

SPACE GENERATION ADVISORY COUNCIL
ANNUAL REPORT 2010





SPACE GENERATION ADVISORY COUNCIL
in Support of the United Nations Programme on Space Applications

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ACRONYMS

Acronym	Definition
SGAC	Space Generation Advisory Council
AAJ	Astronomical Association of Jamaica
AIAA	American Institute of Aeronautics and Astronautics
APRSAF	Asia-Pacific Regional Space Agency Forum
APSCO	Asia-Pacific Space Cooperation Organisation
ASECNA	Cameroon Civil Aviation Authority
AsMA	Aerospace Medical Association
ASRI	Australian Space Research Institute
ASTROSAT	Astronomy Satellite
AWS	Asian Winter School
AYAF	Australian Youth Aerospace Forum
BEXUS	Balloon Experiments for University Students
BRITE	Bright Target Explorer
BRITE-PL	Bright-star Target Explorer-Poland
CAP	Communicating Astronomy with the Public
CASI	Canadian Aeronautics and Space Institute
CCSDS	Consultative Committee for Space Data Systems
CSA	Canadian Space Agency
CSO	Czech Space Office
DASS	Department of Astronomy and Space Sciences
DLR	Deutsches Zentrum für Luft und Raumfahrt (German Aerospace Centre)
EADS	European Aeronautic Defence and Space Company N.V.
EC	European Commission
ECOSOC	Economic and Social Council
EISC	European Interparliamentary Space Conference
EO	Earth Observation
ESA	European Space Agency
ESMO	European Student Moon Orbiter
ESO	European Southern Observatory
ESON	ESO Science Outreach Network
ESPI	European Space Policy Institute
EXA	Ecuadorian Civilian Space Agency
GAIA	Globales Astrometrisches Interferometer für die Astrophysik
GAM	Global Astronomy Month
GEOSS	Global Earth Observation System of Systems
GIS	Geographic Information System
GISTDA	Geo-Informatics and Space Technology Development Agency
GMES	Global Monitoring for Environment and Security
GNSS	Global Navigation Satellite Systems
GPS	Global Positioning System
GSA	Galileo Navigation System
GSLV	Geosynchronous Satellite Launch Vehicle
GTTP	Galileo Teacher Training Programme
GWU	George Washington University
IAA	International Academy of Astronautics
IAC	International Astronautical Congress
IAF	International Astronautical Federation
IAT	Istanbul Astronomy Community
ICG	International Committee on GNSS
ICIST	International Conference for the Integration of Science and Technology
ICTP	International Centre for Theoretical Physics



Acronym	Definition
IEEE	Institute of Electrical and Electronics Engineering
IKAROS	Interplanetary Kite-craft Accelerated by Radiation Of the Sun
IKY	Ελληνικά Ίδρυμα Κρατικών Υποτροφιών (Greek State Scholarships Foundation)
ILOA	International Lunar Observatory Association
INTA	Instituto Nacional de Tecnica Aeroespacial
ISRO	Indian Space Research Organisation
ISS	International Space Station
ISU	International Space University
IUCAA	Inter-University Centre for Astronomy and Astrophysics
IYA	International Year of Astronomy
JAXA	Japan Aerospace Exploration Agency
JENAM	Joint European and National Astronomy Meeting
KAIST	Korea Advanced Institute for Science and Technology
KARI	Korea Aerospace Research Institute
KOMPSAT 5	Korean Multipurpose Satellite 5
KSAY	Korea Space Association for Young Generation
KSLV	Korea Space Launch Vehicle
KSLV-I	Korean Space Launch Vehicle-1
LEEM	Laboratory for Space and Microgravity Research
LOC	Local Organising Committee
MDG	Millennium Development Goals
MEA	Mexican Space Agency
Mk-III	Mark III
MUSES-C	Mu Space Engineering Spacecraft C
NASA	National Aeronautics and Space Administration
NASO	Nepal Astronomical Society
NAST	Nepal Academy of Science and Technology
NCAC	North, Central America and the Caribbean
NCRT	National Council for Research and Technology
NEO	Near Earth Objects
NGO	Non Government Organisations
NIA	National Institute of Aerospace
NPoC	National Point of Contact
NSCW	National Space Camp Woomera
NZ	New Zealand
OOSA	Office for Outer Space Affairs
PR & Comm	Communications & Public Relations
PSLV	Polar Satellite Launch Vehicle
PW-SAT	studencki satelita Politechniki Warszawskiej
QZS-1	Quasi Zenith Satellite 1
RASC-AL	Revolutionary Aerospace Systems Concepts-Academic Linkage
RC	Regional Coordinator
RDS	Rocket for Drop Sonde
REXUS	Rocket Experiments for University Students
SAAO	South African Astronomical Observatory
SANSA	South Africa National Space Agency
SAR	Synthetic Aperture Radar
SASA	South African Space Association
SASS	South Australian Space School
SC	Security Council
SCA	Space Conference of the Americas
SCaN	Space Communications and Navigation
SEDS	Students for the Exploration and Development of Space
SG	Secretary-General



Acronym	Definition
SGC	Space Generation Congress
SGF	Space Generation Forum
SH-SSP	Southern Hemisphere Summer Space Programme
SPDC	Special Political and Decolonisation Committee
SPU	Space Policy Unit
SSN	Space Surveillance Network
SSP	Space Studies Programme
SSS	Space Safety and Sustainability
STUDSAT	Student Satellite
THEOS	Thailand Earth Observation Satellite
UdelaR	Universidad de la República
UK	United Kingdom
UN	United Nations
UN COPUOS	United Nations Committee on the Peaceful Uses of Outer Space
UN GA	United Nations General Assembly
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNISEC	Asia-Pacific Satellite Communications Council
UNISPACE	United Nations Conference on the Exploration and Peaceful Uses of Space
UNITEC-1	UNISEC Technology Experiment Carrier-1
UNL	University of Nebraska at Lincoln
UN-SPIDER	UN Space-based Information for Disaster Management and Emergency Response
UPC	Polytechnic University of Catalonia
US	United States of America
VINASAT	Viet Nam Satellite
VNREDSat-1	Viet Nam Natural Resources, Environment and Disaster Monitoring Small Satellite
VSS	Victorian Space School
VSSEC	Victorian Space Science Education Centre
WPA	Woomera Prohibited Area
WSW	World Space Week
YGNSS	Youth for Global Navigation Satellite Systems





SGAC
SPACE GENERATION ADVISORY COUNCIL

INTRODUCTION

ABOUT THE SPACE GENERATION ADVISORY COUNCIL

The Space Generation Advisory Council (SGAC) in support of the United Nations (UN) Programme on Space Applications is a non-governmental organisation that aims to represent university students and young space professionals to the United Nations, Nation States, space agencies, industry, academia and other organisations in the space community.

SGAC has permanent observer status in the United Nations Committee on the Peaceful Uses of Outer Space (UN COPUOS). SGAC has a long history and was conceived at the Third United Nations Conference on the Exploration and Peaceful Uses of Space (UNISPACE-III) in Vienna in 1999. The SGAC Executive Council is made up of representatives from each of the six UN regions, and has a larger body of representatives from nation states. Our focus is on pragmatic space policy advice to policy makers based on the interests of the global community of university students and young professionals, broadly in the age range 18-35, interested in space. SGAC currently has 4,000 university students and young professionals in roughly 90 countries in its network.



MESSAGE FROM THE SGAC CO-CHAIRS

Dear Members, sponsors and supporters,

As we look back to report on another year of SGAC activity we continue to be amazed by the growth and success of our individual members as they make their way in study, careers and life. There is a sense of high-energy optimism and ambition amongst SGAC's membership base as we turn a passion for space, in its many delicious flavours, into careers full of meaning and accomplishment.

The measure of SGAC's success is to see more students and young professionals involved in more space events, more often. As Chairs, we have been delighted to see new faces at our annual conference and others around the world, to see ambitious young policy makers from developing economies stand up at COPUOS and make their statements and to see students standing by their first poster session at regional space conferences. Thanks to partners' support SGAC sponsored 30 people to attend the Space Generation Congress (SGC). We were able to provide the Belarusian government with input to the development of their national space policy. We were able to speak on gains and opportunities in women in the workplace. We helped facilitate youth workshops at the Space Conference of the Americas (SCA). These highlights and more are provided in detail in this report.

Thank you to everyone who has supported the organisation throughout the year in their own way. Our thanks in particular goes to Ariane Cornell and the executive office for their tireless work running the day to day operations of SGAC – as volunteer youth organisation we are grateful to have the capacity to employ full-time staff to help make us look so good. Thanks to our financial sponsors who help provide the means for SGAC to go about its work. This year SGAC held its first two Advisory Board meetings, which helped to provide a new perspective on organisational governance and strategy. Our utmost appreciation goes to the Advisory Board for their time and continued support.

SGAC is looking forward to a thrilling start to the new decade. The Space Generation Congress, in its 10th year, will be in South Africa and is shaping up to be our biggest and most lively ever. We are also looking forward to our first joint event with the National Space Symposium in April further expanding our involvement in the US space community.

Thank you once again for your continued support, we are looking forward to working with you all in 2011 to help turn raw energy and passion for space into dynamic careers in the space community.

We commend this report to you.



Agnieszka Lukaszczyk
Chair



Michael Brett
Co-Chair



MESSAGE FROM THE EXECUTIVE DIRECTOR OF SGAC

Dear all,

2010 represents a year of steady progress on a continued trajectory of success for SGAC. 2009 was a year in which the organisation launched from its solidified base. The ways in which we ran projects, competitions, partnerships and events took new, improved shape. 2010, though, was a year in which SGAC was able to start to sharpen and improve those activities.

SGAC's projects and competitions were given great support with the creation of the new roles of Project Coordinator and Assistant Project Coordinator. Subsequently, Cem Asma (Turkey) and Tabitha Smith (US) were appointed to the respective roles and worked to assist the individual project leads in the guidance of the SGAC projects. The Youth for GNSS, Space Technologies for Disaster Management, and Near Earth Object Working Group projects with new structure have begun in 2010 and will continue in 2011 to see the fruits of these efforts. The number of competitions, both SGAC-based and those in conjunction with external organisations, also increased.

In addition to linking with external organisations for competitions, SGAC in 2010 signed memoranda of understanding with several organisations to offer excellent and exclusive opportunities for our members. From a special Space News subscription offer, to an opportunity to contribute to Belarusian space policy, to creating a space history movie with the University of Nebraska Space and Telecom Law department, to earning a scholarship from Germany's German Aerospace Centre (DLR), SGAC's partnerships with various organisations around the world have given our young professional and university student members the chance to develop and share their perspectives on space in many new ways.

Finally, in 2010 SGAC put on events that reflected the growing strength of the organisation. For example, in September, SGAC organised its ninth annual Space Generation Congress which had a record number of applications, hosted world-class speakers, acted as a forum for top notch space discussions, and sold out all 100 delegate positions of which a record 40 were scholarship supported. From the opening speaker, Dorin Prunariu (Chairman of UN COPUOS), through to the closing speaker, Charles Bolden (NASA Administrator), the event was action packed and intellectually rigorous. Just as importantly, the recommendations and high calibre output from the event is scheduled to be presented at conferences throughout the globe in 2011 in addition to at the United Nations.

2010 was certainly a strong year for SGAC, and we look forward in 2011 to building upon our successes. With strong systems and volunteers in place, SGAC hopes in the upcoming year to further increase both the quality and quantity of opportunities for our members around the world. We do hope you will join us!

Warm regards,



Ariane Cornell
SGAC Executive Director

EXECUTIVE REVIEW

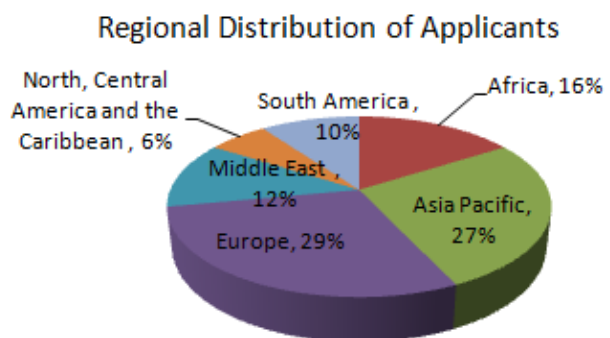
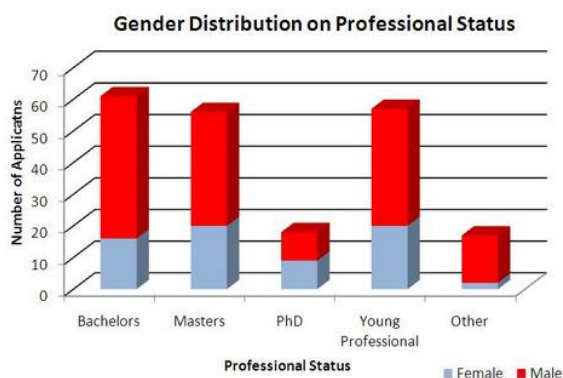
ORGANISATIONAL DEVELOPMENT

- Team Changes:
 - SGAC appointed its first Honorary and Advisory Boards consisting of influential members of the international space community who have been strong supporters of SGAC and its goals
 - Michael Brett (Australia) was elected as the new Co-Chairperson of the Space Generation Advisory Council
 - Agnieszka Lukaszczyk (Poland/US) became the new Chairperson of SGAC
 - Ben Basely-Walker (United Kingdom) completed his term as the Chairperson of SGAC
 - Julie Rowe (New Zealand) was elected as the new Treasurer of the organisation
 - Cem Ozan Asma (Turkey) was appointed as the new Project Coordinator
 - Tabitha Smith (US) was appointed as the Assistant Project Coordinator
 - Damian Maria Bielicki (Poland) was elected as the Regional Coordinator (RC) for Europe
 - Aziz Kayihan (Turkey) was elected as the new RC for the Middle East
 - Sonja Russell (Australia) was hired as the Executive Office Intern

SPACE GENERATION CONGRESS

The 9th annual Space Generation Congress (SGC) was held on the 23 – 25 September, in Prague, Czech Republic

- Delegate statistics:
 - 101 delegates represented a total of 40 continents
 - The male to female ratio of SGC delegates has remained stable at 38% females and 62% males.
 - 30 of the attendees received SGAC scholarships
 - 49% of applicants were not part of SGAC before their application



SGC Statistics

- This year, five topics were covered and worked upon; for more information, see the SGC section below
- SGAC continued its participation in the IAC and the UN / IAF workshop
- Delegates at the SGC 2010 heard from a wide variety of highly acclaimed speakers from many different companies and organisation, these include:
 - Charles Bolden, NASA Administrator,
 - Dumitru Prunariu, Chairman of UN COPUOS,
 - Berndt Feuerbacher, President of the International Astronautical Federation
 - Jim Zimmerman, President of the International Space Services, Inc.



