



SPACE GENERATION ADVISORY COUNCIL

*in support of the United Nations Programme
on Space Applications*

Annual Report 2007

About the Space Generation Advisory Council (SGAC)

The Space Generation Advisory Council in support of the United Nations Programme on Space Application (SGAC) is a non-governmental organisation, which aims to represent students and young space professionals to the United Nations, States, and space agencies.

The SGAC brings together students, young professionals, space organisations and other NGOs to present a unified vision for the future exploration of space to the United Nations and other organisations. The SGAC is an official observer to the United Nations Committee on the Peaceful Uses of Outer Space (UN COPUOS) - an international forum where space issues are debated.

Each year SGAC organises an international, intercultural and interdisciplinary youth space conference - the Space Generation Congress. These events usually bring together around 150 passionate young space professionals to work on issues of grassroots space education and outreach, space policy and law, space engineering and architecture and many others.

Perhaps above all, the Space Generation offers a forum for making contacts, friends and business associates across the planet. In the network one will hear about job opportunities, projects that it is possible to be involved with, events which can be attended and an audience of likeminded individuals to share ideas with. Space Generation really is the biggest global youth space network!

Space Generation Advisory Council (SGAC)

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Message from the SGAC Co-Chairs

In 2007 the SGAC continued to conduct a diverse range of activities towards its goals of representing young space professionals to the UN, space agencies and other space entities around the globe on various space issues. We are pleased to report to you on SGAC's highlights of the past year in which priority attention has been given to rejuvenating SGAC membership (including officers) and starting new projects. We remain a young organisation but we continue to go from strength to strength.

In terms of personnel, the hiring, in late 2006, of our Executive Director Dr. Chris Boshuizen and our Executive Officer Ms. Agnieszka Lukaszczyk proved to be vital to the organisation. SGAC has long desired a permanent staff dedicated to leading the implementation of its goals and Chris has continued to do an excellent job in that capacity. The same is true for Agnieszka, who through her hard work in Vienna allowed us to expand our number of active National Points of Contact and increase our policy output to the UN and other entities considerably. Finally, in July, Kevin Stube was hired again as Event Manager for our yearly conference, the Space Generation Congress, to be held in Glasgow, Scotland September 25-27, 2008. We would like to welcome our new points of contacts and officers to our team!

The SGAC has also contributed a great deal to space policy this year. A delegation of members attended the February, April and June meetings of UN-COPUOS. The major output of SGAC for this year has been our 50 Year Vision which was researched and planned to provide space policy input to The Future of Space Exploration Symposium which was held at the Boston University in April. SGAC conducted a two round survey among global youth to derive the 50 Year Vision, including a roadmap for the next 50 years.

In April the annual Yuri's Night was held – with over 125 simultaneous celebrations around the world to share and educate the public about space - a tremendous success as usual.

In September of this year the SGAC convened its sixth consecutive Space Generation Congress (SGC) held in conjunction with the IAF's International Astronautical Congress (IAC) in Hyderabad, India. SGAC is working in close cooperation with both the IAF, and the ESA Outreach programme to do this years conference. Over 150 people from 63 countries attended and it was a great success. The participants fed many ideas from the conference into the main IAC. In addition to a very successful conference, the SGAC was asked for a consecutive time by the IAF to help organise the Young Professionals Programme for the IAC. This was also a success.

2007 marked a very special occasion – the 50th anniversary of the space age with the launching of Sputnik, as well as the 40th anniversary of the Outer Space Treaty – the magna carta of space law. SGAC attended, presented and co-hosted some of the events held in line with the anniversary. We look forward to helping the space community at large to commemorate the tremendous successes and progress to date and help to set in place visions and plans for another 50 years in space.



Several opportunities that SGAC has begun planning for in this regard is the ISU symposium to be held at ISU in February where we will present a further developed roadmap for the next 50 years in space as well as policy input to all three UN COPUOS meetings in 2008 and of course the SGAC annual conference to be held in Glasgow, Scotland. The Space Generation would like to utilise these opportunities to accelerate our pace in space, ensure that space development helps the quality of life of people around the world and that it remains peaceful.

The developments of SGAC over the year would not be possible without the tremendous work of our Executive staff: we are indebted to their hard work and diligence. Thanks go to them, and to all the other members of the space generation community for their efforts over the year.

We would like to close by thanking Dr. Sergio Camacho, former Director of OOSA, Ms. Alice Lee, Expert of Space Applications at OOSA, and Prof. Dr. Kai-Uwe Schrogl from the European Space Policy Institute for their kind support.



William Marshall & Alex Karl

SGAC Co-Chairs

Message from the Executive Director

2007 marks the most successful year yet for the Space Generation Advisory Council, with significant advances made in project output, member participation and financial strategy, as well as the introduction of a range of new systems and tools to aid the contributions of our members to goals of youth-led space development.

With our office in Vienna now permanently staffed throughout the year, and through the tireless efforts of our Executive Officer Agnieszka Lukaszczyk we have been able to maintain a visible presence in Vienna, Austria. We enjoyed a closer working relationship with the United Nations Office of Outer Space Affairs (UN OOSA) and have had a continual level of participation in the meetings of the UN Committee on the Peaceful Uses of Outer Space (UN COPUOS). Our statements to UN COPUOS have been warmly received and are indicative of the new level of participation in world affairs SGAC is able to offer to its youth members. Alex Karl joined us in March of 2007 as our second co-chair person, and with his addition to the team SGAC reached a new level of consistency in its presence and made huge strides, particularly in the coordination of its projects.

2007 saw the introduction of our flagship project, “Visions for the next 50 years of space exploration”, beginning with an invitation to present the vision at the prestigious, high-level symposium “The Future of Space Exploration: Solutions to Earthly Problems”. This project also saw us partnering for the first time publically with the Secure World Foundation, who has provided invaluable support with the survey process. This will be an ongoing research project throughout 2008, and we are now in the midst of a follow-on survey to resolve further details about the youth vision for the next 50 years. The resulting, detailed youth visions will in turn be used to form a strategy document for youth participation in space development for the next 5-10 years.

In 2007 we also developed a new fundraising strategy with a focus on longer-term partnerships. The Secure World Foundation was the first such partner to join us, followed shortly thereafter by Lockheed Martin and the NASA Astrobiology Institute. The partnerships with these organizations have already proved fruitful, as the resulting ability to operate our office continuously has significantly impacted the depth, quality and consistency of our project work.

In addition to these major steps forward, in 2007 we introduced a completely renewed Space Generation website, which includes a number of carefully designed tools to support our community. The new site involved over a year of work, through design to implementation, and has played a key role in establishing our position as a professionally managed volunteer organization. Following the implementation of the website and further excellent work by Agnieszka Lukaszczyk we have also seen a surge in membership on our both our discussion forums and SGAC Talk mailing list, and a subsequent increase in volunteer participation in our projects.



It has been my pleasure to have worked with the council for the previous year and I look forward to leveraging this previous year's successes to allow the Space Generation to make the best possible contributions to space development in 2008.



Chris Boshuizen

SGAC Executive Director



Executive Summary

2007 has been an especially important year for Space enthusiasts. It was a year of celebrations. Two big events were commemorated, both symbols of the beginning of the Space Age. These were the 50th anniversary of the first human being and the first man-made satellite in Space.

A new age was opened in 1957. Aware of the past and with also a view to the future, the Space Generation Advisory Council launched in 2007 an ambitious project entitled “Aiming Ahead: Next Generation Visions for the Next 50 Years in Space”. Furthermore, Yuri’s Night and Space Generation Congress in Hyderabad were in 2007 as successful as former years.

The Space Generation Advisory Council (SGAC) is an international, not-for-profit organisation that represents views of youth in space issues to the United Nations, Space Agencies and other bodies. SGAC continued to maintain permanent observer status at the UN Committee on the Peaceful Uses of Outer Spaces (COPUOS) and is also a member of the International Astronautical Federation.

In October 1999, as part of the Third UN COPUOS (UNISPACEIII), the UN agreed that an international youth forum for university students, graduate students and young professionals should be organised by the alumni of the International Space University (ISU). From this idea the Space Generation Advisory Council was conceived.

There are four main programs of the SGAC with the two main aims being:

1. Space policy advice to policy makers based on the opinions of students and young professionals interested in space form around the world. This includes partnerships and co-operations with well established organisations such as the UN, IAF, ESA, NASA, JAXA, SEDS, NSS, ISUF, Planetary Society, Secure World Foundation, Space Alumni just to name a few.
2. Space Education and Outreach worldwide to:
 - Identify and increase access to space education for all age groups
 - Increase public awareness and visibility of youth space activities and events,
 - Develop expertise and skills of youth space activities and events
 - Establish a global network with particular focus on Space
 - Education Activities and to make use of the Space Generation network
 - Youth space events such as the Space Generation Congress held in conjunction with the International Astronautical congress (IAC) and Yuri’s Night.

SGAC goals achieved so far are listed in the report along with the goals for 2008, 5 year plan, 2010 overall targets and the complete SGAC timeline since 2003 as a diagram.

With regard to international organisations, delegations were sent to all COPUOS meetings in 2007, including the two subcommittees (Legal and Scientific & Technical). Moreover, the Executive Officer played a major role in the UN Conference of Non-Governmental



Organisations in Consultative Relationships with the United Nations (CONGO). Another highlight was the organisation of the 2007 Outer Space Forum, where SGAC made several presentations.

Under the Executive Officer the Vienna Office, SGAC's central hub in Vienna kept undertaking key projects, ensuring prompt response to all external and internal communications and progressing good professional relations with SGAC's collaborators especially OOSA and ESPI. Significant thanks go to the Executive Officer, Agnieszka Lukaszczyk, for consistently working in such an efficient and professional manner.



SGAC Month by Month Highlights

- January: SGAC General Assembly held. Launching of the “50 Years Survey”.
- February: SGAC statement at the UN COPUOS S&T Subcommittee.
- March: Elections for Co-Chairman post as well as Regional Coordinator for South America and Asia-Pacific regions. Launching of a second round of “50 Years Survey”.
- April: Boston Symposium, at which the SGAC “50 Years” paper was presented. Yuri’s Night 2007. UN COPUOS Legal Subcommittee.
- May: Boost in SGTALK list network.
- June: SGAC statement at UN COPUOS by the Executive Officer as well as a Technical Presentations made by the Austrian members.
- July: Elections held in North, Central America and Caribbean region.
- August: Launching of survey “Space Technology for Sustainable Development”.
- September: Elections held in European region. Hyderabad Space Generation Congress 2007. International Astronautical Congress. UN/IAF Workshop.
- October: 50th Anniversary of Sputnik’s launch and Yuri Gagarin’s inaugural flight. World Space Week. Civil Society and Outer Space Forum held in Vienna. SGAC General Assembly held.
- November: UN workshop in Vietnam. World Space Week celebrated in Muslim nations.
- December: SGAC announcement of Annual Global Fundraiser 2008. Elections held in North, Central America and Caribbean region.



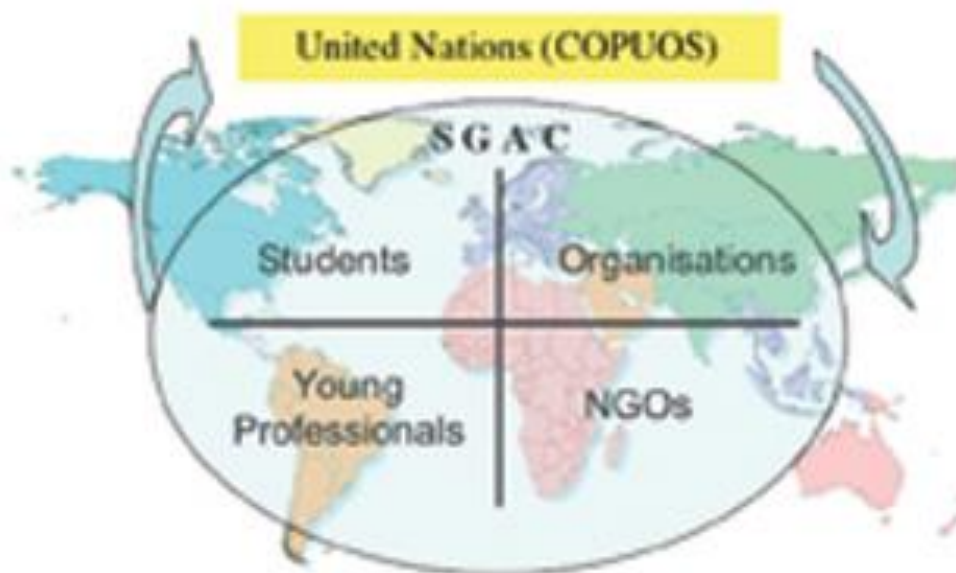
Introduction

The Space Generation Advisory Council (SGAC) is a non-governmental organisation, which brings the views from its members to and works with: the United Nations, Space Agencies and other organisations. Members are students and young space professionals. Thus SGAC engages young people in space policy.

More broadly, the Space Generation identifies a large group of young (minded) volunteers who have an interest in space and an ambition to act. In fact, the Space Generation Network is "the biggest, global, space youth network". We know that by working together, we can make a difference.

SGAC has obtained permanent observer status in the UN Committee on the Peaceful Uses of Outer Space (COPUOS) and is a member of the International Astronautical Federation.

The SGAC carries out policy projects -- writing papers to present to the UN and Space Agencies – as well as conduct projects – such as in the areas of space education and outreach. We advocate for space exploration and try to motivate others in our generation to be interested in space.



The interaction between the SGAC, it's member organisations and people, and the flow of information between UN COPUOS

History of the Space Generation Advisory Council

As part of UNISPACE III¹, alumni of the International Space University² organized and convened the Space Generation Forum (SGF)³. The aim of the forum was to express the visions and perspectives of youth with regards to future space activities. This evolved to include a youth input into the deliberations of the UN at UNISPACE, and was charged to make recommendations to the Committee on the Peaceful Uses of Outer Space. Over 160 young people from 60 countries attended the forum, which ran parallel to the UNISPACE III proceedings.

One of the recommendations was "To create a council to support the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS), through raising awareness and exchange of fresh ideas by youth. The vision is to employ the creativity and vigour of youth in advancing humanity through the peaceful uses space".

Five (*) of the top ten recommendations from the SGF Technical Report⁴ were integrated into the Vienna Declaration on Space & Human Development⁵:

- A Global Space Education Curriculum
- **Priority Access to Mobile Satcom Network for Disaster Emergency Management***
- International Space Authority
- **SGF Follow-up***
- **Establishment of an International Centre for Space Medicine***
- International Space Chamber of Commerce
- **Action Plan for Meeting the World's Basic Needs through Technology***
- Nobel Space Prize
- **UN Space Advisory Council***
- Planetary Defence/Protection

¹ UNISPACE III

<http://www.un.org/events/unispace3/>

² International Space University (ISU)

<http://www.isunet.edu/>

³ Space Generation Forum

<http://sgf.unsgac.org/>

⁴ SGF technical report

<http://www.spacegeneration.org/downloads/documents/UN/sgf-technical-report-july-1999.pdf>

⁵ Vienna Declaration on Space & Human Development

<http://www.unoosa.org/pdf/reports/unispace/viennadecIE.pdf>



Programs and Projects

The Four Programmes of SGAC

Space Policy

Past SGAC Achievements include the Vienna Declaration (1999), Creation of Latin-American Space Association ALE (2000) and the Space Association of Turkich States SATS (2001), Space Policy Summit SPS (2002) and the EU Green Paper Submission (2003).

In 2007 SGAC continued to have an observer presence and input to COPUOS at the 50th Session in Vienna in June 2007, the Scientific and Technical Subcommittee in February and also for the first time in April 2007 had input to the Legal Subcommittee.

Space Education & Outreach

During 2007 many SGAC members were on the receiving end of various space education programmes, others who have recently completed their studies have gone onto contributing to space education. Space Outreach was common between SGAC members worldwide! Major programmes included SGAC students in the ISU SSP 2007 in Strasbourg, France, ADAM, Yuri's Nights, Cosmos Education along with many SGAC members participating in and/or organising space education and outreach events in their respective countries. In addition, in 2007 SGAC was able to obtain funding for several students from the developing countries to attend international conferences and workshops such as the SGC, IAC, UN/IAF workshop in Hyderabad, and the UN workshop in Vietnam.

International Cooperation

More a philosophy than it is a programme.

SGAC Members have worked together to advance space projects more efficiently – time and money was saved by not reinventing the wheel!

The global network enabled many proven concepts to be brought from one country to another and international collaboration was enhanced.

Space Generation Network

The Space Generation expanded significantly in 2007 with the addition of many new Points of Contact around the world. At the end of 2007 links are now fostered between 58 countries worldwide. Significant discussions were held on the SGTALK mailing list and connections were made between individuals and groups for international collaborations as a result of this. New posters and fliers were designed and distributed in Hyderabad.

Archives of all the TALK emails can be found at <http://lists.spacegeneration.org/pipermail/talk/>



In addition, a new official website has been created, which greatly facilitates communication among the SGAC members.

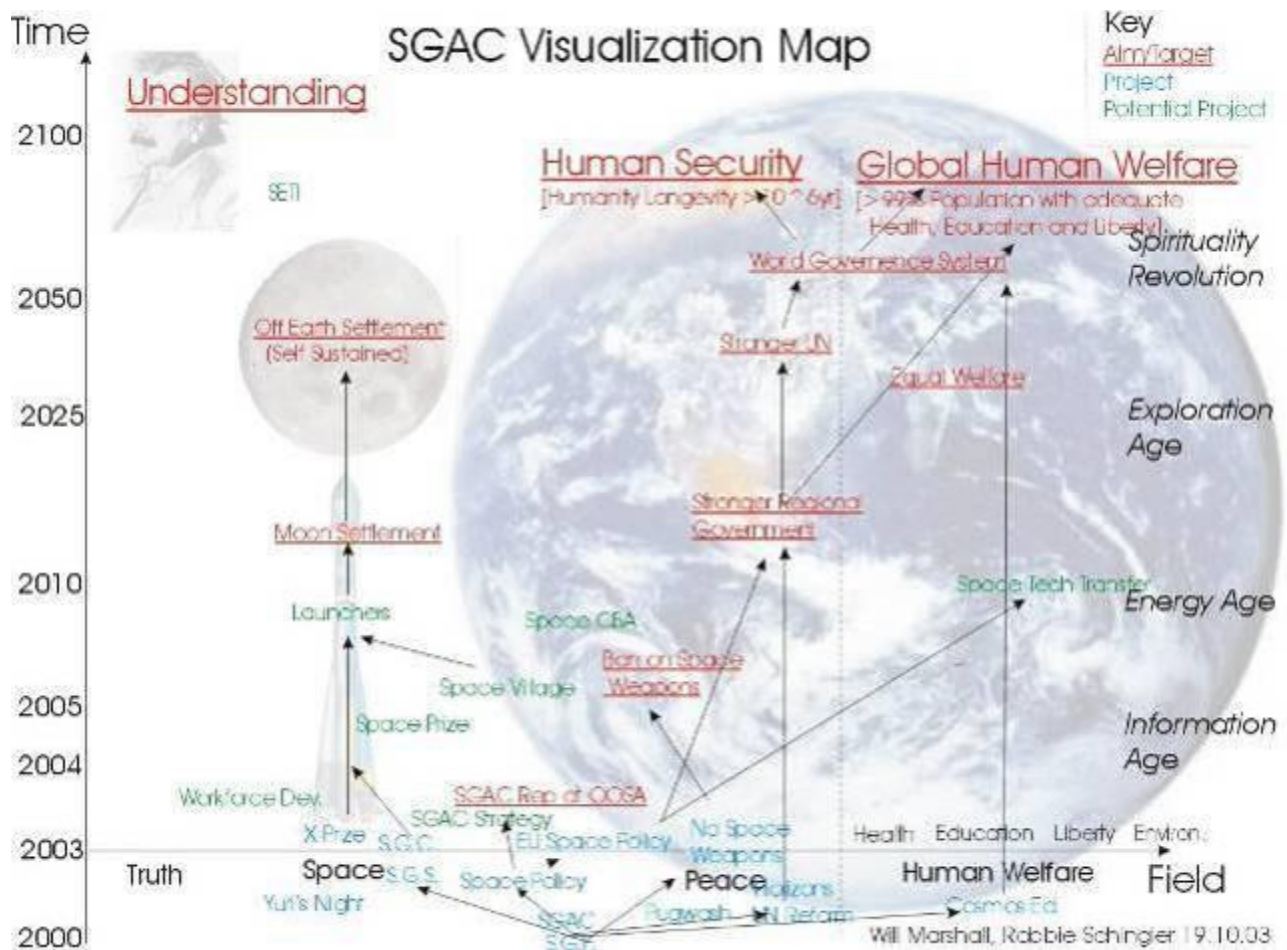


Figure 1: SGAC Timeline from 2003 onwards

Goals and Strategy

Accomplishments in 2007

1. 50 Visions for Space: a comprehensive survey of youth visions.
2. Expanded our regional network: new regional coordinators and recruited 60 National Points of Contact.
3. Attended and made statements at all COPUOS meetings and strengthened ties with UN OOSA.
4. Featured in numerous publications.
5. Hosted and co-hosted several events, including:
 - a. Space Generation Congress, India
 - b. Yuri's Night, including a large event at NASA Ames, in California.
 - c. Space games I
 - d. Numerous regional events
 - e. UN CONGO (co-hosted and presented)
6. Attended and contributed to the following events:
 - a. IAF Spring Meeting, Paris
 - b. International Space Development Conference, USA
 - c. Boston University Space Conference
 - d. COPUOS Scientific and technical committee, February
 - e. COPUOS Legal subcommittee, March/April
 - f. COPUOS General Assembly, June
 - g. IAC, India
 - h. Invited and funded to attend the Seventeenth UN/IAF Workshop held in Hyderabad, India
 - i. ESF/ESA/ESPI Conference Humans in Outer Space
 - j. 50th anniversary of Space Age, which took place in Warsaw, Poland
 - k. American Astronautical Society, "Celebrating 50 Years - But, What's Next?"

Goals for 2008

1. Recruit an SGAC National Point of Contact in every country and fund some NPOCs to attend the Space Generation Congress.
2. Increase regional activities by hosting and encouraging more regional meetings.
3. Develop the 50 year visions into a roadmap for youth participation in space exploration.
4. Increase the depth of our policy work, including:
 - a. A focus on Near Earth Objects
 - b. Specifically focusing on promoting the peaceful uses of outer space among the youth around the world.
 - c. A meeting or online discussions concerning space traffic management.
5. Fund two interns to handle increasing work load in Vienna.
6. Increase world-wide participation in Yuri's Night, and implement new programs together with World Space Week.

7. Introduce a technical project to inspire youth and increase our membership base, particularly amongst youth interested in areas outside space policy.
8. Hosting events: as in 2007, including:
 - a. Space Generation Congress, Glasgow.
 - b. Space games II.
9. Attending/presenting: as done in 2007, plus all other events relevant to SGAC's work.

5 year Targets (2003-2008):

1. Permanent employees and staff in Vienna, Washington D. C., Strasbourg
2. Permanent Space Agency Relationships
3. Bring issues to COPUOS
4. Sustainable funding
5. Greater on-line community (inc. full time web person)

2010 Targets:

1. Policy Input at all regional, national & international levels
2. SGAC staff working at the World Space Authority



COPUOS

The Committee on the Peaceful Uses of Outer Space (COPUOS) was set up by the General Assembly in 1959 to review the scope of international cooperation in the peaceful uses of outer space, to devise programs in this field to be undertaken under United Nations auspices, to encourage continued research and the dissemination of information on outer space matters and to study legal problems arising from the exploration of outer space. COPUOS and its two Subcommittees each meet annually to consider questions put before them by the General Assembly, reports submitted to them and issues raised by the Member States. The Committee and the Subcommittees, working on the basis of consensus, make recommendations to the General Assembly.

The United Nations Office for Outer Space Affairs (OOSA) implements the decisions of the General Assembly and of the Committee on the Peaceful Uses of Outer Space and its two Subcommittees, the Scientific and Technical Subcommittee and the Legal Subcommittee. The Office is responsible for promoting international cooperation in the peaceful uses of outer space, and assisting developing countries in using space science and technology. Located in Vienna, Austria, OOSA maintains a website at <http://www.unoosa.org/>.

UN COPUOS held its fiftieth session in Vienna, Austria, from 6 to 15 June. SGAC Executive Officer, Agnieszka Lukaszczyk presented the Space Generation's statement at the 50th Session of the United Nations Committee on the Peaceful Uses of Outer Space.

Central to the statement was the recent publication of preliminary results of Visions for the next 50 years in Space, which was the result of several SGAC youth consultancy efforts including a green paper to the European Commission on European Space Policy, and the recent survey project asking youth to state their visions for the next 50 years. This latter survey project is part of SGAC's major work for 2007, the 50th anniversary of space flight.

The key recommendation of youth concerned turning attention to the sustained exploration of the Moon. There was an overwhelming response in favour of exploring the Moon and using it as a testbed for exploration of other solar system bodies, development of a permanent moon base/s, and development of a cis-lunar economy by extraction of different resources in order to make exploration cost effective.

Other recommendations included furthering exploration of the solar system, maintaining human presence in the near earth space, turning attention to issues of space governance, and strong support for international cooperative efforts for space exploration.

June also marked the last period of Dr. Sergio Camacho's stay at UN OOSA. Dr. Camacho has been an inspirational supporter of the Space Generation since the Advisory Council was formed in 1999. In the SGAC statement Dr. Camacho was thanked for his support and we wish him well for the future.



SGAC also gave a Technical Presentation regarding the online educational portal NoaNgea, which is currently being created by the SGAC Austria members. Martin Kukla and Marcus Rennhofer delivered the technical presentation.

Scientific and Technical Subcommittee

The Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space had held its forty-third session in Vienna from 12-23 February 2007. The SGAC Executive Officer, Agnieszka Lukaszczyk, attended the meeting. She read a comprehensive statement detailing the milestones of SGAC throughout 2006. She first introduced SGAC then spoke sequentially about the past year's achievements. She read out the executive summary of the 2006 Annual Report

Legal Subcommittee

The Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space had held its forty-sixth session in Vienna from 26 of March to 5 of April 2006. It was attended by the Executive Officer, Agnieszka Lukaszczyk. SGAC did not make a statement during this session of the subcommittee.



