

REPORT ON WORLD SPACE WEEK 2003

Prepared in cooperation with Spaceweek International Association

space: horizon beyond earth



UNITED NATIONS

ST/SPACE/23
Office for Outer Space Affairs
United Nations Office at Vienna

REPORT ON WORLD SPACE WEEK 2003

Prepared in cooperation with Spaceweek International Association



UNITED NATIONS
New York, 2004

ST/SPACE/23

UNITED NATIONS PUBLICATION
Sales No. E.04.I.19
ISBN 92-1-100948-0

ST/SPACE/23

Office for Outer Space Affairs

United Nations Office at Vienna

REPORT ON WORLD SPACE WEEK 2003

Prepared in cooperation with Spaceweek International Association

Table of Contents

1	<i>Introduction</i>	1
2	<i>Background</i>	3
2.1	History.....	3
2.2	Participation	3
2.3	Organization.....	5
3	<i>World Space Week Activities</i>	7
3.1	International Organizations	7
3.2	Africa	8
3.3	Asia & Oceania	11
3.4	Europe	17
3.5	Latin America	27
3.6	North America & Caribbean	30
4	<i>Educational Programme</i>	35
4.1	Introduction.....	35
4.2	Celebrity Spokesperson.....	35
4.3	Media Coverage	36
4.4	School Appearances	42
4.5	Student Projects.....	43
5	<i>Affiliate Programme</i>	44
6	<i>Recommendations</i>	45

1 Introduction

This is the annual report on the international celebration of World Space Week. It provides the background of World Space Week, details of the events that occurred during World Space Week 2003 and recommendations for making future World Space Week events even more successful.

World Space Week was declared in 1999 by the United Nations General Assembly, implementing a key recommendation of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III). The objective of World Space Week is to increase awareness among decision makers and the public of the benefits of the peaceful uses of space. World Space Week is held from 4 – 10 October annually.



U.S. television station broadcasts live interview of World Space Week 2003 Youth Spokesperson

Consisting of outreach and education activities, World Space Week attracts global media attention to space. Through the media and attendance at events, World Space Week informs the public about the benefits of space while motivating students to study science.

Government agencies, companies, schools, museums, planetariums and other institutions in 41 nations reported participation in World Space Week 2003. A network of coordinators in 56 nations supported the large programme of events.

The theme of World Space Week 2003 was “Space: Horizon Beyond Earth”. Events focused on the exploration of deep space and the utilization of space technology for the benefit of humankind. The theme for the 2004 celebration will be “Space and Sustainable Development”.

Government and non-government organizations around the world are invited to hold space-related outreach and educational programmes during October 4-10 annually, to publicize and report such programmes, and where possible to provide voluntary support for the global and national coordination of World Space Week.

This report was prepared in cooperation with Spaceweek International Association, a non-government organization that supports the United Nations in the global coordination of World Space Week.

For further information, please visit www.spaceweek.org or email admin@spaceweek.org.



Students in Bolivia learn about space during World Space Week 2003

2 Background

2.1 History

World Space Week, October 4-10 annually, was declared in 1999 by the United Nations General Assembly “celebrate each year at the international level the contribution of space science and technology to the betterment of the human condition.” This was in response to the recommendation of all nations represented at UNISPACE III:

from the
Report of UNISPACE III

Recalling that 4 October 1957 was the date of the launch into outer space of the first human-made Earth satellite, Sputnik I, thus opening the way for space exploration,

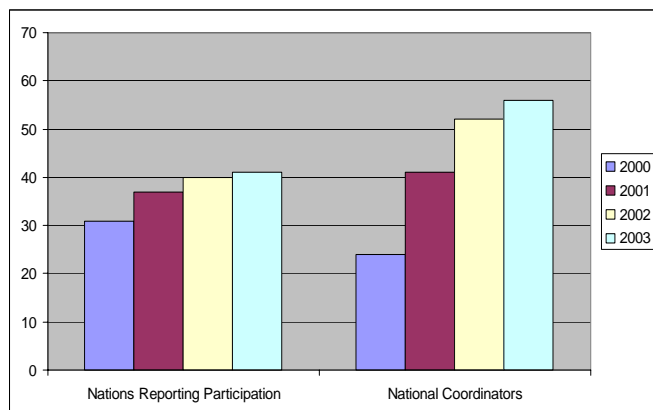
Recalling also that 10 October 1967 was the date of the entry into force of the Treaty on Principles Governing the Activities of States in the Exploration and Peaceful Uses of Outer Space, including the Moon and Other Celestial Bodies,

Decide, in order to contribute to the achievement of the objectives of UNISPACE III, in particular that of increasing awareness among decision makers and civil society of the benefits of the peaceful uses of space sciences and technology for sustainable development, to invite the General Assembly to declare, according to its procedures, “World Space Week” between 4 and 10 October for the yearly celebration at the international level of the contribution that space science and technology can make to the betterment of the human condition.

2.2 Participation

Organizations in 41 nations reported participation in World Space Week 2003. Four nations participated for the first time. The number of national coordinators increased to 56, indicating that greater participation in the future can be anticipated. The chart at right summarizes the participation in World Space Week.

The table on the next page details the location of reported participation since 2000.



Region	State or Area	2000	2001	2002	2003
Africa	Algeria				
	Djibouti				
	Ghana				
	Libya				
	Morocco				
	Nigeria				
	Senegal				
	Somalia				
	South Africa				
Asia & Oceania	Antarctica				
	Australia				
	Bangladesh				
	China				
	India				
	Indonesia				
	Iran				
	Iraq				
	Israel				
	Japan				
	Kazakhstan				
	Malaysia				
	Nepal				
	Pakistan				
	Philippines				
	Saudi Arabia				
	Thailand				
	Turkey				
	Uzbekistan				
Europe	Austria				
	Bulgaria				
	Czech Republic				
	Croatia				
	Denmark				
	France				
	Germany				
	Greece				
	Hungary				
	Ireland				
	Italy				
	Netherlands				
	Poland				
	Portugal				
	Romania				
	Russia				
	Slovakia				
	Slovenia				
	Spain				
Sweden					
Switzerland					
United Kingdom					
Latin America	Argentina				
	Bolivia				
	Brazil				
	Chile				
	Colombia				
	Mexico				
Panama					
North America & Caribbean	Canada				
	Cuba				
	Dominican Republic				
	Trinidad & Tobago				
	United States				
Totals	62	31	37	40	41

2.3 Organization

2.3.1 Global Coordination

The United Nations Office for Outer Space Affairs (OOSA) and Spaceweek International Association (SIA) work closely to encourage global participation in World Space Week, assist participants, attract publicity and report the results. These services include the development and support of the global network of national coordinators, development and distribution of educational and promotional materials, maintenance of the World Space Week web site and publication of this annual report. SIA is a non-government, non-profit, non-membership organization and is governed by a distinguished Board of Directors with members from 22 nations. Directors and officers of SIA are listed below.

Spaceweek International Association Board of Directors

Adigun Ade Abiodun, Chairman of the Board

Chairman, UN Committee on the Peaceful Uses of Outer Space

George Abbey, James Baker Institute	Miguel Hernandez, Hernandez Engineering
Buzz Aldrin, Astronaut	Raza Hussain, SUPARCO
Oleg Alifanov, Moscow Aviation Institute	Dale Johnson, Consultant
Turki bin Saud bin Mohammad Al-Saud, Space Research Institute	Michel Laffaiteur, CNES/DLR
Ali Al-Mashat, International Telecommunications Consultant	Ariane Malzac, EADS Space
Alvaro Azcárraga, Sener	Gilles Maquet, EADS
Larry Bell, University of Houston	Thomas Marsh, Lockheed Martin
Elod Böth, Hungarian Space Office	George Mueller, Kistler Aerospace
Sergio Camacho, United Nations	Tuken Omarov, Astrophysical Institute Observatory
Karl Doetsch, International Space University	Mazlan Othman, Malaysia National Space Agency
Kerrie Dougherty, Powerhouse Museum	Lubos Perek, Czech Academy of Sciences
Driss El Hadani, Royal Centre for Remote Sensing	Walter Thiebaut, ESA
George French, Space Education Initiatives	Ernesto Vallerani, ALTEC
Luo Ge, China National Space Administration	Joao Vaz, Brazsat
Raimundo González, Ambassador of Chile	Suvit Vibulsresth, GISTDA
Tom Hanks, Actor	Chris Welch, Kingston University
	Kazuyoshi Yajima, Sano College

Spaceweek International Association Officers

Dennis Stone, President	Rhonda Alcorn, Secretary
Michel Laffaiteur, Vice President	Ken Short, Treasurer

2.3.2 National Coordination

The growth of World Space Week is dependent on the global network of volunteer National Coordinators. Coordinators perform a crucial role by inviting space and education organizations in their countries to participate in World Space Week. They compile information on the national celebration and provide that information to the media and to Spaceweek International Association.

The current National Coordinators are listed in the table below. Organizations in regions shown below are encouraged to contact their National Coordinator to report planned World Space Week programmes and to offer support. Organizations in regions not shown below are invited to contact SIA and propose a coordinator for their region.

Region	State	Last Name	First Name	Organization	
Africa	Algeria	Oussedik	Azzedine	Centre National des Techniques Spatiales	
	Ghana	Bonsu	Kwaku	Ashanti Space Agency	
	Kenya	Njuguna	Peter	Mbaruk Ecology Centre	
	Libya	Gashut	Eng. Hadi M.	Libyan Center for Remote Sensing and Space Science	
	Morocco	El Hadani	Driss	Royal Centre for Remote Sensing	
	Nigeria	Boroffice	R. A.	National Space Research and Development Agency	
	Senegal	Dia	Aliou Mamadou	University of Dakar	
	South Africa	Joubert	Marina	Foundation for Education, Science and Technology	
	Asia & Oceania	Antarctica	Greene	Nick	McMurdo Station
		Australia	Dougherty	Kerrie	Powerhouse Museum
Bangladesh		Sarker	F. R.	Bangladesh Astronomical Society	
China		Dept of Foreign Affairs		China National Space Administration	
India		Prasad	MYS	Indian Space Research Organization	
Indonesia		Djojodihardjo	Harijono	Institute of Technology Bandung	
Iran		Tarikh	Pariz	Iran Space Agency	
Iraq		Al-Mashat	Prof. Ali	International Telecommunications Consultant	
Israel		Inbar	Tal	Israeli Space Society	
Japan		Fushimi	Kazuya	Japan Space Forum	
Kazakhstan		Gataullin	Yunir	Tashkent Research Institute of Space Engineering	
Malaysia		Shah	Zamri	National Space Agency	
Pakistan		Shah	M. Nasim	SUPARCO	
Saudi Arabia		Hakami	Muhammad	Jeddah Science & Technology Centre	
Thailand		Singhasaneh	Pitan	Geo-Informatics and Space Technology Development Agency	
Turkey		Nuranoglu	Hassan	Space Research Working Group Turkey	
Uzbekistan		Omarova	Gulnara	Aerospace Committee	
Europe		Austria	Weinwurm	Gudrun	Österreichisches Weltraumforum
		Bulgaria	Radeva	Veselka	Informational Center for European Educational Astronomical Programs
	Czech Republic	Kolár	Jan	Czech Board for Space Activity	
	Denmark	Jørgensen	Jesper	Danish Astronautical Society	
	France	Contreras	Pierre-Louis	Centre National d'Etudes Spatiales	
	Greece	Cassapoglou	Vassilis	Greek Centre of Space Science and Technology	
	Hungary	Both	Dr. Elod	Hungarian Space Office	
	Ireland	Barnett	Dr. Ed	Space Encounters	
	Netherlands	Eger	Arthur	Space Expo	
	Poland	Ustynowicz	Adam	Committee on Space Research, Polish Academy of Sciences	
	Portugal	Lopes	Manuel Matos	Universidade de Lisboa	
	Romania	Piso	Marius-Ioan	Romanian Space Agency	
	Russia	Vozzhov	Vladimir	Department of International Cooperation	
	Slovenia	Jarh	Dr. Orest	Technical museum of Slovenia	
	Spain	Cragolini	Alider	Instituto Nacional de Técnica Aeroespacial	
	Sweden	Brandt	Börje	Rymdtekniknätverk	
	Switzerland	Meiner	Rudolph	PUSH Foundation	
Ukraine	Trofimov	Maxim			
United Kingdom	Welch	Christopher	Space Education Council		
Latin America	Argentina	Capeluto	Victor	St. Peter's School	
	Bolivia	Zalles	Rodolfo	Observatorio Astronomico Nacional	
	Brazil	Sausen	Tania Maria & Jo	Spaceweek Brazil Committee	
	Chile	Mujica	Fernando	Aeronautical Engineer	
	Colombia	Rua	Beatriz Elena Her	Voz Infantil- Hola Juventud members of WYESR-Colombia	
	Panama	Barrera	Azael	Universidad Catolica Santa Maria La Antigua	
North America	Canada	Clemen	Jason	Canadian Space Agency	
& Caribbean	Cuba	Suarez	Loudres Palacio	Instituto de Geofísica y Astronomía	
	Dominican Republic	Guerrero Mieses	Robert	Sociedad Astronomica Dominicana	
	Trinidad & Tobago	Sankar	Hollis	Corinth Teachers College	

3 World Space Week Activities

This section describes the activities of World Space Week 2003. It includes reports received by geographical region and from participating international organizations.

