

## **DIVISION I                      FUNDAMENTAL ASTRONOMY**

### *ASTRONOMIE FONDAMENTALE*

Division I provides a focus for astronomers studying a wide range of problems related to fundamental physical phenomena such as time, the inertial reference frame, positions and proper motions of celestial objects, and precise dynamical computation of the motions of bodies in stellar or planetary systems in the Universe.

<b>PRESIDENT</b>	<b>Toshio Fukushima</b>
<b>VICE-PRESIDENT</b>	<b>Jan Vondrák</b>
<b>PAST PRESIDENT</b>	<b>Nicole Capitaine</b>
<b>BOARD</b>	<b>George A. Krasinsky, Andrea Milani, Imants Platais, Veronique Dehant, Demetrios N. Matsakis</b>

### **DIVISION I COMMISSIONS**

<b>Commission 4</b>	<b>Ephemerides</b>
<b>Commission 7</b>	<b>Celestial Mechanics and Dynamical Astronomy</b>
<b>Commission 8</b>	<b>Astrometry</b>
<b>Commission 19</b>	<b>Rotation of the Earth</b>
<b>Commission 31</b>	<b>Time</b>

### **DIVISION I WORKING GROUPS**

<b>Division I WG</b>	<b>General Relativity in Celestial Mechanics, Astrometry and Metrology</b>
<b>Division I WG</b>	<b>Re-definition of Universal Time Coordinated</b>
<b>Division I WG</b>	<b>Future Developments in Ground-Based Astrometry</b>
<b>Division I WG</b>	<b>Precession and the Ecliptic</b>
<b>Division I WG</b>	<b>Nomenclature for Fundamental Astronomy</b>

### **INTER-DIVISION WORKING GROUPS**

<b>Division I-III WG</b>	<b>Near-Earth Objects (WGNEOs)</b>
<b>Division I-III WG</b>	<b>Cartographic Coordinates and Rotational Elements of Planets and Satellites</b>

### **PROCEEDINGS BUSINESS MEETINGS on 18 and 23 August 2006**

#### **1. Introduction**

Division I meetings were organized in two parts during the IAU XXVI General Assembly; one at Sessions 1 and 2 of 18 August, and the other at Sessions 3 and 4 of 23 August 23. This split was designed in order to separate the presentation of proposals on business issues and their amendments and adoption so as to provide the Division members to have enough time of consideration and internal discussion. The timing of the second meeting, which was immediately after the Joint Discussion (JD) 16, was chosen to provide a chance to deepen the understandings of conclusions of the JD.

The first meeting included one session devoted to the reports of the Division and the Inter Division Working Group(WG)s and another for presenting the proposals on the business issues. Thanks to the successful scheduling of the JD, the second meeting was entirely devoted for the discussion of proposals mainly focused on the structural issues of the Division. The SOC of these meetings was composed of the Division I Organizing Committee (OC) for 2003-2006, namely, the president, the vice-president, and the past president of the Division as well as the presidents of five Commissions under the Division.

In the below, we omit the reports of the Working Groups, which are found in *Reports on Astronomy, Transactions IAU Volume XXVIIA* (2007, Ed. O. Engvold), and concentrate ourselves on the summary of the presentations and discussions on business issues.

## 2. First meeting

After the presentation of the activity reports of five Division WGs, the Division officers for 2006-2009 were proposed. They are J. Vondrák as president, D. D. McCarthy as vice-president, who was nominated by the Division Organizing Committee (OC) by e-balloting, and T. Fukushima as past-president.

Next, the enlargement of the Division OC was proposed. The essence was to add the vice-presidents of Commissions under the Division to get them accustomed to the conventions and rules of the IAU and to inherit the experiences from the current presidents to the next ones easily. This was enabled thanks to the amendment of By-Laws to relax the restriction on the number of Division OC members adopted at the first Session of General Assembly.

Third, the summary of the EC Meeting on 13 August was reported by the Division president.