UNCONGO

The Conference of Non-Governmental Organizations in Consultative Relationship with the United Nations (CONGO) is an independent, international, not-for-profit membership association of nongovernmental organizations that facilitates the participation of NGOs in United Nations debates and decisions.

SGAC has been a part of UN CONGO since formal recognition was given by ECOSOC as an international NGO in 2005. CONGO has organized the Outer Space Forum 2007. This comprehensive conference was held from 8-9 October 2007 at the Vienna International Centre, during World Space Week, with the aim of providing a complete overview of the current situation of the uses of outer space and in particular those applications responding to societal needs.

The Forum on Civil Society and Outer Space was held with the financial and substantive support of the Austrian Ministry for European and International Affairs, the Austrian Ministry for Transport, Innovation and Technology, the Austrian Research Promotion Agency, Astrium, the City of Vienna, the United Nations Office for Outer Space Affairs, United Nations Institute for Disarmament Research, the European Space Policy Institute and the Space Generation Advisory Council.

The Global Significance of Outer Space and Space-Related Technology

The participants in the forum reaffirmed the importance of peaceful space activities for improving the common welfare of humankind and the planet, as well as the potential contributions that civil society, including in particular NGOs, could make to that cause. They recognised the role of space technology in solving problems of regional and global significance and the need to strengthen capabilities to use space applications for the purposes of economic, social, cultural, scientific and technological development. To that end, it was recommended that awareness of the benefits of space activities be increased; in particular the key role that those activities played in such areas as sustainable development, resource management and the achievement of internationally agreed development goals, within and as supported by international (space) law.

Awareness-raising efforts should thus encompass civil society in general. More specifically, they should incorporate NGOs whose members voiced the concerns of the people and were often referred to as the ‘conscience of humanity’. It was highlighted that NGOs assumed a key role as constructive participants in major conferences and were indispensable partners in development efforts. Advantage should be taken of their societal potential, networks, knowledge, expertise and skills.

International organizations and governments alike were urged to continue the process of opening up to relevant non-governmental actors, as well as support those actors’ efforts to contribute to the fulfilment of the development potential of space activities.

At the same time, NGOs interested in the benefits of peaceful space activities and the promotion of the peaceful uses of outer space should take steps to increase awareness among their constituencies of the value and importance of space activities and the need to support their peaceful development. Those NGOs should consider taking steps to set up an NGO committee on Outer Space. The role of such a committee should be to:

- Identify issues of space activities particularly relevant to civil society at large,
- Identify new benefits of space activities to society,
- Promote access to the beneficial outcomes of space activities,
- Propose best practices for the exploitation of space activities, from direct benefits such as access to satellite data to broader societal benefits such as peace education, public outreach, capacity development and retention on space activities,
- Prevent a divide between space-faring nations and non-space-faring nations in benefiting from space applications and activities,
- Provide a holistic viewpoint of the potential benefits and impact of space activities,
- Constitute a network of NGOs and potential beneficiaries of space activities and facilitate the access to expertise in relevant fields of development,
- Serve as a forum for discussing and responding to threats to the peaceful uses of outer space,
- Serve as a channel of communication between UN organizations and NGOs dealing with space activities,
- Be a voice for NGOs on space issues being addressed in UN organizations.

Modelled on similar NGO Committees established under the aegis of CONGO in New York, Geneva and Vienna, such a committee could provide a forum for the discussion of substantive matters in an NGO setting. Committed to fostering cooperation and dialogue, it could promote the creation of NGO partnerships, seek opportunities to support and assist each other and secure access to decision-making processes.

Given the importance attached to increasing awareness of space activities as expounded in the Vienna Declaration on Space and Human Development and in light of the location of the United Nations Committee on the Peaceful Uses of Outer Space, the participants recommended that, considering the value of an NGO committee on outer space, the initiative be launched by the NGOs that had participated in the forum. The Vienna CONGO Office stood ready to offer all possible support to such an initiative.

Looking Back, Looking Forward and Aiming Higher: Visions of the Next 50 years in Space

The '50 years visions study' project coordinated by the Space Generation Advisory Council (SGAC) in support of the United Nations Programme on Space Applications collected the response of students and young space professionals on the occasion of the 50th Anniversary of the first artificial satellite and the 40th anniversary of the Outer Space Treaty. It follows consultation of the SGAC community through a series of meetings, online discussions and online surveys. The first two online surveys collected over 750 different visions from the international community, totalling approximately 276 youth from over 28 countries and builds on previous SGAC policy contributions. A summary of these results was presented as the top 10 visions of today's youth as an invited input to world space leaders gathered at the Symposium on "The future of space exploration: Solutions to earthly problems" held in Boston, USA from April 12-14 2007 and at the United Nations Committee on the Peaceful Uses of Outer Space in May 2007.

These key visions suggested the enhancement for humanity's reach beyond this planet – both physically and intellectual. These key visions were themed into three main categories:

- Improvement of Human Survival Probability – sustained exploration to become a multi-planet species, humans to Mars, new treaty structures to ensure a secure space environment, etc
- Improvement of Human Quality of Life and the Environment – new political systems or astrology, benefits of tele-medicine, tele-education, and commercialization of space, new energy and resources: space solar power, etc.
- Improvement of Human Knowledge and Understanding – complete survey of extinct and extant life forms, use of space data for advanced environmental monitoring, etc.

SGAC is working to further supplement this study with advanced input from the international community and help youth groups around the world provide their views to the policy makers to orchestrate the futures of human endeavours in Space.



SGAC Global Activities 2007

January

January 14th

Space Generation held its General Assembly with 35 people attending from all over the world thanks to NASA support on the teleconference service. A new version of our [Statutes](#) and [Bylaws](#) with the approved changes was written.

SGAC carried out a survey in order to learn the opinions, ideas and views of young people regarding the key events for the next 50 years of space activities. The survey was conducted all over the globe with responses from young space enthusiasts from every continent.

February

SGC 2007 Event manager visits Hyderabad SGC site with the IAC organisers in order to kick off the first phase of on-site preparations.

COPUOS S&T attended by Executive Officer Agnieszka Lukaszczyk who made a statement to the Committee.

March

Space Generation Elections 2007, resulting in the following new appointments:

Co-Chairperson - Alexander Karl of Germany

South America RC - Paul Acquatella of Venezuela

South America RC - Martin Canales of Peru

Asia Pacific RC - Bee Thakore of India

Call for future space events result. In this first round participation was highly successful. 275 youth visionaries from all over the world answered SGAC survey regarding the key events for the next 50 years of space activities. After this tremendous success, a second round survey was launched.

IAF Meeting in Paris attended by SGAC representative.

April

April 12-14th

On the anniversary of Yuri Gagarin's flight to space and the 50th anniversary of space travel Space Generation prepared 10 top visions for the future of space exploration. Visions were formed from the two surveys conducted over the last four months. These results had been presented at the Symposium "The future of space exploration: Solutions to earthly problems" took place in Boston, USA. Two SGAC delegates attended the symposium and presented the results. These were Shi Heng (China) and Tiffany Frierson (USA).

Leading space scientists, visionaries, and entrepreneurs from around the world met at Boston University to discuss the future of space exploration. Conference participants worked together to imagine the next half-century of space exploration and identified five key areas that require attention if humans are to thrive in space over the next 50 years. They were Space Governance, Public Participation, Biotechnology and Strategy in space exploration.

Another two members of SGAC were contributors and signatories of the Congress declaration. These were Dr. Chris Boshuizen, Executive Director and Dr. William Marshall, Chairman.

April 12th

Another successful year of Yuri's Night being celebrated all over the globe.

Between April 11th and April 14th, over 126 separate Yuri's Night parties were held across 35 countries over every continent on Earth except for Antarctica. Tens of thousands of space enthusiasts of all ages gathered around the globe (including, for the first time, the Second Life 'virtual world' program) over these few days to celebrate the history of space exploration—and to look to its future.

COPUOS Legal Subcommittee attended by Executive Officer.

May

Executive Office meeting in the NASA AMES Research Center attended by Co-Chairman Will Marshall, Executive Director Chris Boshuizen, Executive Secretary Kevin Stube, Executive Officer Agnieszka Lukaszczyk and Co-Chairman Alex Karl, the latter via video conference.

June

June 8th

SGAC Executive Officer, Agnieszka Lukaszczyk made the Space Generation's statement at the 50th Session of the United Nations Committee on the Peaceful Uses of Outer Space.

Central to the statement was the publication of preliminary results of Visions for the next 50 years in Space, as well as the technical presentation.



This month also marked the last period of end of Dr. Sergio Camacho's stay at UN OOSA. Dr. Camacho had been an inspirational supporter of the Space Generation since the Advisory Council was formed in 1999. Thank you Dr. Camacho!

July

July 30th

Elections held in North, Central America and Caribbean region. Rob Guinness¹ of United States was elected. Rob has been involved in SGAC since 2002, when he attended the Space Generation Summit at the World Space Congress.

August

Space Generation conducted a study in order to provide input to the workshop “Space Technology for Sustainable Development: Towards Food Security”. This survey aimed to gather the opinion of students and young professionals in the age group 18-35, on the studied topic. The general trends from this survey fed in to the SGAC report to the workshop.

September

September 11th

Elections held in European region. Jesper Jorgensen² of Denmark was elected.

1 Bio: After SGS, he helped to found and organize the first MoonMars Workshop, held in Bremen, Germany in conjunction with SGC 2003. He also helped organize the 2nd MoonMars Workshop held in Vancouver in 2004. He completed his Bachelor of Arts in Physics from Washington University in 2004. In 2005, he was awarded the National Space Society's scholarship to the International Space University, from where he graduated second in his class in September 2006 with a Master of Science in Space

2 Bio: Jesper Jorgensen is psychologist with a special interest in confined and extreme environments and a specialization in space psychology. He has beside a M.Sc. in Psychology and Communication, degrees in International Education, Development studies, medical Informatics and Public Health. He is an experienced science communicator and science educator, both among professionals and in the general population. Research interests are sensory stimulation in confined environments and development of new design concepts for coming long-term manned space missions. He is a member of the Design Engineering Technical Committee at American Institute of Astronautics and Aeronautics and the Space Architecture Study group at International Academy of Astronautics.



September 20 - 22nd



The logo of the Space Generation Congress in Hyderabad

This year, the Space Generation Congress (SGC) brought together a group of more than 40 people from around the world including the first ever delegates from Tanzania and China as well as two delegates each from South America and Africa. The group was joined by distinguished professionals from around the world including Bill Nye, Vice-president of the Planetary Society, Dr. Bernard Foing of ESA, James Zimmerman, president of the International Astronautical Federation, and Dr. Pascale Ehrenfreund of Leiden University.

The delegates participated in several projects, not just on-site, but also for the 6 months prior to the congress to help promote space education, space exploration, and space for the betterment of humanity. The United Nations Educational, Scientific, and Cultural Organisation (UNESCO) officer Yolanda Berenguer shared with the delegates how the UN can help them promote space in their home countries. Dennis Stone, President of World Space Week explained to the delegates how they can host events to promote space.

September 23rd

[Space Generation actively contributed to the seventeenth UN/IAF Workshop held in Hyderabad, India.](#) The seventeenth UN/IAF Workshop, reviewing initiatives in the area of space science and technology applied to sustainable development of food security, concluded on September 23rd. It was hosted at the premises of the Indian National Remote Sensing Agency (NRSA) at Balanagar, Hyderabad and was co-sponsored by the European Space Agency.

As a result of the highly successful Space Generation Congress, Space Generation Advisory Council has been working along with Space Adventures to conduct a call for scientific and commercial projects that can be carried along with the next Space Flight Participant in October 2008.

September 24-28th

Space Generation members attended the International Astronautical Congress (IAC) and Young Professionals Programme in Hyderabad India. As Space Generation Congress is held in conjunction with the annual IAC, space activities continued for many through September 28th.



Space Generation Advisory Council (SGAC) staffed an exhibit booth at the IAC exhibition area where the IAC attendees and public visitors were given information about SGAC by members.

October

October 2-3rd

SGAC participated in the [50th anniversary of Space Age conference in Warsaw, Poland](#) in cooperation with the Polish Academy of Space Generation and the Warsaw University of Technology.

The celebrations of 50th anniversary of the beginning of the Space Age were divided into two days of activities: the first - official one and the second- student one. The first day was fulfilled with projections of many distinguished guests and the second one with competitions and students' presentations. SGAC Executive Officer, Agnieszka Lukaszczyk was asked to moderate the second day of the conference. She was privileged to not only moderate the student day but also to serve as a source of information in regards to youth space activities worldwide. SGAC National Point of Contact for Poland, Mateusz Wolski, participated in the student contest and we are proud to announce that he received 2nd place for his 50 year vision.

October 4th

Anniversary of launching of Sputnik (message from SCAC members to celebrate it)

October 4-10th

Space Generation co-organised the Vienna Forum on "Civil Society and Outer Space". SGAC Chairman, Alex Karl, participated as a Panelist while SGAC Advisor Norbert Frischauf offered a keynote speech.

The forum was organised in cooperation with ESPI (European Space Policy Institute), UN OOSA (UN Office for Outer Space Affairs), UNIDIR (UN Institute for Disarmament Research), SGAC (Space Generation Advisory Council) and FFG (the Austrian Research Promotion Agency).

SGAC National Point of Contact for Argentina, Laura García Oviedo, published two articles concerning SGAC in the Argentinean News Agency of Science and Technology - CYTA Institute Leloir. The first article regarded youth involvement in COPUOS while the second described the Space Generation Congress in India. The titles of the stories are:

- 1) "Tecnología Espacial Para La Humanidad" (Space technology for humankind)
- 2) "Jovenes Que Miran A Las Estrellas" (Young people looking at the stars)

You can read the articles in Spanish at the website: www.agenciacyta.com.ar



October 11-12th

SGAC presented at the ESF/ESA/ESPI Conference Humans in Outer Space-Interdisciplinary Odysseys, Vienna. This conference, co-organised by the European Science Foundation (ESF), the European Space Agency (ESA) and the European Space Policy Institute (ESPI), aimed at being the first comprehensive trans-disciplinary dialogue in Europe on humans in outer space. It went further than regarding humans as mere tools for exploration, or better robots, and it investigated the human quest for odysseys beyond the atmosphere and reflected on the possibilities to find extraterrestrial life. The goal of the conference was to open up new perspectives in assessing humankind's present and future outside the Earth while documenting this in a "Vienna Vision on Humans in Outer Space".

SGAC Executive Officer, Agnieszka Lukaszczyk was one of the speakers at the conference. She presented the "50 Year Vision" paper. Furthermore, her paper along with the papers of the other speakers, will be published by Springer in a proceedings book, which will come out this spring.

October 21st

Space Generation held its General Assembly with 24 people attending from all over the world thanks to NASA support on the teleconference service. One noted change was the modification of North America region, now called North, Central America and Caribbean region.

November

Space Generation actively contributed to the UN workshop in Hanoi, Vietnam. United Nations/Vietnam/European Space Agency Workshop on Forest Management and Environmental Protection took place in Hanoi, Vietnam. SGAC was represented by Nitto Bormon - NPoC of Bangladesh.

December

Space Generation Advisory Council began a search for a full time Intern in its main office located in Vienna, Austria. Interviews conducted.

December 10th

[US National Point of Contact, Daniel Porras, attended the Galloway Symposium](#) -a highly informative day of lecture and discussion that addressed key issues in Space Law. December 21st

Elections held in North, Central America and Caribbean region. Daniel Porras¹ of USA elected Regional Coordinator.

¹ Daniel is a recent graduate of California Western School of Law who now seeks to practice Outer Space Law. Originally from Texas, Daniel now resides in Washington DC after living in San Diego, California. He is currently



Vienna Office 2007

Agnieszka Lukaszczyk continued as the Executive Officer in 2007. During the year many projects have been and continue to be successfully undertaken and significant ties with space contacts sustained. In addition to managing and administering SGAC tasks, Agnieszka has conducted research work for ESPI on core space policy projects. She has also met monthly with UNCONGO to co-organise the 2007 Outer Space Forum, which took place 8-9 October 2007.

In 2007, Agnieszka has executed the following achievements:

- Reconstruction of the SGAC Office & the status of SGAC in Austria
- Maintained with Austrian Authorities good legal, financial and administrative standing in this country where SGAC is registered
- Continued the good relations with the European Space Policy Institute under the new Director General Kai-Uwe Schrogl.
- Renewed SGAC relationship with OOSA, which led to OOSA's support in various SGAC projects including supporting SGAC members in attending several international conferences and workshops such as the International Astronautical Congress, Space Generation Congress, 17th UN/IAF Workshop all held in Hyderabad India, as well as the UN workshop held in Vietnam. In addition SGAC has been supporting OOSA in creating an educational directory on the web.
- Strengthen relationship between SGAC and the Secure World Foundation (SWF). This resulted in a fantastic support from SWF concerning various SGAC projects and over all SGAC operations.
- Coordinated in conjunction with the Australian NPoC Sarah Crook a Winter Internship in Vienna for an SGAC member to assist in the office voluntarily for two months: Andrea Boyd (fourth year Mechatronic Engineering, Mathematics and Languages undergraduate) from Australia/Italy.
- Recruited tens of new National Points of Contacts
- Touched base with all existing Regional Coordinators and NPoCs to ensure active, dedicated global team
- Consistent hands-on involvement with local Austrian SGAC members: participated, supported and encouraged their projects
- Preparation for General Assembly and Elections 2007

working as a Court Clerk for the DC Superior Court. Daniel recently interned with the United Nations Office for Outer Space Affairs and developed a deep passion for Outer Space Law. He has since attended numerous Space Law Conferences around the world and hopes to increase the number of young people seeking to work in space exploration.

- Represented SGAC and presented on its behalf at several international events (IAC, UN/IAF workshop, Outer Space Forum 2007, Humans in Outer Space Interdisciplinary Odyssey Conference, Lunar Conference in Sorrento, Italy, and many more).

Represented SGAC and spoke on its behalf at the Committee on the Peaceful Uses of Outer Space (COPUOS) and its Scientific & Technical as well as the Legal subcommittees.



Agnieszka Lukaszczyk

Executive Officer

Treasurer's Report

From a financial perspective, 2007 was a significant year for SGAC. The organisation struggled with cash flow at times but has made good progress in improving its management of funds. Gaining access to our bank accounts over the Internet and formalising the financial relationship with SGAC USA Branch were two major steps forward this year.

Income for the year came from our existing sponsorship agreement with Serco Facilities as well as SGC sponsorship and registration fees. The agreement with Serco has now ended and we will need to secure a new long term sponsor. SGC 2007 was a profitable exercise earning approximately € 5,700.

Operating expenses were down on previous years as a result of our low operating cash in early 2007. SGAC was simply not able to fund as many opportunities as usual.

While the 2007 balance sheet does not show SGAC in a particularly strong position, we have since received €20,000 from fundraising efforts in the USA. This amount, with even more on the way, gives the organisation the opportunity to manage its cash flow much more strategically in 2008 and end the year in a good position.

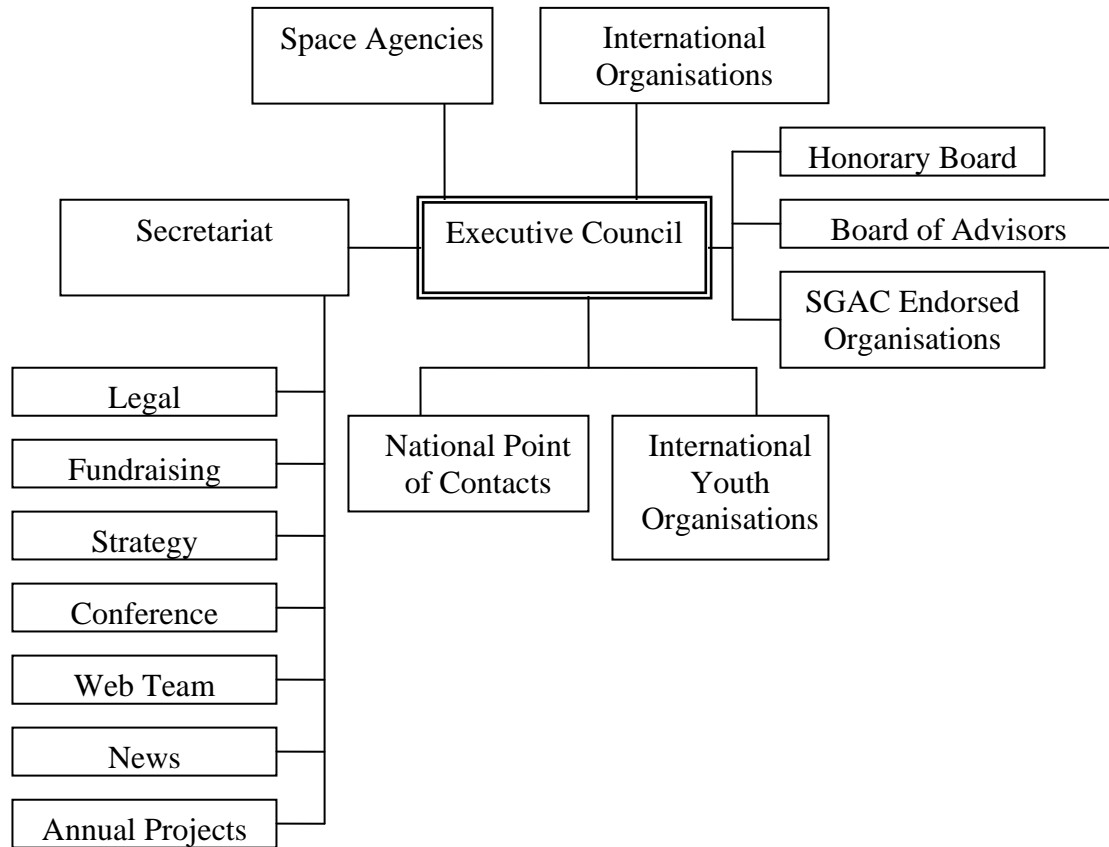


Michael Brett

Treasurer

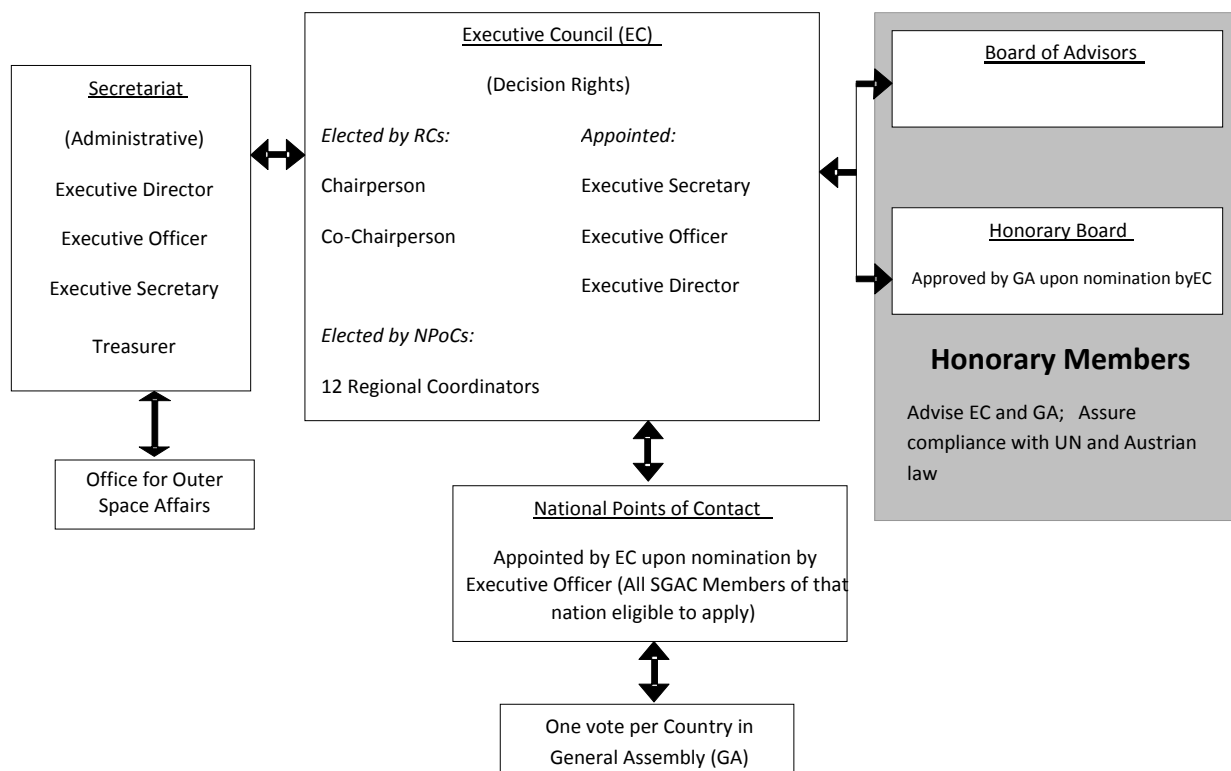
Space Generation Advisory Council

Leadership



SGAC External Organisations Map





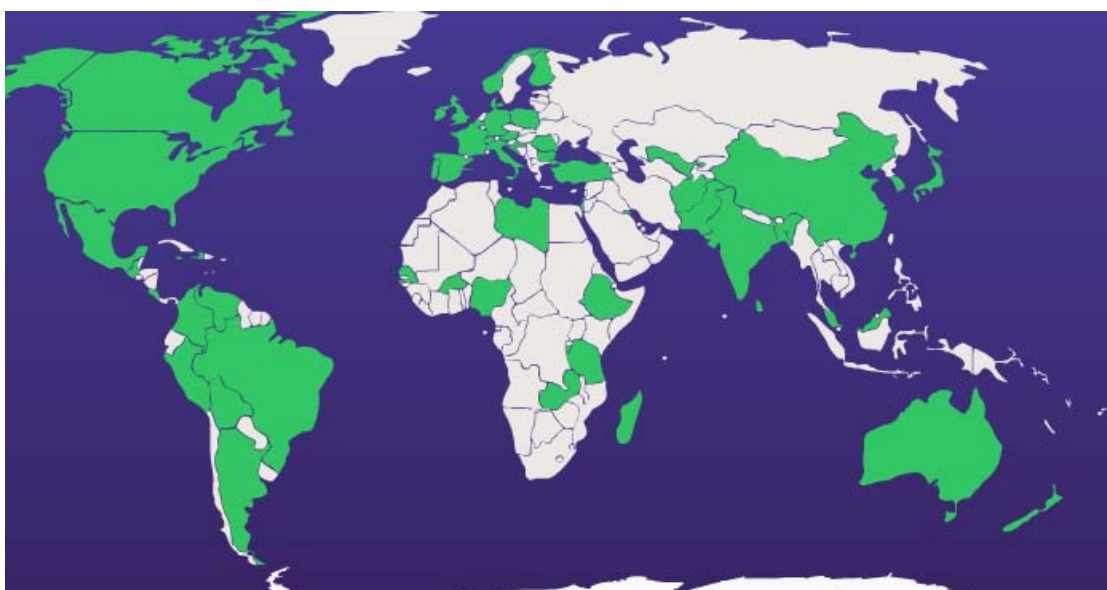
SGAC Internal Organisation Map



SGAC Regional Reports



Map of all SGAC Regions



SGAC – so far 58 countries worldwide!



