

## Editorial

This thirteenth number of the Latin-American Journal (RELEA) is quite significant, since we are still in a special moment of astronomy education in Brazil.

The II National Symposium on Education in Astronomy (II SNEA) will be held in the Campus of the University of São Paulo (USP), São Paulo city, SP from 24 to 27 of July.

Like the I SNEA (held last year at the Campus of the University of Rio de Janeiro State, UNIRIO), the event is aimed to gather and enhance the interaction of researchers in Astronomy education, with the intention of discussing the recent research works dealing with these subjects. The planned activities include: conferences, roundtable discussions, presentation of research works and the realization of the I School of Formation of Teachers in Astronomy Education, intended primarily for Basic Education teachers perfecting their knowledge in this area.

Due to our participation in the Scientific Committee, we know that about 100 contributed papers were submitted, indicative of the success of the event and the continuity of further editions. These facts confirm the expectations of the organizers, taking into account the Brazilian activity and reinforces the consolidation of a steadily growing area. From now on, the SNEAs will be held each two years.

In this issue we have three articles:

*Application of three-dimensional models for the teaching of time zones*, by Paulo Henrique de Azevedo Sobreira. In this paper, two proposals are presented for the making of low-cost materials aimed to construct three-dimensional models for teaching time zones.

*Providing meaningful learning for students of the sixth grade of middle school: a study on the Moon phases*, by Luiz Marcelo Darroz, Renato Heineck, Carlos Ariel Samudio Pérez and Cleci Werner Rose. This paper presents a teaching experience to study the phases of the moon with a group of 6th graders of a middle school, located in the city of Passo Fundo, RS. Within the theoretical background of the Meaningful Learning Theory of David Ausubel, based on prior knowledge of students, a proposal was developed from a didactic model of the phases of the moon. The evidence of learning was found from the records of the activity.

*Forms of appropriation of tools for the Astronomy education in continuous training of teachers*, by Leonardo Marques Soares and Sylvania Sousa do Nascimento. This paper presents a study on how a group of teachers have appropriated the tools of the kit for the Teaching of Astronomy (KITPEA). The subjects attended the specialization course on astronomy education offered by the Continuing Education Project (Focus), the Center for Mathematics and Science Teaching (CECIMIG), Faculty of Education, Federal University of Minas Gerais (SAF/UFGM). The information was obtained through different questionnaires and interviews applied to these teachers, later analyzed with the help of Activity Theory and the Theory of Mediated Action. The speeches were interpreted with the use of elements of the activity and the concepts of *appropriation* and *mastery*.

Also in this issue we publish, for the first time, a book review:

*Astronomy, Education and Culture: transdisciplinary approaches to the various levels of education*, by Luiz C. Jafelice (Org.), Maria Luciene S. L. Freitas, Gilvana B. C. Fernandes and Luziânia A. L. de Medeiros. The review, written by Jules Smith and Flavia Cristina de Mello, introduces the book, which proposes a humanistic approach, an anthropological, environmental education, where astronomy comes from a cultural perspective, helping to create an environment more favorable to accommodate diversity and worldviews and alternative pedagogical practices.

The RELEA want to make the publication of reviews as regular as possible. In this regard, we encourage authors and readers to submit their reviews, or to request our help to carry out reviews of texts relevant to the scope of this journal. Thus, we hope to help provide greater visibility and encourage the reading of quality works in the area through the analysis of the reviewers, especially in Brazilian and Latin America.

More information about the journal and instructions for authors listed in the address: [www.relea.ufscar.br](http://www.relea.ufscar.br). Articles may be written in Portuguese, Spanish and English.

We thank Miss. Ana Carolina Contini Pietscher for editing the articles, to the authors, referees and all those who directly or indirectly helped us in continuing this initiative and, in particular, in preparing the present edition.

Editors

Paul S. Bretones

Luiz C. Jafelice

Jorge E. Horvath