss). The commission was renewed in Prague; with the addition of a dozen new members, it now has a membership of several hundred scientists. In the past triennium it has cosponsored Special Session 6 at this General Assembly, and sponsored the meeting Bioastronomy 2007 in San Juan, Puerto Rico, with an attendance of about 250. It was originally proposed to hold the next Bioastronomy meeting in 2010 but, following up on a long standing proposal it was decided instead to join forces with ISSOL (International Society for the Study of the Origin of Life) and hold a join meeting in France in 2011.

Service: Minor Planet Center (Ted Bowell for MPC). Minor Planet Circulars continued to be issued each lunation. About 20000 asteroids/year are numbered (the total of all numbered

asteroids is now 220,000). A "few score" comets, discovered with ground-based telescopes, and on the order of 100 SOHO comets are designated every year; names are published for about 1000 asteroids/year; about twenty periodic comets/year are numbered. The number of astrometric observations of asteroids in the database exceeds 50 millions, going back to the early 1800s. Hundreds of thousands of comet observations are now in the database. The Minor Planet Center has secured funding from NASA for the years 2008-2011; thus many MPC services, which previously were charged for, will be provided gratis after 1 October 2009; and there will be accelerated software and website development. We note that there is a commercial enterprise attempting to sell asteroid names; should the IAU do something about this? Perhaps the IAU should sell such names themselves and use the collected money to support research.

Division Working Group: Committee on Small Body Nomenclature (Pam Kilmartin for Jana Tich). As noted in the triennial report, 701 comets and 2228 minor planets received names between July 2005 and June 2008; there are now about 220,000 numbered asteroids, of which 14,574 are named. Among the notable names are 100000 Astronautka, named for the 50th anniversary of the start of the space age with the launch of the first satellite, Sputnik, in 1957; the significance of the number is the convention that "space" begins at 100,000 meters above the Earth. Names for dwarf planets and satellites have been assigned (with the WGPSN). A naming convention has been proposed for non-resonant objects with semimajor axes a ¿30.07: those with chaotic short lived orbits, like centaurs, will be named for mythical creatures that are hybrids or shape shifters, for example 42355 Typhon's satellite Icneda. An update of the minor planets dictionary is being published.

Division Working Group: Planetary System Nomenclature (Rita Schulz). We consist of 13 members, mostly task group chairs for various planets in solar system. Jrgen Blunck, our expert on Greek and Latin and classical history, died during the past triennium; he has been replaced in this role by Guy Consolmagno. The working group met in Ithaca, NY on 10 Oct 2008 (during the AAS-DPS meeting at Cornell University) and agreed to write a document to define clearly the roles and responsibilities of task groups; this document can be found on our web page now. Each task group now should have a minimum of 5, maximum 8, members; there was a need to renew task groups for Mercury and Venus which were suddenly needed after many years of being dormant. As of June 2008, there have been 255 features named on moons of Saturn, on Mars and Phobos, on Mercury, on Venus, and on Earth's Moon; in addition several newly discovered planetary satellites have been named.

Interdivisional (with Division I) Working Group: Cartographic Coordinates and Rotational Elements of Planets and Satellites (Brent Archinal). We have published a proposal in our triennial report to recommend coordinate systems for various bodies; nine have been so done since 1976. For Mercury we have discussed a model based on new radar results, and a new (observed) pole position. A question arose as to whether it would be better to use a system based on a particular feature (as is currently the case) or one based on a now much more accurately known axis of figure system? It was decided to continue the feature-based system but to publish the offsets between the two systems. We recommend the use of the Moon DE421 ephemeris, rotated to the mean earth polar axis system. For Mars we recommend no changes at this time, even as improvements continue; this may change in six years. For Saturn we note new results for its satellites, especially the librations of Titan, and Saturn's rotation; the committee has noted that it needs more expertise for understanding the issues of choosing rotation systems for the gas giant planets, especially Jupiter, Saturn, and Neptune. A subgroup has been formed to decide which small bodies to include in our data base (limited to those that have been directly imaged, not just those with good light curves). We are planning a separate category for dwarf planets; they will be treated as small bodies in terms of the default choices for coordinate systems. Long term issues include reestablish IAG affiliation and the issue of extrasolar planets where it is becoming possible to make temperature maps (for example). A uniform way for describing the location of these features also needs to be determined. Officers of the commission will continue as in the past triennium; the proposed six-year limit might be a problem for this group, where a particular technical expertise is required.

Interdivisional (with Division I) Working Group: Natural Planetary Satellites (Jean-Eudes Arlot). We are looking for new members to continue the important work of maintaining observations from which improved ephemerides can be derived; satellites are fast moving, and many observations are needed to provide good ephemerides including reasonable estimates of errors. We must avoid repeating the 1920-1970 gap where there were few good observations; the absence of such data impairs our ability to develop dynamical models for the orbits. Even in the past triennium

it has happened that many newly discovered faint outer solar system irregular satellites have been lost due to the lack of follow-up observations, which are only possible at large telescopes. The main interest of the Working Group is maintaining the databases in Paris and Moscow, which include about 90% of all observations made (several centuries' worth) of great value for developing dynamic models; a web page provides further details. Mutual event campaigns are underway for Jupiter and Saturn in 2009; the hope is to provide an accuracy of 0.2 arcsecond, an improvement on the current 1 arcsecond accuracy. With such accuracy one can study the effects of tides in these satellites; for example, one can see accelerations in the motions of Io that can be related to its thermal state (see papers in Nature in 2009), thus constraining the internal structure of the Galilean satellites. The question arose as to whether this work would be better served by a new commission rather than as a working group; however, it was decided it would be more useful to remain as an interdivisional Working Group. Concerning the satellites of asteroids, we plan to produce a database for these objects, which currently is scattered in several locations. We are looking for more members for our Working Group because gathering such data is a lot of work; we need help. We note that our data and ephemerides at present are held at the MPC, at JPL, and at Moscow; it is good to have several sites maintaining these data.