Africa

The year 2007 witnessed, comparatively speaking, a very little SGAC activity in the African region. A major challenge during the year 2007 on the African continent was the difficulty in establishing an ongoing dialog among the various NPoCs and the RCs. Especially since a conversational interaction was not achieved, very little could be accomplished.

An encouragement came about midway through the year when a new face in the African region has surfaced on the SGAC scene. This new fellow, Castory Ntullu, became the NPoC of Tanzania and, just recently, the second SGAC Regional Coordinator of the African region. As a result of his outstanding contributions he won a sponsorship award to attend the SGC and IAC 2007 in Hyderabad, India.

As the year came to a close, however, a few other NPoCs picked up the momentum – some only shortly after being inaugurated – and thus a small dialog among SGAC folks in the region has begun. In particular, the NPoCs of Mauritius, Ethiopia and Nigeria became active and this resulted in some useful discussions taking place. One of such discussions regards an initiative started by the Ethiopian NPoC that involves creating an African Working Group that will help with addressing problems of Space Education on the continent; this discussion is still ongoing and the details are currently being discussed. For instance how to best go about the planning as well as to eventually implement final decisions and execute required actions.

Some events that were successfully executed by the SGAC folks in the region include the Yuri's Night party in Tanzania and a seminar on space science activities at the University of Zambia and the participation of Zambia in various international space activities. More details about these events (and possibly even more events themselves across the region) should be contained in the NPoC reports for the respective countries. In addition to the aforementioned events, two African delegates (one each from Tanzania and Nigeria) made it to the SGC and IAC 2007 – this was made possible due, either entirely or partly, to the support of the SGAC.

In concluding, I would like to state that the year 2007 has been the most active year of SGAC activities in the region so far. Enthusiasm and awareness in the region are gradually, but apparently steadily, replacing apathy and ignorance. Even though there is room for improvements and further achievements, one can say that there have been significant improvements in the region on the overall involvement.



Burkina Faso

In 2007, not many activities were carried out in Burkina Faso. Daouda Bitié, NPoC in this country, organized a conference on November 17th with students of the Virtual University of Ouagadougou.

The subject was: Space exploration and climatic changes. It was led by Dr Traore, he is a teacher at university of Ouagadougou. 45 persons from University and other domains attended at this conference.

Currently, Daouda Bité is working to find students who can organize more activities next year in Burkina Faso.

Burundi

During Year 2007 three main activities were carried out despite the limited financial means that Burundi has:

Celebration of Yuri's Night in Bujumbura

At this date when other people around the world remember the first pace in space by the Russian Yuri Gagarin on 12 April 1961, Burundian space enthusiasts remembered him through a party that gathered about 30 young people on 12 April 2007

In Dieudonne Bizimana's (NPoC of Burundi) speech for the day, he told the young men who were around who is Yuri Gagarin and why we celebrate the day of 12 April.

A project proposal has been submitted to BINUB (Bureau des Nations Unies au Burundi, Burundi UN office) and other potential funders at national and international level

In Burundi, a high proportion of people do not use ICT facilities particularly due to ignorance or the high poverty the country is facing particularly these days. This is a serious problem that hampers the country's sustainable development. For this matter, a project proposal has been written. The project proposal intends to help the Burundi youth in communes (Equivalent to counties) of the Bujumbura Province (the capital city of Burundi and suburbs) to access to updated Information and Communication Technology mainly through Internet Cyber cafes

Liaison with other Space enthusiasts around the world

We have been liaising with space enthusiasts around the world especially through the network of Space Generation Advisory Council where we have been interacting with other young people on space issues and programs.

Ethiopia

February

Space Science Workshop for Students: This event was a one day event organized by Bishoftu Space Science and technology Club and it was held in Bishoftu city. Students from 10 high schools participated in the event.

June

Space and Natural Science Day A two day Event organized by Debub University Space Science club and Debub University.

September

Space Science Bazaar Organized by Bishoftu Space Science and technology club and more than 25,000 people visited the bazaar which was held in Bishoftu

November

IHY-SCINDA Workshop 11-16 November 2007 Ghion hotel, Addis Ababa More than 100 space physicists from different countries participated. SCINDA took place on 11 November 2007 and IHY workshop was a five day event from 12-16 November 2007. Ethiopia NPoC took part in both SCINDA and IHY workshops.

Mauritius

Mauritius, new partner in SGAC. National Point of contact Assad Anathallee only recently appointed in August 2008.

Mauritius is a developing country with very limited resources. GDP (PPP) of only around \$16 billion with no national space program.

Current Space Activities In Mauritius

Radio Astronomy - The University of Mauritius (UOM) is instrumental in the basic space science activity in Mauritius. Operating the Mauritius Radio Telescope (MRT), which is an Indo-Mauritian joint venture with the Raman Research Institute and the Indian Institute of Astrophysics (both based in Bangalore), the UOM is equipped to conduct surveys of the Southern Sky at 151 Mhz in the declination range -70 degrees to -10 degrees with a point source sensitivity of 150 milliJansky (mJy) and an angular resolution of nearly 4 arcmin by 4 arcmin (complementing the northern 6C Cambridge survey). (Rughooputh S.D.D.V et al., 2002) Given its latitude, Mauritius is well situated to accommodate more scientific instruments and thus if more money were made available to the scientific community, there would definitely be more local and international interest to set up observational campaigns on the island.

Remote Sensing/Geographical Information Systems- Another joint venture of the UOM, with the Philips University of Marburg (Germany) carrying out various studies, mainly agricultural, environmental and coastal zone mapping and management using Land Remote Sensing Satellite (LANDSAT), Satellite pour l'Observation de la Terre (SPOT) and Radar Satellite (RADARSAT).

A National Remote Sensing Center for Mauritius (NRSCM) has been set up, functioning in conjunction with Indian Remote Sensing Satellite (IRS). Cooperation with the Indian Space Research Organization is already well established with a Telemetry, Tracking and Commanding station in operation in Mauritius. (Rughooputh S.D.D.V et al., 2002)

Introduction to model rocketry- Lancée fusée à Eau/ Model Water Rocket launch with students of Lycée La Bourdonnais (secondary school).

Nigeria

The Nigerian chapter of the SGAC started this year with the appointment of a new NPoC in the person of Kio Michael. T.E. Committees were immediately set up to map out strategies on how to establish space clubs across the country and the way forward of SGAC activities in Nigeria and the committee report is currently awaited.

There were certain points raised during the meeting for action, they included:

1. Set up an SGAC Nigerian council. This body will coordinate the activities of SGAC in Nigeria and outside Nigeria affairs.
2. Establishment of space clubs in the six geopolitical zones of Nigeria.
3. Organizing seminars, outreaches and workshops in different part of the country.
4. Drawing up of a constitution for SGAC Nigeria.
5. Having an administrative office for SGAC Nigeria.
6. Enhancing good working and communication relationship with the African regional coordinators and the SGAC headquarters.
7. Enhancing the Image of SGAC Nigeria by doing what is ethically and socially right in Nigeria and abroad.
8. Involving all the stake holders in space that are in Nigeria.

This and other points were deliberated. It was concluded that when the committee finishes its work an implementation committee will be set up to implement the committee report.

Tanzania

Yuri's Night Celebration

Yuri's night has been celebrated for the very first time since the introduction of SGAC in Tanzania, whereby in the year 2007 NPoC for Tanzania in collaboration with the SGAC members organized a very unique and challenging event during the Yuri's Night on the 12th April.

A press release was issued to all the students of the University of Dar es Salaam and the College of Engineering; the aim was to call the attention to all the students as to why Yuri's Night was celebrated. Some students gathered at Nyerere Theater One, which is situated at the University of Dar es Salaam. All the participants looked at the sky to look at the moon for five minutes, then all sat down in a circular form to symbolize the shape of the moon, everyone enjoyed the night as the sky was so bright with shining stars and bright moon light. Then Mr. Ntullu stood at the middle of the group and explained briefly why we have to celebrate Yuri's Night. He gave an interesting story on how Yuri Gagarin, the first man in space, explored the space for one hour and 48 minutes. While in space he realized that the Earth we are living in is so fragile, with no boundaries on it, no conflicts or wars, rather just like one home where all the people were just like a single entity. During that night also assistants realized that Yuri paved the way to space exploration, which led to space colonization, and perhaps later on may lead to space tourism.

This is how Tanzania celebrated yuris night for the first time ever.

Publicity

As the SGAC NPoC for Tanzania Castory Ntullu realized that SGAC as a global network was not very familiar to many of the Tanzanian youth, that is why he decided at first to concentrate much on publicity so as to make the SGAC popular in order for many young people to get involved in space activities. Articles, press release and radio were used to address the mass, particularly the youth, on Space Generation. Although the turn up was not as high as expected at least now more youth in Tanzania has heard about the SGAC as well as participated in SGAC activities.

Currently SGAC NPoC put much emphasis on Education because he believes that education is the magic bullet, as it can have a great impact on the youth world wide.

Lobbying for space policy

It would be quite difficult for any country in the world to be successful in space affairs without having a space policy in place, as it can open a room for space industry to flourish, and to allow the Governments to have a play a bigger role in space programmes as well as space activities. This has made the members of SGAC in Tanzania gather their effort so as to pressure their government to have a space policy and to invest in space industry.

Tanzania is still immature in space technology and in order for it to follow the growing space technology it has to establish its own space policy.





Asia Pacific

Asia Pacific, the land of the 'east' possesses a rich and diverse culture. It has a history as old as civilization. Astronomy, navigation, mathematics, and different sciences have deep roots in the Asian continent. Modern man cannot help but awe at the boundless extremes of the universe or remains unaffected by how a signal from an artificial bird thousand of miles above him gives him reason to predict his crops (e-farming), to educate (distance learning) and to communicate (mobile comms, Broadcast TV, internet).

SGAC Asia Pacific RCs (Imran Majid and Bee Thakore) have tried to facilitate the NPOCs and extend as much help as possible to involve SGAC volunteers in relevant projects related to mankind and its future. It includes the input to the study of the next 50 years in space. Apart from online messages, telephone, internet social sites (Facebook, myspace etc.) have been utilized to get feedback and to promote the activities of space within the Asia Pacific countries.

Summary of the activities I have been involved in are:

1. Mentoring council members of IET Branch Karachi branch to help facilitate group projects working on astronomy, telescopes, inter planetary networks.
2. As web blog member of Frozen Sun, I passed requests to relevant astronomers and member of space science labs to make contributions.
3. Coordinating and getting feedback from Pakistani NPoC and requests for updates to Sri Lankan, Uzbekistan NPoC.
4. Request for volunteers sent to Indonesia (a telecom organization)
5. Letter draft and submission to UNESCAP in which I introduced SGAC, submitting relevant links within Asia Pacific activities and requested for relevant volunteers and notification of appropriate activities which could be attended by SGAC members.
6. Discussions on revival of SGAC Philosophy team (philosophy ethics and morality working group). Plans for submission of an abstract on a relevant topic for IAF / SGC 2008.

Indeed, 2007 has been a significant year for space activities and has seen a greater coordination of youth activities within the Asia Pacific region. Since the start of the year, the focus of the world of space organizations had turned to Asia in the anticipation of the IAC 2007 in India and the build up to the IAC 2009 in Daejeon, S Korea. April saw over 20 parties organized in the region for Yuri's night 2007 and we hope participation in this event will only increase in 2008. China's space enthusiast, Shi Heng was also awarded the travel grant from SGAC's 50 years visions project to represent the collective views of the world's youth as an invited input to the Boston University Symposium. This project saw a large participation from advocates from Philippines, India, Pakistan, Afghanistan and Vietnam.



Asian Region has been fortunate enough to amass some of the most active and inspirational individuals in our community today as NPoCs with several that are active in promoting youth activities as well as initiating them in countries that we could not reach out to before. Afghanistan saw the first ever youth event organized in late July/August. During the time of the Space Generation Congress and the SEDS International Congress, both held in India, Regional Coordinator Bijal Bee Thakore met some of the NPoCs from Asia Pacific Region in person who truly re-inspired her.

Andrea Boyd, former Executive intern at the SGAC office and a truly international space advocate from Australia who is working closely with space organizations in S Korea also received the Peter Diamandis Leadership Award for 2007. Over 20 places in Asia-Pacific joined world-wide celebrations for World Space Week and rounded up the year that marked the 50 years of space activities - a truly memorable landmark. Dr Nitto Prissy, NPoC from Bangladesh was selected to represent SGAC at the UN Workshop on space technology and forestry held in Hanoi, Vietnam. With the recent developments, youth from 3 Asia-Pacific countries have even undertaken to compete at the Google Lunar X PRIZE - we wish them all the best of luck and hope that this daring spirit can carry us through 2008.

Afghanistan

Despite the serious reasons of war in Afghanistan, NPoC in this country managed to initiate some activities throughout that state.

A first-ever space-related two-day workshop was held in September 2007. In this event more than 70 students were invited and they really enjoyed each second of this programme.

A few events more were organized from which the water-rocket event was the most interesting one. A video of 45 minutes related to the History and Updates from Space was prepared on a Projector in the hall.

Australia

Australia may not have a space agency, but is highly active in contribution to space activities and Australians undertake work in key space positions abroad. In 2007, Australia had made significant advances towards international recognition in the aerospace and space industries. This report gives a brief outline of all nationwide activities, which were held in the past year and aimed towards promotion of peaceful advancements in space exploration.



Significant events

The most recent space related event was held at the Victorian Space Science Education Centre (<http://www.vssec.vic.edu.au/>) (VSSEC) at the Strathmore Secondary College in Strathmore, Victoria. Australian Space Research Institute (<http://www.asri.org.au/>) (ASRI) held its 17th annual conference from 23-26 November. The conference showcased historical legacy, current activities and future direction of the research institute. Various presentations were given on a range of topics concerned with small sounding rocket technology development, carriage of payloads and ASRI's major liquid fuel rocket, Ausroc 2.5. The conference was well attended and VSSEC facilitated the event superbly.

Among the attendees was Brett Biddington who is the space team leader of the APAC global space team at CISCO. Mr Biddington gave an excellent insight into the progress of Square Kilometre Array (<http://www.atnf.csiro.au/SKA/>) (SKA) — radio telescope project consisting of 17 nations and 46 research institutions around the world. With a projected life of 50 years from the achievement of full operational capability in 2020, SKA project will aim to assist in the search for answers of some of the most fundamental questions concerned with astronomy (namely, what is dark matter/energy, exploration of gravitational theory, evolution and origin of cosmic magnetism & assistance with SETI project). Western Australia seems like the best candidate to host the project because of its richness in vanishing natural resource — “radio-quietness”. Final decision on the location of the project will be made in 2009/10.

Government Policy

Australian Government policy framework for space engagement is primarily concerned with areas where it has competitive advantages. This includes ground-segment aspects of space infrastructure. Australia's location and political stability make it a desirable location for major ground-segment infrastructure such as the SKA project. By participating in and supporting global cooperative and trading arrangements, Australia will achieve favourable strategic, economic and social outcomes, which will initiate further involvement in such initiatives.

Another Government funded initiative, which is well underway is the previously mentioned Victorian Space Science Education Centre (VSSEC). The centre provides opportunities for both high school students and graduates. VSSEC has quickly gained recognition in Australian space community since its initiation in 2006 through provision of education in astronomy and astrophysics to high school students. The organisation is consisted of professionals and recent graduates of various engineering and science degrees. The following programmes are currently on offer:

- Mission to the International Space Station
- Mission to Mars
- Living in space: language programme in Japanese
- Living in space: language programme in Italian
- Victorian Certificate of Education (VCE) Biology
- VCE Astrophysics
- VCE Astronomy



- VCE Chemistry

Students who have attended VSSEC and are interested in astronomy have been very lucky this year. They were given an opportunity to attend the Victorian Space School scheduled from June 25-27, 2008. This will be a three day residential conference for 40 Victorian year ten students who will:

- Take part in the Mission to the International Space Station at VSSEC
- Build and fly rocket models
- Meet a NASA astronaut
- Visit the Defence Science & Technology Organisation (DSTO)
- Learn about how they can launch Zuni rockets from Woomera site
- Design experiments that could be launched into space at Woomera

Opportunities for Students

In addition to the benefits outlined above, graduates of VSS will also have an opportunity to be selected to represent Victoria at the Australian International Space School (<http://www.yassa.com.au/AISS.html>) held in Adelaide and Woomera, as well as to win a scholarship to the Engineering Space Challenge at NASA's Johnson Space Centre in October 2009. What better time to be a year ten student in Australia!

Senior high school student and first year university students are also offered an amazing opportunity to attend the European Space Camp (<http://www.spacecamp.no/>) from June 21-30, 2008. In 2007, 26 students from 11 countries launched real sounding rockets and attended valuable lectures held by some of Europe's eminent scientists. This is a great way for young students with an interest in space sciences to familiarise themselves with the mechanics of cosmology and astrophysics.

The Australian Space Design Competition is also being held in 2008 (January 22-25). The competition is an industry simulation exercise designed to encourage high school students to choose post-school educational options in mathematics, science and technology courses such as engineering. It consists of a qualifying activity and an Australian final. The winning team is entitled to represent Australia at the Annual International Space Settlement Design Competition (<http://spaceset.org/>) held each July at the Johnson Space Centre in Houston, Texas. At this competition students from America, India, England, South Africa, Canada and other locations meet and work together in a similar format to the Australian finals.

Another event important of noting is the Engineering and Science Careers Expo scheduled during the National Engineering and Science Week from August 16-24, 2008. Event will take place on Thursday 21st of August, 2008 at VSSEC and will be attended by representatives from major tertiary institutions as well as various aerospace companies.



Events and gatherings

In addition to the above mentioned events, a plethora of other less publicised lectures and gatherings were held during 2007 in Australia. The following list gives a brief summary of what has taken place during the last 12 month on Australia's space calendar:

- Australian Students Space Association (<http://assaqu.com/index.php?page=index>) ASSA organised a guest lecture on 18th of April 2007 on International Space Engineering hosted by Christi Gau Pagnanelli.
- 7th Australian Space Science Conference (<http://www.nssa.com.au/ocs/index.php?cf=8>) was held in Sydney from September 24-27 and presented by the National Committee for Space Science and National Space Society of Australia
- 2 hour public lecture was given by Russia's cosmonaut Ms Tatiana Matveeva on 5th of July at Queensland University of Technology
- 12th Australian International Space Congress took place from March 19-22 in Melbourne
- Associate professor Lachlan Thompson of RMIT gave a lecture for the Royal Aeronautical Society (<http://www.raes.org.au/Melbourne/index.htm>) (RAeS — Australian Division) on "Winning the International Space Olympics" which in 2006 saw the first Australian team to the International Space Olympics win the prize for best space research project.
- Distinguished presenter, Astronomer Dr. Guido DeMarchi of the European Space Agency (ESA) gave some insights into the application of space-based telescopes for the exploration of the universe and addressed the advantages of space telescopes over other data gathering instruments when he gave a lecture on October 8, 2007 at the Engineers Australia auditorium in Melbourne.
- The University of Stuttgart's Space Station Design Workshop was held for the first time outside of Europe, at the University of Sydney School of Aerospace, Mechanical and Mechatronic Engineering from 16 to 21 July 2007. Due to the unique location and internationality of the workshop, it was conducted again as a one week full-time workshop, with 28 participants from Australia, Canada, France, Germany, India, Italy and Russia, including several SGAC member participants and also staff member Juergen Schlutz. The cold Australian winter could not stop two competing teams to deliver outstanding work and two elaborate space station designs. Video Summary can be found at www.youtube.com/watch?v=bnPJ9eLfZ1s, and www.irs.uni-stuttgart.de/SSDW has full details and the report available for download.
- One of the most talked about events of 2007 was the seminar delivered on 10th of October for the AIAA by Dr Mark Adler of NASA's Jet Propulsion Laboratory (JPL). Dr Adler is the Mars Exploration Rover (MER) Spirit Mission Manager who is the chief engineer and programme architect of the MER mission. The lecture covered the project initiation, its lifespan and future planned and imagined missions to Mars. Interesting and educational, the event attracted largest space crowd in 2007. Dr Adler toured and presented in several cities around Australia during World Space Week as part of the AIAA Distinguished Lecture Series.



Bangladesh

After Nitto Ronjon Bormon's appointment as a national point of contact for Bangladesh he did the following activities in different parts of the country:

June - July 2007: I visited the following Universities and colleges:

1. University of Dhaka
2. University of Rajshahi
3. University of Chittagong
4. Victoria University College
5. Carmical University College

Bangladesh NPoC distributed 200 question papers among the students in each institute mentioned above for my survey and received the following statistics. Questions addressed were:-

1. What is space science?
2. What is a satellite?
3. Could you please give any examples of satellite use for our daily life?
4. Would you like to visit the Moon?
5. Do you like to study space science?

August - September 2007:

Bangladesh NPoC selected 200 students from different institutes and sent a 10 page notebook (Bangle and English language). He translated the content of this notebook from wiki media. His notebook content was as below:

What is space science, satellite technology, navigation satellite and its peaceful uses, remote sensing and its application and GIS.

He put requests to them so that after finish the reading they would reply to him. Every student replied and they want to know more about this subject. Nitto Ronjon referred them to the SGAC website, WIKI media website, NASA website, ESA website and United Nations OOSA website.

October - November 2007:

Easy writing competition among 200 students to whom I had sent notebook. The topic was "space science, satellite technology and present Bangladesh".

He selected 10 students as of point of contact for their Institute and on the 15th November he arranged to get together with all of them and facilitated open discussion about SGAC, space science, satellite technology and its peaceful uses and the role of us as an SGAC member.

November - December 2007 :

Nitto Ronjon attend the workshop on 4-9th November in Hanoi which was organised by the United Nations and European Space Agency. From the workshop he gained huge knowledge on remote sensing, forest management and environmental protection.

On 15th December, he arranged a seminar at the University of Chittagong. All Participants were from the Department of Forestry. Total number of students 245 and 6 faculty members. It was a one day workshop from 9.30am to 12.30pm and 2.00pm to 4.30pm. The workshop topic was “Remote sensing for forest management”.

The Next scheduled workshop is 15-16 March 2008 on “Remote sensing for crops management”, location Bangladesh Agricultural University in Maymonsng. h.



China

These are the 2007 highlight events held in China:

Visions for the next 50 years of space

A survey to investigate youth Chinese’s vision for the next 50 years of space was held. More than 50 people were involved in the survey. Shi Heng, one of the organisers, was awarded the travel grant from SGAC's 50 Year Visions Project to represent the collective views of the world's youth as an invited input to the Boston University Symposium.



Chinese delegate Shi Heng and United States Delegate Tiffany Frierson at Harvard.



Yuri's night Party

Beijing 2007 Yuri's night party was held in Beijing University of Aeronautics and Astronautics (BUAA) on April 12th, 2007. Finance support from Google cooperation was recieved. It was a successful and fun evening.

India

2007 was the most exciting year for SGAC in India. During the months of September and early October, India became the epicenter of space activities, with the Space Generation Congress (22-25 Sept, 2007 in Hyderabad), the SEDS International Conference (SEDS-IC 2007 in Vellore) and the hosting of the 58th International Astronautical Congress (again in Hyderabad). These events saw a large participation of youth volunteers and young space professionals. It was India's great good fortune to hold these events during the 50th anniversary year of the launch of Sputnik-1.

Space Generation Congress 2007 and the 58th International Astronautical Congress

The sixth SGC took place in Hyderabad, a town in the South east of India, just above the peninsula. It was a great opportunity for SGAC members in India. As many as 57 applications were from India, which is 20.57% of the total applications received and also the highest number of application received from any country in the year 2007, out of which 5 members were present at the SGC in person and all of 5 also attended the IAC. For some of the Indian participants, it was a dream come true to attend the SGC as high costs of travel and Visa problems prevented them from attending SGC in previous years. One of the members had even waited 5 years to attend the Space Generation Congress.

Hundreds of Indian Students and Young Space Professionals visited the SGAC booth at the International Space Expo at the IAC and were happy to learn about SGC and its activities and many signed up for the SGTALK list.

SGC 2007 was also covered in printed media. An article on SGC 2007 featured in the Deccan Chronicle on 23rd of September 2007. The article describes the main projects, an interview with the SGC 2007 Manager Kevin Stube, and Indian Delegates Ashish Mistry, Ashish Sharma and Kavya Manyapu.

Appointment of new National Point of Contact

The year 2007 also saw the appointment of Vikrant Narang - a young and dynamic space professional - as the new National Point of Contact of India. At the appointment, Vikrant, expressed his determination to do his best to strengthen and spread the network of SGAC in India.

SEDS-IC

Another very exciting youth space event was held in a small town called Vellore 140 kms from Chennai, India's 4th largest city. This was the Students for Exploration and Development of Space International Congress (SEDS-IC). Whilst SEDS has had 20 successful years since it was first instituted at the Massachusetts Institute of Technology, the SEDS-IC was only the 2nd meeting of all its international chapters. This SEDS-IC was particularly remarkable as being organized by the largest SEDS chapter, all based at the Vellore Institute of Technology (VIT), with 70+ members. A purely student organized event, it was heavily supported by the VIT faculty and advisors as well as the Indian Space Research Organization (ISRO) and was inaugurated by the State Minister for Science and Education. Bijal Bee Thakore - SGAC Asia Pacific Regional Co-Coordinator - also attended this event.

Looking Ahead

SGAC in India looks forward to a great year 2008 and will be making efforts to effectively communicate about SGAC activities amongst the students and young space enthusiasts in India and also work towards increasing participation in SGACs projects in keeping with the SGACs new direction to focus on projects and project output.