All reports received from participating organizations by Spaceweek International Association by March 2004 are included in this report. Any additions or corrections emailed to admin@spaceweek.org after that date will be posted to the World Space Week website, www.spaceweek.org.

The report of the 2003 Educational Programme of Spaceweek International Association, which included a celebrity spokesperson project, is described in section 4.

3.1 International Organizations

3.1.1 European Space Agency

The European Space Agency (ESA) gave young Europeans the chance to tell the world how they imagine the future of space exploration. The ESA Education Office invited primary and secondary school students to submit their ideas on the theme of 2003, "Space: Horizon beyond Earth," in the form of an essay. The maximum length was two pages and it could be submitted any time between 10 October and 31 December 2003. The essays could be written in any of the languages of ESA member states but were to include a 15-line summary in English. The most innovative ideas will be published on the ESA Education website, and winners will also receive a set of educational materials for their classroom.

In conjunction with World Space Week, ESA participated in several events in Paris, where its Headquarters are located (refer to report from France).

3.1.2 United Nations Office for Outer Space Affairs

As part of the international celebration of World Space Week, the Vienna-based United Nations Office for Outer Space Affairs (OOSA) held an exhibition in the Vienna International Centre (VIC). The exhibition was on display from 6 to 24 October 2003. The exhibition, entitled "Space Solutions for the World's Problems: How the United Nations Family is Using Space Technology for Sustainable Development", included poster displays describing the use of space technology by different United Nations agencies and offices in carrying out their work. The exhibit also displayed multi-spectral remote sensing images provided by several Member States, in addition to models of satellites provided by Brazil, China, India, Malaysia, the Russian Federation and the United States.

During the first week of the exhibition, high-resolution imagery of the view of Earth from space were displayed. These images were taken by the IKONOS earth imaging satellite. The imagery on display included multi-spectral views of different landmarks, cities and natural features around the world, including the Great Pyramids in Giza, the Eiffel Tower in Paris, the Forbidden City in Beijing, the Port of Rio de Janeiro and Bora Bora Island in French Polynesia. A presentation on the work of the UN Committee on the Peaceful uses of Outer Space and its Legal and Scientific and Technical Subcommittees was also on display during the first week of the exhibition.

To highlight the importance of education in the field of outer space, the exhibition included paintings by 4th grade students at Vienna's Notre Dame de Sion primary school. The paintings depicted the children's impressions of outer space. The students visited the exhibition, where they were addressed by a representative of the United Nations Office for Outer Space Affairs and taken on a guided tour of the Vienna International Centre.

3.2 Africa

3.2.1 Algeria

The Constantine Salon on Popular Astronomy held in celebration of World Space Week in Algeria this year was truly successful. Many hundreds of visitors walked through the aisles of the Salon which was organized by the Sirius Astronomy Association and participated in the various activities and programs. All activities took place at the large and imposing el-Khalifa Cultural Center in downtown Constantine from 7 to 9 October 2003. The highlight was a very successful exposition with all aspects of space exploration presented in large explanatory panels along with scale models of spacecraft such as Sputnik, Apollo, Mir, International Space Station and Alsat, the first Algerian satellite which was launched last year. An elaborate poster was produced to promote the Salon. More pictures and details can be found at the Salon's web site <http://www.geocities.com/cirtasalon>.



The Algerian Space Agency (ASAL), the National Center for Space Technology (CNTS) and the Research Center in Astronomy, Astrophysics and Geophysics (CRAAG) presented the achievements and activities of Algeria in the space sciences.

The scientific program of lectures was even richer than in the previous year as six lectures were given during the Salon by professionals. A special viewing session of the video "SpaceView" from the Hubble Space Telescope Institute was held, with Arabic translation and followed by a debate. In addition, various amateur astronomy associations from different parts of the country participated in this second Salon.



The Salon also included a "smarties corner" with many activities and hand-on projects, which was well attended throughout the three days of the Salon.



Fifty prizes were distributed to the laureates during the ongoing competitions held throughout the three days. A special competition was held on Thursday afternoon with participation of 300 school children from the various parts of Constantine. The competition/show "*Ten slides, ten questions*" organized by a school teacher working closely with the Sirius Association, consisted of 20 questions, ten for each age category, all related to space science, geography and astronomy. Prizes were distributed to the winners of each category.

In view of the many hundreds of young people who participated to the Salon, many may have found new ways of dreaming and perhaps, for some, their future vocation!

The media coverage was exceptional and all the major national newspapers wrote about the Salon, in particular the leading newspapers in French (*Le Quotidien d'Oran, El-Watan*) and in Arabic (*El-Khabar, El-Chourouq*). In addition, the local radio station Cirta-FM, provided full coverage during the three days of the Salon and the event was on national TV news.



3.2.2 Ghana

The Accra Technical Training Center celebrated World Space Week with a lecture, film show and poster exhibition.

On 9 to 10 October, the Hermann Gmeimer SOS Village in Tema introduced the young astronauts society to SOS students.

3.2.3 Libya

The Libyan Center for Remote Sensing and Space Science (LCRSSS) held festivities for World Space Week on 8 to 9 October 2003. The celebrations were attended by the Chief Executive of Services in the General Public Committee, the Director General of the National Committee for Scientific Research, the Director General of LCRSSS and Head of the National Committee for Remote Sensing, the Representative of the Permanent Office for the United Nations Program in Libya, a representative of the Permanent National Committee for the Peaceful Uses of Outer Space, Director General of the Survey Department, the Director General of the Water Research Center, members of the diplomatic community and heads of colleges. A number of people interested in space science also attended.

The Festivities started with the national anthem, followed by speeches given by:

- The Chief Executive in charge of services in the general National Committee
- The Director General of the National Committee for Scientific Research
- Director General of LCRSSS.

The event emphasized the role that the international community plays in World Space Week and the importance of ensuring that such events improve knowledge of people interested in space and appeal to the public to get them interested in space science. Many research papers by various local and international researchers were distributed during this event.

An exhibition was held, which demonstrated the achievements of local airlines, international scientific companies and the National Weather Forecast Office as well as the recent activities of the Libyan Center for Remote Sensing and Space Science.



Demonstrations and astronomical shows were available to the public in the Astronomy Dome, which was the location of the festivities in the city of Tripoli.

The festivities were successful due to the efforts of all involved and proved that World Space Week is an event worth waiting for.

3.2.4 Senegal

The University Cheikh Anta Diop, in collaboration with the University of Marne la Vallée, France, introduced the project “Natural Disaster Management through Remote Sensing and GIS: Applications to the Hydrological Study of the Senegal River” at a seminar held in Saint-Louis during World Space Week in October 2004. The seminar brought together the scientific community; local stakeholders; local, national and regional authorities; and the general public.

During this meeting, the problems of the floods and their impact in the town of Saint-Louis were discussed. The review of the different episodes of past floods illustrated the passage of important floods in 1879, 1890, 1950, 1994 and recently in 1999. The causes of the floods were identified. Remote sensing and GIS are to be used by the project for an evaluation of the impact of each of the causes of the floods.

The Project, launched during World Space Week 2003, has the objective of gathering and synergising the efforts to develop tools to help decision-makers find adequate solutions to the issue of floods in Saint-Louis.



3.2.5 South Africa

World Space Week was celebrated in South Africa from 6-11 October 2003 with a variety of activities around the country. These activities were jointly organized by the Department of Science and Technology and the Department of Communications, with the South

African Agency for Science and Technology Advancement (SAASTA) as the implementing agency.

The events included:

- A “Roadshow” from 6 to 18 October taking space science and technology to schools in urban and rural areas across South Africa. For more information, contact Viwe Soga, Department of Communications (viwe@doc.pwv.gov.za).
- World Space Week events included space displays; popular talks; workshops on rockets, telescopes, electronics and comets; space shows and space film festivals which were held around the country. Several science centres, museums, planetariums, observatories, science councils and other organizations joined forces to hold a week of fun and educational space activities.
- The Southern Skies Challenge invited youth (5-23 years) to write, draw or create art about space sciences. Prizes in this competition included computers, cash prizes and visits to the new Southern African Large Telescope. The closing date for the competition was 15 December 2003.
- A map poster with information on “Who’s Who in the Southern Space Zoo” was produced and was available for download as an educational resource for schools, libraries and museums. The poster was available free of charge from Tebogo Gule (space@saasta.ac.za).

The World Space Week South Africa web site at <http://www.saasta.ac.za/wsw> has further information, map posters and a solar system board game.

3.3 Asia & Oceania

3.3.1 Australia

World Space Week events that were held in Australia included:

- The annual Australian Space Research Institute student rocket program at Woomera.
- A series of school holiday events at Sydney Observatory (part of the Powerhouse Museum) celebrating Mars, in conjunction with their new Mars exhibition.
- Events in the city of Newcastle (north of Sydney).
- Events in Melbourne.

The first of a potentially annual School's Space Symposium (where school students present papers about their space-related school projects) took place after World Space Week (October 15) at a school in western Sydney. As World Space Week occurs in the school holiday period in Australia, this event has been organized to be as close to the official World Space Week dates as the holiday period will allow.



3.3.2 Bangladesh

The Inaugural Ceremony of World Space Week 2003 was held on October 4 in the auditorium of Mirpur Bangla High School at Section-11, Mirpur, Dhaka, Bangladesh

between 12.15 pm and 2.15 pm. The Meeting was presided over by Dr. AKM Aminul Haque, the Vice-President of Bangladesh Astronomical Society and the former Vice-Chancellor of Bangladesh Agricultural University, Mymensingh.

Among who delivered their lectures in the meeting were: Mr. F. R. Sarker, an eminent Astronomer and the General Secretary of Bangladesh Astronomical Society; Dr. Mobarak Ali Akand, the Treasurer of Bangladesh Astronomical Society and the former Director of the Museum of Science and Technology, Dhaka; Mr. Syed Abdul Kaium, the Head Master of Mirpur Bangla High School; Mr. Shiba Ranjan Datta, Science Teacher and Adviser of the Science Club of Mirpur Bangla High School; two school students, Master Amit and Master Rahim. The speakers discussed the objectives of World Space Week and the necessity for creating space awareness among the younger generations of Bangladesh. Space-related videos were shown through the multimedia projection system. The Bangladesh Astronomical Society held the week-long programme to celebrate World Space Week 2003 in a befitting manner. Some other organizations in Bangladesh also celebrated this Space event.

Under assistance from the Bangladesh Astronomical Society, the Science Club of Mirpur Bangla High School, Dhaka arranged a Children's Art Competition which was held on October 7 in the school rooms as a part of the programme for World Space Week. Children between 6 and 10 years of age participated in this competition. They drew colourful pictures about the sun, moon, planets and other objects from their imagination which they felt to be suitable. Mr. Shiba Ranjan Datta, the science teacher, explained to them that in the future when they become older they may travel to space, which they heard with great excitement. The Art Competition continued from noon to 2pm with great enthusiasm by the participating children. The winners of the Art Competition were given certificates and prizes on October 9, during the concluding ceremony of World Space Week.

As a part of the programme for celebrating World Space Week, the Science Club of Mirpur Bangla High School, supported by Bangladesh Astronomical Society, arranged a Lecture Competition on Space Topics which was held in the school on October 8, 2003. A large number of students from Class VII to VIII of the school participated in the competition. They brought their handwritten papers with articles on the exploration of the moon and Mars, which they read eloquently. Each speaker was allowed 3 minutes time to deliver their lecture. Winners were selected from the speakers whose speeches were clear and contained more information. A team of judges headed by Mr. Shiba Ranjan Datta, Science Teacher, and assisted by two Science organizers, Abur Rahim and Maniruzzaman Monir, conducted the Lecture Competition. Those students who were winners in the competition were given certificates and prizes during the closing ceremony of World Space Week on October 9, 2003.

