

Report on ASHULA travel in Beijing

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Drs. H. Takabe, Y. Kuramitsu, T. Moritaka, T. Morita, and myself visited Beijing, China from Oct. 18 to 23, 2011 supported by ASHULA program. We visited three institutes this time; Institute of Physics (IOP), Institute of Applied Physics and Computational Mathematics (IAPCM), and National Astronomical Observatory of China (NAOC).

On the first day (Oct. 19) at IOP, we discussed with Drs. Y. Li and Q. Dong on Gekko XII experimental results of collisionless shock generation and a plan for the next experiment.

On the second day (Oct. 20) at IAPCM, we had a workshop on “Computer simulation for astrophysical collisionless shock” and discussed on new collaboration in computer simulation. The program of the workshop was as follows.

1. Opening, introduction etc (S. Zhu)
2. Summary of the agreement (H. Takabe)
3. Review of the experiment to be simulated as collaboration (I) (Y. Sakawa)
4. Review of the experiment to be simulated as collaboration (II) (T. Morita)
5. Review of PIC simulation results at ILE (T. Moritaka)
6. Review of Hydrodynamic simulation for the experiment (Y. Kuramitsu)
7. Present status of PIC simulation with collision (H. Cai)
8. Present status of Multi-dimensional Hydro-code (J. Li)
9. PIC and Monte Carlo simulation for Vacuum breakdown study (H. Takabe)
10. Time for discussion in three groups: PIC, Hydro, and Vacuum breakdown

More than 20 scientists and students joined the workshop (Fig. 1). Dr. Cai will include the Monte Carlo collision in his 2D PIC simulation code and calculate the collisional effect on the shock formation. Then he will try 3D PIC simulation as a next step.

On the third day (Oct. 21) at NAOC, we discussed on Gekko XII experimental collaboration in photo-ionized plasma and magnetic reconnection next year with Drs. G. Zhao, J. Zhong, and F. Wang.

We enjoyed good discussions with our collaborators every day and night (for example Fig. 2) and weekend (for example Fig. 3) during our stay in Beijing. We appreciate all the collaborators for their hospitality and ASHULA program for their support.



Fig. 1 Workshop on “Computer simulation for astrophysical collisionless shock” at IAPCM.



Fig. 2 Night session at IAPCM.

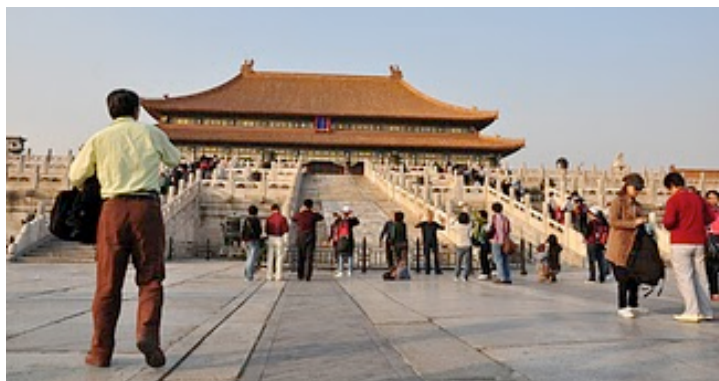


Fig. 3 Imperial Palaces (Forbidden City) of the Ming and Qing Dynasties in Beijing at the weekend.