Japan

Japan had an exciting year especially with the launch of the Kaguya probe to the Moon. In April, various groups held 6 Yuri's Night events in 3 cities, including Yokohama and Tsukuba for the first time. Japan had only 1 remote participant at this year's Space Generation Congress; they would like to think of ways to overcome the language barrier, which seems to be the biggest hurdle for interactions with people outside of Japan. They had a fairly large Japanese delegation at the X Prize Cup again, with booths to introduce Japanese space activities and culture. Yuki Takahashi, NPoC in Japan is making some progress in finding more active participants for the Space Generation.

Korea

Unfortunately, there were no special youth space activities in Korea at last year. A meeting was held in September. Six young space enthusiasts gathered, talked about space and had fun.

A Yuri's Night Dinner Party was organised in Gyeongsan on 12 April 2007, attended by Yeungnam University local students as well as international students from Australia, China, France and Italy.

Seung-Hyun Hwang, Korean NPoC, recognized there are so many Indian people in Korea especially in Deajeon province, where he lives. So he contacted three Indian young students but just one of them got together at that time. NPoC for Korea will try to make more meetings.

In April in 2008, the first Korean astronaut will fly to the ISS onboard the Soyuz. That will be a great event of the year in Korea. After that Korean young people get more interests about the space

Malaysia

The highlight of 2007 was the launch of the first Malaysian cosmonaut, or Angkasawan as he is called in the Malaysian language to the International Space Station and his return. Dr. Sheikh Muszaphar Shukor, an orthopaedic surgeon attached to the National University Malaysia Hospital carried out with him the dreams and hopes of the nation and lifted off in Soyuz TMA-11 together with Commander Yuri Malenchenko and Flight Engineer Peggy Whitson, from the Baikonur Cosmodrome, Kazakhstan, on the 10th October 2007, 7.21pm local time. The flight opportunity arose from the purchase of 18 Russian Sukhoi's by Malaysia early 2003. In October 2003, the Malaysian National Space Agency or Angkasa and the Ministry of Science Technology and Innovation to select the crème of the crop from a pool of 11,000 applicants who applied for the Angkasawan Programme. The secondary Angkasawan was Major Dr. Faiz Bin Khaleed, a dental surgeon with the Royal Malaysian Armed Forces. Both youths survived the 18th month long training programme at Star City and were commissioned as Cosmonauts by Roskosmos, the Russian National Space Agency in November.

Dr. Sheikh's 10 days in space opened the eyes and imagination of the people of Malaysia, especially youth and school children. His activities and experiments conceived by local universities on the International Space Station were telecast live on the national channels. A significant milestone was the organized Amateur Radio contact between Dr. Sheikh and groups of school children at the Amateur Radio Station located in the National Planetarium. Dr. Sheikh did his best to answer many interesting questions on how his daily life was, onboard the ISS in micro gravity.

His return was nominal until the final descent when the module veered a few hundred kilometres off the landing zone to the East. Thankfully the Russian landing team located the descend capsule and all crew members were safe.

The Angkasawan Programme marked a significant event in the 50th year that Malaysia, more precisely the peninsular of Malaysia, obtained her independence from British Colonial rule. As Dato' Prof. Mazlan Othman, the director of Angkasa, eloquently puts it,

“It has galvanized the nation's interest in space, enhanced the nation's awareness of its importance to humanity and inspired a generation of young Malaysians.”

Yes, the Angkasawan programme has indeed opened the minds of youth that dreams are possible. Yet, as a developing nation, Malaysian youths are also pragmatic. This is evident from the Workshop on Youth for Space: The Next 50 Years held on the 8th to the 9th September 2007 and organised by Angkasa. The workshop covered three main categories, security¹, discovery and prosperity. The general outcome was that, yes Malaysians can conquer space as ‘Malaysia Boleh!’ (Malaysia can!), a ‘mantra’ shouted by Malaysians when faced with tremendous odds. But more importantly, the youth viewed space technology should be integrated with other existing technologies to solve problems such as natural disaster mitigation, communication, protection of our natural forest and wildlife reserves, information dissemination, agriculture, fishery, transportation, all leading to increasing and prospering the quality of life for Malaysians, especially in the rural areas. An interesting stance regarding national security is that, although national assets and the security of Malaysia must be upheld, the youths viewed that weaponization of space and getting into an arms race is not necessarily a solution and asked instead “Is there a middle ground?”

The world celebrated 50 years of the space age in 2007. Malaysia's journey into space has only just begun. With a collective vision and strategic planning grounded with a pinch of pragmatism, the youths of Malaysia will and shall one day join other space fairing nations in achieving humanity's destiny to reach the stars, definitely before 2057!

New Zealand

Disappointingly, public interest in space and space exploration has never been high in New Zealand, with a dearth of relevant youth organisations in particular. Despite this, there is certainly room for improvement, as a number of New Zealand's universities offer Science, Applied Science and Engineering qualifications that are potentially relevant to Space, Space

¹ The authour gave a talk in the security section on the dual use of space.

Technology or Space Exploration. In opinion of Brett Chapman (NPoC of New Zealand) this means that there exists a significant untapped potential amongst the Science, Technology and Engineering professionals of tomorrow. Hopefully one day New Zealand takes its place on the international scene, and contributes fully to the development of humanity's presence in space.

Pakistan

The activities performed so far in the space sector were mainly in the domain of Space Awareness for youth and school students. The second area of emphasis was activities relating to World Space Week. The key players in these activities were

Pakistan Space and Upper Atmosphere Research Commission (my employer organization).

Inter-Islamic network on Space Sciences and Technology.

A portal comprising space awareness on diverse topics including Astronomy, Atmosphere, Environment, Earth, Geological phenomena, GIS, Remote Sensing, Disasters, Satellites and Launchers was made. This portal is functioning now and can be accessed at the following address. <http://suparco.gov.pk/pages/youth-edu.asp?edulinkid=2>

The same information was also made available in a booklet which was made available to download at <http://suparco.gov.pk/downloadables/bokklet-eng.pdf>

As part of an Outreach and Space Education Project, this booklet was translated to Local Urdu Language and its printed copies were distributed in a number of Schools in Pakistan during the WSW activities. The Urdu Language version of this booklet was made available to download at <http://suparco.gov.pk/downloadables/bokklet-urdu.pdf>

Moreover the activities during WSW celebrations included an Inauguration Ceremony, Space Quiz Competition between school students, Space Declamation Contest, Space Poster Making Competition, Water Rocket Display, Space Family Fair.





Water Rocket Display participants

The NPOCs of Pakistan is planning to establish a local SGAC Pakistan chapter within Department of Space Sciences in Lahore, Pakistan. There is already a student society ISSTEC and we hope to collaborate with a few organizational changes.

Cooperation mechanism exists between educational institution and organizations in Pakistan, of these a few names are given below.

- Pakistan Space and Upper Atmosphere Research Commission,
- Space Science Department of Punjab University,
- Institute of Space Technology, Islamabad
- Institute of GIS, NUST,
- numerous institutes working in the domain of GIS and Remote sensing,
- numerous institutes working in the domain of Satellite Meteorology and
- many private companies working in the domain of Remote Sensing.

There is however a need for continuous effort required in the domain of youth. In this regard continuation of previous activities on national level (UNESCO Space Education Essay Contest, Yuri's Night, World Space Week) was emphasised.

NPoC attended UNCONGO Forum meeting (Civil Society and Outer Space) in Vienna, Austria to obtain point of views in implementation of outer space in society in general.

IEEE GRSS conference was held in Islamabad in late 2006. The topic of the conference was Advances in Space Technologies; a recurring meeting is currently being planned for the future. On recommendation of RC, a proposed Summer School/Workshop in Islamabad was considered

in preliminary discussions with Chair of Meteorology Institute in Comsats University. Currently the finance is being discussed with the Higher Education Commission.

Sri Lanka

In May 2007, Yohan Ferreira, NPoC of Sri Lanka, was invited to give a talk by the Young Members Section of the Institution of Engineers of Sri Lanka and gave a public presentation on 6th June 2007. It was about his experience as a student at the International Space School at NASA's Johnson Space Center in Houston, USA. The presentation was attended by mostly undergraduates and young professionals. The event was publicised in the 'Daily News' (the national English language newspaper in SL with the largest circulation). The flyer for the event is attached with this e-mail.

It was an honour to be selected in May 2007 as the first ever Sri Lankan delegate to attend the Space Generation Congress 2007 in Hyderabad, India and to participate in the 3 day event in September 2007. Meeting many young people from around the world with a similar passion for space and its exploration and interacting with them was a memorable experience that he will always cherish.

Also in May D.S. Senanvake from the College Astronomy and Space Science Association organized an event at the Sri Lanka planetarium. 20 school clubs gathered and discussed about the Solar System, Our star, Introduction to space exploration and SOHO mission.

After founding the 'Sky Trackers' online group on 5th September 2006¹ and its success, it was decided to 'move with the times' and create a similar group on Facebook. The 'Sky Trackers' Facebook group, for all astronomy and space enthusiasts in Sri Lanka, was founded in 2007 and presently has 89 members²

This education and public outreach group distributes interesting news items about astronomy and space exploration, space science education, links to online resources, news about local and international events and much more!

Also in September a space event was held in D.S. Senanayke College. 150 student participants from all over the country attended lectures about introduction to satellites, globalisation, advanced satellite technologies, project IRIDIUM and introduction to rocketry.

¹ <http://groups.yahoo.com/group/SkyTrackers/>

² <http://www.facebook.com/group.php?gid=6265828590>



The Royal College Astronomical Society in Colombo, Sri Lanka celebrated its 40th anniversary together with the 50th anniversary of the dawning of the Space Age on 12th November 2007. The annual astronomical workshop was held at Navarangahala with the participation of over 280 school students and teachers from around 28 schools in Sri Lanka. Astrophysicist Professor Kavan Ratnatunga was the chief guest at the event. The theme of the workshop was 'Satellites: Eyes in the Sky' and included several guest lectures and presentations. An enjoyable water rocket contest was held with the participation of 42 teams of students. It was a great opportunity for Yohan to meet many of the participants and inform them about the SGAC, its activities and goals. Many SGAC promotional cards and brochures were distributed. Thiwanka Chameera, SGAC Co-NPoC for Sri Lanka, was also recruited to the SGAC at this event.

That's about it for 2007. Recently, Yohan Ferreira was invited by the Young Members Section of the Institution of Engineers of Sri Lanka to give a presentation about SGAC and SGC 2007.

Uzbekistan

International Aerospace School – 2006/ 2007



It was the 18th time when the young “Stars Academy” gathered young teenagers who are interested and are dreaming about space. It happened in summer 2006. Only those, who are the best in astronomy, mathematic and physics, could take a part in that incredible event. Many great teachers, scientists, astronauts and pilots were invited to share their experience with young space enthusiasts. The astronaut Salijan Sharipov gave a talk during the summer season of the international aerospace school MAKSH dedicated to 45 Years of Yuri Gagarin flight in the beautiful mountain region near Tashkent.

There was another grand opening on July 25th 2007 of the 19th International Aerospace School – MAKSH-2007 – dedicated to the 150th Anniversary of Tsiolkovskiy, 100th Anniversary of the founder of practical astronautics Sergei Korolyov, 75th Anniversary of the Academician Sh. Vahidov, 65th Anniversary of the pilot and twice the hero of the

Soviet Union V. Djanibekov and the 50th Anniversary of the first artificial satellite - Sputnik.

The young space enthusiasts from different regions of Uzbekistan and France were invited to take part in activities at the school that covered the basic topics and skills in the field of

aerospace and rocket modelling. They also had an opportunity to enjoy beautiful nature in mountains of Uzbekistan.

The scientists Sh. Vahidov and Sh. Alimov, guests from Russia - astronaut V. Djanibekov, astronaut-trainer A. Malikov, the representative of the NPO “Energia” Prof. V. Sinyavskiy and guests from France - pilot Kristin Debusi and the physician Veronike Lanre also took part on the academic part of that annual program.

Tashkent Scientific Research Institute of Space Engineering becomes a partner of Infoterra GmbH, as a reseller of satellite images from TerraSAR-X.

Tashkent Scientific Research Institute of Space Engineering became a partner of Infoterra GmbH (an EADS company), as a reseller of satellite images from TerraSAR-X in Uzbekistan. This was a new step towards development of the remote sensing data market in Uzbekistan which is still very young. High resolution radar images acquired from TerraSAR-X satellite will provide excellent opportunities for the



government to monitor agriculture, water resources, and will significantly improve spatial planning as well as prediction and monitoring of various hazardous geocological processes which take place in Uzbekistan quite often. Please contact stkp@tps.uz for details



“Uzbekistan Airways Technics” attended International Aerospace Show 2007



Delegation of «Uzbekistan Airways Technics», which represents national air company «Uzbekistan Havo Yollari» has taken a part in the VIII International Aerospace Show «MAKC-2007», which was held in Jukowski city near Moscow.

This was the 8th and one of biggest aerospace show in the world, where modern achievements in space and aviation were demonstrated. More than 700 companies and organizations took part in this event from different countries. It is second time that «Uzbekistan Airways Technics» has participated in this major show. The delegation had a possibility to see new technological achievements as well as possibility to meet potential customers for future.

There was a great attention near the stand of «Uzbekistan Airways Technics». Several companies, like «Atlantic Jet Support», “Jakutia” are very interested in cooperation with «Uzbekistan Airways Technics» in aircraft maintenance and other services. There was also meeting with a vice-president of «Pratt&Whitney», where the possibilities of engine maintenance were discussed.

Tashkent Aviation Plant joins Russian United Aviation Construction Corporation.

Tashkent Aviation Production Association (TAPOiCH) is a leading high-technology company of Uzbekistan, which was originally moved from Russia during World War II. Since 1972 it has been mainly involved in production of Ilyushin IL-76, a 4-engined strategic airlifter, which is in widespread use in Eastern Europe, Asia and Africa. Until the collapse of the Soviet Union it had produced over 900 cargo and military airplanes.

The First Prime Minister of Russia Sergey Ivanov and the Minister of Finance of Uzbekistan Rustam Azimov have signed the agreement about the cooperation in the field of the aircraft building and integration of the Tashkent aviation production association in the Russian company United Aircraft Building Corporation.

Further development of the unique Radio-astronomical complex PT-70

According to the Center of space researches of the Academy of Science of Uzbekistan the preparatory phase in development of the unique radio-astronomical complex PT-70 on the high plateau Suffa in the Djizzak Region in Uzbekistan has been finished by Russian and Uzbek specialists.

The Project is carried out by two countries in the context of the intergovernmental Agreement about creation of the International radio-astronomical observatory on the plateau Suffa. The radio-telescope with a mirror of 70 meters in diameter will be the biggest astronomical tool of the millimeter diapason, on which the absolute minimum of brightness temperature of the whole spectrum of the electromagnetic space background radiation exists. This kind of spectra is the most perspective for space research and study of the cold Universe substance. The observatory allows carrying out the large-scale applied researches in space and at the same time solving the number of military applications.

Intergovernmental program on peaceful use of space and Earth

The exhibition “Telecommunication and Information Technologies” was held recently in the capital of Uzbekistan – Tashkent city. More than 35 companies from 11 different countries like Russia, Kazakhstan, Germany, France, Korea, Singapore, Latvia, Belgium, Israel, and Holland attended the exhibition.

In the scope of this exhibition the Russian Scientific Research Institute plans to carry out the number of Seminars on topics related to “Intergovernmental space program on utilization of the Earth and space for peaceful purposes”, “Monitoring of transportation means”, “Search and Rescue”.

**Space needs professionals**

The Russian astronaut Vladimir Djanibekov initiated the project “Tempus” at the meeting with teachers and students of the Tashkent State Aviation Institute.

The project partners are the Tashkent State Aviation Institute in Uzbekistan, Berlin Technical University in Germany and the Institute of Denaura in Belgian. The project was initiated by the two former students of aerospace department of Tashkent State Technical University and from the German side by Arnold Shterenharz who worked at the Tashkent State Aviation Institute and the scientist Dmitriy Bogdanov who continues his study at the Berlin Technical University. It was considered that SGAC members could also be involved in this project.

This project was supported by the European Commission. The plans cover the preparation of space technologies professionals at the Tashkent State Aviation Institute, opening satellite technologies lab, satellite data processing, etc. Besides that the development of accurate models of Earth satellites with weight of $\geq 10\text{kg}$ were discussed within the scope of the project.





Europe

The European space sector has been on hold in 2007, while awaiting the launch of the Columbus module to ISS. Other space projects have developed slowly, but are still caught in the traditional European political turmoil, where national priorities are in a constant limbo between conflict and cooperation with all European space interests. One such project is the Galileo global positioning system, where discussion of priorities and economics in the project, is under constant discussion in the European Union.

In the European population, space exploration is not on the agenda, and in general, science does not have a priority in the public and political debate, despite the fact that economics in Europe is quite positive at present. Positive statements on participating in new interplanetary manned missions have been made both by the Russian and French president, but these views need to be concretized and converted into political priorities.

General priority of space sciences in the general and university educational systems is lacking in most European countries, and where education in space science is taught, there is a priority on satellite missions for present needs in military and communication. Space generation in Europe therefore have an important role to play, to put space on the European agenda again, and to implement the longer visions of SG for future space development.

The European Region has been quiet active this last year, with many national events where SGAC either collaborated and/or was represented by one of our Representatives. One such event was the very successful "Mars Festival" in Poland. Despite these successes, many challenges and plans still lie ahead of us. We have been struggling through the year to organize our first set of bi-annual European meetings and after having suffered from some drawbacks the future seems now bright, as the first such meeting will take place in the first quarter of 2008. And of course the big event of 2008 will be the return of the IAC and SGC to Europe in Glasgow, since it was held in Valencia in 2006.

Austria

Committee on Peaceful Use of Outer Space (COPUOS)

Each year in February the Committee on the Peaceful Use of Outer Space convenes in Vienna. The committee has a legal and a technical subcommittee. SGAC delegates participate each year in the both of the subcommittees as well as the General Assembly in June. COPUOS is an excellent place to meet international representatives of the space community, various



organizations involved in space issues around the world as well as experts in all kinds of space-related fields.

SGAC NPoC as Liaison with Austrian Space Forum, February 2007

In order to improve our cooperation between SGAC and the Austrian Space Forum (ASF) the Austrian NPoC, Manfred Steinkellner, spent the whole month of February working at ASF headquarters in Innsbruck. This period was spent partially working on ASF matters in order to gain insight into their work as well as to understand their needs. Furthermore it was used to see how SGAC, providing the global network and ASF, as an organization with a big member base in Austria, could work together in the future. These thoughts and the mutual understanding that was build up during this valuable time were used later on in the Space Fair Vienna as well as in other public outreach projects of SGAC Austria.

Austrian Space Day, 27th March 2007

At the Austrian Space Day, held at the Siemens Forum in Vienna, most of the Austrian companies were involved in Space Business get together. Ranging from GIS provider GeoVille in Innsbruck to Austrian Aerospace in Vienna, all the companies with their diverse backgrounds and their varying product portfolio were there. Throughout the day there were presentations of the company's recent products and their new ideas and visions. Furthermore students who participated in the Alpbach Forum, an interdisciplinary gathering in the western parts of Austria that tries to find answers to a myriad of society's problems, presented their space related project at this opportunity in front of all the Austrian space companies.

ESA Space Camp, Millstätter See, Carinthia, 22nd July – 4th August

The ESA Space Camp has become a very good tradition, nearly an institution. Every year about 150 kids from ESA employees have the amazing opportunity to relax for about two weeks, but that's not all. These camps combine fun, relaxation, space and sports, at least that is what they did this year. Our partner the Austrian Space Forum got the contract for the execution of the ESA space camp for 2007. The kids were invited to Carinthia, Austria's most southern province where they had an intense experience over a time of two weeks. Sport sessions in the morning were followed by lunch and fun-science lectures in the afternoon. Activities ranged from swimming, mountain biking to canoeing and from scientific lectures to remote-controlling rovers as well as building their own rockets.

An ESA astronaut visit was on the program as well as a lot of ESA experts who came by, so did local personalities from politics and science who also had a look at this special group of young kids.

Space Fair Vienna, 15th Dec 2007

In cooperation with the International Space University SGAC held a space fair in Vienna. This fair was intended to highlight existing opportunities in the world of space. It mainly targeted young students, although due to SGAC promotion activities retired professors from the Technical University of Vienna came along too. Our special guest was Prof. Dr. Johannes Ortner, one of the founding members of the Austrian Space Agency.

The event was held at the University of Vienna and attracted about 50 visitors. Following the keynote speech by Dr. Ortner there was a general part on the International Space University summer session program (SSP), followed by an alumni presentation of Manfred Steinkellner. Then there was a presentation of SGAC by its officer Agnieszka Lukaszczyk followed by a presentation of the Austrian Space Forum which again highlighted opportunities of involvement and a couple of their outreach activities.

All in all the event was a success as participants got connected very well with some important people in the Austrian space sector and students got a glimpse of involvement opportunities in Austria. SGAC is looking forward to a new version of this event the next year which will involve even more existing organizations and demonstrate ways of how to get involved in a field that is cutting-edge, not only in one but in many perspectives.

SGAC and Austrian Space Forum in public education

Another activity triggered by SGAC was the Public Outreach Initiative. This initiative aims to reach as many pupils as possible and let them understand more about space. This event was the first to start with, in order to get a feeling for schools in Austria, what the current environment is like, what they need and what they are interested in.

Contact with St. Martin high school started a while ago, interest on both sides was there, it was just a question on how we would take this further. Options were ranging from a single speech lasting for two hours in their school to a full blown, multi-disciplinary education project around Mars. In order to get to know each other better we started with a single speech approach, taking this as a beginning and as a getting to know.

The speech at St. Martin was focused around Mars, as our partner the Austrian Space Forum, had done a Mars Analogue Research Mission at the Mars Desert Research Station in Utah, USA. Gernot Grömer from the Austrian Space Forum shared the crew experiences at this mission and led the students to understand a couple of key scientific insights on current Mars research questions. Surprisingly interesting was the students reaction on the question “Who would go on a one-way trip to mars?”, which led to around 5-10 kids raising their hands, out of a group of 50 students. Given this enthusiasm we will eventually make it there.

At the moment SGAC is in touch with Mrs. Haimann, a physics teacher from this school, in order to workout the specifics of this multi-disciplinary Mars project which should also involve external experts from ESA and maybe NASA in order to increase the personal importance of those projects for both the school and the students.

Croatia

Space Travellers Gather in Croatia for Historic Summit

On the occasion of the fiftieth anniversary of space travel, space travellers with a combined 415 days of space experience gathered in Croatia to discuss the future of human spaceflight.

The summit¹ brought together private space traveller Greg Olsen, veteran astronaut Ed Lu, active cosmonaut Valery Tokarev, and prospective space traveller Per Wimmer. Olsen, Lu and Tokarev all have substantial time on the International Space Station, while Wimmer has tickets on future suborbital flights. It was the first time that all types of space travellers had come together in Europe.



Kids asking questions during the forum

Summit organizer Dr. Bojan Pecnik remarked, "This is the first time that space travellers have visited this region since Yuri Gagarin in the early sixties."

The conference, "Human Presence in Space," was organized by the Croatian organization Znanost.org, a non-profit dedicated to science education and outreach. The aim of the event was to inspire the next generation of scientists in Europe and Croatia, and to chart the future role of smaller countries in human spaceflight.

Vladimir Ivkovic, a co-organizer of the summit who is now working with NASA's Johnson Space Center on space physiology, stated, "We hope these space pioneers will inspire children to pursue studies in science, math and technology."

¹ www.space-forum.org

Croatia in Space

Croatia, like many smaller countries, has never had one of its own citizens go into space. The country gained its independence from the former Yugoslavia in 1991. While the Soviet Union had a program to launch representatives of Eastern Bloc countries, Yugoslavia was a non-aligned country and so did not participate in the program.

Despite this, or perhaps because of this, there is substantial interest in spaceflight in Croatia. Croatia is a prospective member of the European Union, and one of the topics of discussion was whether Croatia might join the European Space Agency in the future.

Another hot topic was the lack of spaceflight regulation in Croatia, which could open up commercial opportunities for future space tourism companies operating in Europe, including zero gravity flights.

Tonka Buric, a Croatian student, presented a case study that showed that it was possible under existing Croatian laws and airspace regulations to fly parabolic flights. "Starting parabolic flight in Croatia would expand Croatia's international reputation for tourism. The market is there. All that is required now is the will."

The Future of Croatia in Space

Sited in the coastal city of Split, the three-day conference drew attendees from across Croatia. The conference was opened by the Croatian Minister of Science, Education and Sport, Dragan Primorac, and underscored how important space is to the future development of the country. The event also included a series of lectures to over 200 local schoolchildren.

Znanost.org, the producer of the event, is led by a group of dynamic young scientists, many of whom have trained abroad but have returned to their home country to help develop the next generation of scientists.

Dr. Dejan Vinkovic, president of Znanost.org, said, "For a small country like Croatia without a space program, this event has opened the minds of children to the possibilities in space and science, and showed the general public the value of investment in science and technology."

The summit capped several years of space and astronomy outreach organized by the group, including the development of a national network of astronomy education, higher education and scientific research. The name of this broader program is Astrophysics Initiative in Dalmatia.¹The next goal within the Initiative is the creation of a center of excellence for space sciences.

¹ www.aphyid.org



Znanost.org has teamed with the physics department of the University of Split to launch a new graduate program in astrophysics in 2008.¹

Another space activity held in Croatia was the international forum “Human Presence in Space”. Society znanost.org, in collaboration with Physics Department at the University of Split, organised this prestigious international forum, from 24 to 26 of August, 2007, in Split, Croatia. Forum panellists were: Edward Tsang Lu (American astronaut), Valery Tokarev (Russian cosmonaut), Gregory Olsen (space traveler), Per Wimmer (prospective space traveler), Slavko Kulić (economist), and the forum moderator was George Whitesides (executive director of the National Space Society). This event was a part of [Astrophysics Initiative in Dalmatia](#).

