

COMMISSION 9: INSTRUMENTATION AND TECHNIQUES (*INSTRUMENTATION ET TECHNIQUES*)

PRESIDENT: Ding-qiang Su

VICE-PRESIDENT: Michel Dennefeld

ORGANIZING COMMITTEE: Tim Abbott, Noah Brosch, Russell Cannon, Xiangqun Cui, Martin Cullum, Masanori Iye, George Jacoby, Peter Lawson, Ian S. McLean, John O'Byrne, Michael Redfern, A.K. Saxena & Milcho Tsvetkov

The business meeting of Commission 9 held from 11:00 - 12:30 am 16 July, 2003 in Sydney, Australia. About 20 persons attended this meeting including Johannes Andersen, the former IAU General Secretary, Arlo Landolt, the Division IX President, seven OC members. First, Ding-qiang Su, the President of Commission 9, gave a report on commission work of the last triennium. Then Russell Cannon, the Chairman of Working Group on Sky Surveys and Martin Cullum, the past Chairman of Working Group on Detectors, gave their reports on these two WGs. Then Michel Dennefeld, the Vice-President and incoming President, was in charge of the discussion on the role of Commission 9 in the future. Since time is limited the vote for two OC candidates has not proceeding.

Joint Discussion 8 "Large Telescopes and Virtual Observatory Visions for the Future" was organized by Commissions 9 & 5. This meeting held in Sydney, Australia on 17 and 18 July, 2003. Commission 9 and Commission 5 are in charge Large Telescopes part and Virtual Observatory part respectively. The meeting of Large Telescopes part of JD8 held on 17 July whole day. It consists of four sessions each including two invited reviews (Session 1 only one since the second speaker was absent) and a half hour discussion. About 200 astronomers participated in this meeting. All reviews are excellent and with warm discussion. Except invited reviews there are 24 posters with high qualities given to Large Telescopes part of JD8. This meeting is fully successful.

In the past three years, Commission 9 was very active. Ding-qiang Su summarized it in four aspects:

1. Foundation of webpage (<http://www.nairc.ac.cn/dqsu/>)

The web page of Commission 9 was founded on 12 December, 2000. In the past three years, it was updated five times (five versions). For example, the fifth version includes the present and the upcoming officials of Commission 9, the Membership List and the Newsletter 5 which including the venues and times of Commission 9 business meeting and JD 8, the program of JD 8, and the triennial reports of Commission 9 and its two Working Groups. Also, the WG on Sky Surveys has created a good web page with plentiful information, and the web page CCD World is well managed by WG on Detectors.

2. Science meeting

Since several years ago, every two years SPIE holds astronomical telescopes and instrumentation conferences. These conferences are large and have a wide scope. This may be

the main reason why for many years Commission 9 has had almost no science meeting, except Working Group meetings. IAU is the most important organization of the international astronomical community. Telescopes, instrumentation, and techniques are an important part of astronomy, and new technology and new telescope projects are driven by astronomical goals. IAU should also hold astronomical telescopes and instrumentation conferences. These conferences should lean toward science goals and they could make astronomers understand the recent development of telescopes, instrumentation, and techniques. If an IAU commission holds no science meeting for a long time, it will wither. When I was elected to be President of Commission 9, I did my best to promote this work. In January, 2001 I sent e-mails to 18 astronomical optics experts and all OC members of Commission 9 to propose to hold an IAU telescope optics meeting in 2002. Since the persons who supported to hold this meeting was a little less than half of the total number and in August, 2002 there would be a SPIE astronomical telescopes and instrumentation conferences, I did not submit the proposal to IAU finally. One year later, in January, 2002, I joined other astronomers and technical experts to put forward a proposal to hold a telescope symposium. This meeting will be co-sponsored by ICO. I received many e-mail messages of strong support. On February 15, 2002 I submitted this proposal to Arlo Landolt, the President of Division 9. But IAU Executive Committee decided to merge our proposed symposium with another meeting "Virtual Observatory" as a joint discussion on "Future Giant Telescopes and Virtual Observatory". It is a pity that we wanted to hold a symposium but only secured half a joint discussion. But even so this ended the situation that for a long time Commission 9 had had no science meeting.