The Bangladesh Astronomical Society held the Closing Ceremony of the celebration of World Space Week on Thursday, October 9, between 5 pm and 7 pm in the auditorium of Mirpur Bangla High School, Dhaka, and it was attended by a large number of people. Mr. Mesbah Uddin Ahmed, the Secretary, Ministry of Science and Information & Communication Technology, Government of Bangladesh attended the ceremony as the Chief Guest. Dr. AKM Aminul Haque, Vice-President, Bangladesh Astronomical Society and former Vice-Chancellor of Bangladesh Agricultural University presided over the meeting. Among others who delivered lectures at the event were Mr. F. R. Sarker, General Secretary, Bangladesh Astronomical Society and the National Coordinator for World Space

Week in Bangladesh; Dr. Mobarak Ali Akand, Treasurer, Bangladesh Astronomical Society and the former Director of Science Museum, Dhaka; Professor Habibur Rahman Chowdhury, Director of Science Museum; Dr. A.M. Chowdhury, Chairman, Bangladesh Computer Council; Mr. Syed Abdul Kaium, the Headmaster, Mirpur Bangla High School; Mr. Shiba Ranjan Datta, Science Teacher, Mirpur Bangla High School; Yakub Hossain Shohel, Science Organizer; and Master Amit, a junior Astronomer.

The speakers discussed the prospects and problems of studies of astronomy and space science in Bangladesh and concluded that the government must develop realistic programmes for the development of this important sector. Mr. F. R. Sarker explained the importance of celebrating World Space Week with a multimedia presentation. He demanded that the Ministry of Science and Information & Communication Technology should immediately set up an organization named “Bangladesh Institute of Astronomy and Space Research” (BIASR) aimed at creating opportunities for study and research of astronomy and space science in Bangladesh. Mr. Mesbah Uddin Ahmed thanked the organizers for arranging the celebration of “World Space Week” and assured them that his Ministry would try its best for the development of astronomy and space science in Bangladesh. Later, he distributed prizes and certificates to the students who had won in the Art and Lecture Competitions on Space Topics held in Mirpur Bangla High School during the celebration of World Space Week. The ceremony was followed by video shows on different subjects of space and astronomy.

Media coverage of World Space Week was good. Most of the reports of the celebration were published in Bengali Newspapers. Four reports were published in two leading daily Newspapers in Dhaka: The New Age, October 11; The Independent, October 11; The Independent, October 6; and The Independent, October 15.

3.3.3 China

The opening ceremony for “the Forth World Space Week” was held in Xidan Culture Plaza, Beijing on 4 October 2003. The purpose of this activity was to publicise the close relationship between space technology and daily life. The subject was “Space: Horizon beyond the Earth”.

The Forth World Space Week was sponsored by the China National Space Administration, supported by China Aerospace Science and Industry Cooperation and undertaken by the Chinese Society of Astronautics. A popular space science workshop was held in Xidan Culture Plaza on the opening day, when Mr. Lian Sili and other academicians and advisers from China Academy of Science, China Aerospace Science and Technology Cooperation and China Aerospace Science and Industry Cooperation were present to answer questions. The exhibition of World Space Week 2003 on its related activities, China’s Shenzhou Spaceship and space life was also on show. The short video program about popular space science was played through a large screen on the plaza.

A lot of people, including the students from middle schools and primary schools, were attracted by The Forth World Space Week, which aroused teenagers’ interest in space exploration and popularized space science. Since the 54th Meeting of United Nation General Assembly in 1999 named 4 – 10 October as World Space Week, China has held series of activities to popularize space science for four years in succession since 2000, which greatly benefit the society.

At the opening ceremony, Wang Shuquan, Deputy Secretary-General of the Commission of Science, Technology and Industry for National Defence, described the good prospects of China's plan for future space exploration to participants in the activities. He said that in future, China would conduct tests on lunar-landing flight. In his speech, Wang Shuquan said that there have been many important milestone events in the course of space exploration by mankind. China has become the world's third country to carry out manned space flight. Prior to this, China's "Shenzhou" spaceship successfully flew four times round the earth in space. China will continue to carry out its space exploration plan.

3.3.4 India

The Indian Space Research Organization (ISRO) took the lead role in promoting World Space Week in India. Various Centres and Units of ISRO have planned and organized programmes of public outreach during the World Space Week celebrations over the last four years. This year the celebrations were aimed at disseminating the theme, "*Space: Horizon beyond Earth*", to target groups of school and college students, teachers, planners and state officials.

The visit of His Excellency the President of India, Dr. A.P.J. Abdul Kalam, who himself is a renowned Space Scientist, to Satish Dhawan Space Centre, Sriharikota, coincided with World Space Week. In his special address he said, "*I understand that we are celebrating World Space Week now. India has been in the forefront of bringing the benefits of space technology to the common man. Space touches the human beings on their day-to-day life in a variety of ways. I believe that technology is a major enabler for the development of our country. Space technology with its uniqueness can network in many ways. With your strength, you have shown self-reliance in this core area. Even as you do this, there are opportunities to be part of global systems to serve the humanity in general.*"

In Thiruvananthapuram, World Space Week was formally inaugurated on 4 October at the royal venue, Kanakakunnu Palace, by renowned space scientist and Marconi award winner Prof. Yashpal. Dr. B.N. Suresh, Director of Vikram Sarabhai Space Centre (VSSC), Mr. N. Vedachalam, Director of Liquid Propulsion System Centre, and Mr. P.S. Veeraraghavan, Director of ISRO Inertial Systems Unit, addressed the gathering, signifying the relevance of the celebrations. In his inaugural address, Prof Yashpal exhorted the students to strive to apply science and technology for the betterment of humanity. A cross section of society, dominated by educators, planners, administrators and technologists attended the function.

The following Programmes were held in Thiruvananthapuram during World Space Week 2003:

- A "Space Gallery" was set up at the Kerala State Science and Technology Museum and was declared open by Mr. R.V. Perumal, Director (Projects), VSSC. The Gallery illustrated the evolution of the Indian Space Programme from an obscure fishing village to the GSAT-2 satellite orbiting at 36000 km.
- One of the significant programmes of World Space Week in India, the Workshop on Resource Planning for Development, was held on October 8. Mr. V Ramachandran IAS (Retd.), Vice-Chairman, Kerala State Planning Board, inaugurated the Workshop. About 120 senior level officials of the Government of Kerala and other autonomous bodies participated in the workshop. The workshop provided a common platform for motivating the planners to utilise space technology.

- The Space Workshop for graduate students was conducted at the Science and Technology Auditorium on October 8, 2003. For more than 100 students, selected from various colleges of Thiruvananthapuram and who were addressed by senior scientists of ISRO, it was a unique learning experience.
- A painting competition for Thiruvananthapuram school children from standard 1 to 10 was held on October 5, in which 220 young artists vied with each other for honours. “Exploration of Space” and “Frontiers of Space” were the themes given, which gave the students ample scope to express their imagination.
- About 350 students drawn from 50 schools of Thiruvananthapuram participated in a chat session with the Space scientists. The students were shown two video capsules on the Indian Space Programme.
- On October 6, a college-level quiz competition was held at the VSSC auditorium, in which 40 colleges participated.

In Kochi, a Workshop for school teachers was held on October 8. About 70 teachers attended the workshop, which was held at the School of Management, Cochin University of Science and Technology (CUSAT). Dr N. Unnikrishnan Nair, Vice-Chancellor, CUSAT inaugurated the Workshop. Topics such as the programmes of ISRO, space technology, space science and space applications were covered in the workshop. The teachers had a rare opportunity to interact with senior scientists.

A quiz competition for high school students was organized at Nirmala Higher Secondary School, Aluva on September 29, 2003. Students from 40 schools of the District of Ernakulam participated in the quiz.

During World Space Week, students from the Madras Institute of Technology (MIT) Chennai, and Indian Institute of Technology (IIT), Chennai, organized quiz programmes, displayed banners and released posters. On October 6, Madras Institute of Technology and Indian Institute of Technology organized independent programmes in which Mr. V. Krishnamurthy, Satish Dhawan Space Centre SHAR, gave a talk on "India in Space" and Mr. C. Ravikumar, VSSC, gave a presentation on India's scientific Mission to Moon "Chandrayan-I" .

World Space Week was celebrated in Ahmedabad with the Vikram Sarabhai Space Exhibition which was open to the public, a video programme on space activities and “face-to-face” activities with space scientists. The celebrations were given wide publicity and there were more than 10,000 visitors to the exhibition during World Space Week. The students, as well as the teachers, showed keen interest and asked many questions related to space in general and the activities of ISRO.. Prof. Narendra Bhandari of Physical Research Laboratory, Ahmedabad, delivered the popular lecture on the subject "*The Indian Moon Mission*", which was very well received by the public.

“Face-to-face with space scientists” evoked keen interest with a large number of questions pertaining to all aspects of space research, space sciences, astronomy, etc. During these sessions, senior ISRO Scientists participated by responding to these questions.

In addition, competitions were held for school and college students of Ahmedabad. The competitions included models of space technology or applications, posters on space

activities and an essay contest on the topics “Space Colonies: Future Vision and Possibilities” or “Mission to Moon”. There were approximately 100 contestants in these competitions. The quality of the material submitted by the students in all competitions was quite good.

The Vikram Sarabhai Space Centre, Thiruvananthapuram, organized the programmes at Thiruvananthapuram, Kochi and Aluva. Satish Dhawan Space Centre, Sriharikota, organised programmes at Chennai. Space Applications Centre, Ahmedabad, organized the programmes at Ahmedabad.

3.3.5 Israel

A public star party and observation was held in Golan Heights on 3 October as an opening event for World Space Week. For additional details:

<http://forums.nana.co.il/forum.asp?id=2122>.

3.3.6 Japan

In Japan, 12 September is “Space Day”. On this day in 1992 the astronaut Mamoru Mohri became the first Japanese in space aboard the Space Shuttle and the 11th Space Day was held in 2003. Since 2000, the period between Space Day in Japan and World Space Week has been regarded as the “Space Month” many space-related events are held every year.

On 1 October 2003, three Japanese space agencies, the Institute of Space and Astronautical Science (ISAS), National Aerospace Laboratory of Japan (NAL) and National Space Development Agency of Japan (NASDA), were combined into one organization and Japan Aerospace Exploration Agency (JAXA) was established. Therefore, the space-related events were held in September this year. In 2003, as the opening event of the Space Month, “Fureai Festival 2003” was held in Tokyo from 13 to 15 September.

The Ministry of Education, Culture, Sports, Science and Technology (MEXT), ISAS, NAL and NASDA, etc. promoted the Essay and Drawing Contest for Elementary and Middle School Students and other space-related events, where children can enjoy and learn about space and space development. Along with those events, ISAS, NAL and NASDA also opened their facilities to the public.

For the Essay and Drawing Contest, 22,979 essays and drawings were sent by children from all over Japan and foreign countries, with the awards ceremony held at “Fureai Festival 2003” on 14 September.

3.3.7 Malaysia

World Space Week celebrations in Malaysia started at the National Planetarium Kuala Lumpur, which gave special gifts to visitors starting on 4 October. The first ten visitors followed by the 100th, 200th, etc. up to the 1,000th visitor received prizes such as binoculars, t-shirts, bags, etc.

From 4 October five information sessions on space followed by quiz questions were held through the National radio channel every day until 10 October 2003. Quiz winners were given special prizes by the organizer.

An Exhibition on Space and Astronomy was also conducted during the week at the National Planetarium and on 11 October, a Space Hunt programme was held at the National Planetarium in which 300 school children participated.

During the night of 3 October, a Star Gazing programme was held at the National Planetarium for the general public. During the day, a Sun spot observation programme using telescopes at the entrance of the National Planetarium was held.

Special Video Shows on astronomy and space were also scheduled for day-time visitors to the National Planetarium in addition to the normal Planetarium and large format film shows in the Space Theatre.

3.3.8 Thailand

This was the first year in which Thailand participated in World Space Week. Full details of Thailand's World Space Week 2003 celebration can be found on the following web site: <http://funscience.gistda.or.th/wsw/wsw.html>.

3.3.9 Uzbekistan

For the last 3 years World Space Week has been celebrated in Uzbekistan. Uzbekistan, as a part of the previous USSR, dealt with a large part of the Soviet Space Programme, especially on the exploration of Moon and Venus, and has retained the remaining infrastructure as well as young people who are interested in space activities.

World Space Week 2003 was a great success. More than 30 young people from the Tashkent State Aviation Institute (Department of Aerospace Engineering), Tashknet Research Institute of Space Engineering, Uzbekistan Space Agency and people from the International Aerospace School prepared posters and other promotional materials regarding space exploration. A lecture for the pupils in several schools was held in the capital city Tashkent. The people from the rocket modelling circles prepared rocket models and more than 20 model rockets were launched. Many flowers were brought to the memorial statue of the first astronaut - Yuri Gagarin. Celebrations were held for the first 3 days but lectures continued for the whole week. The pupils were made aware about world space activities and World Space Week history as well.