PROJECTS & UNITED NATIONS WORK

- Youth for Global Navigation Satellite Systems (YGNSS) contributed to a series of conferences and meetings, including the International Committee on Global Navigation Satellite Systems' (ICG's) annual meeting in Turin, Italy.
- The SGAC Space Technology for Disaster Management team produced high level briefs on both the Chile and the Haiti disasters.
- Near Earth Object (NEO) Working Group: The NEO working group was involved in organising two student competitions over the year. These were the Asteroid Warning Competition and the Planetary Defence Conference Student Competition.
- United Nations Report: SGAC participated in the UN COPUOS main meeting, the two COPUOS subcommittee meetings, as well as the UN General Assembly.

REGIONAL ROUNDUP

- Africa: SGAC elected two new Regional Coordinators and appointed five new National Points of Contact to represent the region and six Africans were given scholarships supported by SGAC to attend the Space Generation Congress and International Astronautical Congress in Prague.
- Asia Pacific: With 13 countries represented in SGAC, the numbers of activities in the Asia Pacific region are increasing. Members from SGAC Asia Pacific represented the organisation in even more local, national and international events than ever before.
- Europe: All major goals set for the year 2010 were successfully met in the European region. The main emphasis was on consolidating the internal structure of the region by improving communication between members, expanding representation in already represented and especially in previously unrepresented countries.
- Middle East: Although the Middle East region does not have many countries in SGAC, strategic goals were met and the region was very successful with outreach activities. As part of the outreach strategy, SGAC was presented on the most well known astronomy TV show in Iran.
- North, Central America and the Caribbean: Throughout the year 2010, SGAC in the North, Central America and the Caribbean region worked on improving the, already strong, space industry. Space is now not only popular in North America but activities have also been increasing in Central America and the Caribbean.
- South America: The South American Region has always been a very active and enthusiastic group within the SGAC. However, in the past year the South America region has experienced changes and the region looks to 2011 to grow its National Point of Contact base.

OUTPUT AT A GLANCE

Throughout the year, SGAC supported a number of scholarships, conferences and papers, these are listed below.

SCHOLARSHIPS (34)

- IAASS Conference (4),
- IAASS/ISSF Scholarship to SGC,
- Diamandis scholarship,
- Move an Asteroid,
- DLR Delegate Assistance Award (4),
- Event Manager Candidate Travel Scholarships (2),
- SGAC Young Leader Awards (19), and
- UN/IAF Workshop Scholarships (2).

CONFERENCES SUPPORTED (2)

- Space Generation Congress, and



- Space Conference of the Americas Youth Forum.

PAPERS AND MOVIES (9)

- SGC reports (5 session reports plus congress report),
- Haiti earthquake Paper,
- Chile earthquake paper, and
- Space Generations Movie.

CONFERENCES WITH OFFICIAL SGAC REPRESENTATION AND/OR PRESENTATION (18)

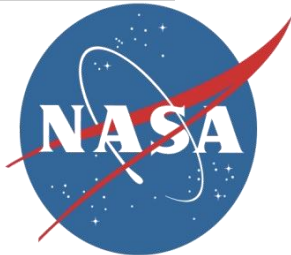
- International Astronautical Congress,
- National Space Symposium,
- American Institute of Aeronautics and Astronautics (AIAA) Aerospace Sciences Meeting,
- United Nations Committee on the Peaceful Uses of Outer Space (UN COPUOS),
- Legal Subcommittee of COPUOS,
- Scientific and Technical Subcommittee of COPUOS,
- UN Workshop in Ethiopia,
- United Nations International Astronautical Federation (UN/IAF) Workshop,
- Asia-Pacific Regional Space Agency Forum,
- Space Conference of the Americas,
- Australian Space Development Conference,
- International Committee on GNSS (ICG) in Turin,
- European Space Agency (ESA)-Euro Commission Exploration Workshop,
- International Space University (ISU) Symposium,
- International Conference for the Integration of Science and Technology - Korea Advanced Institute for Science and Technology (ICIST-KAIST),
- Berlin Airshow,
- National Aeronautics and Space Administration (NASA) Workshop on Education Innovation, and
- Ethiopian Physics Society.



SPONSORS

The Space Generation Advisory Council is very grateful once again for the generous support of our sponsors and partners. This year our sponsors and partners expanded their financial and intellectual (e.g., data, subject matter experts, speakers, etc.) contributions. Both types of contributions have played important roles in the improved quantity and quality of SGAC's products in 2010. SGAC would like to thank them for their contributions to one of the most successful years in SGAC history.

PLATINUM



SGC 2010 Participant

Private
Anonymous
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GOLD



Cynda Collins
Arsenault



SILVER



European Commission



SAAO
South African
Astronomical Observatory



Peter Diamandis James Moody Juergen Schlutz George Whitesides



PARTNERS

The Space Generation Advisory Council is fortunate to have partner organisations who work in collaboration with our organisation sharing their solidarity in spirit and resources. These organisations both support proactively the mission of SGAC as well as provide special opportunities for SGAC and our members. SGAC is very appreciative to have worked in 2010 with the following organisations.





SGAC
SPACE GENERATION ADVISORY COUNCIL

SGAC BACKGROUND

HISTORY OF THE SPACE GENERATION ADVISORY COUNCIL

As part of UNISPACE III, alumni of the ISU organised and convened the Space Generation Forum (SGF). The aim of the forum was to express the visions and perspectives of youth with regards to future space activities. This evolved to include youth input and recommendations into the deliberations of the UN at UNISPACE. 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, 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 Report were integrated into UNISPACE III's final report, the Vienna Declaration on Space & Human Development:

- 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

For more information about UNISPACE III please visit:

[<http://www.un.org/events/unispace3/>](http://www.un.org/events/unispace3/)

For more information about the International Space University please visit:

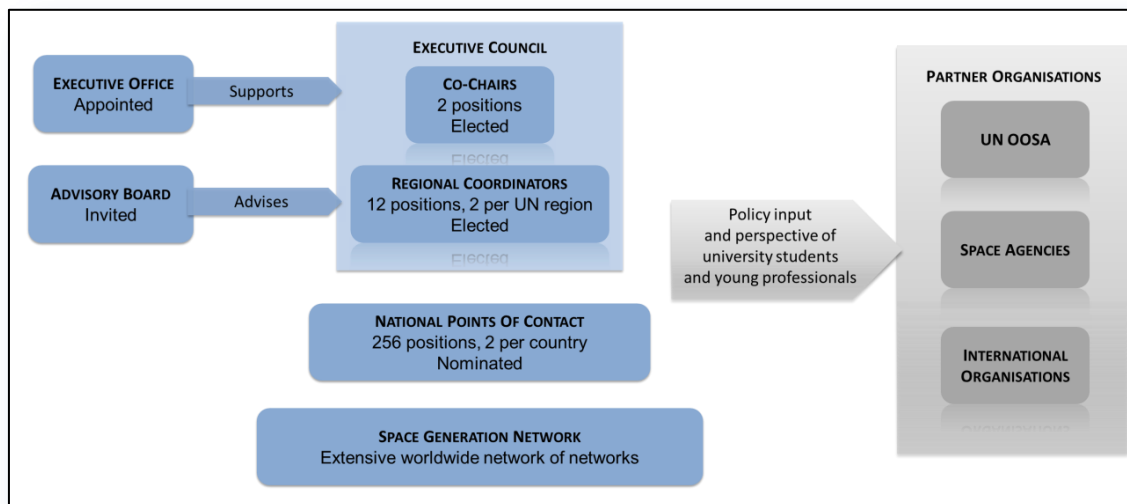
[<http://www.isunet.edu/>](http://www.isunet.edu/)

For more information about the Vienna Declaration on Space & Human Development please visit:

[<http://www.unoosa.org/pdf/reports/unispace/viennadecle.pdf>](http://www.unoosa.org/pdf/reports/unispace/viennadecle.pdf)



SGAC LEADERSHIP AND STRUCTURE



SGAC PROGRAMME

SPACE POLICY

Past SGAC achievements include the Vienna Declaration (1999), creation of Latin-American Space Association ALE (2000) and the Space Association of Turkish States SATS (2001), the Space Policy Summit (SPS) (2002), the EU Green Paper Submission (2003), and *"The Youth Space Vision for the Next Decade"* (2009).

In 2010, SGAC continued to have an observer presence and input to the 47th meeting of the Scientific and Technical Subcommittee in February, the 49th session of the Legal Subcommittee at the end of March and the 53rd Session of COPUOS in Vienna in June, 2010.

SPACE EDUCATION & OUTREACH

Space outreach was once again a primary SGAC activity uniting SGAC members worldwide. This year many SGAC members participated in and organised space education and outreach events in their respective countries. As in former years, in 2010 SGAC was able to obtain funding for several students from the developing countries to attend international conferences and workshops such as, the SGC and IAC with ground-breaking 34 scholarships including 19 SGAC Young Leader Awards.

INTERNATIONAL COOPERATION

International cooperation is more of a deeply embedded philosophy than 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 continued to expand in 2010 with the addition of many new National Points of Contact around the world. At the end of 2010, 65 of our roughly 90 countries are represented by National Points of Contact. Significant discussions were held on the TALK e-mail list and connections were made between individuals and groups.





SGAC
SPACE GENERATION ADVISORY COUNCIL

THE ORGANISATION IN 2010

GOAL ACHIEVEMENT ASSESSMENT

At the beginning of 2010, the Space Generation Advisory Council set nine strategic goals to achieve during the year in three areas: high-calibre output, strengthened network and a robust administration. Below is the SGAC Executive Office's evaluation of the success in achieving these goals over the year.

HIGH-CALIBRE OUTPUT

1. PRODUCE A NUMBER OF SELECT HIGH CALIBRE PROJECTS WHICH ARE SIGNIFICANT CONTRIBUTIONS TO THE INTERNATIONAL SPACE POLICY DEBATE

In 2010, SGAC decided to focus on quality over quantity of projects choosing three areas of interest:

- a. **Space Technologies for Disaster Management Working Group** – In mid-2009, the SGAC Group on Space Technologies for Disaster Management was initiated to create greater awareness of space technologies and space-derived information in disaster relief efforts. In 2010 group members produced two quality papers regarding recent natural disasters in various parts of the world: [Space Applications for Disaster Relief: The Haiti Earthquake Brief](#) (February 2010), [Space Applications for Disaster Response: The Chile earthquake and Tsunami Brief](#) (April 2010). These activities have helped the disaster management community and general public better understand the increasing need for the integration of space-based technologies into traditional disaster preparedness, response, recovery and mitigation practices.
- b. **The NEO Working Group** – This group is dedicated to helping the worldwide planetary defence community to meet one of nature's greatest challenges. The group provides a youth perspective to planetary defence through annual reports, competitions, conference attendance and public outreach projects related to Near Earth Objects. In 2010, the NEO working group organised SGAC's third annual "Move; contributed to the development of a UN Legal Framework for International NEO Cooperation through COPUOS" Action Team 14; and has already launched a student competition in support of the May 2011 Planetary Defence Conference in Bucharest, Romania.
- c. **YGNSS** - YGNSS is a team of university students and young professionals who aim to help bring the maximum benefits of the [Global Navigation Satellite System \(GNSS\)](#) to society. In 2010, the group was actively involved with the International Committee on GNSS ICG Prep meetings ([YGNSS intent to support GNSS](#)); produced the SGC 2009 SGC Agency report related to GNSS uses in developing countries ([SGC 2009 Agency Report](#)); supported the 2010 Space Generation Congress's Agency session on GNSS for disaster management; gathered the opinions from international delegates on the best uses for GNSS and presented them at the ISU Symposium ([Paper](#) at ISU Symposium 2009 and [poster](#)); developed the online YGNSS Education Portal ([Paper](#)); and completed a YGNSS Flyer - Who We Are and What We've Done ([Flyer](#)).

2. BUILD ON SUCCESS OF THE SPACE GENERATION CONGRESS 2009 IN DAEJEON, KOREA FOR THE SPACE GENERATION CONGRESS 2010 IN PRAGUE, CZECH REPUBLIC

The organising of SGC 2010 was a challenge as SGC 2009 had been a resounding success in terms the record-breaking 21 scholarships awarded and the content. The organising team of 20 people from 15 countries delivered, though, an even improved Congress in 2010. 28 scholarships were awarded this year to delegates from 22 countries. The speaker line-up consisted of the space sector's top international leaders from the opening speech of UN COPUOS Chairman, Dimitru Prunariu, through the closing speech of NASA Administrator, Charles Bolden. More press attended the event including television station, France 5, and spaceref.com, which had extended coverage of SGC. Last but certainly not least, SGC produced reports that were improved in intellectual quality thanks to the



preparations of SGC's staff. SGC 2011, SGC's tenth anniversary, will look to lessons learned from SGC 2010 to continue the Congress' positive development.