6. Vote on the CSBN Appeals

Discussion on each of the three names was resumed, with a final five minutes provided for a summary discussion for each name, followed by a vote. There was concern in all cases that the problem might not be the selection of the names but rather with the citation describing the selection, so two votes were taken; those in favor as it stands, and those who would change their vote if the citation were altered.

Aungsansuukyi: There was great sympathy for the person in question but also a concern that this was clearly a political statement; any choice would reflect political opinions, which could be too subjective and in any case beyond the realm of the IAU's expertise. It was for such reasons that the IAU guidelines were adopted in the first place; suspending the 100-year rule in this case might lead to further complications later, if some future cases were accepted and other rejected. For Aungsansuukyi, the vote to overturn the decision of the CSBN was Yea: 4, Nay 22; if the citation wording were changed to remove the first sentence, 16 still would vote nay. The appeal was rejected.

Asanaviciute: It was noted that this was the most political case of the three, related to recent events, and it could reflect badly on the Russian community within Lithuania. There was also concern that the citation might be seen as provocative. Again, the utility of the 100-year rule allows one to recognize the significance of a given event with a better perspective; there does not appear to be an urgent need for such a naming at this time. For Asanaviciute, the vote was Yea: 1, Nay: 27; if the wording were changed, 22 indicated they would still vote against overturning the CSBN decision. The appeal was rejected.

Georgelser: He was clearly a brave person, and the IAU has already honored similar anti-Nazi dissidents; but they were peace activists, whereas he wanted to make a change via violence. For Georgelser, the vote was Yea: 6, Nay 20; the Nay votes stayed at 20 even if the citation were changed. The appeal was rejected.

7. Election of New Officers

Unlike in previous years, voting for the slate of new officers took place several months before the General Assembly, by e-mail. Constructing the ballot proved to be complicated, and the outcome was extremely close.

The Division III Board consists of President, Vice President, Secretary and Organizing Committee (OC) members. Currently there are 14 OC members, including past President Iwan Williams. The IAU desires broad geographic representation and gender balance. The Division III Board had extensive discussions about the voting process.

Following tradition, Vice President Karen Meech agreed to become President; incoming Commission Presidents, the outgoing Division III President, and the Chair of WGPSN were appointed to the OC without vote (8 people).

Division III members were asked to vote for Vice President, Secretary, and 6 OC members. Some outgoing Commission Presidents became candidates for incoming Vice President and Secretary. The current Board discussed additional nominees, and selected 3 candidates for each position. Outgoing Commission Presidents were invited to run as OC members. Division III members were asked to nominate themselves for OC membership (rather than the Division III membership being asked to nominate others). The current board voted to select a subset of nominees from this list. This list was then submitted to the membership for a vote by email with the following results:

President	Karen Meech (U.S.A.)	
Vice President	*Giovanni Valsecchi (Italy)	
Secretary	*Patrick Michel (France)	
Organizing Comm	*Dominique Bockele-Morvan (France)	Incoming D15 VP
	Alan Boss (U.S.A.)	Incoming C53 P
	Edward Bowell (U.S.A.)	DIII Past P
	Alberto Cellino (Italy)	Incoming C15 P
	*Guy Consolmagno (Vatican City State)	Outgoing DIII S
	*Julio Fernndez (Uruguay)	Outgoing C20 P
	William Irvine (U.S.A.)	Incoming C51 P
	*Uwe Keller (Germany)	
	*Daniela Lazzaro (Brazil)	
	Melissa McGrath (U.S.A.)	Incoming C16 P
	*Keith Noll (U.S.A.)	
	Rita Schulz (Germany)	Continuing WGPSN C
	Jun-Ichi Watanabe (Japan)	Incoming C22 P
	Makoto Yoshikawa (Japan)	Incoming C20 P

*Asterisks indicate members who were voted on by the Division III membership.
C = Chair. P = President. S = Secretary. VP = Vice President

The number of Board members at this point totaled 17, the same as the outgoing Board. Eight nations and four continents were represented, with the gender balance being five women, twelve men. This Board contained eight continuing members, and nine new members. In light of the desire for geographical balance, it was moved from the floor to add Mikhail Marov as a representative of Russia and Jin Zhu as a representative of China Nanjing. (Due to email problems, they had been left off the original ballot.) Both motions passed without dissent. It was moved to thank Ted Bowell for his service as President; this passed by acclimation.
The Division meeting closed at 3:50 pm.

Ted Bowell
President of the Division

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