

## **DIVISION II COMMISSION 12**

## **SOLAR RADIATION AND STRUCTURE**

*RAYONNEMENT ET STRUCTURE  
SOLAIRES*

**PRESIDENT**  
**VICE-PRESIDENT**  
**PAST PRESIDENT**  
**ORGANIZING COMMITTEE**

**Alexander Kosovichev**  
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**Valentin Martinez Pillet**  
**Martin Asplund, Axel Brandenburg,**  
**Dean-Yi Chou,**  
**Jorgen Christensen-Dalsgaard,**  
**Weiqun Gan, Vladimir D. Kuznetsov,**  
**Marta G. Rovira, Nataliya Shchukina,**  
**P. Venkatakrisnan**

### **PROCEEDINGS BUSINESS SESSION, 22 August 2012**

Commission 12 held a separate business meeting, on Wednesday August 22, from 14:00-16:00.

The President of C12, Alexander Kosovichev, presented the status of the Commission and its working Group(s). Primary activities included organization of international meetings (IAU Symposia, Special Sessions and Joint Discussion); review and support of proposals for IAU sponsored meetings; organization of working groups on the Commission topics to promote the international cooperation; preparation of triennial report on the organizational and science activities of Commission members. Commission 12 broadly encompasses topics of solar research which include studies of the Sun's internal structure, composition, dynamics and magnetism (through helioseismology and other techniques), studies of the quiet photosphere, chromosphere and corona, and also research of the mechanisms of solar radiation, and its variability on various time scales. Some overlap with topics covered by Commission 10 Solar Activity is unavoidable, and many activities are sponsored jointly by these two commissions. The Commission website can be found at <http://sun.stanford.edu/IAU-Com12/>, with information about related IAU Symposia and activities, and links to appropriate web sites.

Commission 12 currently includes 351 members. However, from a cursory inspection it appears that a large number of them is already retired and/or working in fields only marginally related to Solar Physics; the President comments that a revision of the list is in order to redress this situation. Attendees comment that at the time of membership, one is asked to join only one particular Commission, and it is not obvious how to extend membership to other ones (although possible by IAU rules). Both of these issues had been solved after IAU implements the structural changes voted at the GA. Each member was asked to renew their affiliation to one or more Divisions, as well as to the Commissions.

During the past triennium (Sept 2009-Aug 2012), the Commission either organized directly or supported, a total of 5 Symposia and 1 Special Session:

- IAUS 264, Solar and stellar variability - impact on Earth and planets, Rio de Janeiro, Brazil
- IAUS 271, Astrophysical dynamics from stars to galaxies, Nice, France
- IAUS 273, Physics of Sun and star spots, Los Angeles, United States
- IAUS 274, Advances in plasma astrophysics, Catania, Italy
- IAUS 286, Comparative magnetic minima: characterizing quiet times in the Sun and stars, Mendoza, Argentina
- IAUS 294, Solar and astrophysical dynamos and magnetic activity, Beijing, China
- JD11, New advances in helio- and asteroseismology, Rio de Janeiro, Brazil
- SpS6, Science with large solar telescopes, Beijing, China

The Commission members edited 5 volumes of IAUS Proceedings. The triennial report on research activities in the fields of C12 was compiled by the Organized Committee (Kosovichev *et al.* (2012)).

After the discussions at the past GA in Rio de Janeiro, a new Working Group of C12 was established: “Coordination of Synoptic Observations of the Sun”, chaired by Alexei Pevtsov (NSO, USA). The WG has the mission to facilitate international collaboration in synoptic long-term solar observations as well as providing a forum for discussion of all issues relevant to synoptic long-term observations of the Sun. The web page of the WG is at [http://www4.nso.edu/staff/apevtsov/IAU-Com12/main/wg\\_synoptic\\_observations.html](http://www4.nso.edu/staff/apevtsov/IAU-Com12/main/wg_synoptic_observations.html)

The President mentioned the impressive array of new facilities related to the study of the Sun that have come online in the past triennium. These include the space-based SDO, Koronas, Picard, as well as the ground-based 1.5 m telescopes NST and GREGOR and the balloon-born SUNRISE. Many more are scheduled for construction in the next years, such as IRIS, Solar Orbiter, Solar InterHelioProbe, ATST. The Commission must actively promote the circulation of information in the community about these facilities. In this regard, it is noted that C12 organized a Special Session during the Beijing GA on “Science with Large Solar Telescopes”, which was well attended with over 100 participants. Several articles were also published in the GA Newsletter about both the meeting and the individual projects, giving them ample visibility within the astronomical community at large.

The President noted the result of the election for the incoming Organizing Committee:

*President:* Gianna Cauzzi (Italy)

*Vice-President:* Nataliya Shchukina (Ukraine)

*Past President:* Alexander Kosovichev (USA)

*Board:* Axel Brandenburg (Sweden), Michele Bianda (Switzerland), Dean-Yi Chou (China Taiwan), Sergio Dasso (Argentina), Mingde Ding (China PR), Stuart Jefferies (USA), Natasha Krivova (Germany), Vladimir D. Kuznetsov (Russian Federation), Fernando Moreno Insertis (Spain).

Despite promise of a user-friendly polling system provided by IAU, Commission-wide elections for the renewal of the Organizing Committee were still not possible, due to mishaps in the system. It is widely expected that these problems will be solved over the course of the next triennium, given the restructuring of IAU Divisions and Commissions’ role and activities. However, officers of C12 will keep in touch with the relevant IAU bodies to make sure that such a feature is finally implemented.

The President concludes reminding what will be the focus of C12’s activity in the next three years: *i)* Continue effort in supporting proposals and organization of IAU symposia, SpS and JD on C12 topics; *ii)* Promote international cooperation and support of solar astronomy in different countries; *iii)* Promote interdisciplinary links and

cooperation within the IAU Division II (now Div. E) and with the other IAU Divisions and Commissions; *iv*) further develop cooperation and coordination in the form of Working Groups; *v*) Support young solar astronomers, summer schools, EPO activities.

In particular, C12 already actively sought to support young students and scientists for participation in the GA activities. To this end, two grants were secured from the Tom Metcalf Travel Fund of the Solar Physics Division/AAS, and from the NSF-sponsored program managed by the University of New Mexico. These grants covered expenses for four young scientists, who gave invited talks in S294; JD3; SpS6.

Alexander Kosovichev  
*President of the Commission*

## References

- Kosovichev, A., Cauzzi, G., Martinez Pillet, V., Asplund, M., Brandenburg, A., Chou, D.Y., Christensen-Dalsgaard, J., Gan, W., Kuznetsov, V., Rovira, M. G., Shchukina, N., Venkatakrishnan, P. 2012 *Commission 12: Solar Radiation and Structure*, In I. Corbett (ed.) *Transactions IAU, Vol. XXVIII, Reports on Astronomy*, Cambridge University Press, pp. 81–94