Later we spent many time and energy to prepare this meeting. It should be pointed out that Johannes Andersen, the former IAU General Secretary, as an IAU representative attend SOC of JD 8 and spent much time and energy for organizing this meeting

3. Triennial Reports

These reports have been published in IAU Transaction Vol.25A: Reports on Astronomy. The triennium from July 1, 1999 to June 30, 2002 is very special, because of spanning both the 20th and the 21st centuries. Also it was an extremely unusual period in telescopes, instrumentation, and techniques for its having obtained unprecedented achievements. Before these three years, there were only two 8-10m telescopes, Keck I and II working for astronomical observation. During this period eight 8-10m telescopes including four VLT units, two Gemini, Subaru and HET telescopes began their scientific operation. Until now the total number of 8-10m telescopes has reached ten. In these three years, many instruments were completed, improved or have being developed for these and other telescopes. The new techniques, especially adaptive optics and interferometry have already been used successfully on large telescopes in near infrared waveband. Many projects of the Future Giant Telescopes with 30-100m aperture have been put forward, and a lot of research work on FGT has been developed. Also Russell Cannon and Tim Abbott wrote the Triennial Reports for two Working Groups respectively.

4. Appointment of new officials of Commission 9

On February 5, 2003 I suggested Michel Dennefeld and Martin Cullum be the new President and Vice-President of Commission 9 respectively, and I asked all OC members if they were willing to continue as the OC members of Commission 9. I received nearly all OC members' replies. All of them agreed with my suggestion and were willing to continue as OC members. Since I am too busy with myself can not continue as an OC member for the next three years. On February 27, I recommended the Russian astronomer Yuri

Balega to be a new OC member. I received most OC members' replies and all of them agreed with my recommendation. I asked Cannon and Abbott to provide the list of new officials for the WGs. The following is name list for the new officials of Commission 9 and two Working Groups:

President: Michel Dennefeld (France)

Vice-President: Martin Cullum (Germany)

OC members: Tim Abbott (Spain), Yuri Balega (Russia), Noah Brosch (Israel), Russell Cannon (Australia), Xiangqun Cui (China), Masanori Iye (Japan), George Jacoby (U.S.A.), Peter Lawson (U.S.A.), Ian S McLean (UK), John O'Byrne (Australia), Quentin Parker (Australia), Michael Redfern (Ireland), A K Saxena (India), Milcho Tsvetkov (Bulgaria)

Chairman of Working Groups on Sky Surveys: Quentin Parker (Australia)

Chairman of Working Groups on Detectors: Tim Abbott (Spain)

In addition, Milcho Tsvetkov recommended an astronomer and another astronomer who recommended himself to become the new OC members of Commission 9. I suggest the vote for two candidates and even others in this business meeting.

5. Two suggestions

Finally I would like to give two my suggestions for the coming three years:

On September 10 and 11, 2002, I received two e-mails from Hans Rickman, the IAU General Secretary, in which he told me IAU EC had acknowledged the importance for IAU to organize series of astronomical telescopes and instrumentation meetings also. And he asked me to consider if such a series of meetings can be held from 2004 onward. I think that since there will be SPIE astronomical conferences in that year, it is better to hold an IAU astronomical telescopes and instrumentation symposium or colloquium in 2005. I hope that the new President Michel Dennefeld could consider this issue.

In my opinion both working groups, WG on Sky Surveys and WG on Detectors, are important and should continue to exist. Since adaptive optics is one of the most important new technologies, I believe it is necessary to establish a new Working Group on Adaptive Optics and I think this WG should be included in Commission 9. However, since establishing such a new working group during the 25th GA is too rushed, I suggest that the new officials of Division 9 and Commission 9 could consider this issue during the next three years.

Acknowledgments. As an outgoing president of Commission 9, I would like to give my thanks to all OC members of Commission 9, the Division IX President Arlo Landolt and the IAU General Secretary Hans Rickman for their support in last three years.

Ding-qiang Su

President of the Commission