



# General Assembly

Distr.: General  
30 December 2002

Original: English

---

**Committee on the Peaceful  
Uses of Outer Space**

## **Report on the United Nations/Austria/European Space Agency Symposium on Enhancing the Participation of Youth in Space Activities**

**(Graz, Austria, 9-12 September 2002)\***

### Contents

	<i>Paragraphs</i>	<i>Page</i>
I. Introduction . . . . .	1-11	2
A. Background and objectives . . . . .	1-6	2
B. Programme . . . . .	7-8	3
C. Attendance . . . . .	9-11	3
II. Summary of proceedings of the Symposium and recommended activities . . . . .	12-42	4
A. Observations, activities to date and accomplishments . . . . .	12-17	4
B. Recommended action . . . . .	18-42	5
III. Presentations and discussions . . . . .	43-63	8
A. Education and outreach . . . . .	44-50	9
B. The Space Generation Advisory Council and its projects . . . . .	51-58	11
C. Working groups: implementation action teams . . . . .	59-60	12
D. Conclusion . . . . .	61-63	13

---

\* The present report required preparation by the individual speakers of abstracts of the presentations they had made during the workshop. This process took several weeks, which delayed the submission of the report.



## **I. Introduction**

### **A. Background and objectives**

1. In its resolution 54/68 of 6 December 1999, the General Assembly endorsed the resolution entitled “The Space Millennium: Vienna Declaration on Space and Human Development”,<sup>1</sup> which had been adopted by the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III). UNISPACE III had formulated the Vienna Declaration as the nucleus of a strategy to address global challenges in the future. Part of that strategy called for actions to create, within the framework of the Committee on the Peaceful Uses of Outer Space, a consultative mechanism to facilitate the continued participation of young people from all over the world in cooperative space-related activities.

2. In his report of 10 January 2000 to the Committee and its Scientific and Technical Subcommittee (A/AC.105/730), the Expert on Space Applications proposed the organization of a series of symposia to promote the participation of young people in space activities as part of the programme of workshops, training courses, symposia and conferences of the United Nations Programme on Space Applications for 2000-2002. In its report on its forty-third session, the Committee endorsed the organization of such a series of symposia.<sup>2</sup>

3. The present report contains a summary of the presentations and discussions of the United Nations/Austria/European Space Agency Symposium on Enhancing the Participation of Youth in Space Activities, held in Graz, Austria, from 9 to 12 September 2002. The Symposium, the ninth in a series of symposia held in Graz, was organized as part of the 2002 United Nations Programme on Space Applications and was co-sponsored by the Federal Ministry for Foreign Affairs of Austria, the State of Styria, the City of Graz, the Federal Ministry for Transport, Innovation and Technology of Austria and the European Space Agency (ESA).

4. The Symposium was the third and final meeting in a series of three dealing with the participation of young people in space activities. It was built upon the outcome of the first two symposia and served as a forum for the Space Generation Advisory Council (SGAC) to identify and strengthen avenues and mechanisms for pursuing its objectives in the future. Representatives of working groups of SGAC made presentations on the work that had been carried out since the second Symposium, which had been held from 17 to 20 September 2001, and on the projects that had been proposed or initiated during that symposium.

5. The main objective of the Symposium was to bring together young space experts from around the world as well as experts from major space education and outreach groups in order to discuss and define mechanisms to increase space education in various countries and to identify actions to involve young people in space-related activities. The Symposium also served as a forum for SGAC with the following objectives: (a) to refine or develop implementation plans and action teams of SGAC for the recommendations made by the Space Generation Forum during UNISPACE III, to contribute to the work of the action teams established by the Committee on the Peaceful Uses of Outer Space to implement the recommendations of UNISPACE III, and to review the status of other current projects or proposed

projects from the previous two symposia held in Graz; (b) to find ways to enable SGAC to meet at least once a year; (c) to develop a comprehensive three-year plan for the activities of SGAC; and (d) to disseminate the results of its work to a broad range of decision makers and the general public. The Symposium was also expected to define areas and possible additional mechanisms through which SGAC could more effectively serve as a channel of communication between young people and the Committee on the Peaceful Uses of Outer Space, in particular in connection with the implementation of the recommendations of UNISPACE III.