Fourth, a package proposal on the change in the internal structure of the Division was proposed. This consists of (1) the creation of a new Commission under Division I dedicated for resolving the issues on general relativity within the Division, (2) the change of status of WG on Natural Satellites under Commission 20 to a new Inter Division WG related to Divisions I and III, (3) the continuation of the Division WG on FDGBA, and (4) the set-up of two new Division WGs; WGs for the revision of ICRF and for the consideration of astronomical constants.

The first proposal is actually a promotion of the WG on RCMAM to a Commission, the tasks of which has been acknowledged to relate with issues of all the Commissions under the Division and is believed to be so difficult and complicated that a temporal WG will not be able to resolve them. This proposal itself was welcomed, however, the proposed name of the new Commission was questioned. Also, it was requested to clearly specify the scientific goals of the new Commission. The intention of the second proposal is to enlarge the scope of the WG not only within the physical and observational aspects of natural satellites but also their dynamical characters which are well within the scope of Division I. The third proposal was seriously discussed and the change of the scope as well as the name of the WG was requested. As for the new WGs, the detailed rationale were presented by the proposers. Both of the proposals are welcomed, however, further refinement of the scientific goals was required. These homeworks were requested to finish before the second Division Meeting.

## 3. Second meeting

First, the proposals on the Division officers and on the enlargement of the Division OC were approved.

Also approved was the creation of a new Commission. Its title was, after some debate, fixed as *Relativity in Fundamental Astronomy*. The scientific goals are (1) to clarify the geometric and dynamical concepts of Fundamental Astronomy (FA) within the relativistic framework, (2) to provide adequate mathematical and physical formulations to be used in FA, (3) to deepen the understandings of the above results among astronomers and students, and (4) to promote the researches needed to accomplish these tasks. The Officers of the new Commission were nominated as S. Klioner as Commission president and G. Petit as Commission vice-president.

As a result, the new Division OC members are the following 14 persons; J. Vondrak, D.D. McCarthy, T. Fukushima, J.A. Burns, I.I. Kumkova, A. Brzezinsky, P. Defraigne, S.A. Klioner, G.H. Kaplan, Z. Knezevic, D.W. Evans, Chopo Ma, R. Manchester, and G. Petit.

Next, the change of the status of WG on Natural Satellites was approved. J.-E. Alrot was nominated to chair this new Inter Division WG.

Third, instead of continuing the WG on FDGBA, the Division concluded its abortion and the creation of a new WG named WG on Astrometry by Small Ground-Based Telescopes (WG-ASGBT) to be chaired by W. Thuillot. Its scientific goals are (1) to follow-up the observation of large and fast surveys including the detection of NEOs and the determination of asteroid masses; (2) to set-up a dedicated observation network for *GAIA*; (3) to conduct observation campaign on the mutual events of natural satellites, stellar occultation, and binary asteroids; and (4) to encourage teaching astrometry for the next generation.

Fourth, the two new WGs proposed in the first meeting were both approved and specified in detail. One is titled as the WG on *Second Realization of ICRF* and is chaired by Chopo Ma. Its scientific goal is (1) to oversee the generation of the second realization of the ICRF from VLBI observations of extragalactic radio sources through state-of-the-art astronomical and geophysical models in the analysis; (2) to ensure the selection of defining sources and the mitigation of source position variations and the consistency with the ITRF and the IERS EOP; and (3) to present the second ICRF at the next IAU General Assembly. The other is the WG on *Numerical Standards of Fundamental Astronomy* (NSFA) chaired by B. Luzum. Its scientific goal is to update the IAU Current Best Estimates of Astronomical Quantities while ensuring the conformity with the latest IAU Resolutions on FA, the IERS Conventions, and the concepts/definitions of SI.

Finally, free discussions on the following topics were conducted; the review process of the Division structure, the strategy to propose the future IAU Symposia and Joint Discussions, the arrangement of meetings of Division and Commissions at the next General Assembly, the activation of Division-wide discussions, and the e-communication among Division Members.

Toshio Fukushima  
*president of the Division*