
Editorial from the Editor-in-Chief

The International Year of Astronomy

The United Nations Educational, Scientific and Cultural Organization (UNESCO) have proclaimed the year 2009 to be the International Year of Astronomy, and the International Astronomical Union is coordinating related events throughout this year.

When in 1609, Galileo Galilei first turned his telescopes to the night sky he made striking observations that changed not only the perspective of scientists but practically everybody's conception about the way the universe we live in functions. Moreover his experimental approach to science together with the mandate of precise observation and measurement started science as we know it today. Today new instruments are launched into the sky and help us to understand processes that have been mysteries for a long time. Only few of the scientists in our field take an active part in satellite missions, however our instruments like high power lasers (Cook *et al.*, 2008; Krasa *et al.*, 2009; Neumayer *et al.*, 2005; Nobile *et al.*, 2006; Seifter *et al.*, 2009), intense particle beam accelerators (Hoffmann *et al.*, 2005; Kulagin *et al.*, 2008; Ni *et al.*, 2008; Singh *et al.*, 2008), and pulsed power drivers (Burdovitsin & Oks, 2008; Li *et al.*, 2008; Liu *et al.*, 2008; Mao *et al.*, 2009; Tarasenko *et al.*, 2008) can generate matter in extreme conditions. Usually, we find these conditions to prevail in the interior of stars, in stellar atmospheres, in interplanetary space, or even in the interior of planets. With lasers, accelerators, and pulsed power drivers we are able to generate high energy density matter under controlled and reproducible conditions and thus we investigate astrophysical phenomena in the laboratory. In this way, laboratory astrophysics becomes an important part of high energy density science. Many of the effects that have been observed by astronomers using telescopes can now be simulated in laboratory experiments. In this way, we are an active part of the international year of astronomy. *Laser and Particle Beams* has followed the development of laboratory astrophysics since 1998 (Browne, 1988; Rose, 1991). Currently, the investigation of laboratory plasma jets in comparison to astrophysical jets has become an interesting object for theoretical and experimental investigation (Kasperczuk *et al.*, 2009; Schaumann *et al.*, 2005; Schopper *et al.*,

2003; Sizyuk *et al.*, 2007). We encourage our authors to continue to submit articles related to high energy density physics and laboratory astrophysics.

Finally, I want to make our community aware of two conferences later this year that are of importance to our community. From August 24–28, 2009 the 4th Stimulated Brillouin Scattering and Phase Conjugation Workshop will be held in Prague, Czech Republic. *Laser and Particle Beams* is following the developments in this field very closely and last year we carried a long article on trends in Brillouin scattering and phase conjugation (Kappe *et al.*, 2007; Kong *et al.*, 2007; Ostermeyer *et al.*, 2008). The main event this year will be the Sixth International Conference on Inertial Fusion Sciences and Applications to be held September 6–11, 2009.

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