6. The present report covers the background and objectives of the Symposium, as well as the discussions held and action taken by the participants, and is submitted to the Committee on the Peaceful Uses of Outer Space at its forty-sixth session and to its Scientific and Technical Subcommittee at its fortieth session, in 2003. The proceedings of the Symposium, including a detailed list of participants, will be prepared by the Office for Outer Space Affairs in due course.

## **B. Programme**

7. At the opening of the Symposium, statements were made by representatives of the United Nations, ESA and the host country. The keynote addresses were given by Isabelle Duvaux-Bechon, ESA, and Shane Kemper, SGAC. The programme was divided into sessions on education and outreach; SGAC and its projects; and working groups on implementation action teams. The presentations by invited speakers and chairpersons of the working groups on the results of their work were followed by discussions, including one on the future role of SGAC.

8. Presentations were made by representatives of the action team for recommendation 18 of UNISPACE III on increasing awareness among decision makers and the general public of the importance of space activities, the International Space University (ISU), the National Space Development Agency of Japan (NASDA), ESA, the Chilean Space Association, the Global Learning and Observations to Benefit the Environment (GLOBE) programme and regional representatives of SGAC.

## **C. Attendance**

9. On behalf of the co-sponsors, the United Nations invited developing countries to nominate suitable candidates under the age of 35 for participation in the Symposium. The participants selected were required to have a university degree or well-established working knowledge in a field related to the overall theme of the meeting. They also had to be working in programmes, projects or institutions that conducted education or outreach activities or with space-related companies. Students without university degrees were accepted if they were actively involved in space-related activities in their home countries or in SGAC or if they had been actively involved in the work of the Space Generation Forum during UNISPACE III.

10. Funds allocated by the Government of Austria, the State of Styria, the City of Graz, the Federal Ministry for Transport, Innovation and Technology of Austria and ESA were used to cover the travel and living expenses of participants mainly from

developing countries. In total, 73 young people and space experts from 41 countries attended the Symposium.

11. The Symposium was attended by participants from Algeria, Argentina, Australia, Austria, Azerbaijan, Bangladesh, Brazil, Bulgaria, Burundi, Canada, Chile, China, Cuba, Denmark, Egypt, France, Germany, Ghana, Honduras, Hungary, Indonesia, Ireland, Italy, Japan, Jordan, Kazakhstan, Kenya, Mexico, the Netherlands, Pakistan, Poland, Portugal, Romania, the Russian Federation, Spain, Sweden, Turkey, the United Kingdom of Great Britain and Northern Ireland, the United Republic of Tanzania, the United States of America and Venezuela.

## **II. Summary of proceedings of the Symposium and recommended activities**

### **A. Observations, activities to date and accomplishments**

12. Discussions at the Symposium focused on the participation of youth in space activities, mainly in the fields of education and outreach, and on the achievements of SGAC. It was emphasized that, through their enthusiasm in the area, young people could provide current leaders and decision makers with innovative ideas and contributions. That had been demonstrated clearly in the projects presented by the regional representatives of SGAC as well as in the recommendations formulated by the Space Generation Forum during UNISPACE III. Young people were inspired by space; space created a desire for knowledge and could be used as a motivator for learning.

13. The participants were provided with a broad overview of the mechanisms, activities and programmes through which young people could both benefit from and contribute to space for the benefit of humanity. Such mechanisms included SGAC and its numerous activities.

14. The sessions on education and outreach provided participants with information on educational programmes and outreach schemes provided by national and international agencies and private and institutional actors. The topics covered ranged from how to raise awareness among decision makers and the general public through global educational networks to the efforts undertaken by national agencies and private associations. Discussions following those sessions led to the conclusion that increased coordination among the organizations offering training and outreach in space-related areas was highly important. Other topics covered were problems associated with measuring the success of an educational programme in the short term and how schools and countries could become part of international educational programmes.