3.4 Europe

3.4.1 Austria

As national co-ordinators, the ASA and OEFW are pleased to be able to report on Austrian space meetings during World Space Week. ASA and OEFW would appreciate being informed of interest in holding relevant meetings and meetings in World Space Week that have already been planned. Although there is a special theme every year, it is not necessary that all events fall within this theme. It is more important that the worldwide activities held during the week attract the attention of the media and that public awareness of "Space" becomes stronger. Contact Michaela Gitsch, ASA (Tel: 4038177-12) and Gudrun Weinwurm, ÖWF.

- 5 October, 19:30. The Space Year 2004. Multimedia-lecture from the Kuffner Observatory with Michael Jensen, Vienna. <http://www.kuffner.ac.at>.

- 9 October, 19:30. Space Astronomy – Getting Closer to the Stars. Presentation by Prof. Kerschbaum and Prof. Weiss at the Institute for Astronomy, Vienna, <http://www.astro.univie.ac.at/~space>.
- See also section 3.1.2 for information on a World Space Week exhibition at the United Nations Offices in Vienna, organized by the UN Office for Outer Space Affairs.

3.4.2 Bulgaria

World Space Week 2003 consisted of the following activities in Bulgaria:

- Opening of the World Space Week in the National Astronomical Observatory and Planetarium, Varna, Bulgaria
- Exhibition-contest of space pictures made by students (12 years old) and children in the alley of Cosmonauts in the Maritime Garden
- Stars show for the young cosmonauts in the First Bulgarian children planetarium, Varna
- Teacher training workshop on space
- Writing letters to newspapers about space and participant in TV broadcast
- Student debates about space
- Star séances in the Planetarium in Varna: Star travellers
- Presentation of KEO project.

3.4.3 Croatia

As part of World Space Week, the International Society for Photogrammetry and Remote Sensing held a conference on “International Cooperation and Technology Transfer” from 15 to 18 October in Zagreb, Croatia. The topic was “Geoinformation For Practice”. The host and organizer was the Croatian Geodetic Society – Section of Photogrammetry and Remote Sensing.

3.4.4 Czech Republic

Events were organized in the Czech Republic on the occasion of the World Space Week for the second time. As in the previous year, the main organizer of the Czech participation was the Czech Space Office. Involvement of individual organizations as well as individuals in the campaign was managed and coordinated by Mr. Milan Halousek, editor of KOSMOS-NEWS astronautics bulletin.

The year of 2003 would have been considered an extremely successful year with respect to the interest of the public in astronautics – if, however, the major interest of media and the public had not focused especially on the tragic catastrophe of U.S. Columbia space shuttle. In addition to this, in 2003 large attention was paid to another historical milestone in manned astronautics – the lift-off of the first Chinese astronaut, Jang Li-wei on 15 October 2003. Another event in astronautics at the end of 2003 was connected with the upcoming landing of research rovers on Mars. All of these topics were reflected in events organized in 2003 in the scope of the World Space Week. However, it needs to be stressed that

contrary to expectations, the interest of the public in astronautics during entire 2003 slightly reduced the quantity and quality of events organized in the scope of this week. This was due to the fact that a number of organizers of exhibitions and lectures held their events, which were normally planned especially for World Space Week, earlier thus utilizing the interest of listeners and visitors in the actual happenings. Despite this, a number of events promoting astronautics took place during the 2003 World Space Week and just after the Week.

Lectures

A total of 19 lectures were given in direct connection with World Space Week and covered astronautics and partially astronomy. These activities took place in astronomical observatories in Pardubice, Hradec Králové, Hrádek, Prostějov, Valašské Meziříčí, Uherský Brod, Vsetín, Brno or schools in regions in which these observatories are active. Particularly, lectures held in primary or high schools enjoyed a substantial attendance of students. This attendance is even more valuable in view of the fact that new active individuals interested in astronautics may come from this category. Organizers of individual lectures reported more than 950 participants who heard lectures covering the Columbia catastrophe, the Apollo program, stellar space, Mars, ISS, etc.

Exhibitions

Organizers reported that a total of nine exhibitions took place with more than 3,500 visitors. Also in this case, these exhibitions included events organized in primary and high schools. The highest share on the overall results in this area goes especially to the astronomical observatory in Valašské Meziříčí, which has substantial experience with this method of presentation of astronautics. In addition, Mr. Vladimír Plachý from Pardubice contributed significantly to the spectrum of quality exhibitions organized in the scope of the 2003 World Space Week. He organized four exhibitions in primary schools in Pardubice region with over 900 visitors. These exhibitions are always accompanied with a separate brief lecture for each group of visitors and all questions are answered.

Program series

In connection with World Space Week, astronomical observatories in various regions of the Czech Republic designed programs featuring this event. These were mostly included into their program series. Alternatively, some observatories called attention of the public to the ongoing World Space Weeks in the scope of their regular events and provided explanation of its background and significance. These included especially highly active astronomical observatories in Valašské Meziříčí, Prague, Uherský Brod, Vsetín, Brno, Hradec Králové and Pardubice.

Web presentations

Information on World Space Week and related activities appeared on a large number of web pages of both organizations and individuals.

Media presentations

This particular area represents one of a few fields which could still be a subject of significant improvement. Presentation of World Space Week in the media was very weak, despite all media generally paying considerable attention to astronautics in 2003. The only significant activity in this area includes the regularly published press release of the Czech Astronomical Society on the occasion of the World Space Week, which was prepared by Mr. Marcel Grün, the Director of Prague Astronomical Observatory and Planetarium.

Recommendations

Although strong participation of the public in events organized in the scope of World Space Week 2003 in the Czech Republic raises optimism, it is necessary to be fully committed to the promotion of astronautics in the upcoming year. The public needs to be informed on the contribution of astronautics to everyday life and convinced that it represents a useful spending of funds.

The majority of events promoting astronautics, not only during World Space Week, are organized by professional and amateur astronomical observatories. These, however, focus primarily on astronomy and the quality of presentation of astronautical topics is assured only if some of the staff are also engaged in astronautics. For this reason, a number of astronautical topics are presented by external collaborators of astronomical observatories. The element limiting these activities is the amount of time that these external lecturers are able to devote to these events and, last but not least, the financial capabilities of individual observatories.

In addition to introducing astronautics to the general public, a very significant outcome of the 2003 World Space Week is the improved communication between the staff of astronomical observatories and amateur and professional promoters of astronautics. It is certain that these contacts will facilitate higher quality and more emphatic presentations of astronautics to the general public not only in 2004, but also in the years to come.

Summary of selected events having taken place during the World Space Week in the Czech Republic

- Lecture: "Columbia – Investigation Finished"
- Vernissage of the exhibition "Apollo: Footsteps On The Moon" + Lecture
- Afternoon Program of the E. Halley Amateur Astronomical Observatory
- Lecture: "Stellar Space"
- Lecture: "Are we the Center Point of Space?"
- Program: "Astronautical Chronicles" - Summary of the most interesting events in astronautics, launch vehicles and space research in the last quarter
- Vernissage of the traveling exhibition "Share of the Czech Republic in the Space Research"
- Lecture: "Mars and Other Planets by Eyes of Space Probes"
- Lecture: "Past and Presence of the Solar System Bodies"
- Lecture: "Earth in Motion"
- Observation of Fly-Overs of Bright Satellites with Explanation and Description of Satellites
- Night Astronomical Observations, Fly-Overs of Iss, Flares of Iridiums
- Lecture series: "2003 Events", "Exploration of Interplanetary Matter by Space Probes"
- Lecture Series: "Mars Research Continues", "Features and Records of Manned Space Flights", "Columbia", "Iss After Five Years"
- Start-up of the "Space Probes Database" - <http://spaceprobes.fbi.cz>
- Program: "Space Spies"
- Article: "Safety of Manned Space Flights"
- Putting the Czech Translation Of "Orbitron" Program (Monitoring Flyovers of Satellites Above The Earth) Into Operation
- Astronautical and astronomical afternoon.

- Lectures: “Mars – Planet of the Year”, “Astronomical News”
- Publishing the “Sunflower Project” web site
- Lecture: “Future of the International Space Station”
- Exhibition: Astronautics
- Traveling exhibition: “Call Sign Caique or Women in Space”
- “Hradec Králové Astronomical Observatory And Planetarium” - Talking about astronautics (Columbia, Mars space probes, Chinese astronautics) in the scope of regular school events and observations for the public

3.4.5 France

In conjunction with World Space Week, the European Space Agency participated in several events in Paris where its Headquarters are located. This coincided with the French Science Week that started at the end of the World Space Week. Specialists from ESA met several hundreds of children (8 to 12 years old) to explain what satellites are, what they are used for and to help improve their motivation for science.



3.4.6 Germany

World space leaders met at the International Astronautical Congress in Bremen, 29 September to 3 October.

Two programs were held at the University of Bremen in honor of World Space Week.

The United Nations Event for World Space Week was hosted by the German Aerospace Center (DLR) and the French Centre National d'Études Spatiales (CNES) in the University of Bremen on Thursday, 2 October 2003.

Speakers included:

- *Henning Scherf, Mayor of Bremen*
- *Raechelle Newman on behalf Sergio Camacho, Director of the United Nations Office for Outer Space Affairs*
- *Klaus Berge, DLR, Project Director of Space Management*
- *Pierre-Louis Contreras, CNES, Deputy Director for External Communication, Education and Public Affairs*
- *Michel Laffaiteur, CNES-DLR and Spaceweek International Association*
- *Michel Arnaud, CNES, Deputy Director for Orbital Systems*
- *Gerda Horneck, DLR, Deputy Director of the Institute of Space Medicine*
- *Jacques Arnould, CNES, Counsellor to the President*
- *Rupert Gerzer, DLR, Director of the Institute for Space Medicine.*

There was also a morning program organized by University of Bremen for students with the following speakers:

- Begrüßung, *Prof. Peter Richter, Universität Bremen*
- Umwälzungen in Astrophysic und Kosmologie - das Schicksal des Universums, *Prof. Günther Gustav Hasinger, MPI für extraterrestrische Physic, Garching*
- Entwicklung des Raumfahrt - Realität und Vision, *Prof. Dr. Jesco Freiherr v. Puttkamer, NASA Headquarters, Washington*
- Das Leben im All - Traum und Wirklichkeit, *Prof. Dr.-Ing. Ulrich Walter, TU-München*
- Schwerkraftwahrnehmung beim Pantoffeltierchen - Forchung zur Schwerelosigkeitswahrnehmung. *DR. Richard Bräucker, DLR.*

3.4.7 Hungary

On 9 October the Third Youth Forum was held, which was mainly organized by the Hungarian Space Office and the Scientific Council on Space Research. The Hungarian Astronautical Society held its annual essay competition. (In 2002 there were 40 participants from primary schools and 42 participants from secondary schools). The official start of the competition was announced at the yearly "Space Day" in October.

3.4.8 Ireland

In Ireland, World Space Week 2003 was celebrated in a number of schools in both northern and southern Ireland. Activities were often based upon the World Space Week Teachers Activity Guide which was delivered to over 100 schools in Ireland and downloaded by many more, both primary and post-primary levels. Additional activities included visits by mobile planetaria, etc to enhance the experience.

3.4.9 Poland

For the fourth year, Poland celebrated World Space Week. On 4 October 2003 in Warsaw, the Polish Astronautics Society organized a special event for young people participating in the ZNEK project (Application of Science for the Exploration of Space). Three groups of pupils from Gdansk, Gdynia and Torun, awarded for their outstanding activity in the ZNEK project, were invited to Warsaw for a celebration of World Space Week 2003. The excursion included a visit to the Warsaw Planetarium and lecture in Space Research Centre of the Polish Academy of Sciences (www.cbk.waw.pl). The lecture presented by Dr Krzysztof Ziolkowski was devoted to the scientific results of the Galileo mission. The group from Torun visited the new exhibition of the Museum of Polish Army dedicated to the 25 anniversary of the space flight of the first Polish cosmonaut Gen. Miroslaw Hermaszewski. In the evening, both groups saw the 3D film "Space Station" at the IMAX theatre. The educational program ZNEK (<http://znek.astronet.pl>), led by Polish Astronautics Society and its leaders Mr Andrzej Kotarski and Mr Marek Sadowski, has a significant role in the popularisation of space exploration among 14 to 19 year-old students.



