

WELCOME ADDRESS

GUANGZHAO ZHOU

President, Chinese Academy of Sciences

Ladies and Gentlemen:

On behalf of the Chinese Academy of Sciences, I am pleased to welcome you, our colleagues and friends, to this IAU Colloquium at the best season of the year in Beijing.

The topic of this colloquium, the magnetic and velocity fields of solar active regions, is a central concern in modern solar physics. Professor Zirin, chairman of this Colloquium, stresses in his recent book the fact that 'Progress in solar physics has been essential for progress to astronomy as a whole.' Indeed, the role of solar research in astronomy is unique in the sense that: first, the Sun is the nearest star to us, which largely controls our living environment. The knowledge of the Sun is essential for the prediction capability of solar activity and its influence on the space environment. Secondly, the Sun is the only star for which the detailed observation with high spatial, temporal and spectral resolution is possible. And thirdly, in the view of physical science, the Sun serves as an active laboratory not only of astrophysics, but also of magnetohydrodynamics, plasma physics, and high energy physics. The study of solar active regions is of importance in all these respects. In particular, the study of solar magnetic and velocity fields has already led to a much deeper understanding of the dynamic and magnetic aspects of the heavenly phenomena, especially those of the stars in general, and even of galaxies. Chinese Academy of Sciences strongly supports the efforts of this study not only in its own right, but also in the consideration of its interaction with various branches of astrophysics and general physics.

Modern science calls for international collaboration. In the field of solar research, I would like to mention the coordinated round-the-clock observation of the magnetic field distribution on the solar surface carried out since 1987 between the Huairou Solar Observing Station of Beijing Astronomical Observatory and the Big Bear Solar Observatory of California Institute of Technology. The observation has brought us for the first time a comprehensive picture of the evolution patterns of the solar magnetic field. Chinese Academy of Sciences highly appreciate such kind of international collaboration.

This IAU Colloquium itself is a result of world-wide collaborative efforts. It is our great pleasure to have so many leading scientists in the field of solar physics getting together here to exchange and share new ideas and new results. For the Chinese scientists, this meeting is a very good opportunity to meet their foreign colleagues. I am sure that scientific contacts made in the meeting will lay the basis for further contacts and personal friendship, and this is beneficial to the progress of science.

I wish you a successful meeting, and a pleasant stay for all foreign colleagues in Beijing.

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JIAER CHEN

Vice President, National Nature Science Foundation of China

Ladies and Gentlemen:

At this memorable moment, I wish to congratulate on the opening of the IAU Colloquium, on behalf of the National Nature Science Foundation of China. I do believe that it will be a completely successful colloquium, one with interesting presentations, valuable exchange, as well as precious friendship and collaboration.

The study of solar magnetic and velocity fields is one of the key projects in the research on astronomy, which has been continuously supported by Chinese National Science Foundation. This support is based on a consideration for obtaining an accurate understanding on the origin and cause of solar activity and the way of its influence on our living environments. As I know, rapid progress in this study will be summarized and reviewed in the colloquium. Therefore the colloquium will certainly give great impetus to this study in China. We highly appreciate the efforts made by the Scientific Organizing Committee of the meeting, as well as all participants, which led to the opening of this colloquium.

To establish relation with Science Foundation and relevant scientific organization of other countries and regions, and conduct international scientific cooperative research and exchange, is one of the most important functions of our Natural Science Foundation. In the past, we have aided parts of international collaboration in solar physics and astrophysics. In the future, we hope that we can do much better. In fact, solar study is a field which needs world-wide collaborative efforts crucially. This colloquium itself provides a very nice opportunity to coordinate further international collaboration. We hope that we can hear valuable suggestions and interesting ideas on the collaboration in this field from our distinguished guests.

As I understand, you are anxious now to listen the scientific reports. So, I should end my speech here. May the colloquium achieve great success! May everyone here have wonderful presentations, good health, and exciting experiences!