15. At the session on SGAC and its projects, participants were given an overview of the activities that had been carried out in the various geographic regions since the symposium held in 2001. Success stories were told, problems and their solutions were shared and organizational issues were discussed. (The activities in each region are summarized in chapter III, section B, below.) The participants realized that the work of SGAC had indeed helped further the peaceful uses of outer space, but that many challenges still lay ahead.

16. Working groups were established to address the possible implementation of the recommendations contained in the Vienna Declaration and in the technical report of the Space Generation Forum by setting up action teams to work on the recommendations contained in the Vienna Declaration that were subscribed to by SGAC in combination with those recommendations of the Space Generation Forum that had not been included in the Vienna Declaration. The output of the working groups was designed to support the work of the action teams established by the Committee on the Peaceful Uses of Outer Space. In addition, the working groups identified action team leaders and formulated specific tasks to be undertaken in 2002-2003.

17. Throughout the Symposium, participants bore in mind that countries were at different stages in the development of space activities. While some countries were in a position to explore the Earth and the cosmos, others concentrated on specific areas of space activities and some had not yet developed a significant level of activity pertaining to space. Yet presentations and discussions held during the Symposium demonstrated how the dedication, enthusiasm and efforts of small groups of people could make a big difference regardless of the country. From that perspective, education and outreach activities and the cooperation between active agencies and associations were very important.

## **B. Recommended action**

### **1. An enduring human presence on Earth and in space**

18. Developing a comprehensive, world-wide environmental monitoring strategy involves acquiring information on many parameters, some of which still need to be identified. Initial steps include finding ways to increase the use of remote sensing data in environmental monitoring and collecting addresses of web sites that provide useful information on one web page. The addresses could be included as part of the international space index proposed by SGAC in 2001.

19. The main action that SGAC should take to minimize the harmful effects of space activities on the local and global environment is to increase awareness in order to promote the educated use of existing and future space transportation systems. Specifically, SGAC members should recommend the use of environmentally friendly fuels to designers of space launch systems; promote awareness of the danger that the use of weapons in space would represent; promote a greater understanding that the manufacture of space hardware (fuels, rocket systems etc.) can be harmful to the environment; and request States to discuss failures in public in order to promote mitigation measures.

20. A space-based disaster mitigation system could be implemented using existing technology such as Earth observation data, satellite communications and global navigation satellite systems (GNSS) and ancillary technologies such as geographic information systems (GIS). Spin-offs that could support other development issues such as environmental protection and urban planning can result from the creation of such a system. In order to implement such a system, it is necessary to create an international organization supported by the United Nations for disaster management and to create local organizations within countries. A number of legal and economic issues need to be studied.

21. Possible actions that could be taken to improve the scientific knowledge of near and outer space include supporting existing cooperation projects as a basis for strengthened future cooperation; establishing a common infrastructure for sharing technical and non-technical information among agencies; and enhancing the opportunities for participation in missions on a global basis.

22. The strategies that could be followed to improve the international coordination of activities related to near-Earth objects (NEOs) include the creation of a programme sponsored by the United Nations to coordinate NEO observations around the world, including a coordinating mechanism for data sharing. The programme could use existing optical and radio-astronomical systems linked by the Internet, coordinate with military systems to search for NEOs using detection systems already in place and plan a future space-based telescope network dedicated exclusively to NEOs.

23. Nuclear power for systems operation or propulsion is needed for deep space missions where solar power is not available (or is available only at very low levels). Owing to the long-term character of nuclear power applications in space missions, young people should take a proactive role in defining international standards dealing with the launch and operation of nuclear-powered devices. It is proposed that SGAC establish a working group to discuss issues related to nuclear power sources and provide support to implementing recommendation 15 of UNISPACE III.

24. Young people can increase awareness among decision makers and the general public of the importance of space by creating education programmes and materials that could be used in statistical reports on the applications of space technology and public communiqués that highlight the benefits that space technology can provide. Another action would be to quantify the benefits obtained from space, that is, to carry out a global space cost-benefit analysis.