STRENGTHENED NETWORK

3. REJUVENATE NPOC AND RC NETWORK

This goal has been carried across from the 2009 strategic priorities as further work was required. The NPOC and RC network was not performing to the standard needed by SGAC. To improve this, though, the organisation first needed to revitalise its communications infrastructure in order to provide the support to the RCs and NPOCs in developing their portfolios, networks and projects. SGAC is now in a much stronger position and has the opportunity to re-engage with these members and provide them with the structures and incentive to perform. This is due to some improvements made in 2010 including recruiting of top young leaders in the sector, giving out scholarships to its most active members and recognising those who show commitment to the organisation. SGAC is now in a much stronger position and has the opportunity to re-engage with these members and provide them with the structures and incentive to perform. That being said SGAC realises that it will have to continue to work on strengthening networks for many years to come.

4. REDEFINE WHAT IT MEANS TO BE A MEMBER OF SGAC

Whilst there are certain general network benefits of SGAC, what exactly it means to be a member of our network has been at times somewhat unclear. During 2010, the Executive Office took on a task to clearly define the nature of membership, the role of members and the benefits that are associated with membership. *SGAC Bottom-up Revamp: Members/Leadership Expectations and Communications Proposal* has been presented to the Executive Committee and the Advisory Board. The goal of this exercise was to have a better understanding of the organisation and membership which will enable us to focus the direction and leverage our access and networks more effectively for the benefit of all members. In addition, SGAC developed a new website where the organisation can better profile its members and keep a current database of those who are active within the organisation.

5. PROVIDE INCREASED SUPPORT FOR COUNTRY LEVEL ACTIVITIES

Through developing more positions, the Executive Office has by the end of 2010 just entered into a position where it can more effectively support the organisation's work at the national and regional levels. Previously, the organisation has not had the resources or structures to effectively incubate projects at the state and local level. SGAC considers this grassroots work critical for positioning SGAC as an effective contributor to the global space sector. Providing state and regional support is a point of development which will continue to improve faster in 2011 along with execution of the *SGAC Bottom-up Revamp* discussed above.

ROBUST ADMINISTRATION

6. CONSOLIDATE THE SGAC BRAND

The SGAC brand has been enhanced in 2010 with the continued expansion and strengthening of our communications team. SGAC has developed a new website, which is clear, informative and better organised than the previous. The organisation has worked very hard to make sure that SGAC's logo is more widely recognised in the international arena. Through various strategic partnerships we have been able to showcase our brand internationally.

7. DEVELOP EFFECTIVE TOOLS FOR EXTERNAL AND INTERNAL COMMUNICATION

The organisation is in a position to analyse and develop an effective suite of tools and methods for our members to communicate with the organisation and with each other. Simplicity will be a guiding principle in this process. Given that many of our members live in countries with limited internet services, we have aimed to create simple systems that maximise effectiveness without being too technically complex. There is, however, still significant ground to be covered. The members' area of the website needs to be improved in order for the SGAC website to be a useful tool in communicating, information exchange, networking, education, etc. SGAC sees this as a key growth area.



8. CONSOLIDATE AND IMPROVE FUNDRAISING AND BUDGET-CYCLE PROCESSES

In 2010, SGAC has made significant gains in organisational and financial consistency. The organisation aims to build on these successes and focus on long-term financial stability. With this mind-set, SGAC has in 2010 worked on this long-term sustainability by working to strengthen already established partner relationships. Additionally, SGAC has been able to attract new sponsors and supporters, reflecting the growth of SGAC's global recognition and quality output. This relationship building is key to SGAC as it allows the organisation to continue its work with the international youth and provide them with unique opportunities.

9. CONTINUE WITH THE INCORPORATION OF SGAC USA

In continued attempts to streamline SGAC organisationally and operationally, the decision was made two years ago to realign SGAC USA directly under the global SGAC organisation. The process has been long as a key, challenging part has been spinning Yuri's Night off as its own, mature non-profit organisation. In 2010, Yuri's Night was officially established in the United States as a 501(c) 3 organisation and the two organisations were legally and financially separated. SGAC is particularly proud of this achievement as Yuri's Night's spinoff represents the potential of projects started and incubated in SGAC.



SGAC ACTIVITY HIGHLIGHTS

SGAC continued on a positive track in 2010. SGAC developed organisationally by adding new positions and improving on project and conference outcomes. SGAC has also provided more competitions with scholarships allowing an increased number of members to attend international conferences. Furthermore the quality of SGAC's movies, papers and events have improved throughout the year. We look forward to continuing this in 2011.

SGAC ORGANISATION-WIDE HIGHLIGHTS

- The SGAC Space Technologies for Disaster Management Group produced a paper that reviews international efforts by the space sector in disaster management and highlights the recent applications in Haiti following the January 2010 earthquake.
- SGAC's Near Earth Objects (NEO) Working Group's documentary about asteroids was featured on the top rated TV news channel in Romania on the show "Reality Reporters".
- SGAC appointed its first Advisory Board consisting of influential members of the international space community to provide strategic guidance. The members of the Advisory Board are as follows:
 - Adigun Ade Abiodun, Founder of the African Space Foundation
 - Ambassador Ciro Arevalo, Former Chairman of the United Nations Committee on the Peaceful Uses of Outer Space
 - Ben Baseley-Walker, Legal & Policy Analyst for Secure World Foundation & former SGAC Chair
 - Yolanda Berenguer, Space Education Programme Coordinator for the United Nations Educational, Scientific and Cultural Organisation (UNESCO)
 - Lance Bush, Chief Strategy Officer, Paragon Space Development Corporation
 - Sergio Camacho, Secretary General of the Regional Centre for Space Science and Technology Education for Latin America and the Caribbean (CRECTELAC)
 - Chris de Cooker, Head of International Relations for the European Space Agency
 - Clay Mowry, President of Arianespace, Inc.
- SGAC appointed its Honorary Board. SGAC's Honorary Board members are people who have already been strong, consistent supporters of SGAC and its goals:
 - Barbara Adde, NASA's Space Communications and Navigation (SCaN) Policy and Strategic Communication Manager
 - James D. (Jim) Burke, US Naval Aviator and NASA Jet Propulsion Laboratory
 - Carolin C. (Lin) Burke, Teacher and Arts in Space Advocate
 - Gernot Grömer, Professor and Researcher of human Mars exploration at the University of Innsbruck
 - Johannes Ortner, Former President of the Austrian Space Agency and of the International Astronautical Federation
 - Kai-Uwe Schrogl, Director of the European Space Policy Institute
 - Loretta Hidalgo Whitesides, Flight Director for ZERO-G
- SGAC organised its third annual Move an Asteroid Competition with the support of A.C. Charania and SpaceWorks Commercial. The winner, Ben Corbin (United States of America), wrote a paper titled, "Implementing Advanced Technologies and Models to Reduce Uncertainty in a Global, Cost-Effective Asteroid Mitigation System".
- In 2010, SGAC attracted a record 226 applications for the Space Generation Congress, this was a 25% increase from last year. This year's SGC's 101 delegate slots were sold out and attracted delegates from 40 different countries.
- SGAC supported a record breaking 30 scholarship to delegates from 22 countries attend SGC 2010 in Prague.



- SGAC, in a partnership with the University of Nebraska, released a short feature film "Space Generations: From Sputnik, to Today to Tomorrow". The film shows the history, present and future of human space exploration produced by Andy Bacon (United Kingdom) and Art Anisimov (Belarus).
- SGAC solidified a partnership with Space News by signing a memorandum of understanding. The two organisations are working together to promote space to the young generation and to promote the young generation to the worldwide space community. Additionally, SGAC members are receiving a highly discounted subscription rate to the space publication.
- SGAC went live on a completely new website which offers clear, easily navigable information on SGAC and SGAC's members.
- SGAC created a translation team to translate important news in all six UN languages.
- SGAC appointed two new representatives to the United Nations Economic and Social Council, Wajahat Nassar (Pakistan) and Jose Rojas (Spain).
- SGAC Chair presented at the 5th meeting of the International Committee on Global Navigation Satellite Systems in Turin, Italy.

EXECUTIVE OFFICE HIGHLIGHTS

- Ariane Cornell, SGAC Executive Director, presented SGAC's general statement as well as SGAC's "Youth Space Vision for the Next Decade" to the Scientific and Technical (S&T) Subcommittee of the UN COPUOS. The general statement covered the highlights of SGAC's successes in 2009 while the "Youth Space Vision for the Next Decade" presentation reviewed SGAC's 10 Year Anniversary Conference and the findings.
- SGAC contributed to the 53rd Session of the UN COPUOS in Vienna. SGAC Executive Director, Ariane Cornell, explained broadly the activities that SGAC has engaged in during the past year since the previous COPUOS meeting.
- Agnieszka Lukaszczyk, SGAC Chairperson, has contributed, on behalf of SGAC, a chapter, "Youth Contributions to the Debate on Space Security", to the recently released book, *Fair and Responsible Uses of Space: An International Perspective*.
- Ariane Cornell, SGAC Executive Director, participated on a panel sponsored by the Women in Aerospace's European branch at the Berlin Airshow at Schoenefeld Airport. The panel covered the topic of women in aerospace and ways to develop diversity in the space sector's demographics.
- Ariane Cornell, SGAC Executive Director, presented the youth's perspective at a closed ESA-European Commission workshop in Strasbourg, France on exploration.

AFRICAN REGION HIGHLIGHTS

- African Regional Coordinator (RC), Prosperity Simpemba of Zambia, along with Zambian National Point of Contact (NPoC), Misheck Mutuzana, visited the Mpelembe Secondary School and introduced SGAC to students.
- Agnieszka Lukaszczyk, SGAC Chairperson, visited the facilities and met the team of eSystems Africa, SGAC's IT pro bono services provider. Based in Addis Abeba, Ethiopia, eSystems Africa is one of the leading information technology companies in the country.
- Former African RC, Nyeng Gyang of Nigeria, who is now a Scientific Officer for The African Regional Centre for Space Science and Technology Education in English (ARCSSTE-E) in Nigeria, carried out space education and outreach activities in two schools' space education workshops.
- SGAC Chair, Agnieszka Lukaszczyk, and NPoC for Ethiopia, Bekele Erko, attended the UN-SPIDER Regional Workshop, "Building Upon Regional Space-based Solutions for Disaster Management and Emergency Response for Africa".
- Kevin Mohee, NPoC for Mauritius, took part of the Doctors' Academy summer school in Manchester, England and also presented the field of space medicine and SGAC's potential for those interested in engaging in the field.



- Bekele Erko Tujuba, NPoC for Ethiopia, presented SGAC at the annual conference of the Ethiopian Physical Society (EPS) held at Jimma University in Jimma, Ethiopia.

ASIA PACIFIC REGION HIGHLIGHTS

- Patthara Limsira, NPoC for Thailand, attended the sixteenth session of the Asia-Pacific Regional Space Agency Forum, under the main theme entitled "Space Applications: Contributions towards Human Safety and Security" in Bangkok, Thailand.
- SGAC elected Michael Brett of Australia as the new Co-Chair of the Space Generation Advisory Council.
- SGAC announced that Julie Rowe, NPoC for New Zealand, was selected as the new Treasurer of the organisation.
- Ariane Cornell, SGAC Executive Director, was invited to lecture at the International Conference for the Integration of Science and Technology into Society at the Daejeon, Korea campus of the Korean Advanced Institute of Science and Technology.
- Yohan Ferreira of Sri Lanka, RC for Asia Pacific, was selected for the 2010 Peter Diamandis Scholarship by SGAC.

EUROPEAN REGION HIGHLIGHTS

- Damian Maria Bielicki of Poland was elected RC for Europe. A professional of law, he is a PhD Candidate in the Department of Public International Law and European Law with specialisation in Air and Space Law.
- Trond Krovel of Norway, long-time SGAC member, presented the recommendations from SGAC's 10 Year Anniversary Conference and represented SGAC in a panel debate at the International Space University Symposium, "The Public Face of Space".
- Artiom Anisimov, NPoC for Belarus, presented SGAC to top Belarusian officials overseeing the implementation of the National Space Programme of Belarus.
- Representatives of SGAC and DLR selected four German students for the third annual DLR German Delegate Assistance Award, which provided the winners with full scholarships to attend the SGC and the International Astronautical Congress (IAC) in Prague.

MIDDLE EASTERN REGION HIGHLIGHTS

- SGAC appointed a Project Coordinator, Cem Ozan Asma of Turkey. He will be in charge of working with SGAC project leads to develop and execute work plans for SGAC's year-round projects.
- Aziz Kayihan from Turkey was elected RC for the Middle East region. Since 2004, he has been studying Astronomy and Space Sciences researching the Augustinian and Planck era.
- RC for the Middle East, Mahsa Taheran of Iran, produced a short article for Ada Lovelace Day to commemorate women in the history of aerospace.

