

Global Astronomy Survey: Finland

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Updated : Tapio Markkanen [see human resources section] [4 August 2009]

SPoC Approved : Yes

1. Professional (Research) Astronomy

i. Number of universities offering Astronomy (and their names)

Number of universities offering Astronomy: four (4)

University of Helsinki

University of Turku

University of Oulu

Helsinki University of Technology

ii. Number of universities offering Physics (and their names)

Number of universities offering Physics: nine (9)

University of Helsinki

University of Turku

University of Jyväskylä

University of Oulu

University of Joensuu

University of Kuopio

Helsinki University of Technology

Tampere University of Technology

Lappeenranta University of Technology

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

(2003) 75 post PhD, 46 PhD students, (2009) 68 IUA members.

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

Finland has two 14 metre radio telescopes at 100 GHz range. Optical instruments are small

because of unfavourable observing climate. High tech instruments have been developed (optical and radio spectrometry, fotometry, polarimetry, etc.) and are used at large telescopes in good climates. For websites and home pages, see the institutions above.

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.)

Phase 1: Astronomy in Finland has been evaluated several times by international expert panels and has got high rankings. Finland is member and active user of ESO, ESA, CERN and other relevant international research organisations.

2. Public understanding of Astronomy

i. What governmental astronomy/science outreach programmes for the public take place (co-ordinated either by government departments or national facilities)

None

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

Public understanding and interest of Astronomy has a tradition of more than a century. It is created by books, public communication (newspapers, journals, radio, TV, science centres, public lectures, etc.). The activities are not because of government policy but of citizen society. The national organization, Ursa Astronomical Association (founded 1923) (end of 2008) has 14.700 members throughout the country. There are over 40 local or regional astronomical societies. Ursa is a highly esteemed publishing house (over 100 books) running a journal (8 issues a year, completely four-colour) over 17.000 copies an issue. The journal covers both popularly written reports on recent research results, amateur activities, young people activities, short news, questions answered, etc. A copy can be bought at many paper stands.

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 media keenly follow astronomy: news, more thorough reports by professionals, etc. National TV Channel 1 runs a science magazine, and astronomy and space are regular topics. National Radio Channel 2 frequently broadcasts a live programme (lasting 2 to 3 hours) one can call and ask questions and have them answered by professionals sitting in the studio. These

kinds of programmes are very popular and welcome.

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?

Astronomy enjoys a good reputation among the public. When asked which are the most popular sciences people put Astronomy on top of their list.

In general people are well aware of the present knowledge and challenges of modern research (dark matter and energy, exoplanets, etc.). And they are eager to learn more.

It can be seen as a challenge that astronomy and the universe are usually put into a special niche in the media. News or information about them are only seldom considered as part of general knowledge as compared to let say global and domestic politics, economy, culture, etc.

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.)

Phase 1. For motivation, please, see above.

3. Astronomy at schools

i. What governmental astronomy/science education and outreach programmes for schools take place (co-ordinated either by government departments or national facilities)
There is a national (government) organization for astronomy education at the National Board of Education. That co-operates with the National organization of math and science teachers. There are tens of programmes and projects running all the time. It would be quite a task to translate all the titles and themes into English. So I would not do that. A project guide book was published (in Finnish) at the beginning of 2009. An English version is in preparation. New proposals and tested experiences are published in the electronic journal of the agency (each month, June and July excepted for the summer brake).

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)
Finland is involved in measuring sky darkness, and a programme has been developed by Dr. Hannu Karttunen (see human resources section) for global use for determination of one's geographical position by using eclipses of the innermost Jovian satellites. It's in testing phase with Chile, Canada, South Africa, Australia and Finland. By simple observations one can determine her/his latitude and Longitude and contacting through the Internet, compare the results with other young people and groups round the world, determine the distance between them, difference to the map, etc. The programme will be public soon, after the tests are

completed.

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?

There is no such discipline as Astronomy at schools in Finland. The astronomical subject matter and issues are distributed in relevant places within the general curriculum. That serves as a guideline when the teachers (all educated at universities, also kindergarten teachers) design their specific curricula. Typically the seasons, day and night, etc. are dealt with at kindergarten and primary level, later again and more elaborated in environmental education, gravitation (in connection with the Solar System, galaxies, star formation, etc.) within Physics(mechanics), fusion and nucleosynthesis are dealt with in Chemistry, etc.

iii. 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?

The choice of methodology much depends on the individual teacher and her/his interest and experience. The situation is fairly good otherwise but much more further education (in job training) is needed on teaching how to teach. All teachers tell that the pupils love astronomy and the teachers would love to teach it but they feel they need more training and specified skills (how to use of the telescope, etc.).

i.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.)

Phase 1. 'well established'.

Any other general comments or information that you feel would be useful for this survey?

Communication of Astronomy to the media and general public can not be built overnight. It takes decades of continuous and coherent work. That means providing the media frequently with journalistically professionally prepared information on news about astronomy. It takes time to build a trust in the media on an Astronomy department or an Astronomical society being a reliable up-to-date source of relevant and interesting information. The IYA2009 can be a good start for many but everybody getting involved must be prepared to go stubbornly on for many years to come.

Finland

Written by SPoC Finland

Tuesday, 03 March 2009 00:00 - Last Updated Tuesday, 11 August 2009 14:55
