

§24. Linkage of Scientific Research Fields on Plasma Physics

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Purpose Plasma science is defined as a fundamental science covering wide field including nuclear fusion, space plasma, astrophysics, nano-process and mathematical physics. In order to encourage plasma science itself and cross-field linkage with related scientific communities, it is necessary to organize a network of scientists in this field. The Region 2 (DPP: Division of Plasma Physics) in the Physical Society of Japan (JPS) is one of the most active society in the field of plasma physics in Japan. The committees of DPP-JPS operated this collaboration as one of main actions of DPP-JPS and supplied opportunities to communicate between related scientific communities.

Activities In this program, mainly committee of DPP-JPS have communicated with other societies related to plasma physics, and have discussed on the policy and plan to promote plasma physics and nuclear fusion researches. In this fiscal year, exploratory meetings to discuss organization of the second Plasma Conference were held at NIFS at July and November, 2012 and February 2013 (Plasma Conference 2011 was held at Kanazawa city with more than 1000 participants¹⁾, <http://www.jspf.or.jp/PLASMA2011/jpn/>). In these meetings, we discussed on the conference organization, conference place, period, conference fee, program arrangement, support program for students and participants from companies and so on. It was strongly recommended that the scientific program should be unified through the conference in order to promote cross-field communications, although the conference will consist of three societies: the DPP-JPS, the Japanese Society of Plasma Science and Nuclear Fusion Research and the Japanese Society of Applied Physics. We have finally come to agreement that the second Plasma Conference will be held from 21st to 24th November 2014 at Toki-Messe (Niigata city) in charge of DPP-JPS. This preparatory activity finished at the end of the third meeting, and the report was submitted to the chairperson of Plasma Science Association. The organization committee, the program committee and local organizing committee will be organized and the discussion on the conference arrangement will be started based on this report.

The 7th symposium on Plasma Astrophysics was held at annual meeting of JPS (25th - 28th March 2013) in collaboration with the Astronomical Society of Japan

and Society of Geomagnetism and Earth, Planetary and Space Sciences (SGEPSS). 79 presentations were arranged in a single slot through the meeting. Two symposiums (Plasma Astrophysics and Angular Momentum Transport Driven by Turbulence) were held in this joint session and the most participants came to these symposium in DPP sessions. In the informal meeting on this collaborative session, the requests for this symposium on Plasma Astrophysics were discussed, based on summary of questionnaire, which was collected from participants of this symposium. The summary of questionnaire showed that the 80% of opinions are positive to the concept of this Plasma Astrophysics session and hope to participate to this session. Therefore it was proposed to keep this activity for coming five years in the informal meeting.

To support and encourage young scientists and students two programs were operated in DPP-JPS. One is selection of Young Scientist Award of the physical Society of Japan in the field of DPP. Two young scientists got this award from DPP-JPS in 2012. The other is the Best Presentation Award for Students, which is an original program in DPP-JPS²⁾. This program was operated every meeting (September and March) of JPS-DPP. Many students applied this award, and three and four students got the award in Autumn meeting 2012 and annual meeting 2013, respectively. The information of these awards is reported via web page (<http://div.jps.or.jp/r2/injdx.html>).

Summary It is very important mission of DPP-JPS to promote collaborative activities between scientists, to supply the opportunities for presentation and discussion of scientific results. The training and encouragement of young scientists and students are also important missions. It is necessary to discuss the management policy and action plan of the DPP-JPS. In the fiscal year 2012, this program was operated as a collaborative research of National Institute for Fusion Science and the very important achievements such as preparation of second Plasma Conference were obtained. Further discussion and continuous effort are important to establish future strategy of the DPP-JPS and plasma-related societies with strong inter-society collaboration.

- 1) M. Kikuchi, "Report of Plasma Conference 2011", BUTSURI, Vol.67, No.2 (2012) p.143.
- 2) A. Ando, "Best Student Presentation Award: A First Attempt in Division 2 (Plasma Physics)", BUTSURI, Vol.67, No.9 (2012) p.658.