NORTH, CENTRAL AMERICAN AND THE CARIBBEAN REGION HIGHLIGHTS

- Ariane Cornell, SGAC Executive Director, represented SGAC at the largest annual American Institute of Aeronautics and Astronautics (AIAA) meeting. Ariane addressed the AIAA's Student Activities Committee and the Young Professionals Committee, introducing SGAC to the young AIAA community.
- SGAC appointed a new Assistant Project Coordinator, Tabitha Smith of the United States. Tabitha will assist Project Coordinator, Cem Asma, in helping SGAC project leads to develop and execute work plans for SGAC's year-round projects.
- Israel Ojeda Coronado from Mexico, RC for North, Central American and the Caribbean, was featured as a guest on Mexican "Radio Red 88.1", a national news radio station. He presented SGAC and SGC as well as the benefits of space applications for Mexico.



- Ariane Cornell, SGAC Executive Director, was invited to be the Master Moderator for the first day of the National Space Symposium, one of the premier annual space conferences, held in Colorado Springs, USA, where a key focus in 2010 was the New Generation of the space sector leaders.

SOUTH AMERICAN REGION HIGHLIGHTS

- Victoria Alonsoperez, SGAC NPoC for Uruguay, together with eight other members were the first foreign team to participate at the Revolutionary Aerospace Systems Concepts-Academic Linkage (RASC-AL) forum. The project team was awarded with prizes for “Most Innovative Architectural Design” and “Best Title”.
- SGAC started offering regional blogs beginning with the South American region. The first posts came from Nicole Jordan of Colombia, RC for South America, who is shared her experiences from the Space Conference of the Americas in Pachuca, Mexico.
- SGAC helped drive the Youth Forum Recommendations and actively participated during the Sixth Space Conference of the Americas in Pachuca, Mexico.



SPACE GENERATION CONGRESS REPORT



The Space Generation Congress is SGAC's annual conference held in conjunction with the International Astronautical Congress. Held 23-25 September in Prague, Czech Republic, SGC 2010 was a resounding success for the organisation. The number of delegates this year (101) was a considerable increase in comparison to last year (75), a fact that demonstrates that SGC is becoming stronger with every year, as it gathers together representatives from all corners of the world. Delegates from 40 countries and six continents, divided into five groups, shared their knowledge while discussing pertinent space topics within themes that mirrored those of the IAC. SGAC would like to thank its primary SGC supporters: our anonymous donor, NASA, the Secure World Foundation, Lockheed Martin, and the European Space Agency.

SPEAKERS

Barbara Adde	<i>Policy and Strategic Communications (PSC) Manager for the NASA's SCaN Programme</i>
Charles Bolden	<i>NASA Administrator</i>
Ben Corbin	<i>Aerospace Engineering and Planetary Science Masters Student at the Massachusetts Institute of Technology (MIT)</i>
Chris De Cooker	<i>Head of the International Relations Department at the European Space Agency</i>
Berndt Feuerbacher	<i>President of the IAF</i>
Mike Kearny	<i>Chairman and General Secretary of Consultative Committee for Space Data Systems (CCSDS)</i>
John Logsdon	<i>Professor Emeritus at George Washington University's Elliot School of International Affairs</i>
Clayton Mowry	<i>President of Arianespace, Inc.</i>
Dumitru Prunariu	<i>Chairman of the UN COPUOS</i>
William Watson	<i>Executive Director of the Space Frontier Foundation</i>
Ray Williamson	<i>Executive Director of the Secure World Foundation</i>
Jim Zimmerman	<i>President of International Space Services, Inc.</i>



TOPICS

Each year the delegates attending SGC take part in one of five working groups on the key space topics listed below. Each working group discusses topics of high relevance to the current space industry, these mirror the topics addressed at the IAC. The delegates gain an in-depth understanding of the topics through pre-reading materials and support from subject matter experts. Each working group develops a presentation and a report outlining their discussions and recommendations. These recommendations are presented to conferences in the year following the Congress.

INDUSTRY: THE NEW, INCREASED ROLE OF THE PRIVATE INDUSTRY IN THE SPACE SECTOR

The conference delegates discussed the prospects, challenges and potential hindrances of the development of the new generation of commercial space activities.

AGENCY: GLOBAL NAVIGATION SATELLITE SYSTEMS (GNSS) FOR DISASTER MANAGEMENT

Delegates discussed current challenges and suggested practice and policy changes to improve the effectiveness of GNSS to aid in all phases of disaster management.

CLIMATE: ENHANCING GLOBAL CLIMATE DATA EXCHANGE TO BETTER MONITOR CLIMATE CHANGE AND TO EMPOWER POLICYMAKERS, SCIENTISTS, AND THE COMMUNITY

The participants of the group discussed the current challenges of Earth observation data collection both from traditional remote sensing as well as community remote sensing. The group examined the data collection as well as how the exchange of these data can be improved.

EXPLORATION: EXAMINING THE FEASIBILITY OF A MISSION TO MARS FROM THE PERSPECTIVE OF THE YOUNG GENERATION

The group shared opinions on the development of human space exploration and provides an in-depth analysis of what is necessary for a mission to Mars.

OUTREACH: DEVELOPMENT OF SCIENCE AND TECHNOLOGY EDUCATION AND CAREERS FOR THE NEW GENERATION

The working group discussed how to improve space outreach, which includes changing stereotypes about space sciences.

SGC 2010 EVALUATION

The organising of SGC 2010 was a challenge as SGC 2009 had been a resounding success in terms of the record-breaking 21 scholarships awarded and the content. The organising team of 20 people from 15 countries delivered, though, an even improved Congress in 2010. 30 scholarships were awarded this year to delegates from 22 countries. The speaker line-up consisted of the space sector's top international leaders from the opening speech of UN COPUOS Chairman, Dimitru Prunariu, through to the closing speech of NASA Administrator, Charles Bolden. More press attended the event including television station, France 5, and spaceref.com, which had extended coverage of SGC. Last, but certainly not least, SGC produced reports that were improved in intellectual quality thanks to the preparations of SGC's staff. SGC 2011, SGC's tenth anniversary, will look to lessons learned from SGC 2010 to continue the Congress' positive development.



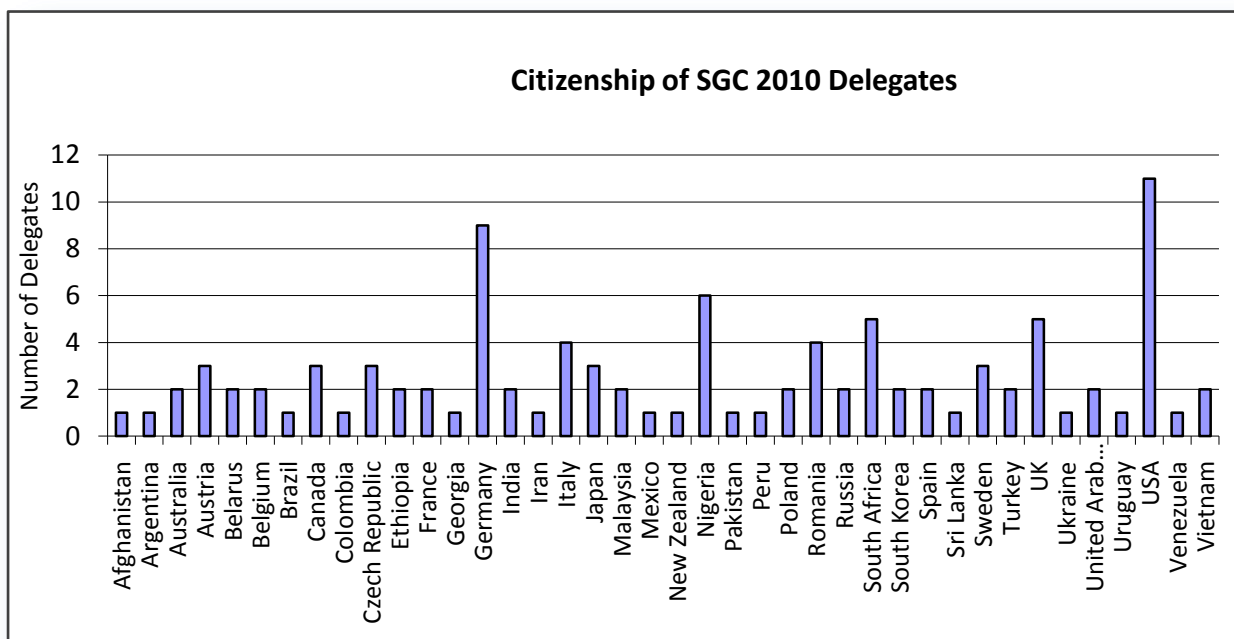


FIGURE 1: THE CITIZENSHIP OF THE DELEGATES AT SGC 2010

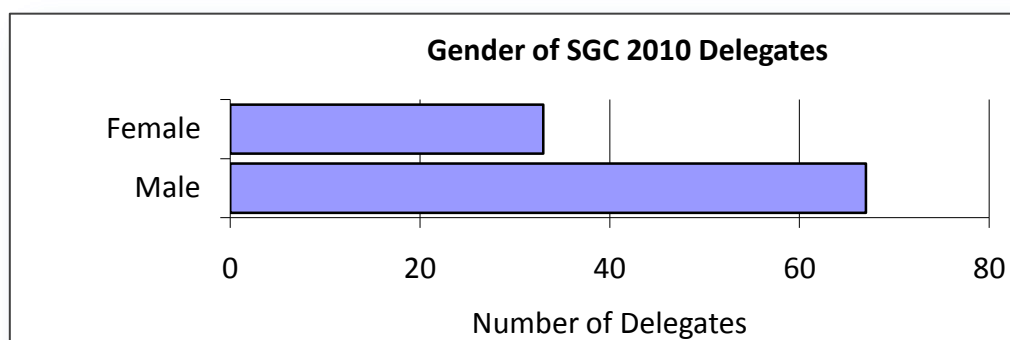


FIGURE 2: THE GENDER OF THE DELEGATES AT SGC 2010

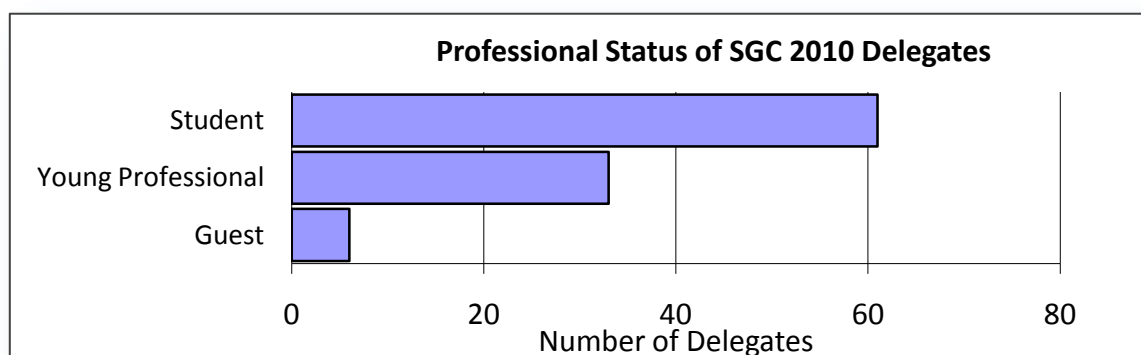


FIGURE 3 THE PROFESSIONAL STATUS OF THE DELEGATES AT SGC 2010



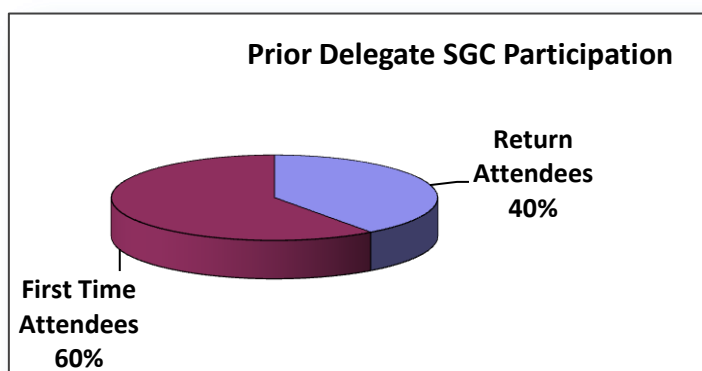


FIGURE 4: THE RATIO OF RETURN ATTENDEES TO FIRST TIME ATTENDEES TO SGC 2010

UNITED NATIONS REPORTS

UN COPUOS AND SUBCOMMITTEES

The United Nations Committee on the Peaceful Uses of Outer Space was established by the General Assembly in 1959 to review the scope of international cooperation in the peaceful uses of outer space, to devise programmes 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 (the Scientific and Technical Subcommittee and the Legal Subcommittee) 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 (UN OOSA) implements the decisions of the General Assembly and of the Committee on the Peaceful Uses of Outer Space and its two Subcommittees. 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 fifty third session in Vienna, Austria, from the 9 - 18 June. Executive Director, Ariane Cornell, gave the Space Generation's statement. The central issues of the 2010 statement were the number of scholarships that SGAC has provided for its members to attend conferences; the NEO, disaster management, and YGNSS projects' work that SGAC members have achieved; the development of SGAC's new Advisory Board; and the gratitude SGAC has for its committed sponsors and partners.

At the 53rd session of the UN COPUOS, SGAC contributed a presentation and an Advisory Board Meeting. In the board meeting, board members discussed the history, status and strategy of SGAC. The presentation, by Ariane Cornell, covered the recommendations put forward by the 2009 SGC in Daejeon, Korea.

SCIENTIFIC AND TECHNICAL SUBCOMMITTEE

This year, the Subcommittee convened for the forty-eighth time in February 2010. SGAC participants included Executive Director, Ariane Cornell, who presented SGAC's general statement as well as SGAC's "Youth Space Vision for the Next Decade". The general statement covered the highlights of SGAC's successful 2009 while the "Youth Space Vision for the Next Decade" presentation reviewed SGAC's 10 Year Anniversary Conference and its conclusions. Additionally, SGAC's thirty minute documentary on NEOs, "Near Earth Objects and Planetary Defence: A Film about Defending the Earth" was shown.