A very important event, related to the popularization of Space exploration and World Space Week, was the Festival of Science organized under the auspices of the Polish Academy of Science and The Nicolaus Copernicus Astronomical Centre in Warsaw. The series of lectures led by prominent Polish scientists under the title “We are Living in the Era of Great Astronomic Discoveries” gathered hundreds of spectators. Eight lectures gave the audience an opportunity to follow the latest discoveries in topics such as: dark matter and energy, history of astronomy, black holes, Hubble Space Telescope, history of galactics and gamma-ray bursts. The final lecture, under the title “All You Ever Wanted to Know About the Universe, But Were Afraid to Ask” was led by top Polish scientists, who work in leading space and astrophysics centers all over the world. Prof. Abramowicz, Dr Bajtlik, Prof. Paczynski, Prof. Lasota and Prof. Juskiewicz answered questions about hot new scientific theories in astrophysics.

The astronomy seminar during the Festival of Science was accompanied by screenings of films about the exploration of Space, exhibition of meteorites and amateur astronomy equipment and presentation of popular science books about Space. The educational campaign was supported by public television, radio, leading newspapers and weekly magazines.

In addition to the main events organized under the patronage of the Polish Academy of Science, several local activities including lectures, exhibitions and other educational events were held in planetariums, schools and universities all over Poland.

3.4.10 Portugal

World Space Week was celebrated across Portugal with different activities and events including seminars, a film and documentary exhibition, theater plays, astronomical observation and exhibitions. These took place in public places and schools, reaching all sections of the public and particularly students of different grades.

For information on Portugal’s World Space Week events, please visit:
<http://www.cienciaviva.pt/rede/space/space2003/>.

3.4.11 Romania

The Romanian Space Agency (ROSA) has organized celebrations of World Space Week each year since 1999.

In 2003, the theme "Space: Horizon Beyond Earth" was the main focus of the events organized in Romania. The presentations, discussions and exhibits tried to make people think about "How is space exploration good for humankind?" During those meetings with professionals and students, the role of deep space missions, space telescopes and planetary exploration in the industrial and post-industrial era as knowledge developers, technology drivers, and spin-off generators were emphasized. At the same time, the wide spectrum of space applications were presented in a more global view, as an essential provider for the information society infrastructure and the present and future security of Earth.

The event was announced by means of space-related news in the media on 3 and 4 October, and after that there were 15-minute radio shows on Radio Romania – Science Department on 3, 6 and 10 October with the participation of space professionals.

Beginning on 7 October, the "Aeronautics and Space" Exhibition, organized by the Romanian Space Agency, was opened in the framework of the national event "CONRO – 2003", organized by the Romanian Government - Ministry of Education, Research and Youth. During this exhibition, a special WSW day was organized on 8 October in the ROMEXPO facilities in Bucharest. This was a great opportunity for ROSA staff and ROSA collaborators, together with space enthusiasts, to meet and exchange ideas and to discuss the benefits that space exploration can provide to humankind. Along the same lines, there were special lectures for college students that were held by scientists and teachers solicited by ROSA on 6, 8 and 9 October.

As the Romanian space-related information and news are delivered on the Internet, a virtual gathering-place for all of this information was launched with the new Romanian Space Agency web-portal (<http://www.rosa.ro>), with the World Space Week activities included in the news list on the home page. All these events were posted on the Romanian Space Agency web page. The World Space Week posters (both the Romanian poster and the official, international version) were distributed and placed in public places, mostly in schools and universities.

3.4.12 Russian Federation

Members of the Youth Space Center (YSC) of Bauman Moscow State Technical University participated in the 54th International Astronautical Congress in Bremen, Germany. YSC Director Victoria Maiorova and YSC member Anatoly Kopik gave an oral presentation titled "Bauman Moscow State Technical University Youth Space Center – students' way in space technologies". The YSC team also made a poster presentation about "Baumanets" student's microsatellite project.

YSC made an aerospace tour for Bauman students to Nice, France with a visit to Alcatel Space Cannes (with the help of Philippe Jung - president of Historical Commission of Aeronautical and Astronautical Association of France and Ivan Benilan - ISU graduate, Alcatel Space engineer), Observatoire de Nice, Astrorama planetarium and telescopes.

YSC (with the help of Bauman professors and Ph. D) started a workshop for high school students with the aim of preparing them for the All-Russian Aerospace Contest

“Cosmonautics”, which gives them an opportunity to show their knowledge in space science. For the contest they produce a research paper in the space-related fields and then they defend their research during the contest. Authors of the most interesting projects are recommended to enter the aerospace department of Bauman Moscow State Technical University.

The Moscow Aviation Institute (MAI) held an annual meeting of its Aerospace School alumnus, professors, students and high school students on 4 October 2003, as part of World Space Week. A public meeting of Cosmonautics veterans, professors, cosmonauts, public leaders, managers of Russian Space Agency and industrial enterprises and students was devoted to the 35th anniversary of Aerospace School, Moscow Aviation Institute on 27 October 2003. In 2003 the Proceedings of the Youth Conference “Problems of Space Education in XXI Century” with motto “World Space Week” were published in the Publishing House of Moscow Aviation Institute. The International Conference and Exhibition “Aviation and Cosmonautics – 2003” was devoted to the 100th anniversary of aviation and the 35th anniversary of Aerospace School, MAI and took place in Moscow Aviation Institute on 3 – 6 November 2003 (under motto “World Space Week”). A special rally carrying World Space Week mottos and all types of publicity took place in Khimki Moscow Suburb, a rocket and space industry Center where Lavochkin and Energomash are located.

3.4.13 Spain

A reminder about the World Space Week celebration was placed on the Web site of major Spanish space stakeholders. Press agencies, newspapers and radio stations were contacted to announce the celebration. Members of the European Space Community were invited to make presentations at the European Forum on Disaster Preventions (Madrid, 6-8 October) and ended their lectures mentioning the WSW event. Specific events were programmed within the current activities of some Spanish science museums, libraries, clubs of students, etc.

3.4.14 Switzerland

World Space Week was celebrated in Switzerland with a public and an industrial event in the central city of Berne. The public event “Swiss Space Days” from 24 - 25 October 2003 was organized by the Swiss Astronautics Association (SRV: <http://www.srv-ch.org>) and the Berner Fachhochschule (HTA Bern: <http://www.hti.bfh.ch>) and was mainly visited by young people.

The big attraction was the Swiss astronaut Claude Nicollier who enriched the programme with many personal contributions. The programme consisted of several elements such as visits to schools, a public symposium, various social activities and an exhibit where a model of Sojourner displayed its Swiss motors. Speakers of all ages from different types of organizations such as universities (e.g. Basel, Bern and Neuchatel), agencies (e.g. Swiss Space Office, European Space Agency) and non-government organisations (e.g. PUSH Foundation) presented interesting viewpoints on today’s and tomorrow’s space projects and plans. The honorary member of the SRV, F. Casal, and other speakers had to answer many sharp questions from the young enthusiasts.

The industrial symposium “Space Tech Forum: Technology transfer” on 28 October 2003, also held in Berne, was organized by and for the Swiss Space Industries. It took advantage

of the presence of several speakers from the public event and incorporated the same exhibits.

3.4.15 United Kingdom

The “Painting the Universe” Exhibition marked the beginning of World Space Week 2003. Organized by World Space Week Manchester, a collaboration of research students from the University of Manchester, the exhibition brought together works from 10 internationally renowned space artists to celebrate global achievements in space activities.

The largest space art exhibition of its kind in the UK, it was officially launched on 4 October 2003 by David A Hardy, Board Member and former President, IAAA and Richard Patrick, Head of the Earth Sciences Department at Manchester University. Garry L Harwood, Gavin Mundy and contributing artists attended as did Phillippa Browning who represented Jodrell Bank.

The Exhibition, consisting of traditional art, digital art and space photography highlighted European activities in space by taking visitors on a tour of the solar system and beyond. The visual arts were complemented by solar system science aimed at key stage 4 level for general understanding of the key issues behind current and future solar system exploration.

Artworks were exhibited by the following space artists: David A Hardy, Gavin Mundy, Garry L Harwood, Brian Smallwood, Richard Bizley, Kenneth Nott, Mark A Garlick, Mark Hemsell, Jackie E. Burns and Arthur Gilbert.

The event was hosted by The Museum of Science and Industry at Manchester, in collaboration with the following partners and sponsors: International Association of Astronomical Artists (IAAA), The Northern Aeronautical Technology Exploitation Center (NATEC), University of Manchester, Particle Physics and Astronomy Research Council (PPARC) and the UK Students for the Exploration and Development of Space (UKSEDS).

Other UK World Space Week events are listed below:

- Blue Streak! A Rocket Legacy. The legacy of a rocket tested at Spadeadam Firing Range in Cumbria in the ‘50s and ‘60s. 4 October to 16 November 2003. Tullie House Museum & Art Gallery, Carlisle, England.
- Space Day - Living in Space IMAX event, 8 October 2003, Science Museum, London.
- 6th Space Education Symposium, 18 October 2003, Science Museum, London.
- Space – Tim Furniss, space journalist, 6 October 2003, Highgate School, London.
- Terahertz Waves and Astronomy – Kate Isaac – Cambridge University, 7 October 2003, Highgate School, London
- 8 page space supplement for teachers, TES Teacher magazine (published weekly), 3 October 2003.
- Kingston Space Pub, Kingston University, London, 7 October 2003.

3.5 Latin America

3.5.1 Bolivia

For the second consecutive year the National Astronomy Observatory organized various activities to celebrate World Space Week with programmes with the participation and collaboration of the Prefecture of the Department of Tarija, the Independent University "Juan Misael Saracho", the House of Cultura of Tarija and the Bolivian Association of Astronomy.

2

Tarija y la Semana Mundial del Espacio



La sala de proyección de la Casa Dorada tuvo gran afluencia de público ante la expectativa por observar los videos con temas referidos a la astronomía y la exploración espacial y donde presentamos por primera vez un documental sobre la historia de nuestro Observatorio que tuvo comentarios halagadores.

El concurso de dibujo infantil "Los niños y el Espacio" programado para el día Domingo 5 de Octubre en el céntrico puzuela "Rvdo. Julian de Lizardi" resultó todo un éxito con más 40 niños inscritos, fue un día apropiado para pintar al aire libre y la imaginación de los pequeños que conmovió a más de uno. El jurado formado por prestigiosos maestros de dibujo y pintura de la escuela de bellas artes tuvo arduo trabajo para calificar los interesantes e imaginativos dibujos pintados por los niños con diferentes técnicas. Los ganadores fueron premiados (Cortesía de Coca Cola) el día Viernes 10 de Octubre en la clausura de la semana Mundial del Espacio en Tarija.

Nuestro agradecimiento a la directora de la Casa de la Cultura Adela Leza Plaza y a todo su personal por la colaboración brindada para el éxito de esta actividad.

Octubre tuvo una semana estelar muy especial, donde escolares, estudiantes, universitarios y público en general del día 6 al 10 de octubre llenaron la sala de exposiciones de la Casa de la Cultura con el afán de ser parte de esa semana dedicada al espacio, fue una manera de rendir homenaje a los pioneros que hicieron que su trabajo de exploración e investigación sea también nuestro, con la premisa del uso pacífico del espacio.

La exposición fotográfica presentada por el Observatorio se dividió en varias secciones como la dedicada a la exploración espacial, mostramos el primer satélite artificial soviético Sputnik, al primer hombre en el espacio Yuri Gagarin, hasta los modernos telescopios espaciales o las sondas planetarias: la que más llamó la atención especialmente a los niños y jóvenes estudiantes fue la de planetas, estrellas y otros cuerpos celestes con temas impresionantes. Fotografías de equipos e infraestructura del Observatorio no fue menos importante, donde se destacaron nuestros telescopios entre ellos el reflector Zeiss-600 que es el de mayores dimensiones con que cuenta el país.



Editorial Universitaria

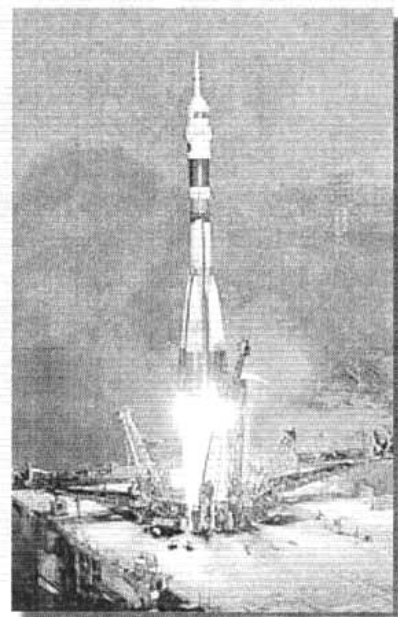
rozalles@cosett.com.bo

OBSERVATORIO ASTRONÓMICO NACIONAL

SEMANA MUNDIAL DEL ESPACIO

4 - 10 octubre - 2003

Espacio: "Horizonte más allá de la Tierra"



Tarija - Bolivia

Space-related programs were conducted in the facilities of the Observatory from 4 to 10 October. Specifically discussed was the development of space exploration and its contribution to science and technology and to improving the human condition. In addition observations with telescopes were carried out.

