# **Global Astronomy Survey : Lithuania**

First submission: Algirdas Kazlauskas [see human resources section] [13 February 2009] SPoC Approved: Yes

### 1. Professional (Research) Astronomy:

- (i) Number of universities offering Astronomy (and their names)
- 1. Vilnius University;
- 2. Vilnius Pedagogical University;
- (ii) Number of universities offering Physics (and their names):
- 1. Vilnius University;
- 2. Vilnius Pedagogical University;
- 3. Vytautas Magnus University;
- 4. Kaunas University of Technology
- 5. Siauliai University;

The other 3 Universities posseses the departments of physics or natural sciences, but no professional physicists are qualified there.

(iii) Number of academics who have been trained in Astronomy (ideally with their names and levels of qualification):

1. dr. S. Bartašiūtė (Vilnius University);

2. prof. dr. A. Bartkevičius (Institute of Theoretical Physics and Astronomy of Vilnius University (ITPA VU)) and Vilnius Pedagogical University);

- 3. dr. A. Bridžius (Institute of Physics);
- 4. dr. Y. Chorniy (ITPA VU);
- 5. dr. K. Černis ((ITPA VU);
- 6. dr. R. Janulis (ITPA VU);
- 7. dr. A. Kazlauskas (ITPA VU);
- 8. dr. A. Kučinskas (Vilnius University);
- 9. dr. R. Lazauskaitė (Vilnius Pedagogical University);
- 10. dr. E. Pakštienė (ITPA VU);
- 11. dr. D. Semionov (Institute of Physics);
- 12. dr. R. Stonkutė (Institute of Physics);
- 13. prof. dr. V. Straižys (ITPA VU);
- 14. dr. J. Sperauskas (Vilnius University);
- 15. dr. J. Sūdžius (Vilnius University);
- 16. dr. I. Šablevičiūtė (Planetarium of ITPA VU);
- 17. prof. dr. G. Tautvaišienė (ITPA VU);
- 18. prof. dr. V. Vansevičius (Vilnius University);
- 19. dr. J. Zdanavičius ((ITPA VU);

20. dr. K. Zdanavičius (ITPA VU);

Among them there are 11 members of the IAU and 7 members of European Astronomical Society.

(iv) Number of astronomical facilities (observatories, telescopes, etc) and as much detail about each as possible (websites/contact details)

Moletai observatory of ITPA VU with 3 telescopes (165 cm, 63 cm and 35/51 cm Maksutov system); (http://www.itpa.lt/mao);

An international journal "Baltic Astronomy" published by the ITPA VU. Sponsored by the Ministry of Education and Science of Lithuania (http://www.itpa.lt/ba/).

(v) Self evaluation (according to the different phases above, how would you rate your country in terms of Professional Astronomy? Please include any other relevant information to motivate your choice.)

Astronomical community in Lithuania is still in the stage of formation. Professional astronomers are spread over four institutions (Vilnius University, ITPA, Institute of Physics, and Vilnius Pedagogical University). In spite of poor governmental funding they are able to carry out high level researches that are widely acknowledged. They participate in training graduate and postgraduate students to become them researchers of the highest qualification. Due to poor governmental funding astronomers of Lithuania cannot join multinational facilities and organizations, such as ESO or ESA.

Phase 2.

### 2. Public Understanding of Astronomy:

(i) What governmental astronomy/science outreach programmes for the public take place (coordinated either by government departments or national facilities):

The government supports the activity of Planetarium of ITPA VU and Museum of Ethnocosmology, which was recently reconstructed, using the funds of EU and the government; The government also supports the publishing of books on the history of astronomy in Lithuania as well as the annual "Lithuanian Sky" issued by ITPA VU and devoted to astronomy popularization.

(ii) What non-governmental astronomy/science outreach programmes for the public take place (NGO activities or international programmes that your country is involved in):

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Moletai observatory of ITPA VU accepts guided excursions (more than 10000 visitors per year), several times during the year thematic astronomical events are organized ("Starry nights", "Researchers' nights"). The Lithuanian astronomical society, which joins both professional and amateur-astronomers is active. There are several websites with astronomical news in Lithuania.