## **2. Universal space education**

25. The participants in the working group dealing with universal space education indicated that space-related education was needed for all age levels, across all sectors of society, and that for that purpose it was necessary to develop a universal space education plan. Such a plan would contain central or core elements but would be adapted to the conditions of the country where it was to be implemented. The observations and recommendations of the working group are presented below.

26. Space-related activities and materials need to be developed for children. Materials should be eye-catching, colourful and without much text, use simple language, be interactive and incorporate fundamental concepts of basic science and technology. Materials should be developed for use in non-conventional disciplines such as arts and social studies. Specific attention should be paid to encouraging girls to study science and technical disciplines.

27. Written materials that focus on youth in rural communities need to be prepared in local languages taking into account specific local needs. Adults from local communities should participate in preparing such information.

28. There is a need for more teacher training programmes aimed at motivating teachers to learn about space sciences and technology and providing them with

supporting materials and examples of practical applications of space science and technology in the daily life of pupils.

29. Governments should take an active role in promoting a better understanding of the importance of having a good national space science and technology education programme and in making possible and encouraging the participation of students in local, regional or international conferences and workshops to exchange information and experiences with other students.

30. Literacy and rural education can be facilitated through tele-education. Some of the incentives that would appeal to user communities are the long-term benefits of education, equal education opportunities for girls and boys and the fact that the education programmes can be promoted within villages by local respected individuals. Programmes could be promoted by offering simple awards and scholarships and by schemes to pay graduates of programmes to teach younger people.

31. Direct benefits of rural education that could help to convince Governments to use tele-education technology are improving farming through access to weather forecasts and information on better farming methods; addressing illnesses through tele-medicine and health education; and improving communication within the country.

32. The use of redundant satellites or bands of telecommunications companies at discount rates and the use of electronic equipment that is being replaced in some countries could reduce the cost of infrastructure needed for tele-education.

33. A universal space education programme would have dual benefits. The information on national space activities that would be gathered to develop the programme would also be a useful mechanism to coordinate space activities, and, because the programme would be based on a universal range of experience, it would be broad enough to be adapted to national circumstances. It is recommended that people and organizations in each country be involved in gathering such information, which can be used to celebrate events and educate people about space activities.

34. One way to increase public awareness and promote space activities is by recognizing outstanding contributions in the space sector. Such recognition could be through offering prizes for outstanding achievements. Options for space prizes that were identified included a Nobel space prize or a space prize created and promoted by SGAC and possibly sponsored by the United Nations. The latter could be linked to existing prizes.

### **3. Meeting basic needs ethically**

35. The working group proposed the creation of a network of health services, linked by satellites, that would include leading medical research centres. Such a network would serve to indicate available medical resources, distribute information on health issues and monitor the spread of diseases.

36. Universal access to space communication services could be promoted through coordinated efforts by international organizations such as the United Nations Development Programme, the United Nations Educational, Scientific and Cultural Organization, the World Health Organization, the World Bank, and space agencies and local organizations that provide space communications and services. For that

purpose, it would be necessary to create an international programme to pool the unused resources of existing satellite platforms and ground stations in order to provide developing countries with access to the Internet at low cost.

37. SGAC could create a forum for an open discussion and identification of space research applications/products that could be used for achieving sustainable development. The results of those discussions could be shared with Committee on the Peaceful Uses of Outer Space and decision makers to promote global awareness of the technologies that are available.

38. Booklets containing ethical guidelines on the use of space technology should be prepared for the public and decision makers. An international space ethics committee should be established to address issues such as meeting basic needs of a country while giving due consideration to neighbouring countries (e.g. in water or energy management). Space should be seen as a peaceful global endeavour unifying humankind.

39. Spacefaring countries should improve the sharing of information on spin-offs from space activities with developing countries. A dedicated web site should be created that could serve as the focal point for the dissemination of information provided by Governments and relevant agencies.

#### **4. Cooperation among nations**

40. The management of Earth's natural resources can be improved by educating youth about the importance of space technology for monitoring and preserving natural resources as well as for research on renewable energy resources.

41. The education of the news media should be emphasized as a way to bridge the gap between society and the space community. A mechanism that is inter-generational, interdisciplinary, intercultural and international in nature could serve to provide feedback to the space community from industry, the public, decision makers and the academic community.