From 6 to 10 October, a photographic exhibition titled "Space: Beyond the Earth" was opened in the House of Culture. This exhibition presented by the Observatory was divided into various sections: space exploration; the first artificial satellite Soviet Sputnik; the first man in space Yuri Gagarin; Neil Armstrong and his landing on the moon; up to the modern telescopes or the planetary soundings. What attracted the most attention, especially of the children and young people, were the impressive images of the planets, celestial stars and other bodies. Photographs of the equipment and infrastructure of the Observatory were no less important, especially the Zeiss-600 reflector telescope which is one of the largest telescopes in the country. It was a very special space week, where students, college students and the general public filled the exhibition hall of the House of the Culture with the eagerness of being part of the World Space Week and who, in a way, paid tribute to the

pioneers who shared their work of exploration and investigation, with the purpose of the peaceful uses of space.

A series of videos were shown in the House of the Culture from 6 to 10 October. Along with videos on astronomy and space exploration, a documentary on the history of the Observatory was presented for the first time and received flattering feedback.



A drawing competition “Children and Space” was held for children between 4 and 10 years of age, divided into categories of 4 to 6 years and 7 to 10 years of age. It was held on the Sunday morning in the Square “Rvdo. Julián de Lizzardí” in fine weather and was a success, with 40 participants. The

imagination of the children impressed all those present. The jury was formed by prestigious teachers of the School of Arts and had the arduous task of describing the interesting and imaginative drawings made by the children using different techniques. The three winners of each category were presented with awards in the closing ceremony of World Space Week in Tarija on Friday 10 October.



From 10 to 12 October, the 8th National Encounter of Astronomy was held in the National Academy of Science of Bolivia in the city of La Paz as part of World Space Week. Unfortunately, the tragic events of the country in those dates caused the delegations of the interior to cancel their trip with the exception of Tarija and Santa Cruz which were each represented by a delegate. José Luis Salas Burgoa, President of the Bolivian Association of Astronomy and Hans Salm, Vice-President organized the event jointly with the National Academy of Science of Bolivia and the National Astronomy Observatory. The inauguration of the event was held on 10 October with an address by Dr Carlos Aguirre, the representative of the Academy of Science, followed by oral presentations by the

members of the presidency of the Bolivian Association of Astronomy and a poster session. The three-day event was of great benefit for national astronomy in spite of the absence of delegations from other districts. The conclusions of the meeting were recommendations to unify efforts to advance and diffuse astronomical science in the country and that the mass media is a fundamental component in the diffusion of astronomy.

3.5.2 Chile

In September 2003 the Chilean National Space Agency, through a letter from the Under-Secretary of Aviation, endorsed the establishment of the official web page of the Chilean Space Week www.semanadelespacio.cl.

The main activities of World Space Week 2003 were related to the promotion of space as part of the Chilean society. Information on World Space Week was published in Spanish on the main web page of the Chilean Space Week.

The national newspaper La Tercera published on its Internet page the yearly special about space from the children's magazine called Icarito at <http://icarito.latercera.cl/especiales/espacio/index.htm> , that includes:

- a. Solar system
- b. Chile in space
- c. Games and a Test

Icarito is a magazine that celebrated 35 years of helping the children of Chile with educational material.

For World Space Week 2004 there are plans to work with the National Aviation Museum of Santiago, Chile.

3.5.3 Colombia

Members of Voz Infantil-Hola Juventud (WYESR Colombia) organized the following activities to celebrate World Space Week (WSW) 2003.

Presentation of the WSW Project and WSW-03 Agenda: The purpose of this activity was to explain to teachers, parents, students and organizations interested in the topic of space, the objective of the WSW Project. It was also an opportunity to present the WSW-03 Agenda in Barranquilla and Colombia. This activity was organized with the support of the Public Library in the Atlantico and was held in September.

On 4 October young members of Voz Infantil-Hola Juventud (WYESR Colombia) broadcast through La Voz de la Costa Radio Station 1190 Khz AM a two-hour special program "Space: Horizon beyond Earth", which was dedicated to the central theme of WSW 2003. This activity offered children and young people from the North Coast of Colombia the chance to know the experiences of engineers involved in space. Besides this special radio program, these young journalists also promoted the WSW-03 celebration through Radio Reloj de Caracol Barranquilla, where they had a segment called Refrigerio, in the morning News Como amanecer Barranquilla. They made the audience reflect on a different topic related to space technology everyday.

On 5 October Voz Infantil-Hola Juventud and Wyesr Colombia invited journalists to promote through mass media, the relevance of the space career to the betterment of humankind life.

With a lecture on 6 October at the Centro Cultural Comfamiliar del Atlantico and a special activity for 20 children on 8 October, the Colombian Air Force joined the WSW-03 Celebration. These 20 children met with Air Force professionals and learnt about their lives, experiences, training base and place of work.

A group of 25 primary students participated in a workshop offered by Guillermo Lagares – Enviromental Education Comision of UNILEVER in Colombia. This activity, which was designed to make kids aware of their role in the preservation of our planet, took place in the Centro Cultural Comfamiliar del Atlantico on 7 October.

On 10 October Naval Force ARC Barranquilla acquainted 20 children with Colombian marines' life in "Little Marines for One Day". They also gave a lecture about the ozone layer during the closing ceremony.

Organizations that joined World Space Week 2003 Celebration in Colombia:

- Voz Infantil-Hola Juventud (WYESR Colombia)
- Unidad Porteña de Aprendizaje –UPA-
- Grupo de Estudio Antares
- Centro Cultural Comfamiliar del Atlántico
- Biblioteca departamental "Meira Delmar"
- Planetario Distrital de Barranquilla
- Escuela Naval de Suboficiales ARC Barranquilla
- Comando Aéreo CACOOM3
- Comisión de Educación Ambiental de UNILEVER
- Comisión Aeronáutica de la Asociación de Astrónomos Autodidactas de Colombia
- Emisora La Voz De La Costa
- Noticiero "Cómo Amanece Barranquilla" de Radio Reloj de Caracol
- Programa Radial "Hablan Las Mujeres" por Radio Mar Caribe Internacional
- Colegio Colón
- Instituto Técnico Nacional de Comercio (INSTENACO).

3.6 North America & Caribbean

3.6.1 Canada

During World Space Week in 2003, the Canadian Space Agency (CSA) held a "Great Canadian Space Quiz" through their website for Canadian students. In total 5 winners were selected from among all entrants whocorrectly answered the questions posed to them and each was awarded with a special CSA prize package.

CSA also sent out to an e-mail to their Educator Database of approximately 1200 educators (and posted on their website) a suggestion of activities that they could conduct to celebrate World Space Week. This included everything from signing up to participate in one of the space-related educational initiatives such as Tomatosphere to encouraging their students to research and write an article on different careers available in the Canadian space industry.

3.6.2 Cuba

The Ministry of Science, Technology and Environment jointly with other organizations organized the following activities to celebrate World Space Week in Cuba.

- October 4 - Opening Ceremony at the National Museum of Natural History; Projection of the movie “Contact” with specialized comments from Dr. Oscar Alvarez at the National Museum of Natural History; Star Party (night observations with manual telescopes) coordinated by the Institute of Geophysics and Astronomy and Group COSMOS BTJ-UJC.
- October 5 - Projection of the video “Our Galaxy” with specialized comments from BSc. Eduardo del Pozo at the National Museum of Natural History.
- October 7 - Projection of the movie “Deep Impact” with specialized comments from Prof. Jorge Pérez Doval at the National Museum of Natural History.
- October 8 - Projection of the video “The Sun” with specialized comments from Atty. Jorge F. Brave at the National Museum of National History.
- October 9 - Second National Workshop “Outer Space and its Peaceful Uses” at the National Capitol.
- All Week - Promotion of World Space Week and special public lectures on space sciences at the Planetarium of the National Aircrafts Museum.

3.6.3 Panama

World Space Week was held in conjunction with the National Juvenile Science Talent Fair. A webcast of the Fair was planned. Several schools had programs to watch Mars.

3.6.4 Trinidad and Tobago

Trinidad and Tobago celebrated World Space Week with the following activities.

- A Science club at Lakshmi Girls' High School held celebrations at the school. Teacher in charge was Ms. Rosina Ramlal.
- The University of the West Indies Physics Department highlighted the week. Lecturer in charge was Dr. Shereen Copliah-Haque.
- Media Releases in the local press from National Coordinator Mr. Hollis Sankar.

3.6.5 United States

Nationwide

- Major media coverage of World Space Week occurred across the United States, much focusing on the role of World Space Week 2003 Youth Spokesperson Lance Bass. Coverage included CNN, the Associated Press, and youth/entertainment media. See section 4 for a detailed report.

- Teachers used space to excite children about learning by using the World Space Week Teacher Activity Guide downloaded from www.spaceweek.org. Students got a chance to meet Lance Bass by designing “Lance's Lab” during World Space Week.
- The NASA Johnson Space Center held an International Space Station Webcast entitled “Space Station Today” from 12:00-1:00 p.m. CDT on 9 October in support of World Space Week. Teachers and students around the world participated. The webcast featured live discussions and opportunities to ask questions of Astronaut and International Space Station Program Scientist Don Thomas and Robotics Flight Controller Royce Renfrew. Poised inside the Japanese Experiment Module Kibo, Thomas explained what it is like to live and work in space and elaborated on the scientific research being done on the ISS. Renfrew described how robotic systems are helping build and maintain the ISS and granted viewers a sneak peek into his career as a Robotics Flight Controller. Students submitted questions in advance or during the webcast through the Web site below. For more information, please see <http://spaceflight.nasa.gov/station/education/index.html>.
- The National Space Grant Foundation sponsored two Earth & Sky radio broadcasts during Space Week (7 & 10 October). See <http://www.earthsky.org>.
- NASA invited the public to celebrate World Space Week by viewing the International Space Station as it passed overhead. For sighting information, the public could visit <http://www.spaceflight.nasa.gov/realdata/sightings/index.html>. The public could also explore the <http://www.spaceflight.nasa.gov> site for more information on the ISS crew's activities and to learn about and be involved in the space program. During World Space Week, orbiting at 240 miles above the Earth, Astronaut Ed Lu and Cosmonaut Yuri Malenchenko work and lived aboard the International Space Station, exemplifying the theme of World Space Week 2003, Horizons Beyond Earth.

California

- Dr. Sally Ride, the first American woman astronaut to travel in space, hosted 5th-8th grade girls and interested adults at the Sally Ride Science Festival, sponsored by Hewlett-Packard, at Stanford University in Palo Alto, California on October 5. For more information, visit <http://www.sallyridefestivals.com/03stanford1005/index.shtml>.
- The Space Frontier Foundation held its 12th annual conference at the Sheraton Four Points hotel in Los Angeles, California, on October 10-12. The theme was “Alt.Space.”
For more information, visit <http://www.space-frontier.org/Events/SFC12/>.

Iowa

- The Iowa Space Grant Consortium in partnership with *Earth & Sky* held the Fourth Annual Space Week Science Challenge October 4-10, 2003. The winner was the 8th Grade Earth Science Class (Third Period) at AGWSR Middle School, Wellsburg, Iowa, Teacher: Ms. Brenda Drake. Ms. Drake and her classroom will receive an Orion StarMax 90 EQ telescope, a Garmin e-TREX GPS receiver, and a trip to the Science Station and IMAX Theater in Cedar Rapids. The teachers at AGWSR

Middle School will receive a training session from the Extension - Science Engineering and Technology (E-SET) team along with many great curriculum materials, posters, etc. This year an Orion StarMax 90 EQ telescope was awarded to the top classroom entry for categories K-3 AND 9-12. The winners were the 3rd Grade classroom of Mrs. Ginny Elliott at South Tama Intermediate School, Tama, Iowa, and the 9th Grade Earth Science classroom of Mr. Sean Singewald at Prince of Peace Academy & College Prep School, Clinton, Iowa. Each and every teacher who submitted an entry received a Classroom Space Travel Kit from Team Encounter as an appreciation gift from the ISGC for participation in the Challenge. There was a total of 46 participants this year.

Massachusetts

- MIT hosted a panel discussion with MIT faculty and local aerospace professionals regarding humans' future in the cosmos. The Horizon Beyond Earth Panel Discussion was held on 8 October at 5:00 pm on the MIT campus. It was sponsored by the Mars Gravity Biosatellite Project.