LEGAL SUBCOMMITTEE

The Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space had held its forty-ninth session in Vienna from the 22 March to 1 April, 2010. SGAC did not make a statement during this session of the subcommittee. The SGAC Chairperson, Agnieszka Lukaszczyk, and the SGAC Executive Director, Ariane Cornell, were both present.



UN ECONOMIC AND SOCIAL COUNCIL

ECOSOC was established under the United Nations Charter as the principal organ to coordinate economic, social, and related work of the 14 UN specialised agencies, functional commissions and five regional commissions. The Council also receives reports from 11 UN funds and programmes. The ECOSOC serves as the central forum for discussing international economic and social issues and for formulating policy recommendations addressed to Member States and the United Nations system. It is responsible for:

- Promoting higher standards of living, full employment, and economic and social progress,
- Identifying solutions to international economic, social and health problems,
- Facilitating international cultural and educational cooperation, and
- Encouraging universal respect for human rights and fundamental freedoms.

It has the power to make or initiate studies and reports on these issues. It also has the power to assist the preparations and organisation of major international conferences in the economic and social and related fields and to facilitate a coordinated follow-up to these conferences. With its broad mandate, the Council's purview extends to over 70 per cent of the human and financial resources of the entire UN system.

Since 2003, SGAC has had Consultative Status at UN ECOSOC. In 2010, SGAC attended two ECOSOC events at the UN in New York: The following report is by SGAC members Wajahat Nassar and Jose I. Rojas who attended the United Nations Meetings in 2010.



REPORT ON 2010 UNITED NATIONS MEETINGS

Wajahat Nassar & Jose I. Rojas, SGAC ECOSOC Representatives

During the UN General Debate, most of the Member States raised their deep concerns about climate change and demanded binding agreements for its mitigation. Most of the Member States also raised their concern for the fact that the world's total military budget has been raised by 6% in real terms during 2009 as compared to 2008, in spite of the financial crisis and the budget reduction scenario. Conversely, very low funding is devoted to development. This situation should be reversed. In particular, the children and the youth are the most affected by the financial crisis, and especially those who are already suffering from poverty and lack of adequate education. Thus, special measures should take into account the particular sensitivity of and the negative effects on these groups. Furthermore, some Member States believe that the present system of economic relations has to be revised since it was the cause of the financial crisis, and given that it is causing climate change, which threatens the human species. A new architecture is requested where the North modifies its consumption patterns and the financial system becomes more equitable and fair.

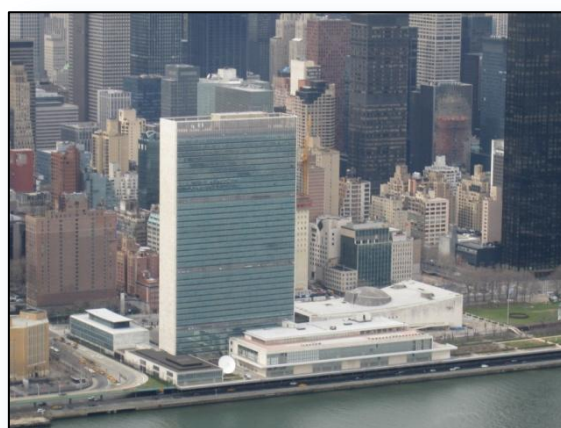


FIGURE 5: UN HEADQUARTERS, NEW YORK, PHOTO BY ULF LIVOFF

The problems derived from climate change should be addressed by all available means, including public-private partnerships, while guaranteeing the right to development of developing countries. The climate change issue is deeply interconnected with human rights and the Millennium Development Goals (MDG) (e.g. ending of poverty), and thus it is necessary to address them simultaneously.

Developing countries claim their need to have access to energy and technology, and to have employment creation facilitated in the present crisis scenario. In particular, these countries are especially concerned with the problem of widespread unemployment in the youth. Specific UN programmes are demanded to support young talented people and to protect teenagers from the decline or deterioration of their (in many cases already degraded) conditions.

According to most of the Member States, it is necessary to make the United Nations General Assembly (UN GA) a more efficient organ. It should be given more power so the will of the majority is better enforced, too. Furthermore, some Member States denounce that the UN GA is progressively excluded from the policy making processes relating to key issues while the UN Security Council is given powers that are not assigned to it by the UN Charter. The necessity of the UN ECOSOC to be refurbished and to grow in importance and power in accordance to its important mandate is also mentioned.

Many Member States request the complete elimination of nuclear weapons, because possession of nuclear weapons does not ensure security for any country in the present day scenario and because that is the only truly



way to ensure the complete elimination of the danger of a nuclear catastrophe. The three pillars for the international community should be the disarmament, the non-proliferation of weapons and the peaceful uses of nuclear energy.

Trans-national crime and illicit drug trafficking undermine sustainable development and fuel violence, and are becoming progressively more related to terrorism. Thus, it is essential to enhance the cooperation in issues like the enforcement of the law, the pooling of resources and the sharing of best practices. Also, more comprehensive educational programmes to dissuade youth from falling into drug consumption are essential. The reduction and ultimately the elimination of drug demand are crucial to terminate the problems associated with drug trafficking.

As per the scope of SGAC, the most interesting items in the agenda of the UN GA are:

- Agenda item 50: International cooperation in the peaceful uses of outer space (resolution 64/86), under topic B. Maintenance of international peace and security
- Agenda item 97: Prevention of an arms race in outer space (resolution 64/28), under topic G. Disarmament
- Agenda item 99: General and complete disarmament: (y) Transparency and confidence-building measures in outer space activities (resolution 64/49), under topic G. Disarmament

In regards of its agenda items, the UN GA recognises the common interest of all mankind in the exploration and use of outer space for peaceful purposes, and reaffirms that these shall be carried out for the benefit and in the interest of all countries, irrespective of their degree of development. On the other hand, the growing use of outer space increases the need for greater transparency and better information on the part of the international community.

The UN GA is deeply convinced of the important role that science and technology play in promoting sustained economic growth and sustainable development and that their use and applications in areas such as telemedicine, tele-education, disaster management, environmental protection and other Earth Observation (EO) applications. In addition, its contribution to achieve these objectives in various aspects of economic, social and cultural development and welfare, particularly poverty eradication and mitigation of the consequences of disasters. It is necessary to continue to examine how space science and technology and their applications could contribute to achieve the UN MDGs, since space tools are indispensable not only in areas linked to disasters, but also in climate change, food security, opportunities for education and global health.

The UN GA recalls that all States should observe the provisions of the Charter of the UN regarding the use or threat of use of force in their space activities and should comply strictly with existing arms limitation and disarmament agreements relevant to outer space. Also, in order to prevent an arms race in outer space and the weaponisation of outer space, further measures should be taken and appropriate international bilateral and multilateral negotiations be held, aiming at effective and verifiable agreements. This would avert a grave danger for international peace and security. In this regard, confidence- and security-building measures would be beneficial to ensure the attainment of the objective of the prevention of an arms race in outer space. The UN GA recognises that a legal regime being applicable does not in and of itself guarantee the prevention of an arms race in outer space, that the regime plays a significant role in the prevention of an arms race, that there is a need to consolidate and reinforce that regime and enhance its effectiveness and that it is important to comply strictly with existing agreements. Possible loopholes in the legal regime could compromise its ability to address current challenges to outer space activities.

The UN GA recognises that the defence of Earth from the threat of asteroids and space debris are issues of concern to all nations, and notes with appreciation that some States are already implementing mitigation measures on a voluntary basis, in line with the Space Debris Mitigation Guidelines of the Inter-Agency Space Debris Coordination Committee and with the Space Debris Mitigation Guidelines of the UN COPUOS endorsed by the UN GA in its



resolution 62/217. The UN GA invites other States to implement, through relevant national mechanisms, the latter guidelines. Also, the UN GA considers that it is essential that States pay more attention to the problem of collisions of space objects, including those with nuclear power sources, with space debris, and other aspects of space debris, calls for the continuation of national research on this question, for the development of improved technology for the monitoring of space debris and for the compilation and dissemination of data on space debris, and agrees that international cooperation is needed to expand appropriate and affordable strategies to minimise the impact of space debris on future space missions.

The UN GA desires to enhance international coordination and cooperation in disaster management and emergency response through greater access to and use of space-based services and desires also to facilitate capacity-building and institutional strengthening for disaster management. The progress made within the framework of the UN-SPIDER is celebrated, in particular in establishing a systematic compilation of relevant information with respect to disasters and making it accessible to all end-users. The loss of life and property could be diminished if better information were available through improved risk assessment, early warning and monitoring of disasters.

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- [8] UN document A/65/123 (Report of the Secretary-General (SG) on agenda item 97 (y) of the 65th UN GA: Transparency and confidence-building measures in outer space activities)
[<http://www.un.org/ga/search/view_doc.asp?symbol=A/65/123>](http://www.un.org/ga/search/view_doc.asp?symbol=A/65/123)
- [9] UN document A/65/123/Add.1 (Addendum to the report of the SG on agenda item 97 (y) of the 65th UN GA: Transparency and confidence-building measures in outer space activities)
[<http://www.un.org/ga/search/view_doc.asp?symbol=A/65/123/add.1>](http://www.un.org/ga/search/view_doc.asp?symbol=A/65/123/add.1)
- [10] UN document A/65/408 (Report of the First Committee on agenda item 95 of the 65th UN GA: Prevention of an arms race in outer space) [<http://www.un.org/ga/search/view_doc.asp?symbol=A/65/408>](http://www.un.org/ga/search/view_doc.asp?symbol=A/65/408)
- [11] UN document A/65/421 (Report of the SPDC (Fourth Committee) on agenda item 50 of the 65th UN GA: International cooperation in the peaceful uses of outer space)
[<http://www.un.org/ga/search/view_doc.asp?symbol=A/65/421>](http://www.un.org/ga/search/view_doc.asp?symbol=A/65/421)
- [12] First Committee Monitor: <http://www.reachingcriticalwill.org>



TREASURER'S REPORT

PROFIT AND LOSS STATEMENT

Space Generation Advisory Council

Profit and Loss Statement

for year ending 31 December 2010

	2007	2008	2009	2010
Revenue				
SGAC Sponsorship	5,997.00	41,441.80	8,750.03	19,662.78
SCG Sponsorship	15,718.47	5,327.73	46,588.30	65,389.21
SGC Registration & Accom. Fees	14,802.26	17,294.67	11,840.80	7,152.00
SGC Fees paid through website	-	1,701.13	-	
SGAC 10 Year Anniversary event			6,973.74	
Interest Earned	3.47	10.61	14.52	28.74
Forgiven Payments	3,030.00	440.40	-	
Website advertisement	-	200.00	-	
Foreign currency adjustment	-	380.99	122.00	375.67
Total Revenue €	39,551.20	66,797.33	74,289.38	92,608.40

Less **Expenses**

Executive Director's fees	10,500.00	5,250.00	16,400.00	24,000.00
Executive Officer's fees	6,000.00	4,121.82	-	-
Executive Officer's apartment	3,877.00	2,100.00	-	-
SGAC Operating expenses	-	6,303.38	2,069.71	2,650.04
ESPI Office Rent	2,938.96	6,433.20	3,600.00	5,577.60
SGC Event Manager	-	-	-	700.00



SGC Operating Expenses	7,389.80	8,417.35	28,507.29	34,839.37
Previous year's SGC Expenses	-	-	9,736.03	2704.94
SGAC 10 Year Anniversary event	-	-	6,703.40	-
Sundry Expenses	303.47	523.12	1,004.68	-
Depreciation	237.59	482.43	-	-
Bad Debt Write Off	16,891.52	6,604.55	-	7,044.62
Intern Wages	-	-	-	1,500.00
Bank Fees	-	-	-	1,303.50
Travel	-	-	-	2736.02
SGAC USA Loan	-	2,767.86	-	-
Website development & support	-	-	-	5,448.70
Total Expenses €	48,138.34	40,003.66	68,021.11	88,504.79
<hr/>				
Net Profit / (Loss) €	(8,587.14)	23,793.68	6,268.27	4,103.61



BALANCE SHEET

Space Generation Advisory Council

Balance Sheet

as at 31 December 2010

	2007	2008	2009	2010	Notes
Assets					
Cash at Bank – Bank Austria	-	19,616.41	182.44	8,929.19	
Cash at Bank – PayPal	702.73	5,113.86	3,574.48	-	
Cash at Bank – PSK Austria	24.81	-	-	-	
Cash at Bank – Bank of America				14,022.47	
Debtors	-	656.78	-	18,745.27	
IT Equipment	482.38	-	-	-	
SGAC USA Loan	-	-	25,434.69	-	
Total Assets	€ 1,209.92	€ 22,163.20	€ 29,191.61	€ 41,696.93	
Liabilities					
Creditors	440.40	1,650.00	-	-	
Loan from Will Marshall	2,400.00	-	-	-	
Member Reimbursements	-	-	784.28	9,185.99	
SGAC USA Loan	-	2,767.86	-	-	
Total Liabilities	€ 2,840.40	€ 4,417.86	€ 784.28	€ 9,185.99	
Net Assets					
Net Assets	(€ 1,630.48)	€ 22,163.20	€ 28,407.61	€ 32,510.94	



Member's Funds

Opening Member's Funds	€6,956.66	-€1,630.48	€22,139.06	€ 28,407.33	4
Net Profit / (Loss)	-€8,304.38	€ 23, 793.68	€6,268.27	€ 4,103.61	
Total Member's Funds	(€ 1,630.48)	€ 22,163.20	€ 28,407.33	€32,510.94	



NOTES TO AND FORMING PART OF THE ACCOUNTS

1. Statement of Accounting Policy

The financial statements were prepared in accordance with required accounting principles and applicable legal requirements. They present a true and fair view of the organisation's net assets, financial position and the results of the organisation.