France

Le Bourget Air Show

This air show is one of the largest in the world, with over two thousand exhibitors, more than 250 aircraft from 88 countries and more than 750,000 visitors expected during these seven days! The show was open from June 18th to the 24th. It was an opportunity for young people to express their passion toward a fast growing industry, meet high profile people to discuss their concerns and enjoy the most splendid aircraft shows. You can watch some videos at YouTube²

CNES & youth interested in Space

Educating and training young people remains a priority for CNES, to:

- Inform future citizens about how space technologies are helping us to better understand and protect the planet
- Actively nurture a science and engineering culture among young people, using the appeal of space as a teaching tool

¹ <http://fizika.pmfst.hr/astro>

² <http://www.youtube.com/watch?v=1kg56OaD4eA>

<http://www.youtube.com/watch?v=Q4K7KB9d0XQ>

<http://www.youtube.com/watch?v=qbDS82Kwl8E>

Argonautica



The Argonautica project gives pupils the opportunity to track wildlife—including leatherback turtles, albatross and king penguins—and drifting buoys released by round-the-world yachtsmen, using Argos transmitters. By comparing their movements with data from satellites like Jason-1, they gain a closer understanding of how the oceans work. Argonautica proposes practical, hands-on activities showing how satellites are helping to teach us more about the oceans and protect the marine environment.

Balloons carry gondolas with experiments conceived and built by pupils to altitudes up to 30,000 metres. The data collected—for example, temperature and pressure readings, photos or data from germinating seeds—are useful for studying a wide range of subjects, including physics, biology and geography. A balloon will fly for 2 to 3 hours before bursting and parachuting gently down to Earth. Some gondolas carry a transmitter to relay readings to ground throughout the flight.

Mini-rockets built entirely by pupils are propelled to altitudes of about 400 metres by a motor supplied by an approved instructor. The aim of such projects is to design a system that ejects the parachute at the end of the flight, so that the rocket can be recovered intact. Besides teaching children rocket construction techniques, this activity also covers the physics of rocket flight.



Microgravity experiments on the ISS and Airbus

- Every year, CNES offers secondary school classes the chance to fly an experiment on the Airbus Zero-g, which is capable of performing 30 parabolas during a flight, creating microgravity conditions for about 20 seconds each time. Teachers can also use the results of scientific experiments performed on board the International Space Station (ISS). Sometimes, the ISS flies projects designed by schools. Courses for teachers

The Space Culture office also organizes 10-day summer courses for teachers, and seminars throughout the year.

Ireland

Yuri's night: a fantastic night in Taboo nightclub in Navan, Meath. Held in conjunction with the Venture Management Society of NUI Maynooth University, we had over 200 people through the

door. For some reason the "space theme" just prompted mainly tin foil outfits that left little to the imagination!

The design & launch of the website spaceireland.com. Mark O'Dwyer (NPoC for Ireland) developed the site over a period of 3 months. The site contains a directory of all Irish companies involved in all aspects of space. It also includes recent space news, info on careers in space and Irish space involvement and links to resources such as international space agencies, Hubble and not forgetting a whole page devoted to the SGAC.

General Activities: The Astro 2 society in my College is working on few projects for the new year. For example, getting speakers in to talk to students on issues like innovative technologies and space tourism.

Norway

There have been a lot of space activities in Norway in 2007. Unfortunately, SGAC's name has not been much attached to them. The "problem" that Are Vidar Boye Hansen (NPoC of Norway) has faced this first year as Norwegian NPoC is that there already are a lot of activities and inspiration concerning space among young people in Norway, so much that it is apparently saturated. An example of this situation is the following:

When Are Vidar Boye was appointed NPoC, his first idea was to arrange a large Sputnik celebration on the 4th of October. But two weeks before there was the yearly "Science Days", where all the space institutions in Norway were heavily involved, and two months later there was the yearly Astronomy Festival in Oslo. People liked his idea, but could not be convinced to participate in between the two large festivals. This year there will be a large public happening in connection with the solar eclipse on the first of August as well.

Poland

Year 2007 was crucial for space activities in Poland. In April Plan for European Cooperating States (PECS) was signed by Polish government, which put this country on fast path to membership in ESA. What is important, this is the first political decision which officially set up Polish space strategy. This act of political will allowed several important space activities. Science, industry and NGOs sectors were active on the Polish space scene.

The four major space events, with more than two hundreds attendants each, took place in 2007 compared to zero in 2006 and one in 2005. SGAC National Point of Contact has started to operate since September and took part in reshaping space lobbying. Year 2007 has brought rising

of enthusiasm for space exploration and has shown that lots of things have to be done if Poland want to play an active role in space exploration.

Important events:

- 28 March - 30th anniversary of Polish Space Research Center – science event.
- 27th April - PECS was signed.
- 21-21 June - Satellite Technology Days, industry and political event, nearly 50 industry expositors, guests from ESA and Polish government representatives.
- 2-3 September "Space for Humans" conference to celebrate the 50th anniversary of Space Age, scientific and political event, UN COPUOS, ESA, NASA, Polish government representatives, about 100 scientists, more than 400 attendants, SGAC cooperation.
- 27-28 September - Mars Festival, NGO Mars Society Poland main event, several lectures about space exploration, about 1000 attendants, SGAC support.

Polish space scene has following characteristic:

- There are several NGOs and informal groups interested in space exploration. These organizations are separated. There is little exchange of information between them. This situation is the main cause of failure of several interesting projects. Ideas need a certain number of determined people to become reality.
- There is no national space policy, there are only separated space projects. Without official support the situation of the sector (industry, science and NGOs) is unstable. PECS gives some kind of stabilization.
- There is no space industry with long tradition. So there is a lack of sponsors for NGOs space activities. There is no known rules how manage space projects. This situation has been changed because some new firms were set up. But their role as NGOs supporters will not be important in several years
- Technical universities (Warsaw, Wroclaw, Gdansk) which offer high level of education, and Space Research Center with long tradition – this institutions can support technically space projects. Science society is wide open for space fans who want to cooperate on projects.
- There is an unsatisfactory knowledge about SGAC and its role in space politics on the world. Sometimes it complicates the work of NPoC because people are surprised why someone would like to help them.

Conditions which were underlined in previous chapter and events described in introduction caused to prepare following working strategy. NPoC is going to concentrate on two main sectors: NGOs and Space Politics.

Non Government Organizations:

- First year: Building integrated space exploration society, with good communication between different NGOs, and possibility to work in bigger group of NGOs in project.

Building a mark of SGAC as a supporter of this kind of activities. Inform people about role of SGAC. Give space enthusiasts tools to manage their organization and projects.

- Second year: Inform about world activities, open for different European NGOs, create chance to participate in SGAC global projects. Management support of NGOs.

Politics:

- become permanent observer of Polish Astronautical Parliamentary Group
- inform people about directions of Polish space politics
- create feedback between astronautical NGOs and politics

Sector NGOs:

- Help with Mars Festival, MSP NGO
- Scarab project – management assistance, PTA + SKA NGO`s
- SKA+PTA series of lectures

Politics:

- Contact with Polish Space Office, help with education activates (I found 5 voluntaries who will help PSO to build an educational service)
- Becoming a permanent observer of Astronautical Parliamentary Group



Misja Mars Society Polska (MSP)



Mars Society Polska (MSP) jest oddziałem stowarzyszenia **The Mars Society**, które ma na celu doprowadzenie do załogowej misji na Marsa oraz promocję idei jego badań. Organizacja skupia specjalistów z dziedziny astronautyki (takich jak Robert Zubrin, Buzz Aldrin), naukowców, filmowców (np. James Cameron), pisarzy (Kim Stanley Robinson), entuzjastów – wszystkich, którzy dzielą wizję obecności człowieka na Marsie.

MSP działa od 1999 roku. Koncentruje się na rozwijaniu własnych projektów oraz koordynacji i promocji działań w Polsce. W początkowym okresie główny wysiłek położony był na rozwój projektu załogowego pojazdu marsjańskiego MPV. Zainteresowanie tematyką marsjańską oraz możliwości oferowane przez Mars Society doprowadziły do czynnego włączenia się Polaków w badania czerwonej Planety. Nasi rodacy brali udział w konkursie Red Rover Goes to Mars i programie sterowania łazikami Spirit i Opportunity na Marsie (w JPL w USA), w symulacjach w bazach MDRS i Flashline Arctic Research Station. Częściowo z inspiracji osiągnięć MSP powstał projekt przenośnej architektury bazy marsjańskiej. MSP zapisało się jako opiekun merytoryczny gry negocjacyjnej Columbia Memorial Negotiations. Zdołaliśmy utworzyć wokół swoich projektów grupę partnerów, którzy pomagają w ich realizacji.

Zapraszamy do współpracy wszystkich, którym bliska jest wizja załogowej eksploracji Układu Słonecznego. Zachęcamy do członkostwa i oferujemy wyjątkową pracę dla wolontariuszy.



Portugal

Portugal is an ESA member state and space industry is starting to grow, though slowly. There are quite a few small companies working in space sector, but always as sub-contractors. The space opportunities and activities are also monitored in parallel by a governmental entity, whose main role is to ease communication between these companies and the main European space players, like ESA. This is the panorama in industry.

Regarding universities, only one actually has an aerospace engineering degree (Instituto Superior Tecnico, Lisboa). There is another one (Universidade da Beira Interior, Covilhã) which provides aeronautical engineering, more focused on planes than actually space. There are however many other universities that do some research on the space area, but more specifically in other engineering areas, like mechanical or electronics engineering.

Student Activities / Projects

There are two main student space associations with representation in Portugal: Euroavia and SSETI. The first one has a local group at Instituto Superior Tecnico (IST) and I think in Covilhã as well. SSETI (www.sseti.net) is more recent and growing. There are two teams in IST and at least two or three teams in Porto university (FEUP) currently participating in SSETI projects.

Romania

2007 has been a special year - the year when our space age turned 50. On this occasion, Romania - one of the cradles of rocketry - could not be missed from the group of countries celebrating this event. Young and old – especially the young – have been involved in space research and dissemination, both at governmental and non-governmental levels. The Romanian Space Agency, for instance, is the national co-ordinating body of the space activities in Romania, and it employs many young and talented people.

On April 12th, 2007, the youth of Timisoara celebrated Yuri's Night – the Global Space Party. The organizer of the event was Virgiliu Pop, the Romanian National Point of Contact for SGAC, whereas Master of Ceremonies was DJ Space, Cosmin Iuhas. An impressive number of participants gathered at the CCCP nightclub, dancing in the rhythm of the space age, under screens showing the milestones of humankind's advance into the outer space.

In October 2007, Romania celebrated the World Space Week. Since 1999, the Romanian Space Agency has coordinated and organized the celebration of this event. In the Bihor country, students from the "Mihai Viteazul" Technical College and "Dacia" highschool, as well as members of the "Meridian 0" Astroclub, presented a multimedia outline of man's conquest of space. In the Cluj Country, an enthusiastic school inspectorate, skilful teachers and a fascinated public contributed to the success of the week. The most spectacular events took place in the Unirii Square – the central square of Cluj-Napoca, on October 4th and 5th. Pupils form



secondary and upper secondary school together with their physics teachers launched water rockets. Students from upper secondary schools interacted with the public and citizens passing by, engaging them in discussions about space activities.

Students from primary and secondary classes presented their works (posters, paintings etc). The event was organized with the support of the local council and local administration, and gathered a lot of passer-bys who had the opportunity to take photos suited as astronauts. An old sea port of Romania, Constanta was, during the World Space Week 2007 a spaceport for the imagination. The "Space for our future" theme encouraged students from the "Decebal" highschool to find ways through which space activities help save lives on Earth. On this occasion, the "Decebal" highschool hosted the first edition of the "My Space" series of events, comprising, inter alia, practical activities, visits to the Planetarium, and the mathematics competition MathSpace. In the Sibiu county, The "Octavian Goga" National College organized the national competition "Europlanet". The competition was widely popularized in the mass media, resulting in the participation of 28 schools from all over Romania.

In the Vaslui county, many events have been organized for the youth, such as "We Will Conquer Space" – the launching of mini-rockets by pupils of Applied Physics section of the "Spiru Haret" Children Club Barlad, from the "Mihai Eminescu" High school courtyard. About a thousand pupils, teachers and mass media representatives attended.

On February 21st, 2008, the Aeronautics and Cosmonautics Romanian Association (ARCA) announced its participation, on behalf of Romania, to the Google Lunar X Prize Competition (GLXP). ARCA is a non-governmental organization, that promotes innovative aerospace projects. Most of its members are under 35 years old. ARCA's proposed project is called HAAS-ELE and has three main sections: a Carrier Balloon - Solar Montgolfier designed to transport the rocket and the probe into stratosphere, an innovative air-launched, 3 stages orbital rocket, and a lunar probe.

Spain

Spanish SEDS Organization Moved To A3e

During the first part of 2007, Spanish SEDS representation was transferred to A3E, "Associació Estudiantil per l'Exploració Espacial", or Student Association for Space Exploration. Information on Spanish chapter of SEDS is available in

<http://wiki.seds.org/index.php/SEDS-Spain>

SSETI Spanish Teams

Spanish student teams from different Universities are taking part in the Student Space Exploration and Technology Initiative (SSETI), either being in charge of different subsystems of the European Student Moon Orbiter (ESMO) or acting as back-up teams. During 2007, the teams



participating were University of Barcelona (Payload - LIDAR), Universidad Politécnica de Madrid (Structure), University of Zaragoza (Mission Analysis) and University Carlos III (Flight Dynamics).

ABCtr Team

This research group, composed by four university students, is devoted to conduct an investigation on Space Pharmacotherapy by studying how ABC proteins work in microgravity. The results of this study can be useful for health care in space, and they can also have an application for the treatment of diseases on Earth.

The team is formed by a group of multidisciplinary students with future biologists and doctors, two women and two men, who have been working together with IMIM's (Institut Municipal d'Investigació Mèdica) support and tutorship. For more information on ABCtr Team, check their webpage:

<http://abctransporters.com>

LEEM Activities

“Laboratorio para Experimentación en Espacio y Microgravedad” (Laboratory for Experimentation in Space and Microgravity) is the name of the Spanish student Association that has probably been the most active one during 2007. Their main activities are listed below:

Inaugural Spanish Space Student Congress (S^3)

During the 1st and 2nd of March took place the first Spanish Space Student Congress, known as S^3. It was celebrated in the European Space Astronomy Centre, in Villafranca del Castillo (Madrid), and it meant the official presentation of LEEM. More than 150 attendants were present, including 50 personalities from the space and technology sector.

Yuri's Night

During April 12th, Yuri's Night was celebrated in Madrid. Under the name of “Human Space Exploration”, a season of several space-related films were shown in the Aeronautical Engineering Technical School (ETSI Aeronáuticos, UPM), including “The Right Stuff” or “October Sky”, as well as documentaries like “Apollo XI”, “Hail Columbia” or “Mission to MIR”. In the night, a party celebrating the first human space flight was held in the pub Chaman. Pictures from this celebration can be found in:

<http://www.leem.es/proyecto.php?ide=10165&sec=1>

Campus Party

LEEM participated in the 11th Campus Party that took place in Valencia from the 23rd to the 29th of July. Two activities were carried out. The first was an inspiring conference about the space activities of LEEM, including CanSat and Microgravity experiments. The second was a rocketry demonstration that included rocket launch. You can see the video at:



<http://es.youtube.com/watch?v=SrWaQS34sz8&feature=Playlist&p=20308BAF134A9096&index=13>

IAC 08

In addition to the previous activities that took place in Spain, LEEM attended the 58th International Astronautical Congress in Hyderabad with the paper "LEEM: Space Education and Student Projects".

Second Spanish Space Student Congress (S³)

22nd and 23rd of November were the days chosen by LEEM to celebrate the second S³ Congress. It was held in the Polytechnical University of Valencia (UPV), and included several technical sessions, as well as Workshops and Highlight sessions. During Highlight sessions several speakers from the Spanish space sector made presentations like "Spanish students and Space" or "Spanish Contribution to exploration and use of Space, past and future", among others. The Congress closed with a night Space Party.

Switzerland

Swiss Astronautics Association (SRV)

Swiss SpaceDays 2007 at the Swiss Museum of Transportation, Lucern Switzerland.

2-3 November 2007

Like last year, SGAC was present at the Swiss Astronautics Association yearly event. The Swiss Space Days aim to bring together experts and specialists from the space industry, official representatives of the national space office, enthusiasts from various space advocacy groups and students together with the public and schoolchildren.

During the two days of the events, youngsters from local schools had the opportunity to meet with professionals of the space sector, as well as ESA astronaut Claude Nicollier. Presentations focused around the history of space exploration, in the light of the 50th anniversary of the launch of Sputnik, the upcoming launch of the European Columbus Module as well as the role of Switzerland in the creation of the European space programme.

A team of parabolic flight students from Swiss technical universities (EPFL & ETHZ) did also present their work in order to inspire the younger generation to start a science or engineering career.

Two movies were also shown during the two day event. The IMAX movie "Roving Mars" was shown for the first time in one of Switzerland's IMAX theatre. The other film shown was Claude Nicollier's biographical documentary "Pour l'Amour du Ciel".



In the regular space exhibit hall of the Swiss Museum of Transportation, representatives of the Swiss space industry had booth put up to present their activities to the public. Space memorabilia from private collections were added to the regular exhibit for a one-month special exhibit.

Public interest was very high and the media covered the event in several local newspapers.

Other events in Switzerland this year included:

- 1st Swiss Astronomy Day, September 22nd, 2007 in Uetliberg, Zurich
- 3rd EPFL Research Space Day - Celebrating Sputnik 50th Anniversary October 4th, 2007 at the Space Center EPFL, Lausanne, Switzerland.
 - Early days of the space conquest and visions for the future
 - What was it like to build a small satellite then?-What is it like now?

United Kingdom

The UKSEDS (UK Students for the Exploration and Development of Space) Annual Conference took place on 17th-18th November, celebrating the 50th anniversary of Sputnik, mankind's first venture into space. The event brought students and young space professionals together to discuss the past, present and future of space exploration and the contributions that our generation and country can make. The weekend featured talks from a variety of speakers on many different aspects of space science, from the latest advancements in satellite technology to intern and career opportunities within space and astronomical organisations. It was also a great chance for students to network with space companies and professionals, as well as meeting fellow students with similar aspirations and passion for space to discuss modern space policies and future projects.

Furthermore, 2007 saw the appointment of two new National Points of Contact for the UK, Angela Whiteside and Rishi Sharda. With the 2008 SGC in Glasgow coming up, Angela and Rishi have established contact with the Local Organising Committee, and have offered their assistance in all organisational matters.

Angela and Rishi have been given the opportunity to write a short column on the SGAC in 'Spaceflight', the British Interplanetary Society publication. The first article has been submitted for the March publication, and there is the possibility of making regular submissions during 2008.



Middle East

Kuwait

February

The Kuwait Science Club has been granted funding for the construction of the first research-grade radio observatory in the Middle East, Kuwait National Radio Observatory (KNRO). The observatory will be dedicated to the study of radio astronomy.

"It is a very exciting project," said Jasem Mutlaq, Director of KNRO and a radio astronomer, "KNRO will enable us to unlock the mysteries of the universe, from distant quasars to the elusive dark matter.

By gaining a better understanding of the universe, we gain a better understating of ourselves."

Mona Anbar, director of the Astronomy Department in the Science Club, stressed the importance of this vital project "Kuwait has always been a leader in supporting grand scientific projects," she said "and KNRO will put Kuwait in bar with first world countries in the pursue of scientific knowledge."

As a cutting edge research-grade radio telescope facility, KNRO will perform a long-term research program investigating the distribution and kinematics of Hydrogen gas in our Milky Way galaxy. At the same time, KNRO will fulfil a parallel educational mission, providing a unique and hands-on introduction to science, computers and mathematics to students at all levels. The telescope facility is currently under construction and will take six months to complete.

For more information visit the website <http://www.astronomy.ksclub.org>.

April

Kuwait Science Club celebrated this event in the Astronomical Sciences Department. It was attended by the Astronomy Department members and space exploration enthusiasts from the public. Yuri's event magazines and handouts were distributed to the party members. Furthermore, a documentary featuring Yuri's first flight to space and the American-Soviet space race was played to the audience at the department's theater. Moreover, the audience participated in contests and quizzes on astronomy and human space flight, and had a buffet dinner at the Astronomy Department. The event was coordinated by -14 years old- Talal AlBahri.



September

A 14 year old member finished first stage of building [Radio Jove](#). Radio JOVE students and amateur scientists observe and analyze natural radio emissions of Jupiter, the Sun, and our galaxy.

November

South Surrah (Kuwait), November 14, 2007- Department of Astronomy & Space Science (DASS) celebrated World Space Week at Kuwait Science Club. It was postponed for one month due to holy month of Ramadan in October. In the presence of the Kuwait Science Club Chairman Iyad Al-Khorafi and board members, a group of eminent scientific including Dr. Saleh Al-Ujari, a veteran astronomer marked the event with his appearance. Also a large number of members, public and amateurs astronomers have attended the event along with local media.

Mona Anbar, Director of DASS welcomed the attendees, praised the role of Kuwait Science Club as a big contributor in the department's activities and the progress towards better performance and thanked the audience for their interest in astronomy and space sciences. Highlighting the department's activities and achievements and has been great credit to the members of DASS. Mr. Iyad Al-Khorafi addressed the audience who welcomed everyone noting that a large number of the audience is mostly outside the club which shows the interests in space science to the audience.

Maryam Aljoaan, a Supervisor at DASS, talked about the reason behind celebrating World Space Week, the history of space exploration, and compassion and curiosity to look up at the sky to explore space. In which resulted from this aspiration by sending first artificial satellite orbiting around our planet sending signals, as a mean of bringing theory of exploring space into reality.

Later Dr. Saleh Al-Ujari started his speech about topic of space science and the evolution of science and changing concepts of science time to time established a comparison between the modern and past, present and future prediction and interest. The ceremony was held next to a small workshop for children where they installed paper space models and drawing. Dr. Saled Al-Ujari passed the certificates for young members, under age of 18, who passed the first level of astronomy. In the end, a group photo was taken with Dr. Saled Al-Ujari for remembrance. Then a half-hour space documentary movie was played, while the audience went to have small dinner from the buffet.

Turkey

Even though there are no any serious activities going on Turkey, this report will try to focus on amateur and institutional space activities at the starting date of between 1 January 2007 and 1 January 2008 in TURKEY. Additionally the lacks of Space Agency in TURKEY, most activities are separated and free each other. This is a big issue that needs to be solved in next years.



In general space activities are based on Astronomy and Space related applications such as remote sensing, GIS and an effort on satellite manufacturing.

Firstly, most of activities, regarding to amateur and professional Space activities, are those directed by TUBITAK (The scientific and Technological Research Council of Turkey). One of these activities is observation weeks which is prepared every year in Tubitak National Observatory at Bakırlitepe Mountain in Antalya. More than 200 participants are attending every year. In the Professional space area TUBITAK has the facilities on Small Satellite Manufacturing, name of Tubitak-Uzay. Bilsat which is the first small remote sensing satellites manufactured at Tubitak-Uzay. Bilsat has 26.5m ground resolution. The Second generation of this satellite is name Rasat, will manufacture and launch in 2008.

Recently, Turkey has been Ikonos imaging through a regional ground station, IntaSpace Systems Inc since 2001. Turkey has also expressed an interest in handling regional distribution of images obtained through commercial, institutional and governmental organizations and this has been extended to include other aspects of general space applications data, retrieval from space-based assets and distribution to national, regional and international operators embracing remote sensing, earth studies, climatology, oceanography, atmospheric sciences and space sciences and also used for different aims to solve the problems of publics.

Other information of Space activities are amateur organizations at ASART (Ankara University Astronomy Research Society) is continues its activities organize presentations, observation days and other small activities in order to inform the public on astronomy. Indeed every 2nd Saturdays of the week organized Public day on astronomy at Observatory of Ankara University.

Additionally on activities carried out by Space generation advisory council in 2007 Mehmet Fatih Engin, NPoC of Turkey announced SGAC 2006 at Ankara University Newspaper and after that we formed up SERES (Space exploration research society) in order to contribute a SSETI project of ESA. The group was working hard at the beginning. But because of local problems and also his graduation from Ankara University and starting to education at ISU Seres couldn't continue its life. This society information's also published at the same university newspaper. You can find the newspaper below.

To make other Public aware on space and to mention the necessity of space we formed up ISU Turkish Alumni webpage www.isutr.org. it can be easily reach on that web page. Consequently, Turkey has very big young potential on Space and it must be warm more. Turkish NPoC is to continue to work on encouraging people in space activities.



Astronomi ve Uzay Bilimleri Bölümü Öğrencimiz, İspanya'daki Uzay Kongresi'nde Ülkemizi Temsil Etti

Üniversitemiz Fen Fakültesi Astronomi ve Uzay Bilimleri Bölümü öğrencisi Mehmet Fatih Engin, İspanya-Valencia'da 28 Eylül-8 Ekim 2006 tarihleri arasında tüm dünyadan 70 öğrencinin katılımıyla Space Generation Advisory Council tarafından düzenlenen ve Birleşmiş Milletler'in de desteklediği "Space Generation Congress"te ülkemizi ve Ankara Üniversitesi'ni temsil eden tek delege olarak yer aldı. Engin, "Space Generation Congress"ın ardından, Uluslararası Uzay Federasyonu tarafından organize edilen ve uzay bilimleri alanında eğitim alan yaklaşık 3000 öğrenci ile sektör temsilcilerinin katıldığı "International Astronautical Congress"de de iki Türk temsilciden biri olarak bulundu. "Space Generation Congress"ın sonucunda, ortak bir çalışmayla dünya-uzay politikası üzerine yayınlanan deklarasyonda aktif rol alan ve 12 maddelik deklarasyonun "Uzay Politikaları" hakkındaki bölümünü kaleme alan Engin ile Kongre macerasını ve gelecekte gerçekleştirmeyi planladıkları çalışmaları hakkında konuştuk.