42. Well-educated people are indispensable assets for space growth and development. Human resources can be developed by organizing training courses and seminars and by setting up space infrastructure facilities. Capacity can also be built by establishing scholarships and fellowships for space enthusiasts. Budgetary resources needed to build capacity could be made available through grants by space agencies and donations by governmental and non-governmental entities. Some budgetary resources could also be included in proposals or requests for funding of space projects and, above all, by setting government and industry policies that foster education in space-related fields.

### **III. Presentations and discussions**

43. Two keynote speakers introduced the overall theme of the Symposium. They represented the views of young space experts and of educational institutions, focusing on how space symbolized advances in human endeavour and also mentioning the potential of youth working together to ensure a sustainable future for the Earth. They also outlined how the work of an international space agency could help promote education and outreach activities.

## A. Education and outreach

44. Johannes Wimmer of the Austrian Ministry of Foreign Affairs made a presentation on the work that had been carried out by the action team for recommendation 18 of UNISPACE III on increasing awareness among decision makers and the general public. He described the work plan of the team, which had reached the review stage. The action team had identified four ways to implement the recommendation: (a) identifying activities that increased awareness; (b) preparing a list of successful outreach activities; (c) identifying possible outreach activities that could be carried out; and (d) providing recommendations for future outreach activities. The action team had started to identify efforts undertaken by the Office for Outer Space Affairs, Member States and was currently gathering information. He invited SGAC and the participants of the Symposium to assist the action team. The Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space would be informed of the work of the team in 2003; and the General Assembly would review the implementation of the recommendations of UNISPACE III, including the results of the work of the action team for recommendation 18, in 2004.

45. Leopold Summerer made a presentation on behalf of ISU "ISU and global education networks". He pointed to the important role that global educational networks could play in the implementation of the recommendations of UNISPACE III in future years. Many people around the world had gone through ISU programmes and were part of a network of alumni who remained active in space-related issues. In time, they would be in charge of space activities. As ISU and SGAC had many features in common, such as being international and intercultural and spanning a wide range of applications and interests, they could benefit from future cooperation. The educational fields at ISU were interdisciplinary and provided students with a firm basis for their future professional work. Courses offered ranged from a two-month summer programme to a full one-year Master of Science degree. Finally, ISU and other international educational networks could also further the objectives pursued by SGAC by providing a model for grass-roots support in many countries around the world.

46. Mamoru Mohri, who, as Japan's first astronaut, had flown on the Space Shuttle twice, made a presentation on behalf of NASDA and the National Museum of Emerging Science and Innovation. During the presentation, entitled "Education and outreach in Japan", he discussed a number of NASDA programmes. The Real-time Space Classroom was a programme that linked him with a Japanese school in real time for space education demonstrations. The education video consisted of a series of lessons recorded in outer space that were distributed to schools around Japan. The EarthCam programme enabled school children to take pictures from a Shuttle-based camera, while the Corner Cube Reflectors programme involved students in the construction of objects visible on the Shuttle's imaging radar. The Tri-Cast programme, which had been moderated by Mr. Mohri, created a network between the International Space Station, a ground station and Japanese classrooms. Over the course of two Tri-Casts, hundreds of Japanese schools and universities were connected. The third Tri-Cast, scheduled for September 2002, would involve schools throughout Asia. Additional information is available from the NASDA Public Affairs Office or at the NASDA web site ([www.nasda.go.jp](http://www.nasda.go.jp)).

47. Isabelle Duvaux-Bechon, a space engineer by training and coordinator for primary- and secondary-level education projects as well as the ESA education web site, made a presentation entitled “ESA education activities” on behalf of the ESA Education Office. She reviewed a wide range of ESA educational projects and programmes, including Toys in Space, ISS Chat Day, Advisory Committee on Education, IAF student funding, Student Space Exploration and Technology Initiative, Physics on Stage, Eduspace, World Space Week and the Solar Car. Information on those programmes, as well as contact information for the responsible officials, can be found at the new ESA education web site ([www.esa.int/education](http://www.esa.int/education)).