(iii) Comment on the presence of astronomy in the media (TV, radio, newspapers). Is it very prominent? Are there specific programmes on astronomy? Is the media generally willing to publish news on astronomy?

The presence of astronomy in the media is occasional – 3-4 times per year, related with "hot" news, like outstanding discoveries, rare spectacular astronomical phenomena etc. There are no specific programmes on astronomy on TV, but one daily newspaper "Lietuvos rytas" publishes monthly survey "What is up in the sky"

(iv) Comment on the presence of astronomy/science in the general culture of the people. Are there any specific challenges or setbacks? Is astronomy a welcome subject of conversation?

Lithuanian people are interested in astronomy. The steadily growing number of visitors at Moletai Observatory and Planetarium of ITPA VU, as well as at Museum of Ethnocosmology supports this conclusion. There is one active amateur astronomer club "Albireo" and several hundreds active amateur astronomers in different regions of Lithuania. However, the level of their astronomical knowledge is rather low and that is the consequence of their poor astronomical education in schools.

(v) Self evaluation (according to the different phases above, how would you rate your country in terms of Public Understanding of Astronomy? Please include any other relevant information to motivate your choice.)

Despite the efforts, taken by the professional astronomers, the interest of media and the public understanding of astronomy are still too low. Phase 2.

## 3. Astronomy in Schools:

(i) What governmental astronomy/science education and outreach programmes for schools take place (co-ordinated either by government departments or national facilities)

The government prepares the educational programmes for schools, publishes textbooks. Also, the national Olympiads of astronomy, organized by Lithuanian Youth Technical Creativity Palace are supported by the government. Ministry of Education and Science funds the participation of the national teams at the International Astronomy Olympiads. The Lithuanian teams participate both in the International Astronomy Olympiad (starting 2003) and in the

International Olympiad of Astronomy and Astrophysics (starting 2007)

(ii)What non-governmental astronomy/science education and outreach programmes for schools take place (NGO activities or international programmes that your country is involved in):

The teachers participate in the seminars organized by the Lithuanian Youth Technical Creativity Palace and Teacher Professional Development Center. The first conference about the Astronomy in formal and informal education will be organized in autumn 2009. The hobby groups of pupils interested in astronomy are organized in the Lithuanian Youth Technical Creativity Palace as well as in a few schools. The National Astronomy Olympiads for the secondary school pupils is organized starting 2003. The Lithuanian astronomical society also takes part in their organization.

(iii) Comment on the presence of astronomy in the school curriculum. Is it part of the school curriculum? Is it very prominent? What age groups?

The astronomical topics are included into other subjects of the primary school (age group 6/7-10/11 years, the course "Nature") and in the secondary school (age group 10/11-11/12, course "Nature and Man"). Starting the grade 7 (age 13/14), the astronomy topics are included into the course of Physics. The school curriculum includes a quite large spectrum of the astronomical topics, but not in all schools the astronomical topics are studied properly due to the short course of physics in school curriculum.

(iv) Comment on the status of astronomy/science in schools. Are there any specific challenges or setbacks? Sufficient number of students studying maths and science? General interest in maths/science/astronomy in schools?

Until 2000 astronomy was a separate subject in the secondary school curriculum. Usually astronomy was taught by teachers of physics or by the teachers of physics and astronomy, mainly graduated from the Vilnius pedagogical university. At present, the course of Astrophysics is included in the curricula of undergraduate physics study programmes of all universities. However, this course is rather short for training competitive lecturers in astronomy. Teachers who give lectures on such subjects as "Nature", or "Nature and Man", did not have any course of astronomy during their studies at the university. There is some disproportion in the requirements of the curriculum in the primary and secondary school and the university programs for teachers.

(v) Self evaluation (according to the different phases above, how would you rate your country in terms of Astronomy in Schools? Please include any other relevant information to motivate your choice.)

The situation with astronomy teaching in schools is not good. Only there, where teachers themselves are interested in astronomy, the level of astronomy knowledge of schoolchildren is higher. The requirements of final school exam are too low and the majority of teachers do not pay serious attention to astronomy questions. Between Phase 2. and Phase 3.

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