"Space Generation Congress"ın, uzay alanında faaliyet gösteren bir oluşum olduğunu belirten Engin, tüm dünyadan uzay bilimine ya da sanayisine ilgi duyan profesyonellerin, öğrencilerin, meslekte yeni olan herkesin bir ön elemeyen geçirilerek katıldığı bir platform olduğunu belirtiyor. Bu kongre hakkında, Space Generation Advisory Council'in web sayfasına girerek bilgi sahibi olduğunu dile getiren Engin, uzay hakkındaki fikirlerini web'e yazan tüm dünyadan öğrencilerin yazılarını sürekli takip ettiğini, 2005 yılı Nisan-Mayıs aylarında da web sayfasında kongrenin duyurusunun yapıldığını kaydediyor. Kongreye katılmak için tüm dünyadan öğrencilerin davet edildiğini ancak, ilgi alanlarını ve daha önce nelerle uğraştıklarını öğrenmek için bir formun doldurulmasını istediklerini de belirten Engin, "Bu formu doldurduktan kısa süre sonra kabul edildiğimi bildiren bir mesaj aldım. Bununla ilgili bilgiyi de Rektörlüğe sundum. Rektörlüğümüz bunu memnuniyetle karşıladı. Sağlık Kültür ve Spor Dairesi de kongrenin kayıt ücreti ile bir miktar cep harçlığı verdi. Şu anda çalış-



tiğim firma yol paramı karşılarken, Space Generation Advisory Council'in bulduğu bir sponsor da 500 Euro destek sağladı" diyor. Fen Fakültesi Dekanı Prof. Dr. Cemal Aydın'ın da önemli destekler sağladığını belirten Engin, elemeyen geçerek Global Space Policy çalışma grubu içinde yer aldığını, insanlı uzay uçuşları, uzay turizmi, Ay ve Mars uygulamaları, uydularla ilgili birçok konu hakkında dünyanın çeşitli yerlerinden gelen genç katılımcılarla birlikte tartışıp, projeler geliştirmeye çalıştıklarını söyledi.

Deklarasyon Maddesini Yazdı- "Space

Generation Congress"ın sonucunda yayınlanan deklarasyon hakkında da bilgi veren Engin, "Dünya-Uzay Politikaları", "Uzay Çöplüğü", "Yakın Dünya Cisimleri", "Uzayda Güvenlik", "Uzay Turizmi", "Gelişmekte Olan Ülkelerin Uzay Konusundaki Rolü", "2007 Mars-Ay Üsüsü", "İnsanlığın Ay-Mars Keşifleri", "Kolonileşme", "Uzay Araştırmaları", "Uzay Teknolojilerinin Gelişmesi", "Uzay Alanında Eğitim" ve "Toplumu Bilgilendirme" ana başlıklarındaki deklarasyonun; uzay ajanslarına, hükümetlere, uzay alanında çalışma yapan şirketlere tavsiye niteliğinde oluşturulduğunu vurguladı. Deklarasyonun, "Uzay Politikaları" ile ilgili bölümünü kaleme aldığını belirten Engin, gelişmekte olan ülkelerde gelecekte görev alacak uzay liderlerinin yetiştirilmesi ve altyapının oluşturulması için Space Generation Advisory Council'in destek sağlayacağını bildirdi. Engin, bu deklarasyonun yakında tüm dünyaya duyurulacağını ve bir milyonun üzerinde imza toplanmasının beklendiğini de söyledi. BM'nin, Deklarasyonu, daha önce 1999 yılında imza toplanmadan

hazırlanan UniSpace III deklarasyonuna benzer olarak dış uzayın barışçıl amaçlarla kullanımı yönünde kendine referans alacağını belirtti.

Engin, "Space Generation Congress"ın ardından da Valencia Bilim Müzesi'nde, Uluslararası Uzay Federasyonu'nun organizasyonu ile 3000'e yakın insanın paneller, konferanslar ve fuar çatısı altında bulunduğu "International Astronautical Congress"e katıldı. Kongreye, Türkiye'den katılan iki kişiden biri olan Ankara Üniversitesi öğrencisi Engin, buradaki kongrede tam bir uzay teknolojisi şovu yaşandığını, kongrenin Hindistan, İsrail, Avrupa Uzay Ajansı, Alcatel Alenia, SpaceX, AIAA, Surrey, İngiltere Uzay Ajansı, Kanada Uzay Ajansı, Japonya Uzay Ajansı gibi uzay ajanslarının katılımıyla gerçekleştiğini vurguladı.



ESA Uydusuna Katkı Sağlamak

İstiyoruz- Kongrede, Avrupa Uzay Ajansı'nın (ESA) sunduğu bir projeden çok etkilendiğini belirten Engin; bunun, AB ülkelerinden 20 kadar üniversitenin ortak çalışmasıyla eğitim amaçlı bir mini uydu projesi olduğunu, bu projeye Ankara Üniversitesi öğrencilerinin de dahil olması için çalıştığını söyledi. Uzay alanında meydana gelen gelişmeleri yakından takip ederek doğrudan içinde bulunmaları için Bölümündeki öğrencileri teşvik ettiğini ve bunun için ilk olarak arkadaşlarıyla "Uzay Keşifleri Araştırma Topluluğu"nu kurduklarını vurgulayan Engin, eğer bu projeye öğrencilerimizin katılımı sağlanırsa, gelecek yıllar için bir altyapının oluşabileceğini sözlerine ekledi.

Source: News of Ankara University published to public day 10 January 2007





North, Central America and the Caribbean

This year the North America Region underwent several organizational changes. First, Cynthia Jimenez stepped down as Regional Coordinator (RC) and subsequently Rob Guinness was elected to succeed her. In October, the RCs proposed a name change for the region to “North, Central America, and the Caribbean” to more accurately reflect the geographic region that the organization represents. This proposal was unanimously accepted at the General Assembly.

Also in October, seven members of the North America Region of the Space Generation Advisory met via teleconference to kick-off discussion on how to re-energize the North America region. For some members, it was their first real-time interaction with other members of SGAC, so we started with introductions of each participant. Kirk Kittell and Loretta Hidalgo briefly reviewed the purpose and goal of our organization. Loretta explained her role as Director of U.S. Operations.

Next, Kirk and Rob, as Regional Coordinators (RCs), described their goals for the North America region. Kirk was working on a number of projects, including an Education Working Group initiative and wanted to get this and other projects actively running in our region, helping to engage new and existing members. Rob’s number one priority is recruiting new National Points of Contact (NPoCs) for those countries in our regions which are not currently represented.

All participants expressed their desire to help in a campaign to recruit new NPoCs. Andres made the point that, in his case, he’d like to work first on getting things up and running in his country, but that he’s willing to help where possible in neighbouring countries. This approach is firmly supported by both RCs. One idea Andres presented was to conduct a survey to find out what areas of space exploration people in his country are most interested in. This idea was well supported, and other NPoCs will try to do the same for their region.

Lastly, a number of specific projects were discussed at this teleconference, including Yuri’s Night, SpaceAlumni.com, InspireSpace, and the development of space-related Facebook applications. The RCs would welcome any new project ideas from anyone who would like to be involved in our region.

In November, Kirk Kittell stepped down as RC and subsequently U.S. NPoC Daniel Porras was elected as his successor.

Rob and Daniel are working with the Executive Council and the region’s NPoCs on a number of new initiatives, including the educational project called InspireSpace and recruitment of new NPoCs to fill vacant spots. Look for more to come from this region in 2008!



Canada

SGAC activity has been very low in Canada the past year. Canadian NPoC, Kenneth Dyson has had no specific projects running up to this point. There has been some activity by the Canadian Space Society and he would like to generate some more interest in SGAC through them for the coming year.

Kenneth Dyson was able to organize a Yuri's night event for the International Gravitational Physiology meeting in San Antonio, Texas.

These festivities began with a cocktail social where the ISGP delegates mingled in a relaxed and festive atmosphere. Following this was a speaker session where we as space physiologists could celebrate pivotal contributions to the development of space exploration. On hand to provide unique perspectives were: Eugene Ilyin, Deputy Director for the Institute of Biomedical Problems in Moscow. Gene spoke eloquently and passionately about the early history of the Russian space life science program, tracing the lineage from early animal experiments to the successful launch and return of Yuri Gagarin.

Kenneth Souza, a scientist/manager at NASA Ames Research Centre, who was involved with the joint US/Russian biosatellite program since the beginning. He spoke candidly about the (sometimes frustrating) development of US/Russian relationships – programmatic, political and scientific. Kathy Ryan, a research scientist at the US Army Surgical Research Institute in San Antonio, provided a short overview of the history of women in the US astronaut program. Her talk illuminated many in attendance to the fact that women were known to be as capable (or more so) as men for astronaut duty from the very beginnings of the US space program, but were effectively excluded until relatively recently.

Costa Rica

In recent years Costa Rica has seen an evolution on its science education system and, overall, an augmented awareness on its capability to design, create and develop different high end technologies. Among these technologies, space is arguably the most recent one, thus it is in a quite early stage compared to other nations, yet it is advancing at an outstanding pace. In this report, the following points are briefly presented: Organizations related to space based in Costa Rica and their activities; How through its NPoC SGAC is helping integrate these activities and The future plans which are based upon current activities.

Organizations related to Space

ACODEA (www.acodea.org/)

ACODEA, Costa Rican Astronomy Association (Asociacion Costarricense de Astronomia, in Spanish), is a NGO founded in

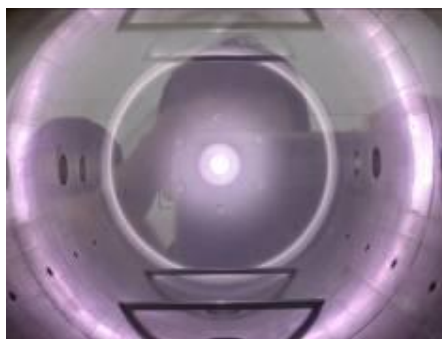


1987 dedicated to educate the general public how to use telescopes, their characteristics, how to find celestial bodies in the sky and also how to take pictures of such bodies. It also informs the general public of upcoming eclipses, comet showers, etc. On its website, people who are interested in any of these topics are able to find the necessary resources to explore the stars through their forums and other links readily available. ACODEA also hosts different events such as “Telescopios en la Acera” (Telescopes on the Sidewalk), as shown at the picture on the left. This event consists on teaching

Costa Ricans on topics such as stars, our Moon, and other celestial bodies and how to look at them through the use of telescopes.

Ad Astra Rocket Company Costa Rica (www.adastrarocket.com)

[Ad Astra Rocket Company \(AARC\)](#) is a rocket [propulsion](#) company dedicated to the development of advanced plasma rocket propulsion technology. The company is continuing with development of the [Variable Specific Impulse Magnetoplasma Rocket \(VASIMR\)](#) and its associated technologies at its Advanced Space Propulsion Laboratory (ASPL). The company is located within the confines of the NASA Johnson Space Center, about 25 miles to the South of the city of Houston. AARC was incorporated on January 14th, 2005 and officially organized on the 15th of July of 2005.



The Ad Astra Rocket Company Costa Rica is a subsidiary of Ad Astra Rocket Company and it was formed as it parent company in 2005. The facility has been built approximately 10 km west of the city of Liberia, capital of the province of Guanacaste, on the campus of [Earth University](#). On December 13, 2006, the Costa Rican team of AARC generated their first plasma pulse. The figures below shows a typical plasma pulse generated during experiments and the configuration of the test bed.

The main tasks of AARC Costa Rica are: building a flexible apparatus to explore optimization of a Plasma Source for VASIMRTM technology, measure the waste heat load from the source, and characterize its distribution, create engineering designs to remove the waste heat efficiently. The company also hosts several schools visits every month, ranging from a wide age spectrum: from primary to university. This not also educates but also motivates the future engineers and scientist of the country.



UCR Planetarium (www.planetario.ucr.ac.cr)

The Costa Rica's University (UCR, in Spanish) Planetarium was created in 2004 and opened its doors to the public in middle 2005 and by then it was the only of its kind in Central America.

Its main activities include various shows using its dome; it also hosts short-term lessons and workshops on astronomy, Sun clocks, telescopes and conferences. It also works as an "astronomy outreach center" for students and the general public; making their contact easier with space themes they usually are not familiar with.

NPoC Current Activities and Future Plans

The main focus of the NPoC activities in Costa Rica until now has been gathering of information regarding the current activities and organizations that are strongly related with the interests and scope of SGAC. In addition, to create strong links among these organizations and between these organizations and SGAC.

From January 2008, a goal to reach is to organize a group of university students from different faculties other than just engineering, to launch a sub-orbital space mission. This mission could be made possible using the collaboration that UP Aerospace has offered to SGAC members.



Guatemala

Astronomy in the Museum Miraflores:

The museum Miraflores is an outstanding resource of knowledge. Claudia Perez, director of the museum, has promoted events such as the observation of eclipses and other space observations. There are astronomy events and talks done practically each month. Edgar Castro helps promote through the museum the astronomy in Guatemala. In general he promotes the astronomy through articles via the newspapers, radios and television.

www.museomiraflores.org

Rockets in the "Museo de los Niños" (the Children's Museum)

The Children's Museum is where astronomy and physics take on a fun meaning. There is much to be played and taught there thanks to Maria René Hernandez de Penagos, the director of education, and also to Maria Ines de la Torres. The promotion of rockets for kids has been turned into a yearly event with various schools.

www.museodelosninos.com.gt

Astronomy and Science Club in the Universidad Rafael Landivar

The astronomy and science club at the University Rafael Landivar is where university students of Guatemala as well as others can much knowledge about our universe. With almost monthly lectures and meetings, Zaida Urrutia de Gutierrez, the coordinator of physics, has helped promote astronomy in Guatemala.

www.url.edu.gt

The Nacional Advisor of Science and Techology ("El Consejo Nacional de Ciencia y Tecnologia - CONCYT")

The CONCYT has promoted and coordinated science activities and technologies throughout Guatemala. Every year they promote reunions such as in march of 2007 of great minds giving lectures to students and the general public through schools, universities and hotels. The objective is to help the community continue forward in all the areas of science. The lectures include space theories and astronomy topics.

www.concyt.gob.gt

Field Workshop "High-pressure belts of Central Guatemala: The Motagua Suture and the Chuacús Complex"

One of the greatest examples of ancient subduction in the caribbean is the Motagua suture of Central Guatemala, which was selected as the first locality for IGCP project 546. Between the 28th of November and the 9th of December of 2007 there was a series of scientific and educational activites in Guatemala. The activities include an international field trip to the Motagua suture zone of Guatemala open to researchers, students and interested people throughout the world, an international conference on Caribbean subduction zones, and a shortcourse on tectonics and geologic hazards for undergraduates at Guatemala's National San Carlos University.

In arranging this educational and scientific activities, there was work done along with Dr. Alfredo Galvez from Guatemala's Ministry of Mining and Energy, who co-organized the event. He facilitated, not only did the Ministry's logisitic support, but actually getting funds which partially covered the cost of organized activities. There was support from the Geology Department of San Carlos University in CUNOR (particularly Luis Chiquín and Axel Gutiérrez), and from the Geological Society of Guatemala (especially Byron Mota) for helping to organize and promote the educational and scientific events.

http://www.ugr.es/~agcasco/igcp546/2WS_guate_07.htm



Mexico

Mario Andres De Leo Winkler, NPoC for Mexico, this year has partnered and collaborated with the Astronomical Society of the Faculty of Sciences at the National Autonomous University of Mexico (U.N.A.M.), one of the biggest universities in the world. Nibiru, the Society's name, has been working for 7 years, bringing astronomy closer to the general population (www.nibiru.com.mx). Activities throughout the year were planned and thought to increase public awareness of some of the goals of the Space Generation Advisory Council. With this partnership several activities have been able to be carried out, year-round, promoting astronomy: from current investigation lines in Mexico to general awareness of 2007 being the International Heliophysical Year.

This is a summary of the conferences, movie-showings, expositions and courses developed with SGAC in mind.

Conferences

This activity was held in an auditorium on the Wednesdays here mentioned. They were given at a basic level (no previous astronomical knowledge required), open to general public and free of charge.

16th Cycle of Conferences

Six conferences held on March 20th, April 11th, May 3rd, 16th, 23rd, 30th, touched the relatively new field of Astrobiology. Important lecturers attended from several Institutes at the U.N.A.M., the Autonomous University of the State of Mexico (U.A.E.M.) and the University of Washington (U.S.A.). Conferences and lecturers were:

- March 20th / PhD. Graciela Matrajt / “Stardust Mission: Analysis of Comet Samples” / University of Washington (U.S.A.)
- April 11th / Master of Sciences Irma Lozada / “The Origin of Life – Interdisciplinary Work” / U.N.A.M.
- May 3rd / PhD. Leticia Carigi / “Habitable Zones of the Galaxy” / U.N.A.M.
- May 16th / PhD. Luis Delaye / “The Last Common Ancestor” / U.N.A.M.
- May 23rd / PhD. Antígona Segura / Search of Extraterrestrial Life in Planets Around Other Stars / U.N.A.M.
- May 30th / PhD. Sandra Ramírez / Extremophile Organisms / U.A.E.M. Attendance surpassed 300 people during the whole cycle.

17TH Cycle of Conferences

Nine conferences were held honoring the International Heliophysical Year (2007), with different lecturers from the Institute of Geophysics, U.N.A.M., including former head-scientist of the Pierre Auger

Observatory: PhD. José Valdés. These conferences were coupled with movie showings related to the Sun, an amateur contest of photography and an solar observation with telescopes.



- October 3rd / PhD. Victor Velasco / “Fifty Years of the Space Age” / U.N.A.M.
- October 10th / PhD. José Valdés / “Solar Neutrons” / U.N.A.M.
- October 17th / PhD. Alberto Flandes / “Dust Bursts in the Interplanetary Medium” / U.N.A.M.
- October 24rd / Engeneer Gerardo Cifuentes / “Geomagnetism” / U.N.A.M.
- October 31st / Master of Sciences Luis González / “Telescope for Solar Neutrons” / U.N.A.M.
- November 7th / PhD. Xóchitl Blanco / “Solar Wind Interaction with Planets” / U.N.A.M.
- November 14th / PhD. Guadalupe Cordero / “Other Tunguskas” / U.N.A.M.
- November 21st / Master of Sciences Carolina Cipagauta / “The Ionosphere and it’s Effects on Communications” / U.N.A.M.
- November 28th / PhD. Alejandro Lara / “Solar Storms” / U.N.A.M.

This cycle was seen by over 400 attendees.

Astronomical observations

Astronomical observations are outings by the Society to different locations with professional telescopes to show the beauties of the Universe as seen from Earth. At the same time, it generates awareness, among the attendees, of the lack of dark-sky legislation and the light pollution generated by cities.

The Society has three telescopes: a Meade LX 200 10” UHTC GPS Schmidt – Cassegrain; a Celestron Nexstar 114 Refractor; a Solarscope for solar observations.

Observations are free of charge, open to general public and paired with a conference given on an object that will be observed that night. The following is a list of dates, places visited and estimated number of people who watched through the telescopes.

- March 15th / Faculty of Philosophy, U.N.A.M. / ~200 people
- March 22nd / Faculty of Medicine, U.N.A.M./ ~800 people
- April 12th / Faculty of Sciences, U.N.A.M. / ~100 people
- October 21st & 22nd / U.N.A.M. / ~750 people / Solar observation
- December 3rd / Faculty of Sciences, U.N.A.M. / ~250 people / Solar observation for the International Heliophysical Year 2007 (See Image #1 & #2).

Movie Showings

This activity was achieved with the help of the Institute of Film, U.N.A.M. and the Department for Science Divuligation, U.N.A.M. Each Wednesday a different film, with some scientific content, was screened at an auditorium. When possible, scientists specialized on the theme were invited to hold an informative dialogue with the public.

The showings are free of charge and open to general public. A total of 44 screenings were made throughout the year, exceeding the 1000 viewers count. Due to space, the following is a list of each monthly cycle theme.



Movies showed:

- January / “Science and Romanticism – From the Golem to Frankenstein”
- February / “Sharp Tusks – Dracula”
- March & April / “The Best of Science Fiction Movies”
- May / “Japanese Science Fiction”
- June & July / “Bond – The Science of Espionage”
- August / “Culture and Nature”
- September / “Teachers of Film and Their Real Life – Scientists”
- October / “International Heliophysical Year”
- November & December / “Walking with Dinosaurs”



Solar Observation - December 3rd Faculty of Sciences, U.N.A.M. Courses

A course on “Basic Astronomy” was given through 8 sessions, covering themes from the Beginning of the Universe to Astrobiology and History of Astronomy. Sessions were held in an auditorium, prepared and given by members of the Council of the Astronomical Society. They were open to the general public, given at an introductory level and required covering a small fee for the whole course (around \$20 USD).

Additional activities

A nation-wide photographic contest was held in commemoration of the International Heliophysical Year (2007). It was open to the general amateur public. The rules required the submitted photograph to be new, unpublished, related in some way to the Sun (that is, not necessarily an astronomical photography), to be accompanied by an explanation of its relationship with the Sun, printed in a 6" x 8" size. Contestants from all over Mexico sent their creations. Over 180 photographs were received. A total of \$200 USD in cash prizes was given to the winners together with a diploma.

The best 80 photographs were displayed at the library of the Faculty of Sciences, U.N.A.M. The inauguration day was paired with the Solar Observation of December 3rd (mentioned before). The exhibition had wide appeal and lasted for 5 days (see Image #3).

Photography Contest International Heliophysical Year December 3rd to 7th – Fac. of Sciences, U.N.A.M.

Conclusions

As the NPoC of Mexico, together with the Astronomical Society of the Faculty of Sciences (NIBIRU) at the National Autonomous University of Mexico (U.N.A.M.), we were able to create public awareness on different fields on Astronomy. From public awareness on the importance of dark sky legislation to conferences and contests commemorating the International Heliophysical Year. 2007 saw over 5000 attendees on activities thought and developed as part of the S.G.A.C.'s goals.



Though most of the activities were limited to Mexico City, we could achieve a nationwide outreach through the photographic contest. Similar activities will be considered for the future. Nonetheless, it must be fully understood that Mexico City (our sphere of influence) holds approximately 1/5th of Mexico's 105,000,000 inhabitants, making it the most important starting point for a nationwide public outreach program on Astronomy.

Further activities will be created in 2008 to reach more people and bring them closer to science as we prepare for 2009: The International Year of Astronomy.

United States

In April 2007, SGAC was invited to attend the Boston University symposium entitled: "The Future of Space Exploration: Solutions to Earthly Problems?" to present their new project on "Visions for the next 50 years of space exploration".

Tiffany Frierson (new NPoC for USA) was selected as a delegate to the symposium. Her travel, hotel and registration costs were completely covered by SGAC and the Secure World Foundation. She posted an account of her time there which is found here: <http://www.spacegeneration.org/node/283>

The United States also continued to play a key role in the organisation and hosting of Yuri's Night events, with events occurring in many US cities, as well as the flag ship event at the NASA Ames Research Center, which attracted over 4000 participants.



Tiffany Frierson meets Apollo astronaut Rusty Schweickart and physicist Freeman Dyson



South America

In 2007, the South American Group of SGAC continued to conduct a diversity of activities towards its goals of bringing South American youth closer to space issues and having informed the team about the benefits of space exploration and what space can offer to our society.

During this year a strong network of students, young professionals and space enthusiasts was established to promote and coordinate youth space activities in our region. And with the help of all of them we were able to organize many events.

Part of our activities in the South American region (during the first trimester of the year 2007) was presented by the SGAC delegation in Vienna for the 50th Session of the Scientific and Technical Sub Committee (STSC) of UN COPUOS. We prepared the letter “COPUOS LATIN AMERICA REGION REPORT OF SPACE ACTIVITIES” which was presented to the South American Ambassadors and State representatives in this session. This document was to present some actual space activities within the Latin American Region and future space projects.

Many (most) activities, meetings and projects have been performed during the whole year, especially to be remembered is the First Latin American Virtual Meeting which was held on 17th of May 2007, with the participation of representatives from 8 countries, like Argentina, Bolivia, Colombia, Mexico, Perú, and Venezuela. At the end of the year 2007 we could count up to three Latin American Virtual Meetings.

The creation of the “Red Espacial de América Latina - SPATIUM Blog” (<http://real-spatium.blogspot.com>) in August was a big step in gathering space related posts written by members of the group with the goal to keep all of us informed on our activities and projects. We were working on the blog during the second half of the year, with the support of Ms. Anita Pérez and Ms. Lujan Araujo. The selection of a new logo and layout has been defined. The blog has helped to reach out the community together and increase communication by constantly participation in this tool.

Also a couple of conferences were attended by and carried out with the participation of some of our National Points of Contacts. The "International Science and Technology Aerospace Congress, CICTA" was held in Bogota, Colombia in October following by the so called "CONGRESITO - The First Young Science and Technology Aerospace Congress" supported by Mr. Marco Pirateque.

In October two delegates of our region, Mr. Paul Acquatella and Mr. Marco Pirateque, participated and actively took part in the Space Generation Congress 2007 and they also attend the International Astronautical Conference in Hyderabad, India.



Another congress where Mr. Martín Canales submitted a paper informing about his work and his involvement with SGAC was the "International Scientific Meeting (ECI)" and the "International network for Science and Technology (InterCYT)" both held in Lima, Peru. Topics were discussed on new technological advances and how to transmit those into educational areas.

New National Points of Contact of SGAC were appointed in Argentina and Venezuela. For 2008 one of our challenges will be recruiting new NPoCs in the countries where still there is not an NPoC.

The SGAC South American Group will also be working to promote space awareness among young people interested in space education and public outreach.

In summary, 2007 was a big year concerning our development as group and the efforts in bringing youth closer to space - reaching for the Stars!

Detailed activities by country are presented below.

Argentina

Laura García Oviedo, became a SGAC NPoC in April of 2007, which was the same month when she received a scholarship to travel to the World Conference of Science Journalists, in Australia. In that important meeting, She “spread the word” about SGAC to her colleagues from different countries.

During 2007, SGAC in Argentina gained few new members. Luján Araujo, also journalist, was one of them. She is an expert on Blogs and web design. There was also an Argentinean who participated in the Space Generation Congress in India.. He is member of a team that designed a small satellite at University of Comahue, in Patagonia.

This same year Laura had a meeting face-to-face with Pablo de León, an Argentinean engineer who lives in the United States and works for NASA. It was a very interesting meeting; they talked about the importance of young people’s interest in space.

Very few of Argentina’s members participate in the virtual meetings of SGAC, through Skype. That is why one of the goals for 2008 is to increase the number of people who participate in SGAC Argentina.

There was a very important meeting about space technologies in Buenos Aires, called “Argentinean Congress of Space Technology” in May 2007. It gathered experts of different countries, and the Argentinean Association of Space Technology (AATE) in which participates Pablo de León organized it. This event was very important for the region.

In 2007, SGAC Argentina proposed the idea to create a blog in order to communicate with all the people about SGAC Latinamerica region's activities. The other NPoCs and the coordinators accepted this idea and everybody worked hard to have the blog on line. Argentina's members also created the blog and wrote up the presentation text, with the help of other member of SGAC Latinamerica. This was really a team effort!