48. Hugo Camus Palacios (Chile) made a presentation entitled “Involving youth in space activities—a Chilean experience”. Chile had had a number of pioneers in space, dating back to its first satellite tracking station, established in cooperation with the National Aeronautics and Space Administration (NASA) of the United States three years after the launching of Sputnik-1, and including the work by Grete Mostny Glaser, resulting in the first rocket launched in Chile in 1977. The latter event had captured the imagination of youth. Since then a number of events involving young people had been organized. One example was the Ladybug Shuttle experiment, designed in 1995-1999 by a secondary-level school for girls. The experiment was selected by NASA and flew on the Space Shuttle in 1999. The results of the experiment indicated that ladybugs continued to feed on aphids in microgravity and could be used as natural pest control for growing plants in space. In 2000 the first Chilean seminar for secondary students was held in Chile in response to the recommendations of UNISPACE III. Some 86 students had participated and explored subjects such as space adventures of humankind, rockets and spacecraft, space experiments, astronomy and space technology, space medicine and Chilean space education. At an international space camp for secondary-level students that was to be held in 2003, young people would learn about how life could develop in an extremely dry environment such as that on Mars and could explore astrobiology, sustainable development applications and how daily life and space were related.

49. Rebecca Boger made a presentation on behalf of GLOBE entitled “Student-teacher-scientist collaboration using space technology and GLOBE”. She illustrated how students learned about science by collecting, analysing and questioning data, which increased their interest in and understanding of the phenomena being studied. GLOBE students used satellite data to enhance the intensity and density of data real programmes. Satellite data were used, for example, for landcover analyses and climate change studies. Teachers felt that students learned more from such hands-on experience than from merely studying textbook examples. GLOBE blended cultures, science and education and cooperated with several specialized agencies of the United Nations. GLOBE worked to increase the use of space technology as well as the understanding of the global environment.

50. A question-and-answers session allowed participants and speakers to discuss such issues as global cooperation between agencies and how it could take place as well as obstacles ranging from time zones to different national educational curricula and policies. There were also questions on how the success of an educational programme could be measured over the short term and how schools and countries could become part of international educational programmes such as GLOBE.

## **B. The Space Generation Advisory Council and its projects**

51. The status and progress of some of the projects initiated during the symposia held in 2000 and 2001 were presented to the Symposium by the regional representatives of SGAC.

### **Space Generation Summit**

52. Julia Tizard (United Kingdom) and Nishi Rawat (Canada) presented an overview of the preparations for the Space Generation Summit, which was to be held at the World Space Congress, from 11 to 13 October 2002. The Summit was an initiative of SGAC and approximately 200 international young people were expected to attend. In addition, a few delegates of the Space Generation Summit would be invited to attend the Space Policy Summit, which was also being held during the World Space Congress.

### **Space activities of youth in Africa**

53. Elias Xavier (United Republic of Tanzania) reported on the progress made in establishing the African Alliance for Space, which was initiated during the symposium held in 2001. The Alliance had been established and registered and was coordinating African activities. Felicien Nzeyimana (Burundi) gave an overview of the activities in Burundi, including an interregional reforestation project using satellite data. Nabila Ibrahim (Egypt) reported on activities in Egypt in mineral mapping using remote sensing. Dieudonne Bizamana (Burundi) informed the Symposium about the Cosmos Education 2002 Under African Skies project, and an example of Algerian activities was given by Jamal Mimouni (Algeria) focusing on involvement in the StarShine project. The workshop was informed that the African Alliance for Space hoped to organize an African space youth conference in the near future with the assistance of SGAC.

### **Space activities of youth in Asia and the Pacific**

54. Gulnara Omarava (Kazakhstan) reported on the activities in the Asia and Pacific region. Active countries in the region were Australia, Bangladesh, India, Indonesia, Japan, Kazakhstan, Malaysia, Pakistan, Thailand, Uzbekistan and Viet Nam. Some of the activities in the region over the last year included Yuri's Night events in a number of countries. Negotiations were currently being held to host a space conference in the region in 2003 and plans were under way to make presentations at a regional conference and scientific seminars. Work was also being carried out to increase interregional cooperation.