2. Management Committee and staff members

The names of the management committee members who have held office during the year are:

Co-Chairpersons Michael Brett

Agnieszka Lukaszczyk

Secretary

Maria-Laura Voda

Treasurer

Julie Rowe

The members of the management committee did not receive remuneration through the year.

Contracted support staff engaged throughout the year were:

Executive Director

Ariane Cornell

3. Definition of terms used:

SGAC Space Generation Advisory Council

SGC Space Generation Congress – SGAC's annual member's conference held alongside the International Astronautical Congress

SGAC USA Space Generation Advisory Council - USA Branch. A separate legal entity to SGAC. The accounts, assets and liabilities of SGAC USA are not linked to SGAC in



any way and are therefore not covered by this report. Please refer to the annual report of SGAC USA for more information.

4. This reduction in opening members' capital is due to a manual general ledger adjustment. This adjustment was required due to the difference between the SGAC USA Loan balance at year-end 2009, and the actual amount available when SGAC Austria assumed full responsibility for the SGAC USA bank account..

COMMITTEE'S DECLARATION

Statement by the Executive Committee

The members of the Executive Committee of the Space Generation Advisory Council are of the opinion that:

- a) The accompanying Profit and Loss Statement is drawn up so as to give a true and fair view of the operations of the Organisation for the period ended December 31, 2010
- b) The accompanying Balance Sheet is drawn up so as to give a true and fair view of the state of affairs of the Organisation at December 31, 2010
- c) As at the date of this statement, there are reasonable grounds to believe that the Organisation will be able to pay its debts as and when they fall due.



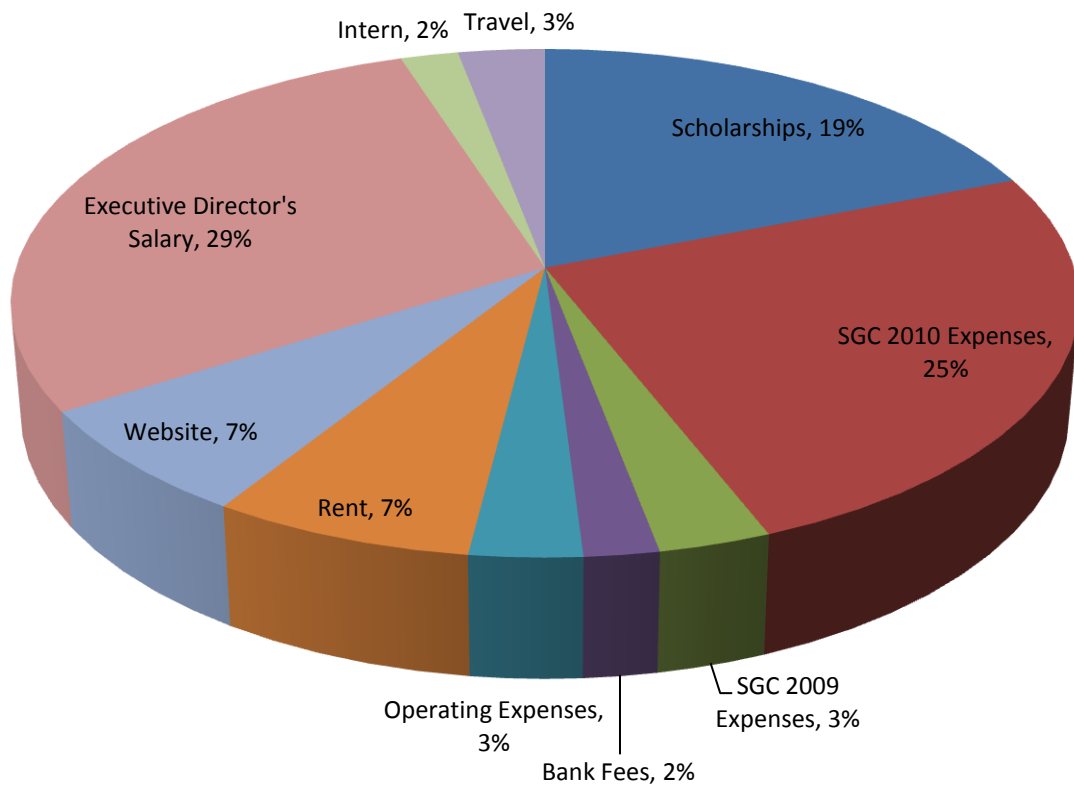


FIGURE 6: SGAC EXPENDITURE IN 2010



COMMUNICATIONS AND PUBLIC RELATIONS TEAM REPORT

During 2010, the Communications & Public Relations (PR & Comm) Team continued to provide consistent support to SGAC, its executives and members. The highlights of the year are detailed below.

SGAC NEWSLETTER

The SGAC newsletter continued to inform members of the latest news about the organisation on a monthly basis.

MEMBER OF THE MONTH

The Member of the Month section initiated by the SGAC Executive Council in December 2009 to acknowledge one member per month for his or her outstanding work and contributions to SGAC and its goals was kept updated by the PR & Comm team in cooperation with the SGAC Chair. A full list of the Members of the Month can be accessed [here](#).

PRESS RELEASES

Several press releases were issued during 2010 on topics such as, the Haiti earthquake brief, the Chile earthquake& tsunami brief, the Move an Asteroid competition, the launch of SGAC's new Advisory Board, the presence of NASA Administrator at SGC 2010. Apart from press releases, the PR & Comm Team also issued several web news reports and promoted them on the SGAC mailing lists, the SGAC Facebook page and on Twitter.

MEDIA RELATIONS

In terms of media relations, the PR & Comm team handled a few media requests on the topic of Near Earth Asteroids from a Romanian news TV station and a French TV station.

The team helped in the negotiations with Space News, which offered SGAC members a discount for subscriptions, supported the collaboration for the Zero-G Challenge competition and wrote a PR analysis of a potential partnership with Aviation Week. Finally, the team also started an internal monthly report of media coverage for SGAC.

Commencing in February 2010 the PR & Comm team added a group of translators to its competence, who started translating the most important SGAC press releases into the six UN languages, plus Turkish.

The team also supported members by translating the SGAC presentation into their language for example or by offering advice in regards to local media relations.

The PR & Comm team delivered a **Search Engine Optimisation report**, offering a series of recommendations for improving the visibility of the SGAC website. The team was also consulted in regards to the layout and content of the new SGAC website.

SOCIAL MEDIA

Social media continued to be used as a channel of information dissemination, although not as much as a channel for interaction with the community.

Graphics continued to play a very important role in keeping a visual coherence of SGAC. Throughout 2010, several graphic works were done as each major SGAC event or project had specially designed visuals, SGC 2010 visuals, SGAC reports, the Christmas card, the organisational chart, etc.

A special PR effort went into the promotion of SGC 2010 and the team's efforts lead to a good coverage of the congress in Prague. 22 articles were written on different media channels. Several characteristics were specific to this year's coverage, the news items were spread over a longer period of time, covering topics even before the congress such as winners of scholarships; there were news items on the websites of relevant and highly visible partners such as esa.org and checzspace.ch. The 2010 edition of the SGC also had a reporter on site, covering the



Congress extensively for spaceref.com. Additionally, a reporter from France 5 TV Station was on site to interview Andrew Bacon (UK), Co-Lead of SGAC Near Earth Objects Working Group for a documentary on such objects and possible solutions to deflect them.

The SGC 2010 had a communication strategy that focused on promoting the Congress in several waves, but with different targets. The first step was the communication done several months prior to the event, with the goal to increase SGC 2010 delegates' applications and therefore addressed directly to students and young professionals in the space sector. Announcements on the website and articles in the monthly SGAC newsletter resulted in a 25% increase in the number of applications compared to last year. Another communication wave was addressed to the media and focused on raising visibility of the top speakers coming to SGC 2010, among which was the NASA Administrator.

On the starting day of the congress, the SGAC PR Team sent out to the media a kick off press release, translated in several languages. During the Congress, the team produced real time event updates via the SGAC Twitter account (#SGAC2010), a daily summary, and SGC 2010 announcements on the SGAC Facebook group. Following SGC 2010, a complete summary press release was disseminated.

WEBLINKS

Press releases are available on SGC 2010 website

<http://spacegeneration.org/index.php/activities/space-generation-congress/press-and-pictures>

A selection of professional pictures, credited to Julio Aprea/SGAC:

<http://spacegeneration.org/index.php/activities/space-generation-congress/press-and-pictures/242-pictures-sgc-2010>

Sample of SGC 2010 media coverage:

<http://www.spaceref.com/calendar/calendar.html?pid=6065>

<http://spaceports.blogspot.com/2010/08/2010-space-generation-congress-draws.html>

http://spacepolicyonline.com/pages/index.php?option=com_jcalpro&Itemid=109&extmode=view&extid=368&tmpl=component

<http://spaceref.asia/news/viewpr.html?pid=31691>

<http://www.astronomy2009.org/news/updates/946/>

<http://www.free-press-release.com/news-high-level-space-leaders-and-young-professionals-start-debates-on-key-space-issues-at-the-space-generation-congress-2010-1285331296.html>

<http://spaceref.com/news/iac2010/>

<http://www.space.com/common/forums/viewtopic.php?t=26260>

http://www.esa.int/esaMI/About_ESA/SEMWQJEODDG_0.html

<http://www.nasawatch.com/archives/2010/09/sqac-at-iac.html>

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF THE SGAC PR & COMM TEAM

For 2011, the PR & Comm team has, amongst its objectives, an upgrade on the newsletter, both in terms of content and layout, an update of SGAC's Wikipedia page, a better use of social media channels to connect and interact with our target groups, as well as continuing the dissemination of press releases and web news about the activity of the organisation and its members.





SGAC
SPACE GENERATION ADVISORY COUNCIL

SGAC PROJECTS

OVERVIEW OF THE 2010 PROJECT OUTCOMES AND HIGHLIGHTS

The members of the SGAC have continued to carry out several projects throughout 2010 for the ultimate purpose of creating outreach opportunities, papers, and presentations on respective topics. The objective is to manifest new ideas to bring SGAC to the next level of production and dissemination of innovative projects that will make a positive impact. Following the appointment of the new SGAC Project Coordinator and the Assistant Project Coordinator in May 2010, a significant increase in the number of actions and deliverables has been observed. Existing projects were supported while incoming projects and competitions outside of SGAC were implemented into the website for member utilisation. The SGAC Project Coordinators also assisted in the preparation of articles for SGAC Newsletters, SGC 2010 Working Group reports, and the “Guidelines for Event Planning” document.

The three major projects of the SGAC continued successfully in 2010. The SGAC Group on Space Technologies for Disaster Management has redefined its tasks and objectives for the coming years and has started to recruit more volunteers. The members of this group gave a presentation on the utilisation of GNSS resources for disaster management during SGC 2010. The YGNSS Group has published a brochure explaining what YGNSS and its tasks are. NEO Working Group has been the most active group, by organising the Move an Asteroid competition and by contributing to SGC 2010. The NEO group has also been active in planning its extended tasks in 2011, such as organising the Youth Planetary Defence Conference (including a student competition) and a “Name an Asteroid Competition”, in addition to its usual tasks. Furthermore, a short movie on the history, present, and the future of human space exploration, “Space Generations: From Sputnik to Today to Tomorrow”, was presented during the plenary session on the second day of SGC 2010. This movie is the result of a collaborative project between the Space Generation Advisory Council and the University of Nebraska – Lincoln (UNL).

SGAC members have been encouraged to actively participate in several space-related competitions. These include the following.

- The Cassini Scientist for a Day Essay Contest
- The Barcelona Zero-G Aerobatics Challenge for the Space Generation
- The IAASS-ISSF-SGAC Scholarship, Essay competition on the topics of space and safety

2011 will be a very active year with an increased number of projects, activities, and competitions. In addition to the on-going endeavours, a major project on Space Safety and Sustainability (SSS) will commence in January 2011. The main objectives of this Working Group are to identify the key issues and areas of SSS relating to current and proposed space applications, and to ensure constant dissemination of SSS information. Feasibility studies and planning activities are also being held to kick off two other projects in 2011, The “Outreach Working Group” and the “Satellite –Aided Education” Project.

Having seen the success and impact of the short movie “Space Generations: From Sputnik to Today to Tomorrow”, it has been decided to use more movies to increase the level of outreach on space related themes. For this reason, two new additional movie projects are being planned. The goal is to have them published before or during SGC 2011. These two movies will originate from South America and South Africa.



YOUTH FOR GNSS

YGNSS

YGNSS Project is a team of students and young professionals under the Space Generation Advisory Council.

The YGNSS project was initiated in April 2008. Noticing the need for the youth to gain a better understanding of how Global Navigation Satellite Systems are used in our everyday lives, YGNSS aims to bring maximum benefits of GNSS to society. YGNSS therefore focuses on outreach and education of GNSS applications. YGNSS project team members not only include students and young professionals from GNSS provider countries but, more importantly, developing space nations. This is important to note as we hope to represent the voices of nations that need to benefit and be educated in GNSS applications.

Since April 2008, the team has recruited from similarly passionate students and young professionals from around the world. It has and received positive feedback and support from the International Committee on GNSS (ICG), NASA, and Global Positioning System (GPS) industry.