In the year 2008 one of the challenges will be to organize more activities, like Yuri's Party in April. There are two members of SGAC in the south of Argentina, in Neuquén province, who organize each year a radio show to celebrate this day. But in other cities, like Buenos Aires, there has not been yet participation in this world party.

And the big challenge will be to keep spreading the word about SGAC and helping to motivate young people to work on space exploration projects. It would be excellent to have as an example the activities held by Anita Pérez, NPoC of Venezuela, who has organized talks about space at schools in that country! Also, to participate within a project at the next SGAC world conference.

As a science journalist, the Argentinean NPoC wrote up several stories in 2007 about space projects (like space tourism and space medicine projects) and meetings (like COPUOS and SGAC congress at India). In the case of SGAC congress, she managed to interview four people from Buenos Aires who could attend it. Some of the stories, written in Spanish, were published at a science news agency, which sends its articles to Argentina's media and all over the region. You can read them at:

http://www.llave.connmed.com.ar/portaInoticias_vernoticia.php?codigonoticia=13454

http://www.llave.connmed.com.ar/portaInoticias_vernoticia.php?codigonoticia=13455

It is important to add that during 2007 the main achievement was to get a more fluid communication with the other NPoCs of the latin american region.

Particularly in Argentina it is known that it's necessary to work harder to get more members! Always with an amazing goal: making space exploration not only a dream, but a real thing!!

Bolivia

Currently space research in Bolivia is being developed by research groups and professionals dedicated to this area.

Astronomy and astrophysics are the mostly explored areas, not only by amateur groups of astronomy but also by researchers. Below, some organisations and scientific research articles developed in Bolivia are summarized.

Planetarium “Max Schreier”

Universidad Mayor de San Andrés Astronomy area is constituted by the Planetarium “Max Schreier” and the Observatorio Astronómico de Patacamaya. Both run by Physics Degree of Faculty of Pure and Natural Sciences. Their main activity is giving support and service to the community at large as well as teaching youth in particular. Thus, they are responsible for social interaction in the Physics Department.

Planetarium and Observatory have a technical personnel, in charge of carrying out all activities developed in this area.

The Planetarium has a projector, donated 25 years ago by UMSA, model NOVA III from Spitz factory in US. It is a rather obsolete model, but still useful in introducing youth to the mysteries of the universe.

In the addition there are also some astronomic supplies, a small collection of meteorites Blaine Reed and a piece of “lunar stone” donated by NASA.

Patacamaya Astronomic Station

The village of Patacamaya is settled on the Bolivian high plateau, 100 km to the south of the City of La Paz. Patacamaya Astronomic Station is located there, run by Universidad Mayor de San Andrés (UMSA) Physics Department.

The Patacamaya Astronomic Observatory has one Celestron telescope of 40 cm, one astro-camera AFU-75, one CCD SBIG ST-5 camera and others equipment for observation and registration.

The Patacamaya Astronomic Observatory was founded in the wake of a Bolivian-Soviet agreement the 26th September of 1973 and 10 years after it became operated by the Universidad Mayor de San Andrés.

Observations are mainly carried out from this observatory..

National Observatory of Tarija.

The National Observatory of Tarija was created in June of 1982 in accordance with cooperation agreement in the field of astronomy, signed between Natural Science Academy of URSS and National Science Academy of Bolivia. The Observatory was officially inaugurated April the 14th of 1984 with the name of Bolivian-Soviet Astronomical Observatory.

The Observatory together with the division of social interaction of Juan Misael Saracho University of Tarija fulfils the task of outreach of the astronomic science. That is carried out in Observatory installations. Visits and excursions are organised for students, national tourists, foreigners and public in general. Visitors are given information about the origin of the Observatory, fields of research in which research and observation programmes are developed.



Astronomy enthusiasts groups

In Bolivia, there are various astronomical groups that are generally made up of enthusiasts or people who have a telescope. These organizations sometimes carry out activities to diverse astronomical events. Below are only some of the groups that promote astronomy in different regions of Bolivia.

- Asociación Boliviana de Astronomía (ABA), which head office is placed in La Paz.
- Asociación de Aficionados a la Astronomía Cruz del Sur (AAACS), is placed in Sucre.
- ICARUS, this young association is placed in Cochabamba.

Other astronomy groups are placed in Potosí, Santa Cruz de la Sierra and La Paz, but these groups are working with private or public university institutions.

Grupo Astronáutico Boliviano

In research groups we find the Grupo Astronáutico Boliviano “Kalpana Chawla”, which aims to design, fabricate and test rocket engines for only scientific goals.

Since the launching date of that group (September the 30th of 2003) it started working with solid fuels, doing all sort of tests in the field of propulsion.

Study projects of this research group are numerous, that is why each project has an area of research within itself. Some of those are:

- Water rockets
- Solid fuel rockets
- Design of rocket engines
- Anti-hail rockets
- Atmosphere research rockets

These are just some of projects had in preparation and investigation.

Space Research

Scientific research in this area is generally about cosmology, astrophysics and related branches. These articles are published in variety of scientific magazines. Some of published topics are:

- Extended Thermodynamics and his Cosmologic consequences.
- Gravitational collapse of a sphere with heat flux.
- Cosmologic Simulation of N bodies.
- Determination of meridian line in Observatorio Geomagnetico de Patacamaya.
- Topics in star formation process.
- Analysis of star formation in simulation of galaxy formation.

Currently research studies are carried out in subjects of structure and dynamic of galaxies and study of spectrum of galactic components in microwave frequencies. All this research is carried out by scientists who generally meet each year in Cosmology and Astrophysics congresses.



Conclusions

Bolivia is a country where space sciences hold a special place. Both enthusiasts and research groups are currently working try hard every day to promote this area,

What is desirable in the future is to strengthen this area, creating institutions fully dedicated to the development of space science.

Nevertheless the need of economic support from international organisations for the development of space sciences is very important. Due to that, youth groups who would like to develop or investigate in the space sector do not do it. And they quit research.

Nowadays, Roger Apaza Vásquez, NPoC for Peru, leads the Grupo Astronáutico Boliviano “Kalpana Chawla”, with which it is expected to develop firstly propulsion systems and next go to satellite technology. Unfortunately information from skilled professionals, materials and sensors are needed in order to fabricate and design this sort of space technologies.

This report just shows a summary of what space sciences are in Bolivia. It also shows how there are enough of human resources in this country in order to develop scientific areas, eg Space..

During the 5 years as the NPoC of Bolivia, Roger Apaza Vásquez has had trouble encouraging people to participate in space science projects, however, now he believes there is a large potential for youth space activities in his country.

Brazil

In 2007 there was a partnership with Brazilian universities to do projects for young students so they could be part of the launch of the VSB-30 rocket in Operation Cumã II (name in reference the Bay of Cumã which is near the place where the rocket will).

The VSB-30 rocket has been developed in Brazil in cooperation with the German Space Agency (DLR). His first flight test, in October 2004, was made from the CLA, considered one of the best places in the world to the launch of rockets because of the location of Alcântara, the 2.18 ° to the south of the line of Ecuador.

The VSB-30 took nine experiments which have been tested in an environment of microgravity. The University Center of the School of Industrial Engineering (FEI) took this release to confirm the results of the experiment started 11 years ago and that in 2006 was taken to the International Space Station (ISS). The enzymatic reactions in the body without gravity environment could help in the work of the food industry (production of sweeteners, soft drinks and frozen foods) and pharmaceuticals (sweetener syrups for children).

The State University of Rio de Janeiro (UERJ) and the National Institute of Space Research (Inpe) sent samples of a bacteria to assess damage and repair of DNA in the microgravity



environment. In the medical field there also took place research at the University of Sao Paulo (USP) and the German Hohenheim that may help in the treatment of migraine, epilepsy and transient global amnesia.

Another experience that Inpe done in Operation Cumã II was the test of Multiuser Furnace of Solidification, FORMU-S, which will help to solve problems in Brazilian research in need of heating. Experiments of the Federal University of Pernambuco (UFPE) were tested in the furnace.

The Federal University of Santa Catarina (UFSC) and the Laboratory of Solar Energy and Cluster Control Technician for Satellites (Labsolar) tested minitubos of heat, which will help in the development of electronic segments. The UFSC developed an experiment to control internal temperatures of satellites.

The University of Londrina (UEL) tested a board computer, designed for vehicle of poll. The SDV (Dynamic System of Flight) will be monitoring each stage of the rocket flight.

In addition to the scientific experiments with young researchers, Operation was considered a major step towards Brazil acquiring technological independence in the area of launching their own satellites.

Colombia

January - Astronomy and Astronautic Festival

Held during the most important month for Amateur Astronomers in Latin America, this event is organized by Association of Self-taught Astronomers in Colombia (ASASAC). During the event, the Colombian Commission for Rocketry and Astronautics (C3) was given a space to present their information. C3 is composed of a diverse group of research professional and students in various fields of space sciences and are in charge of informing the public in general, particularly of the progress in Astronautics in Colombia.

April 12th - The Yuri's Night

Yuri's Night was held for the first time in Colombia, organized by C3. During this event, the group members were given a dinner reception, followed soon afterward with a video conference. The evening ended with a short presentation.

September - Space Generation Congress 2007 Public Relations Team

Since The Space Generation creation in Vienna, Austria, at the birth of the XXI century, for the first time Colombia had a delegation presenting the progress made by Juan Carlos Morales and Marco Pirateque, making Colombia one of the most active countries in the Latin American region, also one of the most active teams in the world.



As part of their collaborative efforts with the public relations team, this delegation translated the brochure and other documents to Spanish for the benefit and information of all the Spanish speaking countries in the world.

September 24th – 28th - International Astronautical Congress 2007

With the support of the UN and OOSA, Marco Pirateque participated in this event. As the Colombian and Latin American delegate, he presented a complete summary of all the space activities occurring not only in the country but in all of the region. During the conference, Marco had also the opportunity to share with many people from around the world and learn of the on going space activities in other countries.

October 4th – 10th - The World Space Week

C3 organized in Bogota, Colombia, a series of lectures and the launch of several hydraulic rockets, all of which informed and entertained over a hundred people including attendees and random pedestrians. It also gave exposure to the new group of researchers from the Distrital University Francisco Jose de Caldas, named Aerospace and Electronic Systems Society [AESS-IEEE], which also organized the launching of a few other rockets.

October 11th - 13th - CICTA

First International Congress in Science and Aerospace Technology

A great scientific progress was reached at the First International Congress in Science and Aerospace Technology, [CICTA2007](#), where a large and diverse number of national and international aerospace scientists got together; highlighting the true high technical and human level in the country came to light. A large number of lecturers and attendees joined this event, visiting from Canada, UK, Argentina, and the US. And nationals from many other countries had submitted their resumes, as well. This superb conference had as general secretary to Marco Pirateque, SGAC's NPoC for Colombia.

The whole event was a great success. For starters, it was held in its entirety at the Elliptic Room of the National Capitol, where the Colombian Congress meets regularly. Furthermore, one of the main acts was the announcement of the CUBESAT-UD project launch made by the Distrital University Francisco José de Caldas; a pico-satellite which mission will be focused on telemedicine. This is the first time this type of satellite will be used for such purposes in the world. Additional highlights of the conference were the lectures by international participants such as Argentina's Pablo de León and his involvement in the PEHUENSAT project, the engineer Juan Jorge Quiroga from the University of Comahue, and other lecturers like Andrew Kalman (US), Sajjad Durrani (US) and Freddy Pranajaya (Canadá).

Concurrently, a positive aspect was the participation of several Colombian professional that work in other countries. Juan Carlos Morales, MA & ME, interim Director of Business in Latin America for the [SPACEFLEET](#) Project, a space tourism project utilizing a suborbital plane; Jaime Riveros, MS, works at MIT's Space Systems Lab. Other key national projects that were presented by the National University are the Astrobiology project which has the support of NASA and the postgraduate program which also works in collaboration with international



research institutions and is the only one in Latin America. Last but not least, is the Experimental Rocketry Project, which is of great transcendence and is being developed in collaboration between the Colombian Air Force and the Universidad del Valle, in Cali, Valle del Cauca.

October 13 th - CONGRESITO The First Young Science and Aerospace Technology Congress

The CONGRESITO was organized parallel to [CICTA2007](#), by Marco Pirateque, SGAC's NPoC for Colombia, also as a Congress in Science and Aerospace Technology, but being the first of its kind, it was focused to include the children of all ages mainly in public schools. The event was highly regarded for it got the participation of more than ten public schools and a few other private schools in Bogotá. They received the orientation and motivational lectures from several nationally and internationally recognized professionals to continue with their projects in the aerospace fields. One of these was the engineer Pablo de León, from Argentina. He generated a great interest in the children he spoke to by giving them an overview of all the space related activities he has participated since his childhood. Along came the biologist Jorge Enrique Bueno with a lecture in Astrobiology.

From the many youth attending the event, Nicolas Rivera, about to graduate from high school, gave us a lecture about Cosmology, which he also presented at the Latin American Astronomy Congress a few days ago. A couple of other big presenters, not in size but in content, were Margarita and Andrés Felipe Becerra Cardona whom have represented Colombia in the World Congress of the Scientific Youth, a few other similar events and even plan to continue attending other youth conferences in the next few years.

At another instance of the program, a teleconference, was realized with Nately Méndez, student of aerospace engineering at the University of Texas, in Austin, Texas. Despite some technical difficulties, the communication could be maintained between her and the children audience. At the end of the day, Jose Manuel Bautista, industrial designer and representative for C3, organized a lecture on hydraulic rocketry followed by a full workshop focused in the construction and the launch of a hydraulic rocket using parameters as any space agency would do it such as saving materials, established times, and as in any bid, role playing as each one of the members of the bidding team, etc.

October 23th - Report regarding space activities in the country for the Chairman of COPUOS Ambassador Ciro Arevalo Yepes [Bogotá, Colombia - Vienna, Austria]

To commemorate Colombian Ambassador's, Ciro Arevalo, Yepess, appointment as the Chairman of COPUOS, and per his request, a document was drafted to describe in detail all space related activities that have been conducted in the main cities of the country by different organizations.

November 7th - Live Conference about the STS 120 landing [Medellin, Colombia]

To commemorate the participation of the astronaut of Colombian ancestry, George Zamka, in the STS 120 mission, this event was organized by the group INGES, from the University of Antioquia, Medellín, Antioquia. It included a teleconference, a short lecture about the technical aspects of the mission and the live transmission of the shuttle landing. Several organizations



came together to make this event a successful experience, including SGAC who provided support through Marco Pirateque, SGAC's NPoC for Colombia.

November 22th - Videoconference about Space Projects in Latin America [Bogotá Colombia - Valencia Spain]

Marco Pirateque, SGAC's NPoC for Colombia, participated in the S3 Congress (Spanish Space Students), organized by the Space and Microgravity Experimentation Lab, [LEEM](#). S3 membership is made up of Spanish students developing space projects, whom are also looking for the most appropriate way to expose their project internationally. Marco's presentation was called Space Projects in Latin America, in which he mentioned the various space science projects that currently are being developed in Colombia and the region by university students.

December - Video clip "Merry Christmas and happy new year from Latin America to the world".

As per a suggestion made to SGAC Latin America, a holiday video was produced wishing to the world a "Merry Christmas and a Happy New Year", announcing that in the year 2008, as the year before, we will transmit a lot of encouragement as well as continue being one of the main engines for SGAC through the world.

Other Activities

In addition to organizing and participating in all the virtual Latin American space meetings and in all their versions, we continued our support for all the projects that are under way in the region, i.e. the Blog publishing and supervision, and for the Colombian delegates initiative, the drafting of a document to invite new members in the Latin American region to become part of SGAC, which is expected to bring fresh and positive results.

Peru

In the second week of January Peruvian NPoC Juan Martín Canales Romero attended the SGAC General Assembly where the proposed changes in the Bylaws and Statutes of the SGAC were discussed. During the assembly the vote to accept these new Statutes and Bylaws was approved. His support was based in reviewing both documents correcting and proposing some changes. Here it was agreed removing the term "State Representative" since this term was not used anymore and instead of that using from that point on the term "National Point of Contact".

In February he was elected Regional Coordinator for South America together with Paul Acquatella. Since that moment they have been in close contact with almost all the members of the SGAC Latin American group.

In March Martin worked together with other SGAC members around the world in expressing his "Visions to the next 50 years of space exploration". Inputs to this big compilation of ideas of 275

young people were provided, which was presented at the conference “The Future of Space Exploration: Solutions to Earthly Problems?” at Boston University in USA.

Following this Peruvian NPoC started to promote the celebration of the “50th Anniversary of Space Era” and he widely forwarded my message to Peruvian colleagues, students of the “Universidad Catolica del Perú (UCP)” and members of the “Peruvian Association of Astronomy (APA)”

Yuri's night was celebrated as an event with some friends and colleagues of the NPoC. Even though it was spontaneously planned the event had participation from France, Turkey, Spain, and Germany, who works with the NPoC for ESA in Munich.

In May together with Rolando Villanueva and the Director of the Peruvian Association of Astronomy they were trying to get funding from the European Union for the organisation of the Space Generation Congress '08. For that case the organisation in mention, i.e. the Peruvian Association of Astronomy (APA) was proposed to act as a partner to SGAC in the preparations to SGC.

The APA has a self-motivated mission to improve the astronomical and space related science awareness among schools, to enable Peruvian students' participation in space projects, to increase space education, and to trigger and participate in amateur and professional projects with a vision to utilize space for our benefit.

During the second half of 2007 and since the creation of the SPATIUM Blog in August Martin actively provided and posted information in this block about Peruvian conferences and congresses and about his work for the German and European Space Agencies. Photos and information can be found at:

<http://real-spatium.blogspot.com/2007/11/encuentro-cientifico-internacional-2008.html>

<http://real-spatium.blogspot.com/2007/11/cuenta-atras-para-el-lanzamiento-del.html>

<http://real-spatium.blogspot.com/2007/10/felz-da-sputnik-y-que-vengan-otros-50.html>

An experimental telescope contest secured by the Peruvian Association of Astronomy is being conducted in schools for kids ranging between 13 and 17 years old. This contest may be a model to be shared with other schools in South America.

Apart from this, NPoC tasks were mainly concentrated in continuing his work assisting Peruvian authorities and scientific institutions in acquiring certain initial capacity to use space technologies in particular remote sensing

One of the NPoC's goals was to look for motivated young people who would like to join SGAC; he also was looking for more active NPoCs in countries that are presently not featured on the list of South American and Latin American NPoCs. Finally, he looks forward to working with all his

colleagues in the Latin American region. Let's make Space happen and be preparing for ... reaching for the 'Stars'!

Venezuela

Delegation

During 2007 the SGAC NPoC-Venezuela was Paul Acquatella, mechanical engineer graduated from the Simon Bolivar University, Venezuela. By the beginning of 2007 he was appointed as Regional Coordinator for South America together with Martin Canales from Peru. By the end of the year, Ana Pérez replaced Paul as National Point of Contact by her impressive skills to achieve space activities and awareness; she began studying Mechanical Engineering at Simon Bolivar University.

Pedro José Gonzalez Ramírez, Carlos Eduardo Mastalli Cadenas, Javier Mendonca and Gregorio Drayer among others are well known space representatives in the country, not only by their space activities and research, but also for their willing to collaborate and spread awareness in the country.

Main Activities

April, 12th. Yuri's Night, of course. One of the biggest Space celebrations in the world couldn't pass by without being celebrated in Caracas, Venezuela. The party wasn't very big because was organised too late, so the team had to improvise and make BBQ in Paul's house. Some space activist were present and of course the future first Venezuelan astronaut, Gregorio Drayer. The night was very pleasant, the team project several space films regarding the beginnings of Space Travels, rocket development and the recently well known Constellation project with the NASA's Orion spacecraft. You can find photos and information at:



<http://picasaweb.google.es/astrodrayer/YuriSNight2007Caracas>

<http://www.spacegeneration.org/node/299>

May 12th. Student Professional Development Conference ASME USB 2007

The annual University Simon Bolivar ASME's Chapter Congress had this time two presentations about Space, one about Mars Exploration presented by Prof. Gregorio Drayer regarding his experience in 3 crews of the Mars Research Desert Station in Utah, together with the Mars

Society, and other about Aerospace Engineering presented by Paul Acquatella, in which he explained his experiences on building an experimental rocket and his participation on the ESA/SSETI ESMO Spacecraft. The congress was the perfect place to make people aware of Space, but still many activities have to be done. <http://www.congresoasme.eventos.usb.ve/>

September - October. Space Generation Congress - International Astronautical Congress, 2007

This was one of the regional key-moments, Venezuela had chance to be present in these two well known space Congresses and represent not only the country, but the region. Paul Acquatella, as the RC for South America, received the sponsorship from the UN-OOSA and SGAC to attend to both events. Two Latin delegates had the opportunity to participate in these meetings. The importance of the presence of the Latin space activist in these events is crucial since there aren't many, this makes the being easily reached for networking and collaborating while sharing ideas and experiences. The Venezuelan delegate was able to connect with several young professionals from all around the region, making strong connections that will ensure SGAC capabilities for the future. Also, the importance of actually knowing in person the SGAC leaders was really rewarding, building strong relationship is always better in person, therefore SGC is the perfect place to meet all the delegates from around the world, and better connect with the leaders. Visit these links



<http://hyderabad.spacegeneration.org/> http://www.esa.int/esaCP/SEMNZTMPQ5F_Spain_0.html

September. IDEA Research group consolidated, 2007.

The UNEFA University of Caracas, Venezuela (Universidad Nacional Experimental de las Fuerzas Armadas), together with the lead of Pedro Jose Gonzalez Ramirez, consolidated officially the IDEA group for the Space and Aeronautics Research (Grupo de Investigacion y Desarrollo Espacial y Aeronautico). This group is very promising and their first attempt for a project is building an airplane to race the well known SAE contest. After they will begin to experiment with rocket propulsion systems.

October, 4th. World Space Week Celebration, 2007.

This was one of the bigger projects of the year. On October 4th, Gregorio Drayer; as a Professor in Control Systems and as a former member of the Latin American SGAC, promoted an activity at the Simón Bolívar University. The main purpose was to celebrate the WSW. Drayer invited the students and the community to watch the first episode of "From the Earth to the Moon", (directed by Tom Hanks) and

**2007**

Paul Acquatella, South American Regional Coordinator of the SGAC, presented a short speech about space awareness. He talked about the sputnik 1, and some aspects regarding the space exploration and its evolution. Carlos Mastalli, Sami Ronzembraun and Ana Perez were able to enjoy that really nice moment.

Visit these links:

<http://blog.astrodrayer.com/2007/10/celebrating-50th-anniversary-of-space.html>

<http://real-spatium.blogspot.com/2007/10/celebrando-los-50-aos-de-la-era.html>

October 19 - C.E.I.T.A., C.A.

Ana Pérez organized an activity at an Educational Center called C.E.I.T.A., C.A. (Centro Educativo Teresita Albarracín, Compañía Anónima) in Turmero, Aragua State. The idea was to make children to know a little more about the space and its exploration. First, she talked to the personal of the center and they allowed her to do that activity in order to celebrate the WSW. Then, she went to the center with some posters and photos and she organized a simple talk about the Solar System, rockets, planets, and finally she explained the history of the sputnik 1 to them. At the end of day, she gave the center and the kids a "rocket" that she made with some help (they could be inside of it and play). This was a lot of fun, especially for younger kids! The plan is to replicate this even more next year. More info and photos:

<http://real-spatium.blogspot.com/2007/10/continuamos-celebrando-los-50-aos-de-la.html>

<http://picasaweb.google.com/sgaclatin/CelebrandoThe50YearsInSpaceEnCEITACA Venezuela>

November, 19th. The [Grupo Universitario de Investigaciones Astronómicas](#) G.U.I.A. (University Group for Astronomical Research) of the [Universidad Simón Bolívar](#) U.S.B., Venezuela, and the Professor [Gregorio Drayer](#) invited the space community to watch with a Meade LX-200 telescope the 17P/Holmes Comet. As members of SGAC and the Astronomy Group-GUIA of the U.S.B. (Simón Bolívar University), we've been trying spread the space voice all around, and using the Astronomy group as a tool to have the attention of young people and invite them to be part of the SGAC!!!!

Venezuelan members really want to make their country to be different and better, they hope they can make connections around the country and work for the same goal, without being separated and working on various fronts. They want to start to write the history of the space exploration, joining the efforts and working A LOT... Because it's their dream, their goal, their future!

Web links

SPATIUM: The Blog of the Latinamerican Group of SGAC (SGAC LA) <http://real-spatium.blogspot.com>

ALE: The Latin American Space Association <http://www.alespacio.org>



Space Generation Congress Hyderabad, India



The 2007 Space Generation Congress (SGC) was the 6th annual meeting of the Space Generation Advisory Council (SGAC), bringing together the most active team members of the Council's currently ongoing projects. The congress was held just two weeks before the 50th anniversary of Sputnik 1, the dawn of the Space Age. This year, seven teams from around the world gathered at the Golkonda Hotel in Hyderabad, India, from 20-22 September, for SGC, and continued their work during the 58th International Astronautical Congress (IAC), held from 24-28 September, also in Hyderabad. This year, SGC's event structure was divided into three major components:

1. Dedicated time for project teams to work,
2. Motivational and technical speakers,
3. Special leadership presentations including perspectives on industry from emerging young space leaders

Potential delegates worked virtually over the Internet from January through September on current SGAC projects of importance and relevance to the space community. Applications for delegates also opened in January, allowing months of opportunity to contribute to project teams before delegate selection in May.

This year saw 276 applicants representing a 63 countries apply for SGC, a record. Of these applicants, one third was female, a quarter was young professionals, and three-quarters were students. SGC is officially held in conjunction with IAC, and this year 35% of delegates had papers accepted for presentation at the conference, again a record. More than 85% of the delegates also attended the IAC and took part in the International Astronautical Federation (IAF) Young Professionals Programme.

Delegates were selected using a rigorous selection process that involved a thorough review of the candidate's application file and feedback from their project leads regarding the quality of their contributions to the online discussions. The result of this selection process was 150 very high caliber delegates from 63 countries being accepted to the congress. Of these selected delegates, 43 were able to be present in India contributing to a very successful event. The challenges of attending the conference in person included obtaining visas for India, costs of flights, and reaction to terrorist attacks less than one month before the start of the congress.

