

Executive summary

The *IAU Symposium 323: Planetary nebulae: Multi-wavelength probes of stellar and galactic evolution* has been held in Beijing on October 10-14, 2016. Upon completion, Xiaowei Liu, Letizia Stanghellini, and Amanda Karakas, as SOC co-Chairs, produced an executive summary, and a list of science highlights related to the meeting.

The planetary nebula (PN) community, currently represented also by IAU Commission H3, has a long history of wide breath IAU Symposia, which recur every 4-6 years, as for a to discuss the developments of the PN field in the current and future instrumentation and modeling scenario. These Symposia are convened also to involve the younger members of the community, and give them a chance to be involved in collaborations. The Beijing Symposium had been excellent at serving its purpose, which includes a sense of history and continuity for the PN community, and its exposure to related fields.

The SOC, lead by the three Chairs, assembled a scientific program specifically inclusive of new takes in the field, and of young speakers that have not recently presented at an IAU Symposium on PNe. Xiaowei Liu gave the Symposium welcome. Letizia Stanghellini also welcomed the audience with a few words on the IAU Commission H3.

We were privileged to have the IAU President, Silvia Torres-Peimbert, to give the introductory talk on history and scope of this Symposium. She did highlight the fact that there are still many open questions within the field, including the distance scale, dust properties, and magnetic fields. By showing some excellent examples of very deep spectra and images, she conveyed that there is still much to be discovered in this rather classical field.

The venue of the conference seemed to be ideally suited for long discussions and calm viewing of the posters. We had two major discussion sessions on “Data and modeling” and on “Future instrumentations” related to the field of PNe. The invited panelists for the sessions did a good job of involving the audience, and we had polite but animated discussions to last all and maybe outlast the allotted time. The LOC did a great job in supporting these discussions with prompt help with the microphones.

Since the field of PNe has a new IAU Commission, we liked to convey this to the audience, and also to requested feedback in the form of a paper survey on possible future PN symposia. The feedback is being elaborated and will be used by the SOC for future PN meeting planning.

We did want involvement of the young Symposium participants, especially students. To this end, we also issued a prize for the two best science posters at the conference. This initiative seems to be warmly received, and helped to create a climate of enthusiasm and accomplishment amongst students.

We could list a number of scientific highlights during the conference, which are summarized in a separate document. Sun Kwok gave the conference summary in an experienced and enthusiastic fashion.

The scientific organizers are very happy to have received several messages from participants to convey the positive feedback regarding the Symposium.