### **Space activities of youth in Europe**

55. Jim Volp (Netherlands) informed the Symposium about activities of SGAC in Europe. He noted that there had been an increase in the number of interactions and in the quality of the relationship with ESA, in particular in connection with ESA education and outreach activities, and gave a brief description of national achievements and plans for future activities. At the regional level, infrastructure had been created for exchanging information, including a web site, a mailing list and monthly teleconferences. Examples of the activities in some of the SGAC countries

in Europe were provided and a written report of all activities was made available to the participants.

#### **Space activities of youth in Western Asia**

56. Asli Pinar Tan (Turkey) presented the activities of the Western Asia region, where SGAC in Turkey worked together with SpaceTurk, another volunteer youth space group. Some of the activities included a number of Yuri's Night parties, the establishment of a master's degree programme in aerospace engineering, cooperation with other regions in the 2002 Under African Skies project, participation in the Burundi reforestation project and a statement of intent from the Space Association of Turkish States.

#### **Space activities of youth in North America**

57. Loretta Hidalgo (United States) informed the Symposium about activities carried out in North America. The outreach activities included Yuri's Night-The World Space Party and a new initiative entitled "Permission to Dream", in which telescopes were supplied to schools or youth groups around the world. Other activities in the region included preparations for active participation in the World Space Congress in Houston, United States, and student work on an experiment on mammal reproduction in a simulated Mars-like gravity environment.

#### **Space activities of youth in South America**

58. Patricio Figueredo (Argentina) presented the activities of the South American region. Most of the activities had been undertaken in the context of the Latin American Space Association (ALE), which was an independent organization with links to SGAC. Countries represented in ALE were Argentina, Bolivia, Brazil, Chile, Colombia, Cuba, Honduras, Mexico, Peru, Uruguay and Venezuela. ALE was carrying out a large number of projects. Among the activities related to SGAC visions were collaboration between countries of Latin America in joint projects, providing opportunities and information on ways to participate in space activities for young people and acting as a regional point of contact.

### **C. Working groups: implementation action teams**

59. The United Nations Expert on Space Applications made a presentation entitled "The United Nations Programme on Space Applications and the UNISPACE III implementation action teams". The presentation included the education and training activities carried out under the Programme.

60. Isabel Pessoa-Lopes (Portugal) made a presentation entitled "Work of SGAC in the UNISPACE III implementation action teams: introduction and tasks for the working groups". Following her presentation, four working groups were established on the following themes: an enduring human presence on Earth and in space; universal space education; meeting basic needs ethically; and cooperation among nations. The observations and recommendations of the working groups on the possible work and contributions of SGAC to the action teams established by the Committee on the Peaceful Uses of Outer Space are presented in chapter II B.

## D. Conclusion

61. The chairpersons and rapporteur summarized the proceedings, results and discussions of the Symposium. Participants were reminded that the purpose of the series of symposia was not only to discuss issues of youth involvement in space activities but also to implement the ideas and action plans that had been proposed during the symposia and that had emanated from the Space Generation Forum of UNISPACE III. It was for that purpose that SGAC had been created. It was also noted that the success of the three symposia on enhancing the participation of youth in space activities was due mainly to having an opportunity for annual meetings of young space professionals to discuss and act on a diversity of space activities and issues. Thus, there was a responsibility to be carried on into 2003 and beyond.

62. Certificates were given to the newly elected SGAC national and regional representatives who attended the Symposium to assist them in their duties and responsibilities.

63. Awards and certificates of appreciation were presented or sent by SGAC to representatives of the United Nations, Austria and ESA in gratitude for three years of dedication, sponsorship and involvement in assisting and enhancing the participation of youth in space activities.

### Notes

<sup>1</sup> See *Report of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space, Vienna, 19-30 July 1999* (United Nations publication, Sales No. E.00.I.3), chap. I, resolution 1.

<sup>2</sup> *Official Records of the General Assembly, Fifty-fifth Session, Supplement No. 20 (A/55/20)*.