ACCOMPLISHMENTS IN 2010

- YGNSS began 2010 by presenting at the 16th APRSAF in Bangkok, Thailand in January. Through these representative efforts with the SGAC Executive Team and Asia Pacific RCs, SGAC now has observer member status at the Forum.
- YGNSS had a poster presentation about GNSS Education Portals at the International Space University (ISU) Symposium in February.
- The GNSS Supervisory Authority invited YGNSS to present about the Youth and GNSS Educational Activities at the Galileo Application Days in Brussels, Belgium.
- To support the SGAC website renovation, the YGNSS website page was updated to ensure that the latest information on YGNSS activities can be found.
- YGNSS and SGAC members attended the 20th UN/IAF Workshop on “GNSS Applications for Human Benefit and Development” in Prague, Czech Republic. YGNSS Project Co-Lead, Stephanie Wan, made a presentation on YGNSS and the importance of how SGAC can play a role in GNSS activities.
- Parallel to the UN IAF Workshops, NASA sponsored the 2010 SGC “Agency Session” on GNSS and Disaster Management.
- YGNSS attended the ICG meetings and the SGAC Chair made a presentation at “Working Group C: Information Dissemination and Capacity Building” at the ICG-5 meeting in Turin, Italy.
- YGNSS team members completed the YGNSS Brochure in December 2010. Copies will be ready for distribution in early 2011.

LOOKING AHEAD – PLANS FOR THE FUTURE OF THE YGNSS WORKING GROUP

- There are discussions with the Space Technologies for Disaster Management project to co-authoring a paper on how GNSS is used in disaster management.
- YGNSS will conduct an international opinion poll in regards to youth knowledge on GNSS and future applications.
- With the 2011 SGC and IAC in South Africa, there are plans to continue YGNSS activities and potentially hold a geocaching event.
- YGNSS will continue to attend and support ICG activities.
- YGNSS hopes to develop a digital GNSS Model that will provide a visual understanding of how all the GNSS systems will work together after these systems are completed.



SGAC GROUP ON SPACE TECHNOLOGIES FOR DISASTER MANAGEMENT

In mid-2009, the SGAC Group on Space Technologies for Disaster Management (hereafter referred to as “the Group”) was initiated to create a greater awareness of space technologies and space-derived information in disaster relief efforts. Initially the Group began by supporting the work of UN-SPIDER, but has broadened its scope to include other organisations and agencies around the world.

PROJECT OVERVIEW

The Group’s main objectives are the following.

1. Create awareness of space technologies and applications in disaster management amongst students, young space professionals, and the general public
2. Bring the views of youth to the major players involved in disaster management
3. Create opportunities for young people to get involved in international volunteerism

Members of the Group include students and young professionals from industry, academia, and governmental agencies who have come together to research disaster management and emergency response practices for the purpose of exploring links to space technologies. Although most volunteers are members of SGAC, some are subject matter experts from outside the SGAC. These individuals have offered guidance and have shown interest in being informed of ongoing activities.

ACCOMPLISHMENTS IN 2010

BRIEFS ON DISASTER EVENTS IN HAITI AND CHILE

In 2010, the Group produced high-level briefs on two major disasters, the earthquakes in Haiti and Chile. These reports were well received by members and experts in the field. It has helped the disaster management community and general public better understand the increasing need for the integration of space-based technologies into traditional disaster preparations, response, recovery, and mitigation practices.

PARTICIPATION IN SGC AND IAC IN PRAGUE

Members of the Group attended the SGC in Prague and actively promoted the Group’s activities by means of a presentation. One of the goals of this presentation was to attract new volunteers. A paper was also presented at the subsequent International Astronautical Congress (IAC). This paper outlined the development, activities, and future plans of the Group.

VOLUNTEER RECRUITMENT & TEAM BUILDING

Efforts to engage new volunteers throughout the year culminated in the recruitment of several new members from various parts of the world. With each volunteer bringing a different set of experiences and skills, the coming year promises to be one of continued growth under the stewardship of the new core team.

LOOKING AHEAD - THE PLAN FOR THE FUTURE OF SPACE TECHNOLOGIES FOR DISASTER MANAGEMENT WORKING GROUP

The process of building a new SGAC Group, writing briefs, recruiting volunteers, and carrying out other activities in its inaugural year has provided many occasions for reflection, lessons learned, and new ideas to be presented. Despite the advent of devastating disasters such as the floods in Pakistan, the oil spill in the Gulf of Mexico, and the fires in Russia, it was decided that the Group should pause from researching space-related applications in these events. Restraint from writing informational briefs was also exercised. As questions arose about the true mandate of the Group, a fruitful discussion followed which has produced a plan for the coming year. The plan, which covers



the period of September 2010 to August 2011, is divided into short-term (Phase 1) and long-term (Phase 2) goals. It is the hope of the Group that this structured plan will stimulate the involvement of new volunteers and provide a solid foundation for recurring and evolving activities in the coming years.

PHASE 1 - SHORT-TERM GOALS

The creation of task groups will be the major thrust for the first six months of the strategic plan. A general management task group will be responsible for the overall governance of the Group and its various task groups. It will also be the main point of contact with the SGAC administration and external organisations. A recruitment task group will focus on running campaigns to attract new volunteers. A marketing task group will maintain a “disaster management brief” in the SGAC monthly newsletter, enhance the Group’s website, create a logo, maintain the mailing lists for the administration of the group, and disseminate information to the public. Finally, a research and public relations task group will create and maintain the lines of communication with major players in disaster management (e.g. UN-SPIDER, Doctors without Borders, and the UN World Food Programme). They will also report on innovative collaborations between the space and disaster management communities. This last group will conduct continuous research and relationship building, which will hopefully lead to long-term collaborations with organisations around the world.

PHASE 2 - LONG-TERM GOALS

The objectives of the second phase of the strategic plan focus on more complex outputs that require a strong volunteer base and more time to develop. Fundraising, for example, will be needed to send members to conferences and workshops that are related to space and disaster management. Such conferences include the IAC, the Crisis Mapping Conference, and specific UN workshops. Competitions will be held to decide who will participate in such activities. It is expected that these contests will generate more interest and innovation from current and future Group members. Another output will be the publication of briefs similar to those done for the Haiti and Chile disasters of 2010. Additionally, the Group hopes to offer the views of the young space community on various relevant issues when requested. Finally, the group will develop appropriate relationships so that internship opportunities can be offered to its members. Internships with organisations such as the Red Cross and the United Nations Institute for Training and Research’s Operational Satellite Applications Programme can offer enriching experiences to students and young space professionals who are relatively new to the space and disaster management communities.

REQUIRED RESOURCES & STRATEGIES

Engaged volunteers for the operation of the Group is the most sought-after resource for 2011, as is the necessary guidance of experts in the space and disaster management communities. Recruitment campaigns and relationship building through various media will be detrimental to the growth and development of the Group. As the Group gathers more volunteers, international exchange will foster and more bridges between disaster management and space communities will be created.

Interested in volunteering? Check out our website for more information and contact details. We would love to hear from you!

<http://www.spacegeneration.org/index.php/activities/current-projects/space-technologies-for-disaster-management>



NEAR EARTH OBJECT WORKING GROUP

The NEO working group is dedicated to helping the worldwide planetary defence community to meet one of nature's greatest challenges. The group provides a youth perspective to planetary defence through annual reports, competitions, conference attendance, and public outreach projects related to Near Earth Objects.



FIGURE 7: NEAR EARTH OBJECT WORKING GROUP

The three main goals of the group are the following.

1. To ensure that the opinion of the youth is heard by the worldwide community on matters relating to NEOs,
2. To promote the work of students and young professionals to the planetary defence community and encourage others to get involved, and
3. To present honest and balanced facts on the dangers posed by NEOs to the general public in a non-technical form.

ACTIVITIES IN 2010

ASTEROID WARNING COMPETITION 2010

The NEO working group followed up its successful Move an Asteroid 2008 and 2009 technical paper competitions with a new focus in 2010. Students and Young Professionals were tasked to come up with original ideas that address the challenges involved with the establishment of a global asteroid impact-warning network. The winner was Ben Corbin, a Massachusetts Institute of Technology student, with his paper entitled “Implementing Advanced Technologies and Models to Reduce Uncertainty in a Global, Cost-Effective Asteroid Mitigation System”. In his paper, Ben warns of the dangers of unnecessary warnings and the need for an NEO detecting Infrared telescope in a near-Venus Orbit to provide total coverage. His prize was a scholarship to present his work at the 2010 Space Generation Congress and International Astronautical Congress in Prague, Czech Republic.





FIGURE 8: BEN CORBIN PRESENTING HIS WINNING PAPER AT SGC 2010

This outreach project is intended to encourage technically minded individuals to apply their skills at addressing one of the greatest challenges that humanity may one day have to face.

PLANETARY DEFENCE CONFERENCE STUDENT COMPETITION

The NEO working group has been proud assist with the organisation and promotion of the student competition for the second International Academy of Astronautics Planetary Defence Conference entitled "*From Threat to Action*". This conference will focus on protecting our planet from asteroids and comets. It will be held from 9 - 12 May 2011 in Bucharest, Romania. The competition calls for students from all over the globe to send in their entries.

SEARCH FOR NEW MEMBERS

The working group has successfully expanded the number of active members by networking and conducting discussions at the SGC. This was done in preparation for a number of new projects planned for 2011.

PLANS FOR 2011

COMPETITIONS

The next technical competition, following on from the success of Move an Asteroid and Asteroid Warning System, is well underway. An additional competition is in the planning stages with a non-technical theme aimed at introducing Planetary Defence issues to the general public.

WEBSITE ENHANCEMENTS

An upgrade to the website is planned that will include links to educational material on NEOs for teachers and a repository that will showcase the past entries to the 2008, 2009, and 2010 technical paper competitions.

EVENTS

The NEO working group is intending to have a large presence at the upcoming Planetary Defence Conference in May. Plans are also in motion for the organisation of an exciting SGAC public event during this conference.





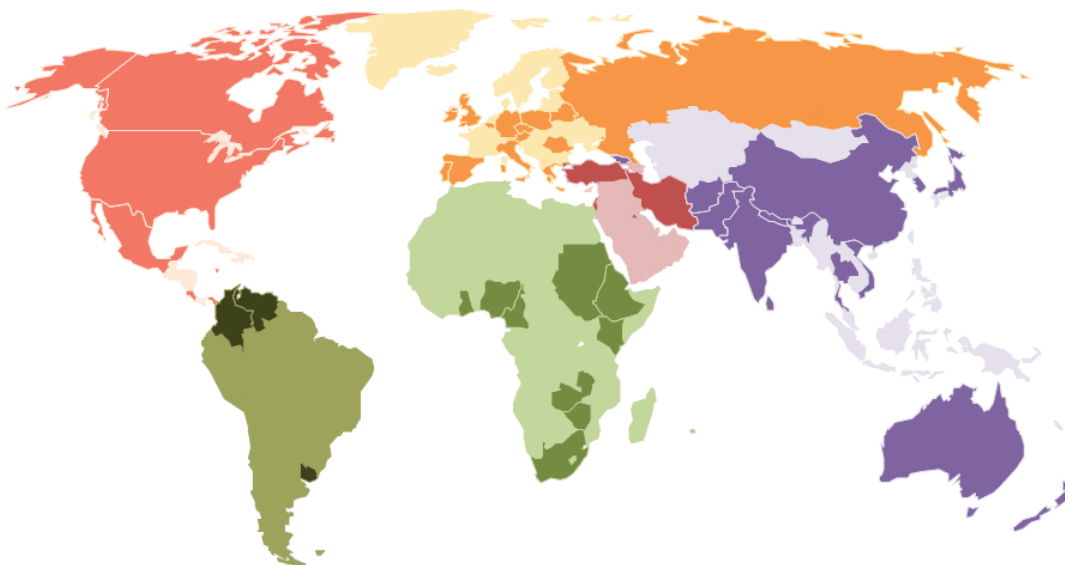
SGAC
SPACE GENERATION ADVISORY COUNCIL

SGAC REGIONAL ACTIVITIES

MAPS OF SGAC REGIONS AND REPRESENTED COUNTRIES



Regions represented in SGAC



Detailed map of countries represented in SGAC

REGIONAL AND NATIONAL REPORTS

Please note that all of the following regional and national reports were written by the respective RCs and NPoCs.

AFRICA



SPACE DEVELOPMENTS IN AFRICA

Africa is a region with the potential to benefit from space applications. Therefore, there were many SGAC activities over the year. Although SGAC official representation in Africa dropped from 14 to 8 countries, the African RC describes 2010 as a turning point for the organisation and the continent. Developments included administrative issues, education and outreach programmes and multilateral space efforts. The region elected Hubert Foy Kum (Cameroon) and Prosperity Simpemba (Zambia) as the African RCs. Additionally, five new NPoCs were appointed, Beza Tesfaye (Ethiopia), Etim Offiong (Nigeria), James Okwe Chibueze (Nigeria), Galal Hosham (Sudan), and Misheck Mutuzana (Zambia). The region lost eight NPoCs for various professional reasons. This included Daouda Bitié (Burkina Faso), Biniyam Yosef Kebede (Ethiopia), Laban Maiyo (Kenya), Assad Anathallee (Mauritius), Onyema Benigna Ajuogu (Nigeria), Olakanmi Olabode (Nigeria), Mlenge Fanuel (Tanzania), and Elijah Kondi (Tanzania). Michael Kio from Nigeria and Castory Ntullu from Tanzania completed their two-year mandate as regional coordinators with great success. Arguably, regional activities are wider in scope and impact than in previous years. This is, perhaps, due to the increasing number of active volunteers and space activities in the continent. African RCs and NPoCs often contribute stories about space events to the monthly SGAC Newsletter. You can find details of these activities in the African national reports.