New York

- On 4 October, the Dudley Observatory in Schenectady and the University at Albany showed the 1953 sci-fi classic "War of the Worlds", followed by telescope observing of Mars and other celestial objects of interest. In addition, Moon rock and Martian meteorite samples were on display. This event was open to the public and free of charge. For details see <http://www.dudleyobservatory.org/0310events.htm>.
- The American Museum of Natural History in New York City held free family programs about astronomy throughout World Space Week. For details, see <http://www.amnh.org/programs/childrens/>.

Texas

- World Space Week 2003 Youth Spokesperson Lance Bass of *NSYNC visited Houston-area schools on October 8 and 9 to inspire students about mathematics and science. For more details on this project, please see section 4.
- Lance Bass and U.S. Representative Nick Lampson were the keynote speakers at the World Space Week reception held on 10 October at the Hyatt, Houston. This event was sponsored by Spaceweek International Association and



hosted by radio station KRBE.

- The Museum of Texas Tech University held the following events for World Space Week. For more information, visit <http://www.museum.ttu.edu>:
 - Oct. 4: 12-1:45 PM Family Astronomy Workshop; 1 PM Telescope demonstration by the South Plains Astronomy Club; 1-3 PM Astronomy crafts; 2 & 3:30 PM Public DVD show: New Horizons; 2-2:45 PM Presentation: Mars Exploration Rover
 - Oct. 5: 2:00 PM Guest Speaker
 - Oct. 7 - Friday Oct. 10: Astronomy workshops for school groups followed by school DVD shows
 - Oct. 3-4 and Oct. 10-11: Free Public Observing at the Texas Tech University On-Campus Observatory from 7:30 to 10 PM
- Teachers in the San Angelo region used space in their classrooms during World Space Week. They received special materials courtesy of the Concho Valley Partnership.
- Teachers in the Clear Lake areas received World Space Week teacher kits courtesy of Hernandez Engineering.

4 Educational Programme

4.1 Introduction

As part of its role in supporting the United Nations in the global coordination of World Space Week, Spaceweek International Association (SIA) makes a special effort annually to increase the impact of World Space Week on the youth of the world. The focus of the Educational Programme is to encourage teachers to use the occasion of World Space Week each year to motivate students using the excitement of space.

SIA undertook a number of educational activities in 2003.

1. Distributed a World Space Week Teacher Activity Guide to teachers for free via the internet and via World Space Week Teacher Kits mailed to sponsored areas. The Guide provides a range of space-themed science and math related activities for students aged 5 to 17. Activities have been translated into a number of languages by the European Space Agency.
2. Encouraged teachers to participate in World Space Week by offering grants to teachers who do so most creatively.
3. Encouraged students to participate in World Space Week via a celebrity spokesperson.

This was the first time that the Association has used celebrity spokesperson. This section provides a detailed report on the celebrity spokesperson project and its results.

4.2 Celebrity Spokesperson

The objective of the World Space Week 2003 Celebrity Spokesperson Project was to understand the potential benefits of using a celebrity to encourage student interest in science and mathematics by associating these subjects with a popular youth icon. The celebrity selected was Lance Bass of the singing group NSYNC, who has space credentials and vast youth popularity. The project was tested primarily in the United States. The target audience was primarily female students, who are under-represented in mathematics and science fields, in their late elementary and middle school years.

The project consisted of a student competition called “Lance’s Lab,” appearances by Mr. Bass in schools during World Space Week 2003 and extensive media promotion. The project concluded in April 2004 when student winners of the competition met Mr. Bass at an awards event in Los Angeles.

The project was immensely successful in promotional terms. Youth-oriented media covered the project extensively, reaching youngsters who may not normally see space-related educational information. Wire service dispatches appeared in mainstream media and reached youth, parents and teachers nationwide. Due to this excellent media coverage, millions of people learned about World Space Week, thousands of students downloaded the competition materials, and hundreds of student teams submitted formal entries (many because of teachers who incorporated “Lance’s Lab” into their classroom plans). The

excitement among students at all grade levels in reaction to surprise appearances of Mr. Bass during World Space Week further demonstrated the immense appeal of such celebrities to youth.

This project demonstrated how a celebrity with appeal to youth can be utilized to efficiently promote science and mathematics education at the K-12 levels on a vast scale. The student entries reveal deep student enthusiasm for both space and the celebrity and demonstrate the opportunity to leverage this enthusiasm into even more meaningful science education in the future. Based on the experience gained, it is believed that appropriate celebrities at the global and regional levels can dramatically increase the educational impacts of World Space Week on a global level.

This project was supported by the Center for Applied Radiation Research, Hill & Knowlton, Business Wire, KRBE and the devoted efforts of some 50 volunteers from the NASA Johnson Space Center community.

4.3 Media Coverage

Hill & Knowlton (H&K), an international public relations firm, undertook a media outreach campaign on a pro-bono basis to raise the visibility of World Space Week activities. With the support of Business Wire, the leading international news wire service, H&K wrote and distributed two news releases and one media advisory. H&K conducted targeted e-mail and telephone outreach to ignite the interest of the media as well.

National and local media covered the World Space Week announcements and events at all stages of the program. At the outset, the selection of Lance Bass as spokesperson received extensive media attention, including prominent mentions on the Internet versions of Rolling Stone, E! Entertainment, MTV, Billboard, and various other entertainment and news Internet sites.

The Associated Press (AP) wrote three separate articles, two based on the first news releases, and the third resulting from the attendance of an AP reporter at the first Houston school visit. Together, the three AP articles appeared in almost 100 separate newspapers, Web sites, and broadcast media transcripts in the U.S. and internationally.

Other significant media coverage included two articles on MSNBC.com, a captioned event photo and article in the *Houston Chronicle*, the *Houston Business Journal*, an article by United Press International and an in-studio feature interview on CNN's "Next@CNN" science and technology program.

The World Space Week school visits in Houston were covered extensively by local broadcast media, including all of the major TV networks (NBC, ABC, CBS and Fox), local cable News Station 24 and popular radio station KRBE. Local broadcast coverage resulted in more than 20 separate Houston-area broadcast hits (TV and radio), reaching an estimated audience of more than one million people.


4.3.1 Youth/Entertainment Coverage

Yahoo! News Sun, Sep 07, 2003 Search

Entertainment - AP Music

Bass to Be Space Week Spokesman for Youth
Fri Sep 5, 1:58 PM ET

HOUSTON - Lance Bass ([news](#)) never got his shot at space, but he's still one of the space program's biggest supporters.



AP Photo

Bass will be the 2003 Youth Spokesperson for World Space Week, which runs Oct. 4-10. Bass will lead a contest for kids called "Lance's Lab," in which students design a hypothetical International Space Station ([news](#) - [web sites](#)) module for Bass to live and work in.

Winners will meet Bass at an awards ceremony early next year. The program will also give free space-related math and science activities to teachers to use during World Space Week.

Bass, 24, a native of Clinton, Miss., was recently among those inducted into the Mississippi Music Hall of Fame for his charity work as well as record sales.

Bass has said 'N Sync ([news](#) - [web sites](#)) will begin recording a new album in January.



HOME ARTISTS NEWS + FEATURES REVIEWS PHOTOS VIDEO

News + Features

In Brief: Paul Simon, Doors
Simon and Garfunkel to tour, Doors go back to school



Photo by Rick Orloff/WireImage.com

No more sounds of silence

PAUL SIMON and ART GARFUNKEL are hosting a press conference in New York City next week to announce details of their first tour in nine years. The pair reunited at this year's Grammy Awards to perform "The Sounds of Silence" . . . 'N SYNC's LANCE BASS will serve as spokesperson for **World Space Week**, which is set for October 4-10 . . . Songs by LED ZEPPELIN, CREAM,, STEVIE NICKS, the DOORS and others will be included on the soundtrack to *School of Rock*, due September 30th . . . The ROLLING STONES have rescheduled their Beijing concert for November 14th; the show was postponed due to the SARS outbreak . . . GUSTER kick off a three-month tour this weekend in Memphis . . .

[Add to Favorites!](#)
[Email this story](#)
[Printer friendly version](#)

4.3.2 National Coverage

Associated Press— September 5, 2003

Lance Bass to be Space Week Spokesman

HOUSTON — Lance Bass never got his shot at space, but he's still one of the space program's biggest supporters.

Bass will be the 2003 Youth Spokesman for World Space Week, which runs Oct. 4-10. Bass will lead a contest for kids called "Lance's Lab," in which students design a hypothetical International Space Station module for Bass to live and work in.

Winners will meet Bass at an awards ceremony early next year. The program will also give free space-related math and science activities to teachers to use during World Space Week.

Bass, 24, a native of Clinton, Miss., was recently among those inducted into the Mississippi Music Hall of Fame for his charity work as well as record sales.

Bass has said 'N Sync will begin recording a new album in January.

Carried By:

Canadian Press, Broadcast News, Fox News, MSN Entertainment, SpaceProgramme News Online, The Courier (LA), WBLI-FM (NY), WKTI-FM (Milwaukee, WI), WPVI-TV (Philadelphia, PA), WSTW-FM (DE), Yahoo News.

Associated Press – September 25, 2003

Lance Bass Still a Fan of Space Travel

HOUSTON - While his plans to fly to the international space station were canceled last year, 'N Sync singer Lance Bass remains an avid supporter of space travel.

He'll return to Houston, where he trained a year ago at NASA's Johnson Space Center, to promote space, math and science to students as part of World Space Week.

"I'm very excited about flying in space one day," Bass said Wednesday. "What excites me even more is the possibility that eventually nearly anyone will be able to travel in space just as easily as taking a plane from L.A. to Houston. But that day will only arrive if today's young people choose to build an extraordinary future for themselves. The keys to that future are a solid foundation in math and science."

During World Space Week, from Oct. 4-10, Bass will visit several Houston elementary and middle schools and review design proposals for "Lance's Lab," a competition in which students will create a hypothetical space station module in which the singer could live.

Bass, 24, would have been the youngest person ever in space. He had to cancel plans to fly to the space station aboard a Russian Soyuz spacecraft last October because he failed to raise the estimated \$20 million fare.

World Space Week, which the United Nations General Assembly established in 1999, is a celebration with events around the world

Carried By:

Ft. Worth Star-Telegram (TX), Hamilton Spectator (Ontario, Canada), Houston Chronicle (twice, TX), KPRC-TV (NBC/Houston, TX), Las Vegas Sun (NV), Miami Herald (FL), National Post (Toronto, Canada), Newsday Online (NY), Seattle Post-Intelligencer (WA)

Associated Press– October 9, 2003

Bass Encourages Students in Math, Science

HOUSTON (AP) — After a highly publicized failed attempt last year, 'N Sync singer Lance Bass still hopes to go into space one day.

And if a group of Houston middle school students has any say, Bass will do it in "Lance's Lab" while eating chicken strips with salsa, wearing stylish pants and T-shirts and listening to and recording music to fight motion sickness.

On Wednesday, Bass visited Ortiz Middle School as part of World Space Week, which commemorates the Oct. 4, 1957, launch of Sputnik 1, the first human-made satellite, and the Oct. 10, 1967, signing of a treaty that governs exploration and peaceful uses of space.

"Just stick with math and science and dream big," Bass told nearly 40 students after hearing their proposal for "Lance's Lab," part of a national competition in conjunction with World Space Week, which takes place annually from Oct. 4-10. Bass was recruited to promote the importance of academics in preparation for space travel.

The 24-year-old also discussed the training he underwent while trying to secure a ride on a Russian Soyuz spacecraft to the international space station.

He would have been the youngest person ever in space, but had to cancel his plans to fly last October after failing to raise the estimated \$20 million fare. A year ago, he trained at NASA's Johnson Space Center in Houston.

"The training is very difficult, very physical," Bass said. "There is also a lot of psychological training."

One student asked whether Bass feared being abducted by aliens if he went to space. "I'm not scared of any aliens," he responded as students burst into laughter. "If there are aliens, I think they'll be friendly."

