

## COMMISSION 15

## PHYSICAL STUDY OF COMETS AND MINOR PLANETS

*ÉTUDE PHYSIQUE DES COMÈTES ET  
DES PETITS PLANÈTES*

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**Yuehua Ma, Harold J. Reitsema,**  
**Rita M. Schulz,**  
**Petrus M. M. Jenniskens,**  
**Dmitrij Lupishko, Gonzalo Tancredi**

## DIVISION III / COMMISSION 15 WORKING GROUPS

**Division III / Commission 15 WG**    **Physical Study of Comets**  
**Division III / Commission 15 WG**    **Physical Study of Minor Planets**

## PROCEEDINGS BUSINESS MEETING on 22 August 2006

### 1. Introduction

This report of the business meeting at the 2006 IAU GA is based on notes provided by Edward Tedesco, past president, and on the minutes taken by Petrus Jenniskens, secretary of Commission 15 in the triennium 2003 to 2006, with additional notes from the current secretary of Commission 15, Daniel Boice. For political reasons the incoming President, Walter Huebner, was unable to attend the General Assembly.

Ed Tedesco gave the President's report. In the necrology section he acknowledged the loss of three outstanding members of Commission 15: Vasilij I. Moroz, Fred L. Whipple, and George Wetherill. In describing the activities of the Commission he referred to the Commission 15 website where detailed reports can be found. Activities included the proceedings of Joint Discussions 14 and 19 at the IAU XXIV General Assembly (GA) in Sydney, as well as support of meetings unrelated to the GA: IAU Symposium No. 229 on *Asteroids, Comets, Meteors* (ACM), Rio de Janeiro, Brazil, 7-12 August 2005, the meeting on *Dust in Planetary Systems*, Kauai, Hawaii, 26-30 September 2005, and IAU Symposium No. 231 *Astrochemistry throughout the Universe*, Monterey, California, 29 August - 2 September 2005. The president's report was followed by the reports from the Working Groups (WGs). Dominique Bockelée-Morvan presented the Comet WG report and Alberto Cellino gave the Minor Planets WG report.

### 2. Task Group reports

The following suggestions and general statements were offered:

1. A "task group" should have specified deliverables for the triennium. Tasks should be clearly defined.
2. There could be a task group on physical properties of comets and one on physical properties of asteroids.

3. Recalibration of albedo-polarization law is a possible task group (proposed by Ted Bowell, Ed Tedesco, and Alberto Cellino).
4. Magnitude definition for asteroids and comets and about polarization are possible task groups, as proposed by Gonzalo Tancredi.
5. Rita Schulz suggested a task group on comets with a report due by October 2008.

### 2.1. Comet Task Group

1. Magnitudes for comet brightnesses need to be publicly available. Dan Green, will look into this matter in the next triennium.
2. Magnitudes for comets need to be better defined. No progress was reported from the Commission 20 task group. Michael A'Hearn will correct  $Af\rho$  values of dust for phase angle.
3. Anny-Chantal Levasseur-Regourd commented that apertures should be translated into distance from the comet nucleus.
4. A depository of information on individual comets, similar to EARN for NEOs should be created.

### 2.2. Minor Planet Task Group

1. There are problems with the consistency of the magnitude scale. Ted Bowell commented that future surveys will retire this problem in the next two to three years. However, Ed Tedesco commented that three different surveys will use different bands. Groups should look into making them agree.
2. Michael A'Hearn recommended that information on asteroid spin rates and pole orientations should be made available on one website.
3. Anny-Chantal Levasseur-Regourd suggested a task group on physical properties for TNOs with a report due October 2008.
4. Ted Bowell pointed out that the IAU is good at having people adopt a given rule or calibration that then becomes a baseline. That calibration does not need to be better than we know now.

## 3. Commission 15 membership and other business

1. Commission 15 has about 202 confirmed members, including 41 new members joining during GA XXVI. This membership count falls short by about 150 members of the official IAU e-mail list for Commission 15 members. The IAU Commission 15 membership list is out of date. The IAU has an electronic interactive system that can help people update their biography and address information.
2. Many active researchers, who currently are not members of the IAU, should be encouraged to become members.
3. Commission websites should be accessible through a central IAU page. "Useful links" should be established. It is left to the Commission president to decide which links are useful.
4. E-mails should be sent out when candidacy for offices of Commission 15 are proposed.

## 4. Commission 15 elections

1. In addition to electing the new president and vice-president, an election was held for the chair of the Minor Planets Working Group (MP-WG) and for members of the Organizing Committee (OC). Ricardo Gil-Hutton was elected chair of the MP-WG. Usually, all nominations for the OC were made during the business meeting, but the by-laws adopted in a recent General Assembly require now that they should be made prior to the meeting. However, difficulties with contacting members via e-mail made some notifications challenging. Thus, at Mike A'Hearn's suggestion, and with the concurrence of the Commission president, the decision was made to allow additional nominations during the Commission 15 Business meeting. Julio Fernandez withdrew his nomination because of other commitments.
2. At the suggestion of the IAU Executive Committee, the total number of members serving on the OC was reduced so that only three new members were added to bring the size of the OC down to that required by the current by-laws.
3. New members were elected to the Organizing Committee. They are: Petrus M. M. Jenniskens, Dmitriy Lupishko, and Gonzalo Tancredi. All members of the Organizing Committee are listed at the beginning of this report.

4. Thanks were given to the outgoing members of the OC: Alan Harris, Nikolai Kiselev, Lucy Ann McFadden, Tadeusz Michalowski, Karri Muinonen, and Mark Sykes. Also all members who stood for election to the OC, including Diane Wooden and Dan Green were thanked.
5. Daniel Boice was appointed by the incoming president to be the new secretary.

## 5. Proposed merging of Commissions 15 and 20 in 2009

1. It was pointed out that some limited overlap exists between the two Commissions. However, the merged commission would have about 400 members. This may be unwieldy. Alternatively, small joint interest groups and task groups with members of both commissions could be formed. Such joint groups might be more effective than a very large Commission.
2. Regarding the writing of reports, discussion centered on whether report writing is rewarding. It was concluded that it is not rewarding if reports are written by one person. However, if reports are written by the Commission membership, many gain insight in work that has been done and that needs to be done.
3. Regarding possible interest and task groups, discussion centered on members to contribute suggestions.
4. Ed Tedesco proposed that Commission 15 discussions include the Commission 20 Organizing Committee and *vice versa*. This may aid in the trial merging of the two Commissions at the next General Assembly.
5. Tedesco also proposed that the president of the combined trial Commission (15 and 20) be decided by a coin toss between those two Commission's current vice-presidents and that the one not-becoming president will serve as vice-president.

## 6. Closing remarks

I want to thank the past president, Edward Tedesco, and the past secretary, Petrus Jenniskens, for their untiring commitment and service to Commission 15.

Walter F. Huebner  
*president of the Commission*