During SGC, the project teams met in person for the first time and held several meetings to continue working on the projects. They were also tasked with making plans for the year to come, while experts from various fields joined them to offer insight on their work. The results of three of those projects were presented at the IAC during a special SGAC plenary event. Several motivational and technical speakers shared their work with the delegates in short presentations and Q&A sessions. Three young professionals shared with the group their views of the present and future status of the space industry.





SGC 2007 Delegates and staff pointing to the stars at the end of Day 2

SGC would not be possible without the generous contributions of the many sponsors who contributed essential monetary and other resource needs and the hard work of voluntary organisers.

Preparations are well underway already for SGC 2008 in Glasgow, Scotland.

Local coverage:

Article on SGC 2007 featured in the Deccan Chronicle on 23rd of September 2007. The article describes the setup of the congress, the main projects, an interview with the SGC 2007 Manager Kevin Stube, and delegates from India (Ashish Mistry and) and the US (Kavya KamalManyapu).

అంతరిక్ష సదస్సుపై పేలుళ్ల ప్రభావం

మా బృందంలో 60 కాతం విద్యార్థులే: కెవిన్ స్టూడె

స్ఫూర్తిదాయకం: యువ శాస్త్రవేత్తలు

(ఆన్లైన్ సీట్ బ్యూరో)

హైదరాబాద్ లో నగరంలో జరిగిన పేలుళ్ల ప్రభావం అంతర్జాతీయ అంతరిక్ష సదస్సు (ఇఎస్) పై వడింది. ఈ సదస్సులో యువ శాస్త్రవేత్తలు, విద్యార్థులకు సౌరభ్యం వహిస్తున్న స్పేస్ జనరేషన్ ఆడ్వెజరీ కౌన్సిల్ (ఎన్ జిఎస్) తరఫున 140 మంది నగరానికి రావల్సి ఉండగా 40 మంది మాత్రమే హైదరాబాద్ కు విచ్చేశారు. ఈ యువకుల బృందం నగరంలోని ఒక హోటల్ లో బస చేసింది. వివిధ దేశాల నుంచి వచ్చిన ఈ అభ్యర్థులను 'ఆన్లైన్' శనివారం కలిసినప్పుడు వారి అనుభవాలు, అనుభూతులను తెలియజేశారు.

భారత్ వేగంగా పురోగమిస్తోంది: ఎన్ జిఎస్ మేనేజర్ కెవిన్ స్టూడె

అంతరిక్ష సాంకేతిక పరిజ్ఞానంలో భారత్ వేగంగా పురోగమిస్తోంది. అమెరికా, యూరోపియన్ యూనియన్, రష్యా, చైనా, జపాన్ తర్వాత స్థానంలో భారత్ ఉంది. జిపిఎస్ టెక్నాలజీని యూరోపియన్ యూనియన్ పాతనాల వ్యాపింగ్ కోసం ఉపయోగిస్తుంది. భారత్ వర్తమాన పరి రక్షణకు వినియోగిస్తోంది. స్పేస్ టెక్నాలజీని రూపొందించడానికి మరుగ్గా ప్రయత్నాలు చేస్తోంది. అంతరిక్ష పరి జ్ఞానం ద్వారా ఉద్యోగాల సృష్టికి యత్ని స్తోంది. ఇక్కడకు వచ్చిన మా బృందంలో 60 కాతం మంది విద్యార్థులే. 40 కాతం శాస్త్రవేత్తలున్నారు. 140 మంది రావల్సి ఉంది. వీరూ రాకపోవడం, ఖర్చులు ఎక్కువ కావడం, బాంబు పేలుళ్ల భయంతో 40 మంది మాత్రమే వచ్చారు. భారతీయ విద్యార్థులకు ఈ సదస్సు ఒక మంచి అవకాశం

నగరానికి రావడం ఆనందంగా ఉంది: నాసా ప్రతినిధి కావ్య కమల్

హైదరాబాద్ లోని బొల్తారం సెయింట్ ఆన్స్ కాలేజీలో వరుసగా అమెరికాకు వెళ్లిపోయా. నాసా ప్రతినిధిగా మళ్లీ నగరానికి రావడం చెప్పలే నంత ఆనందానిస్తోంది. బొల్తారం నుంచే అంతరిక్షం వల్ల నాకున్న ఆసక్తిని గమనించిన మా నాన్న ప్రోత్సహించి 2002లో అమెరికాకు వెంపారు. జార్జియా ఇన్స్టిట్యూట్ ఆఫ్ టెక్నాలజీలో డిగ్రీ పూర్తి చేశా. ప్రసిద్ధ బోయింగ్ సంస్థలో ఇంజనీర్ గా చేశా. నాసాకు చెందిన లాడ్ మార్షన్ కంపెనీ స్పాన్సర్ చేయడంతో ఇక్కడకు వచ్చాను. చివ్వున్నడే బాలశ్రీ అవార్డు పొందాను. భరతనాట్యం బాగా వచ్చు. హైదరాబాద్ కు రాగానే మా డాన్స్ టీచర్ ను కలిశాను. గత ఇద్దేళ్లలో నగరం బాగా మారింది. ట్రాఫిక్ బాగా పెరి గింది. వ్యూహామిగా మంచి పేరు తెచ్చుకో వాలన్నది నా లక్ష్యం. ఏరో స్పేస్ ఇంజనీ రింగ్ లో యు.ఎస్.లో అప్లైస్టండింగ్ స్టూడెంట్ గా గుర్తింపు పొందాను. ఇక్కడకు రావడం అంతకుంటే ఆనందంగా ఉంది.

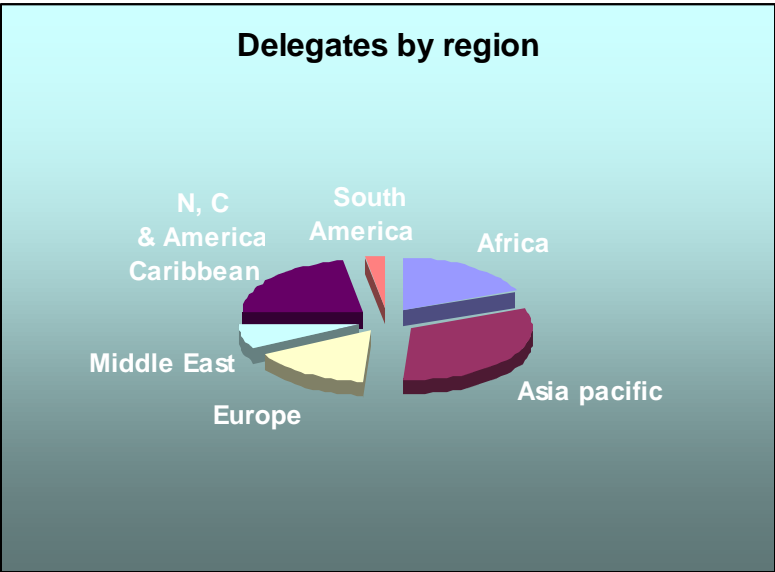
అంతరిక్షానికి వెళ్లాలని ఉంది: ఆశిష్ శర్మ (జైపూర్)

నాకు అంతరిక్ష పరిశోధన వల్ల చిన్నప్పటి నుంచే ఆసక్తి ఎలక్ట్రానిక్స్, కంప్యూటరీస్, ఇంజనీరింగ్ పాను. అంతరిక్షం వల్ల ఉన్న ఆసక్తితో గత జూలైలో సిద్ధిలో జరిగిన ఒక సదస్సులో పాల్గొనే అవకాశం లభించింది. భారతదేశం నుంచి ఈ సదస్సుకు ఎంపి జైన షైలక్ వ్యక్తిని నేనే అక్కడ పాల్గొనడంతో ఈ అంతరిక్ష సదస్సులో పాల్గొనే అవకాశం వచ్చింది. స్పేస్ ఇంజనీ రింగ్ లో మార్కెట్ డిగ్రీ చేసి నాసా నుంచి వ్యూహామిగా అంతరిక్షానికి వెళ్లాలని ఉంది



వారికి అహం లేదు: భారత యువ శాస్త్రవేత్త ఆశిష్ మిట్ట

ఈ సదస్సులో పాల్గొనే అవకాశం పొందడం చాలా ఆనందంగా ఉంది. వ్యూహామి కావాలనే కోరిక వెనకేరు కుందనే ఆశ కల్పలేంది. చివ్వు దేశాల నుంచి వచ్చిన ప్రతినిధులు చాలా స్నేహపూర్వకంగా ఉన్నారు. వారికి ఎలాంటి అహం లేదు. గౌరవపూర్వకంగా వ్యవహరిస్తున్నారు. 'మూన్ మార్క్ లునార్ వే స్పేస్ ఇన్ కంజక్షన్ విత్ ప్లానెటరీ సైన్స్' అనే అంశంపై నేను ఈ సదస్సులో టెక్నల్ సేవర్ నమర్చిస్తూ అంతరిక్ష పర్యాటకం ఉంచుతుంటే ఈ రంగంలో ఉపాధి అవకాశాలు ఏర్పడాలని ఆశిష్ తాయి



Graphic: Delegates by region gathered in SGC 2007 Congress

Congress Statistics

	Number	Percentage
Total delegates	276	
Total countries represented	63	
Gender		
Male	184	66.67%
Female	87	31.52%
Student		
Yes	204	73.91%
No	71	25.72%
IAC participation		
Attending only	127	46.01%
Attending and Presenting	91	32.97%
Non attending	17	14.86%



2007 SGC Hyderabad Sponsors

NASA Astrobiology Institute



IAC Week

As Space Generation Congress (SGC) is held in conjunction with the annual IAC, space activities continued for many through September 28th. Space Generation Advisory Council (SGAC) staffed an exhibit booth at the IAC exhibition area where the IAC attendees and public visitors were given information about SGAC by members. At the booth there were several posters and information brochures as well as the SGAC annual reports from 2000 to 2006 and the SGC final reports from 2004-2006 as examples of the work SGAC is actively involved in.



As the official representative for SGAC to the IAF, Stube attended the members' meetings held during the week. During opening remarks at the first meeting Monday, IAF President Zimmerman noted the success of SGC held the preceding few days in Hyderabad and how the IAF should take note of what the younger generations are doing. Following this, thirteen new members were welcomed to the IAF. Nye, Vice President of the Planetary Society addressed the members about the goals of the Planetary Society and asked for the members' help in starting the "International Lunar Decade" based on the growing number of initiatives to go to the Moon in the next 10-12 years. Nye also mentioned his time with SGC over the previous four days and how it was encouraging to see the energy of such a young international group. Stube then made a statement on behalf of SGAC explaining to the members the need for more cooperation between the generations.



On Tuesday, Stube and Som presented the results of SGC 2006 in the form of the Global Youth Space Declaration to the IAF at the 18th Symposium on Space Activity and Society session. The declaration was the summary of three days of work in Valencia, Spain, where delegates discussed the major points that should be addressed for the next 50 years of space exploration.

Wednesday afternoon, Stube presented the 50 Year Vision of Space during the Space Education and Outreach Symposium. The project coordinated by the SGAC collected the responses of students and young space professionals on the 50th anniversary year of the first artificial satellite and the 40th anniversary of the Outer Space Treaty. It included consultation of the SGAC community through a series of meetings, online discussions and online surveys. The first two online surveys collected over 750 different vision inputs from the international community, totaling 276 youth from over 28 countries along with previous SGAC policy contributions. A summary of these results was presented as the top ten visions of today's youth as an invited input to world space leaders gathered at the Future of Space Exploration: Solutions to Earthly Problems Symposium held in Boston, USA from 12-14 April 2007 and at the United Nations Committee on the Peaceful Uses of Outer Space in May 2007.

On Thursday, SGAC held a special plenary meeting for the IAC attendees. The plenary was opened by Marshal, SGAC Co-Chairperson, giving a description of the history of SGAC and how that falls into the history of SEDS and ISU. Following Marshall, three of the project teams from SGC 2007 presented their work. The first team was the Case for Humans in the Exploration of the Moon and Mars team outlining their plans for a short movie addressing the need of a human based space exploration programme in an easily accessible way. The World Space

Week/Yuri's Night team then gave examples of how they will be helping each other to jointly organise over the next year and in the future for their events. Finally, the Space Transportation Technical Paper Competition team announced the time schedule for kicking off the competition they will be hosting to drive new ideas for space transportation.

On Friday afternoon, a special SGC-only session was held with NASA Astronaut and Indian national hero Sunita Williams. She joined the SGC delegates for a private two hour informal discussion about human space flight, improving global education and outreach, and the inevitable question of "How do you use the toilet in space?"

International Astronautical Federation Young Professionals Programme

Throughout the week, the IAF Young Professionals Programme (YPP) took place during the IAC. This year, SGAC took a lead role in the organising and execution of the second annual YPP.

SGAC assisted Stacey Edgington of NASA and Mary Snitch of Lockheed Martin, as well as others, in bringing together IAC delegates under 33 years old who are not still classified as "students". They hosted several speakers from the major space agencies and two networking events for the young professionals and retired delegates of the IAC to come together and exchange their views on the space industry and learn from each other.



IAF Young Professionals Lunch hosted by the Korean Aerospace Research Institute (KARI)

XVII United Nations and International Federation Astronautical Federation Workshop on Sustainability and Food Security

The seventeenth UN/IAF Workshop concluded on 23 September. It was hosted at the premises of the Indian National Remote Sensing Agency (NRSA) at Balanagar, Hyderabad, and was cosponsored by the European Space Agency.

Opened by Dr. K. Radhakrishnan, the Director of the NRSA, attendees were welcomed by Alice Lee (UN expert on Space Applications), Chris de Cooker (Head of Internal Relations, ESA),

James Zimmerman (IAF President) and Dr. B.N. Suresh (Co-Chair of IPC and Chair of IAC 2007 Local Organising Committee). Dr. G. Madhavan Nair, Chair of the Indian Space Commission and President of the Astronomical Society of India gave the inaugural address.

Initiatives in the area of space science and technology applied to sustainable development of food security lead to the poverty eradication in developing countries that is being carried out by various entities through international cooperation. The workshop also looked for ways to build synergies among them.

The programme of this two and a half day workshop considered, through plenary sessions, working group meetings and discussions, applications of space science and technology to management of food security including land degradation, rain-fed agriculture and farming, irrigated systems in agriculture, watershed/wasteland development and precision agriculture.

The primary objectives were:

- To increase awareness among decision makers and academic community about the use of space technology applications for sustainable development programmes supporting food security in developing countries
- To examine low-cost space-related technologies and information resources available for addressing food security needs in developing countries
- To strengthen capacity building in the area of food security and space technology
- To strengthen international and regional cooperation in the subjects
- To discuss education and training for various target groups on using space technology for addressing food-related challenges Space experts, policy- and decision-makers, representatives from academic community and private industry from developing and industrialised countries have been exchanging their experiences in the application of space technology for food security and also discussed opportunities for increased regional and international cooperation among developing countries or between developing and industrialised countries.

SGAC has conducted a study/survey in order to provide input to this workshop. The survey aimed to gather opinions of students and young professionals in the age group 18-35+, on the studied topic. SGAC Executive Officer Agnieszka Lukaszczyk presented the results of the study during the workshop. The survey illustrated that the awareness among young people regarding the subject matter is very low yet space continues to be a fascinating topic. The survey turned attention of the present experts and politicians into a great need for space education and better outreach programmes. SGAC considers this study a great success due to large amount of feedback received during the workshop and illustrated need for such studies. In an initiative this year, the IAF and UN-OOSA organised a round table with the participation of heads of space agencies and other relevant national, regional and international institutions and organisations from both space faring and non-faring countries.



A direct dialogue can in this way be established with the workshop participants on how space technologies and policies can contribute to sustainable development programmes in developing countries, with a focus on food security.

The round table, which took place on Saturday, opened an exchange of pragmatic ideas between decision-makers and leaders from international organisations and the participants of the workshop. In a wide-ranging discussion, the panelists, leaders from across world space organisations, agreed that a sustained and clear vision over many years was the key for a country's successful entry into the space industry and its exploitation.



Yuri's Night



Another year, Yuri's Night was celebrated all over the globe.

Between April 11th and April 14th, over 126 separate Yuri's Night parties were held across 35 countries over every continent on Earth except for Antarctica. Tens of thousands of space enthusiasts of all ages gathered around the globe (including, for the first time, the Second Life 'virtual world' program) over these few days to celebrate the history of space exploration—and to look to its future.

In Beijing, China, over 250 people converged on the Beijing University of Aeronautics and Astronautics to play games, watch a presentation on the history of human spaceflight, and talk with previous Yuri's Night party organizers. The Association of Astronautics, a local group of student space enthusiasts, publicized the event heavily to bring together BUAA aerospace students and others interested in outer space.



Yuri's Night Beijing

In Houston, Texas, 400+ celebrated at the Pub Fiction bar with dancing, videos, and live music. The capstone of the evening, however, was the drawing for the Zero-G Raffle, sponsored by Jacobs Engineering, which achieved national participation. A \$5 ticket gave each entrant the chance to win an all-expenses-paid zero-g flight (plus travel expenses); many tickets were bought, but in the end, Houston's own Jeremy Hart emerged as the winner.





Houston, we have a winner!

In Stuttgart, Germany, space enthusiasts gathered on the roof-terrace of the SkyBar for stargazing, live DJs, and space exhibits from several astronomical organizations, including the European Space Agency. The ESA also delivered a keynote speech on the past, present and future of spaceflight, which followed video greetings from several NASA astronauts of European origin.

And in California, at the NASA Ames Research Center, a crowd of thousands partied the night away in an astronomical extravaganza punctuated with speeches by Anousheh Ansari, Chris McKay, and Pete Worden, multimedia presentations, and a variety of tech demos. People of all ages drove for hours to pack Hangar 211 for this seminal event, a prototype for future collaborations with NASA that received coverage in Wired and the San Francisco Chronicle.



Privately-funded space traveler Anousheh Ansari at Yuri's Night San Francisco

These parties—and the 122 others held from Grand Rapids, Michigan, to Izmir, Turkey, to Hanksville, Utah, to everywhere else on the map—were all fantastic successes. Another year space enthusiasts worldwide celebrate Yuri's night.

2001: 60 parties in 29 countries, on 7 continents, 1 planet

2002: 120 parties in 45 countries, on 7 continents, 2 orbiting space vehicles, 1 planet

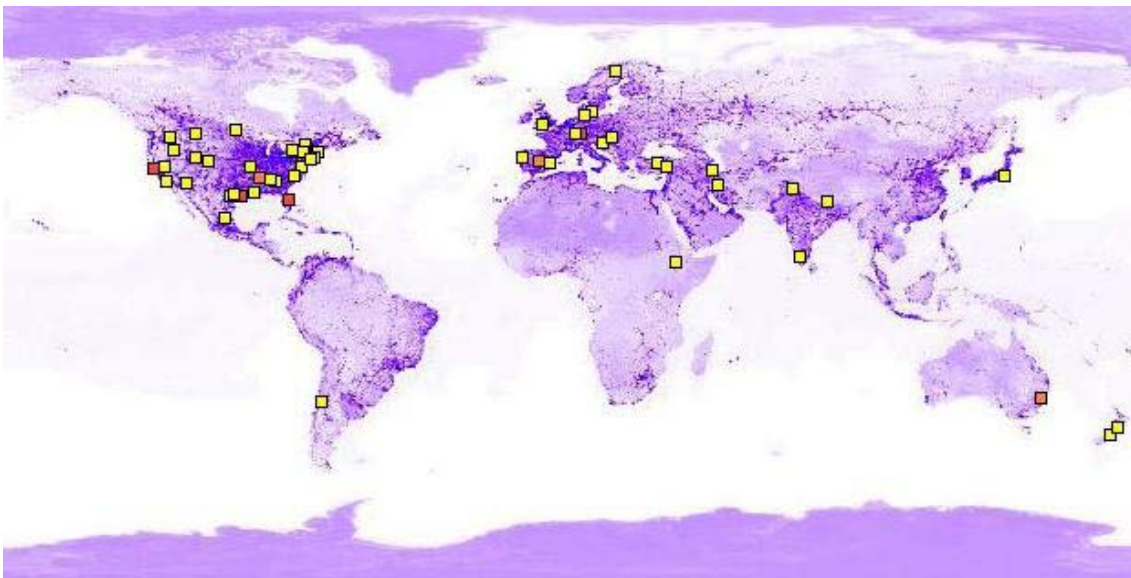
2003: 72 parties in 35 countries on 6 continents

2004: 77 parties in 22 countries, including Antarctica

2005: 63 parties in 22 countries, on 6 continents

2006: 91 parties in 33 countries, on 7 continents, 1 planet

2007: 126 parties in 35 countries over 6 continents on 2 worlds



www.yurisnight.net



Near Earth Objects (NEO) Working Group

Over the past forty years scientists have discovered that asteroids and comets have collided with the Earth throughout its 4.5 billion year history. The impact of these Near Earth Objects with our planet can be catastrophic and still represents a natural hazard today.

In February 2007, the Association of Space Explorers presented a paper to the Scientific and Technical Subcommittee at 42nd session of the Committee on the Peaceful Uses of Outer Space (COPUOS). From that paper came an initiative which has set up a series of meetings of experts and other interested people which will explore the subject of NEOs and possible means of diverting these objects from Earth before they would hit



Following the presentation of the NEO issue at SGC'07, there have been further developments. The [NEO@home](#) project is currently on hold as recent developments in the global effort to predict the path of risk will probably lead to a different solution. However, SGAC has agreed with Apollo Astronaut and the Chair of ASE's NEO Committee Rusty Schweickart to provide input and support on two other issues. SGAC members have the opportunity to come up with novel ideas for the deflection of asteroids and to discuss those with an SGAC expert on this topic before forwarding it to Rusty and the B612 Foundation. SGAC will also provide support to ASE's initiative for a draft on a global legal framework on NEOs within the UN COPUOS Action Team 14 on Near Earth Asteroids. Further activities within possible NEO outreach projects are currently being discussed.

Space Generation Additional Online Sites

YouTube

<http://www.youtube.com/profile?user=spacegeneration>

MySpace

<http://groups.myspace.com/spacegeneration>

Wikipedia

http://en.wikipedia.org/wiki/Space_Generation_Advisory_Council

A selection of Blogs (not extensive)

<http://q80girl.blogspot.com/>

<http://sendbeetospace.blogspot.com/>

<http://spacesooner.blogspot.com/>

<http://stubek.blogspot.com/>

<http://dysonsphere.wordpress.com/tag/space/>

<http://myspace.com/yurisnight>

There are also further Space Generation blogs at the main website, at <http://www.spacegeneration.org/blog>



Secure World Foundation Partnership



The Space Generation Advisory Council formed a new strategic partnership with the Secure World Foundation in 2007, giving the organisation much needed stability and leading to a surge in productivity and consistency in our project work.

The council had previously worked with the Secure World Foundation a number of smaller projects, notably co-hosting a security working group at the Space Generation Congress in Valencia, Spain in 2006. In late 2006 we were asked by SWF to prepare a survey of youth to identify the youth visions for the next 50 years of space exploration. These visions were to be presented on 12 April 2007 at the prestigious, high-level symposium “The Future of Space Exploration: Solutions to Earthly Problems” at Boston University, to mark 50th the anniversary of the launch of Sputnik. The visions were warmly received at the Boston University symposium, and with that encouragement we adopted the Visions project as our flagship project through to 2008.

To help us pursue this flagship project, the Secure World Foundation has kindly agreed to partner with us for an additional six months, supporting SGAC to present the results at a UN COPUOS and at number of conferences. In addition, the support of the SWF will enable us to focus on other project areas, notably Space Traffic Management, Input to National Space Policies, and increasing the use of our Observer Status at COPUOS.

Space Traffic Management

SGAC would like to support the development of space traffic management rules. We would do this mainly through the UN-COPUOS by helping to encourage an ad-hoc committee on this topic as well as informal discussions.

In particular SGAC hopes to support the taking forward of the concepts developed during the ISU Team Project this summer in Beijing to appropriate venues including COPUOS, and national space agencies.

Input to National Space Policies

In 2008 SGAC intends to re-invigorate its previous relationships with countries on advising them on their space policies, in particular for the EU and US. We have had tremendous opportunities to pass on our ideas to both these states – and we would like to re-open these opportunities. We would like to include more policy advice on security related space policies.

Increasing the use of our Observer Status at COPUOS





We would like to increase the use of our observer status with COPUOS by contributing more concretely to activities there. In particular, we would like to support and provide youth input papers to several ongoing processes:





- The mandate discussions and formation of a long term working group
- The discussions of NEOs
- The initiation of discussions on Space Traffic Management








Appendices

Appendix A: SGAC 2007 Executive Office

	Name	Position	Location	Term
	Will Marshall	Global Chair	UK (currently living in USA).	from January 2006
	Alex Karl	Global Co-Chair.	Germany	from February 2007
	Dr. Chris Boshuizen	Executive Director	Australia	from August 2006
	Kevin Stube	Executive Secretary	USA	from March 2006

	Agnieszka Lukaszczyk	Executive Officer	Poland / USA (currently at SGAC Office, Vienna)	from September 2006
<hr/> SGAC 2007 Executive Council <hr/>				
	Nyeng Gyang	Regional Co- ordinator, Africa	Nigeria	April 2006 to April 2008
	Bijal Thakore	(Bee) Regional Co- ordinator, Asia Pacific	India	January 2007 to January 2009
	Kirk Kittell	Regional Co- ordinator, Europe	Denmark	April 2008 to April 2010

	Cédric Sapey	Regional Co-ordinator, Europe	Switzerland	April 2006 to April 2008
	Imran Majid	Regional Co-ordinator, Asia Pacific	Pakistan	October 2006 to October 2008
	Halit Mirahmetoglu	Regional Co-ordinator, Middle East	Turkey	November 2006 to November 2008
	Maryam Aljoaan	Regional Co-ordinator, Middle East	Kwait	April 2006 to April 2008
	Daniel Porras	Regional Co-ordinator, North, Central America and Caribbean	USA	October 2007 to October 2009

	Rob Guinness	Regional Co-ordinator, North, Central America and Caribbean	USA	July 2007 to July 2009
	Paul Acquatella	Regional Co-ordinator, South America	Venezuela	January 2007 to January 2009
	Martín Canales	Regional Co-ordinator, South America	Perú	January 2007 to January 2009

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Contributions: Members of the Space Generation Advisory Council worldwide.

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SPACE GENERATION

the global space youth network

in support of the United Nations Programme on Space Applications

Join us!



enjoy the benefits of a free global network:
be informed, make friends, enhance your skills,
travel the world, find a job, share a passion