Carried By:

Abilene Reporter-News (TX), AL.com (Alabama News), Amarillo Globe-News Online (TX), Attleboro Sun Chronicle (MA), AZNightBuzz (Tucson, AZ), CBS News.com, Charleston Gazette (WV), Charleston Sunday Gazette Mail (WV), Charlotte Observer (NC), Coeur d'Alene Press (ID), Concord Monitor (NH), Contra Costa Times (Bay Area, CA), Corpus Christi Caller-Times (TX), CTnow.com (Hartford, CT), DaytonDailyNews.com (OH), Erie Times-News' Online Edition (NY), FortWayne.com (IN), GoMemphis (TN), Herald-Coaster (Fort Bend, TX), Herald-Sun.com (Durham, NC), Houston Chronicle (TX), KHOU.com (CBS-TV – Houston, TX), KTRK (ABC-TV – Houston, TX), KVUE (ABC – Austin, TX), Ledger-Enquirer.com (Columbus, GA), Lycos Music, Mail Tribune Online (OR), MetroMix.com (Chicago Tribune), Miami Herald (FL), Monterey Herald (CA), MyrtleBeachOnline.com (SC), Nctimes.com (San Diego County, CA), New York Times Online, Ohio.com (Akron, OH), OnWisconsin.com (Milwaukee, WI), OregonLive.com (Portland, OR), Orlando Sentinel (FL), Pop Guide, RoadRunner.com, Santa Cruz Sentinel (CA), South Florida Sun-Sentinel, StamfordAdvocate.com, StarNewsOnline.com (Wilmington, NC), Sunspot.net (Baltimore, MD), Syracuse Post-Standard (NY), Tallahassee.com (FL), TCPalm.com (Treasure Coast, FL), The Benton Courier (AR), The Dallas Morning News (TX), The Monroe News Star (LA), and USA Today.com

Cable News Network (CNN) Interview – October 4, 2003

LINDA STOUFFER, CNN ANCHOR: Today on NEXT@CNN, there are less than three days to go before the polls open in California's contentious recall election. But how fast will we find out the results? We'll show you why it might take longer than you're thinking it will.... Also, your teenagers, they may know Lance Bass is part of a hugely successful boy band. He's also the only spokesman for World Space Week. We'll talk live with him about why kids should care about science and space. [Segments deleted]



STOUFFER: Well, you might not realize, but it was 46 years ago today that the Russians shocked the world launching the first artificial satellite Sputnik into orbit, it sparked the intense race in science and technology between the U.S. and Russia for decades, and today, the anniversary kicks off World Space Week. It's designed to inspire people enter the fields of science and technology. And, joining me, right now, from Los Angeles, is Lance Bass, who is the youth spokesperson for space week.

Lance, so good to see you. Thanks for being here.

LANCE BASS, SPACE WEEK SPOKESMAN: Thanks for having me.

STOUFFER: All right, you're a big pop star, girls love you, guys want to be you, why are you doing this?

BASS: Well, I mean, my passion is space. You know, I love music and performing also, but another passion is space, as everyone know, and I just want to share that enthusiasm with the youngsters out there and get them excited about math and science and future exploration.

STOUFFER: Tell us about space week and why it's so important?

BASS: It's very important, I mean, it's October 4 through 10 every year, and it's global, and it's great just to have the world, you know, enjoy and also look back on space exploration and what it's done for the world, how it's made the world just a better place.

STOUFFER: So, you want to tell kids to aim high, to think about the big picture, but in the meantime they still have to do the homework, that math and science homework, study.

BASS: Exactly, I mean, I can beat it with a stick. But, I mean, stay with math and science, I mean, it's such a key thing and it's also a fun thing. I mean, what I've done, what I've seen with what I've done with the space exploration and training in Russia, and all that, is so much fun, and there's so much out there that we can -- that we can find and there's so much exploration that we haven't even thought of yet.

STOUFFER: Yeah, and I was just going to ask you about that, for people who don't remember, you did train for a mission to the International Space Station, but that fell through because of funding. And a part of this week is Lance's Lab, a creation activity, tell us about that.

BASS: Yeah, it's a fun thing for -- it's ages kindergarten through seniors of high school and there's different levels of the competition. Well, what they've done is they're trying to create Lance's Lab, where it's a huge global thing, 50 countries are involved with this, and it's a competition where you build what you think would be enjoyable in space. If you were to live in space for about three months, what would you want up there? Would you want to record songs, what would you want to study, explore with, discover? New cures are disease, that type of stuff, so, it's going to be a huge competition.

Other national coverage also appeared in Daily Music News, About.com, NASA Explores, NSTA Express (email distribution by National Science Teachers Association, and the Alaska Science Teachers Association Newsletter.

4.3.3 Houston Coverage

Broadcast coverage in the Houston was intense due to the World Space Week appearances of the celebrity spokesperson in the area. This report includes estimated audience size and value of broadcast coverage.

- Throughout the entire week, and including the two weeks leading up to World Space Week, **KRBE-FM** ran approximately 100 mentions of World Space Week and the Houston activities with Lance Bass, with an estimated media value of \$35,000. KRBE also broadcast a five-minute “call-in” interview with Bass on 10/09/03, and ran an hour-long studio event, “Studio 104” on 10/10/03 with Bass as the featured guest.
- 10/09/2003 Time: 06:00am. Aired On: KRIV. Affiliate: FOX Show: **FOX 26 News at 6AM**. Estimated Audience Number: 51,500. Estimated Media Value (Per 30 seconds): \$439.
- 10/09/2003 Time: 05:00am. Aired On: KHOU. Affiliate: CBS Show: **11 News This Morning Early Edition**. Estimated Audience Number: 59,500. Estimated Media Value (Per 30 seconds): \$166.44.
- 10/09/2003 Time: 05:00am. Aired On: KRIV. Affiliate: FOX Show: **FOX 26 News at 5AM**. Estimated Audience Number: 18,932. Estimated Media Value (Per 30 seconds): \$80.
- 10/08/2003 Time: 05:00pm Aired On: KHOU. Affiliate: CBS Show: **11 News at 5**. Estimated Audience Number: 157,000. Estimated Media Value (Per 30 seconds): \$1,452.



YOUNG ROCKET SCIENTISTS MEET BASS

Lance Bass from the pop group 'N Sync Thursday shows off a toy rocket built by fifth-graders Erick Herrera, center, and Jonathon Batiza and classmates at Ed White Elementary School in southwest Houston. Bass, the youth spokesman for World Space Week 2003, also visited Sam Rayburn High School in Pasadena and Ortiz Middle School in Houston to discuss the importance of a "solid foundation in math and science." The singer, who trained to be a cosmonaut in Russia last year, will also be at the World Space Week Celebration at 7 tonight at the downtown Hyatt. Tickets start at \$35. For information, access www.spaceweek.org.

- 10/08/2003 Time: 04:00pm. Aired On: KPRC. Affiliate: NBC Show: **News 2 Houston at 4**. Estimated Audience Number: 108,000. Estimated Media Value (Per 30 seconds): \$1,010.
- 10/08/2003 Time: 07:00am. Aired On: KHOU. Affiliate: CBS Show: **11 News This Morning at 7**. Estimated Audience Number: 71,400. Estimated Media Value (Per 30 seconds): \$650.
- 10/08/2003 Time: 06:00am. Aired On: KHOU. Affiliate: CBS Show: **11 News This Morning at 6**. Estimated Audience Number: 69,600. Estimated Media Value (Per 30 seconds): \$631.
- 10/08/2003 Time: 06:00am. Aired On: KTRK. Affiliate: ABC Show: **Eyewitness News at 6AM**. Estimated Audience Number: 114,700. Estimated Media Value (Per 30 seconds): \$1,017.
- 10/08/2003 Time: 05:00am Aired On: KHOU. Affiliate: CBS Show: **11 News This Morning Early Edition**. Estimated Audience Number: 59,500. Estimated Media Value (Per 30 seconds): \$166.
- 10/08/2003 & 10/10/2003 Time: VARIOUS. Aired On: **News 24 Houston** (16 repeats). Audience numbers are not available.

4.4 School Appearances

Mr. Bass appeared in Houston to conclude World Space Week on October 8-10. An demanding schedule included appearances at an elementary, middle, and high school, where he performed a variety of space-related science education activities tailored to the respective age groups. These activities included reviewing students' designs for Lance's Lab, working with students on space-related projects and speaking to student assemblies. This section contains photographs of the Houston appearances.



4.5 Student Projects

In order to have the chance to meet Lance Bass at the awards event in April 2004, students designed “Lance’s Lab” during World Space Week 2003. Hundreds of teams of students submitted entries for the competition. Entries were received in the following categories: elementary school students; middle school students; and high school students.

The following is an entry submitted by 2nd graders in Madisonville, Louisiana.



5 Affiliate Programme

The Spaceweek International Association Board of Directors last year established a formal programme of affiliation between the Association and other organizations. The goal of the programme is to foster networking among space and educational related institutions while developing resources for the global coordination of World Space Week.

Both government and non-government organizations are invited to become affiliates. Organizations which become affiliated with the Association are credited in official World Space Week publications (such as this report), web site and elsewhere. They receive recognition at the United Nations Committee on the Peaceful Uses of Outer Space, at which the Association is an official observer. These affiliated organizations also have the opportunity to network with key leaders in the global space community who support and organize World Space Week activities. This creates goodwill in the space community and the opportunity to promote products and services.

Affiliated organizations pay annual dues ranging from \$500 to \$10,000, depending on the level of benefits desired. Benefit levels are detailed in the Affiliates section of www.spaceweek.org. To become an affiliate, please complete the on-line application at www.spaceweek.org or for more information, please email the Association at admin@spaceweek.org.

Benefits

Outreach – Help promote and demonstrate public support for space

Education – Encourage student interest in math and science

Networking – Interact with space leaders from over 50 nations

Marketing – Promote your organization and its space products and services

Spaceweek International Association Affiliates

European Space Agency

United Nations Office for Outer Space Affairs

Lockheed Martin

Franklin Institute Science Museum

Sasakawa International Center for Space Architecture

Space Education Initiatives

Hernandez Engineering

Sener Ingenieria Y Sistemas S.A.

Kistler Aerospace

Aerospace Research Institute

Bangladesh Astronomical Society

Pyeong Chang National Youth Center

6 Recommendations

World Space Week has been successful in communicating the benefits of the peaceful uses of space to government leaders and the public, and in inspiring youngsters about science, mathematics and technology. To increase its impact, it is recommended that the scale of World Space Week increase. This would require more events be held in the October 4 - 10 timeframe each year to reach more of humanity through attendance at events and through media coverage of the combined global celebration.

To this end, all organizations are invited to participate in World Space Week in an appropriate manner. Methods of participation can include the following:

1. Schedule Events During World Space Week Annually. All organizations are encouraged to make World Space Week a main timeframe of their annual outreach and education programmes. Participation can be as simple as rescheduling planned events and programmes to occur during 4-10 October and incorporating “World Space Week” into the event name and publicity. This can be done with no additional resources and yet can be very effective in increasing the global visibility of World Space Week. Planned programmes should be reported to the media, to the national coordinator if any and to Spaceweek International Association prior to World Space Week each year. A report should be filed after World Space Week to receive credit in this annual report which is published by the United Nations.

2. Support the Coordination of World Space Week. All organizations are also encouraged to support the global and national coordination of World Space Week. The growth and effectiveness of World Space Week depends greatly on the efforts of the United Nations Office for Outer Space Affairs (OOSA), Spaceweek International Association and World Space Week national coordinators to invite organizations to participate and to provide them with support. To this end, the following steps can be considered:

- Organizations could provide voluntary contributions or in-kind support for World Space Week to the United Nations Office for Outer Space Affairs, Spaceweek International Association and/or national coordinators. A new affiliation program provides recognition to supporters of the Association as described in section 5.
- Organizations could support focused projects related to World Space Week, such as sponsoring the distribution of educational materials to teachers for use during World Space Week, providing awards to schools to encourage their participation or providing materials to developing nations. For further information, please contact Spaceweek International Association.

This report has been made possible by the support of the affiliates of
Spaceweek International Association:

European Space Agency
 United Nations Office for Outer Space Affairs
 Lockheed Martin
 Franklin Institute Science Museum
 Sasakawa International Center for Space Architecture
 Space Education Initiatives
 Hernandez Engineering
 Sener Ingenieria y Sistemas S.A.
 Aerospace Research Institute
 Bangladesh Astronomical Society
 Pyeong Chang National Youth Center

For information on how to become an affiliate of the Association,
 please visit www.spaceweek.org/affiliates.html



World Space Week

For assistance, information, or to offer support, please contact:

Spaceweek International Association

1110 NASA Parkway Suite 120, Houston, TX 77058 USA

Phone: 1.281.333.3627

Fax: 1.281.335.0229

admin@spaceweek.org

www.spaceweek.org



World Space Week

Spaceweek International Association
1110 NASA Road One, Suite 120
Houston, TX 77058 USA
Tel: +1-281 333 3627
Fax: +1-281 335 0229
E-mail: admin@spaceweek.org
www.spaceweek.org

Printed in Austria
V.04-52849—May 2004—730

United Nations publication
Sales No. E.04.I.19
ISBN 92-1-100948-0
ST/SPACE/23



9 789211 009484