Africa participated in many international conferences and workshops in 2010. More delegates participated both in regional and global events than in previous years. One reason for this is an increase in the number of scholarships offered by SGAC partner organisations aimed towards delegates from developing countries. The Space Generation Congress, the 20th United Nations International Astronautical Federation Workshop, and the 61st International Astronautical Congress, all held in Prague, Czech Republic, were major SGAC forums and offered a good case to analyse Africa's participation in global events. Through SGAC efforts and from its partner organisations, six SGAC members won scholarships. The awards, in some cases, covered the full cost of attendance and participation. 2010 winners from Africa are as follows.

- Hubert Foy from Cameroon - UN/IAF Workshop award
- Bekele Erko from Ethiopia - Young Leader award
- Minoo Rathnasabapathy from South Africa - IAASS/ISSF award
- Pierre van Heerden from South Africa - Young Leader
- Jessie Ndaba from South Africa - Young Leader award
- Prosperity Simpemba from Zambia - Young Leader award

Overall, fourteen delegates represented Africa, one from Cameroon, two from Ethiopia, six from Nigeria, and five from South Africa.

Inside the continent, civil society organisations put together seminars and workshops, with focuses such as GNSS and space applications for sustainable social and economic development. The International Academy of Astronautics, Africa Region, organised conferences in Nigeria and Cameroon on the role of space applications for disaster monitoring and response. A growing number of countries in Africa are recognising satellite technology as a key feature of everyday life. Using satellite communication in bank transactions, health emergency systems, navigation, natural resource monitoring, and urban planning improves national economies and wellbeing. Due to



the increasing role of space applications in economic development, governments are adopting policies to either create new space projects or expand existing ones. In December 2010, South Africa unveiled the South African National Space Agency (SANSA), which aims to become a leader in earth observation technology across the region over the next ten years. South Africa joined Algeria, Egypt, and Nigeria in having active space programmes. In a statement released by South Africa's Science and Technology Minister Ms. Naledi Pandor, SANSA planned two new satellite projects. The African Resources Management Constellation will be used for co-ordinating four Earth observation satellites from South Africa, Kenya, Nigeria and Algeria. Additionally, South Africa and Brazil hope to build a space weather satellite to monitor radiation over the southern Antarctic. A publically released statement also indicates that the South African government is reviewing its satellite-launching industry. This could have a major impact on domestic launch capabilities.

At a multilateral level, under the auspices of the African Union, African states approved two major initiatives in August. The first was the establishment of the Pan-African University Institute on Space Science. The second was the creation of the African Space Agency. The Institute will provide high-level training and research throughout Africa with the hopes of producing professionals with the skills necessary to contribute effectively to the establishment and activities of the Agency. The Agency, an integrated singular pan-African platform, could pursue a strategic space programme that will contribute toward natural resource monitoring and sustaining African diversity. If these two initiatives are established and effectively implemented, they could enable the continent to become an important entity in global space programmes. On 3 November, the EU-Africa summit in Tripoli, Libya, adopted a second Action Plan (2011-2013) for Global Monitoring for Environment and Security (GMES) and Africa Initiative. This plan aims to promote environmental policies for sustainable development in Africa. In July, the United Nations Economic Commission for Africa hosted a regional workshop of the UN-SPIDER on "Building upon Regional Space-based Solutions for Disaster Management and Emergency Response for Africa" in Ethiopia. The workshop brought together about 100 senior experts on disaster-risk management from African countries, Europe, the Middle East and America. Organisers expected the event to facilitate the active involvement of African countries in the use of space-based applications and solutions. They targeted disaster-risk management, emergency response, and climate change and health-related issues.

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC AFRICA

Despite diverse challenges that impede regional efforts to expand SGAC representation and activities to many of the 54 countries that make up the African region, education and public outreach projects remain the major focus of SGAC Africa in 2011. RCs and NPOCs plan to build on past successes and explore novel processes to address challenges that impede progress. Over the year, Hubert Foy, on behalf of SGAC Africa, initiated partnership discussions with African Union Economic Commission and the African Region International Academy of Astronautics (IAA). The partnership, if successful, will focus on conference organisation and participation on issues that will contribute to the goals and objectives of SGAC in the region. In order to achieve this goal and others, SGAC Africa has identified some tasks and plans to pursue in 2011. Planned activities are as follows.

- RCs-NPOCs monthly regional Skype conferences to encourage and support NPOCs to organise local events
- Organise a pre-SGAC conference, back to back with SGC 2011 in Cape Town
- Expand SGAC network on the continent in order to develop space sector growth
- Increase space outreach and lectures at universities to encourage the formation of the next generation of space professionals
- Strengthen collaboration with the International Academy of Astronautics and UN Economic Commission in Africa to increase continent-wide participation in workshops and seminars
- Organise seminars and workshops on topical issues to contribute to the formulation of regional space policies
- Encourage higher-level participation of diplomats and government agency professionals in SGAC activities taking place within and outside Africa



- Recruit more NPoCs in Africa in order to expand SGAC's network of contacts to more than 25 countries
- Organise competitions in secondary schools, award certificates of participations, and involve the teachers and parents in space activities
- Encourage NPoCs to contribute knowledge to SGAC from African perspective by conducting research and participating in conferences



AFRICA NATIONAL REPORTS

CAMEROON

ACCOMPLISHMENTS IN 2010

SGAC Cameroon officially started in late 2008 when SGAC approved Mr. Hubert Foy Kum as NPoC. For that year, Hubert focused on creating awareness through media announcement and personal discussion with friends and colleagues. The 2009 and 2010 period was a turning point for space outreach in Cameroon. The NPoC uses social networks including yahoogroups and facebook to distribute information about SGAC and its activities in the country. The purpose of public outreach is to create awareness of SGAC, its mission, its activities and its benefits. As a result, space enthusiasts, including those from government, academia, media, and citizens increasingly join the education and public outreach effort. Students, teachers and parents have shown more interest in learning about space technologies, its daily applications, and the contribution of space technologies to sustainable social and economic development. Among the many active volunteers that support and promote SGAC activities in Cameroon are Mr. Buh Wung Gaston and Ms. Claire Ngobike, both alumni of the ARCSSTE-E, Obafemi Awolowo University, have helped to organise space education and outreach activities in the country. Mr. Yuven Evis, IT consultant, joined the local team of volunteers in early 2010. Through a collective effort, the media is increasingly mentioning SGAC and space news in their programmes. The numbers of campaigns are increasing, the team now delivers lectures to more schools across the country, and more students and their teachers are interested to participate in SGAC workshops.

Efforts to promote activities in the state through SGAC increased in 2010. According to Hubert Foy, NPoC for Cameroon, SGAC activities were more effective than in the previous years. This can be partly attributed to the increased use of media in public outreach programmes and workshops on peaceful space use activism across the nation in 2009. In January, 2010, the African NPoCs elected Hubert Foy as the RC for Africa for a two-year term. In September, Hubert lectured on the “Applications of GNSS technologies and services for sustainable development” during the 20th United Nations/International Astronautical Federation Workshop on “GNSS Applications for Human Benefit and Development.” The UN jointly organised the conference for Outer Space Affairs with UN OOSA and International Astronautical Federation (IAF). ESA and the International Committee on GNSS (ICG) co-sponsored the conference. Hubert further benefitted from the same sponsorship to attend the 61st International Astronautical Congress in Prague.

YURI'S NIGHT

On 12 April, about forty college students, from Cameroon and South Africa, celebrated humanity's achievements in space. This event was in commemoration of 12 April, 1961, when Russian Cosmonaut Yuri Gagarin successfully made mankind's first venture into space and, on 12 April, 1981, exactly twenty years later, NASA launched a pioneering Space Shuttle. Since then 12 April, termed Yuri's Night, has attracted many young professionals and students participation worldwide. This has made an international event and the largest annual event for celebrating the past and future in outer space and of mankind's curiosity, scientific and technical achievements. SGAC NPoCs for Cameroon and South Africa originally planned the event to involve students from Australia, Cameroon, France, Romania and South Africa. Due to conflicting academic calendar events and logistical issues, only students from Cameroon and South Africa participated. The positive feedback on its success from participating students and the Cameroon-South Africa student partnerships established through the event suggested that more countries and students might be involved in the future events if more time and finances are committed.

The aim of the event was to initiate conversation on space issues amongst students who share similar interests in space science but are located in different part of the world. The teleconference brought together, virtually, students across geographical boundaries to form a unified vision for the future exploration of space. For the first



time in a decade, young space enthusiasts in Cameroon and South Africa discussed space development in their respective countries. The students expressed views on what, when and how they would love to see their governments promote the space industry. Generally, students believe that national pride is attached to a space agency; some students admire the astronaut corps and would love to become one if they could get the financial and political support of their governments. It was also an opportunity to learn from each team, the vision for national space programmes, government goals and insightful comments on legislative formulation and space applications. The event resulted in establishing a Cameroonian-South African students' partnership on youth space education, in the hopes of creating a new generation of African leaders on space policy issues.

The event included participants from two colleges and cities in Cameroon included Njukwe Raphael Awah; Jr. (College Junior in Presbyterian Secondary School Mankon), Boum III; Jr. (High School Senior in Sacred Heart College Douala), Momo Bertrand (High School Senior in Sacred Heart College Douala), and Yanou Tchakote Pagnol Michelle (High School Senior in Sacred Heart College Douala). Over 34 students from five different colleges in South Africa participated in the event. Lead persons included Thabang MATLALA (Space School Africa, Student Ambassador for the Space Industry in Africa who represented South Africa a couple of years back at Space School in Houston, Texas), Ernie HALBERG (Grade 12 student from Free State province who discovered the 2010 DC 2 asteroid), and Monique GERBER (Grade 10 student and National Space Science Award winner who also represented South Africa in an International Internet Science and Technology Fair with her Project The Domsday Rock). The students received certificates of participation, a formal symbol of recognition for their knowledge and passion.

The event was organised with the generous support of the United States Embassy in Yaoundé and the Institute for Security Studies in Pretoria. Besides the use of their facilities and video equipment for the event, the success of the event was hinged on the dedication and handwork from the staff members of these institutions. Despite the remote organisation and the challenges often encountered, people were willing to dedicated their time and effort towards preparation for the event. Hubert Foy would like to thank the staff of the US embassy in Yaoundé including Ms Edna M Enyeji (Public Affairs) and Mr. Justin Nkengne (IT Service). Mr. Ashu Theodore Nyenty (State Journalist in CRTV Yaoundé facilitated the event from Cameroon.

UN-DECLARED WORLD SPACE WEEK (WSW) CELEBRATED FOR THE THIRD TIME

From 4-10 October, SGAC Cameroon organised public education and outreach activities in celebration of WSW, which is the largest annual public space event in the world. WSW was first celebrated in the central African country, where French and English are the official languages, in 2008. At the time, Hubert Foy, SGAC RC for Africa and NPoc for Cameroon, conceptualised, organised and implemented an initiative, "Bringing Space to the People Initiative." The goal of the effort was to promote the dissemination of information about space exploration, technology and application through media and classroom lectures. In October each year, the SGAC local organising team arranged a discussion on the year's theme during a special TV or radio programme. They also visit selected colleges in major cities including Douala, Buea and Limbe. During the visits, they lecture students and their teachers on topic related to the international significance of the event. They encourage students and their teachers, with the support of college administrators, to create space clubs in schools. Space discussions on the media and in workshops often involve the participation of university students, lecturers and government agency professionals. Academic agencies and institutions included a delegation of secondary education for the Littoral Region, the Sacred Heart College from Archdiocese of Douala, the University of Douala and the University of Buea.

On 4 October, Elvis Yuven lectured high school students and their teachers in Sacred Heart College Douala on "The Mysteries of the Cosmos'. Feedback from students showed that students are increasingly interested on a wide range of space issues especially applications that can improve citizens' wellbeing. Furthermore, SGAC members, in association with Cameroon Civil Aviation Authority (ASECNA), held a round table discussion about the activities of the celebration. During special programmes on FM 105 Douala, Sweet FM Douala, Mont Cameroon FM, and Radio Equinox, Elvis Yuven, an IT Consultant, and Pierre Tankam, engineer with ASECNA, discussed the GNSS. The discussion focused on the role of GNSS in disaster management and navigation. It is estimated, according to



journalists, that the above listed private radio stations have over three million listeners daily. In the past, a major private TV station, Canal 2 International, played an active role in the promotion of space discussions in Cameroon. One experienced private journalist, Mr. Henry Kejang, is passionate about space news and is dedicated to space news around the world in relation to Cameroon. Mr. Solomon Fogham of Eden Newspaper is another enthusiastic journalist who has developed a particular interest on space issues and devotes his spare time to promote space activities to Cameroon youths and teachers.

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC CAMEROON

Despite challenges over the years, Cameroon has experienced success in attaining goals. It is hoped that this will be more pronounced throughout 2011. Activities are gaining an increasing amount of public support due to an increased number of students, teachers, parents, industry, and government leaders interested on space issues. SGAC Cameroon will continue to focus on education and outreach activities through the organisation of conferences and workshops. Furthermore, both private and public media are increasingly showing interest in broadcasting space activities. SGAC Cameroon will use this opportunity to expand activities to other cities. This expansion is hoped to attract broader participation across the country. A challenging task for 2011 will be to involve government agencies and space-related companies in these activities. Such involvement will add to the credibility of SGAC Cameroon's activities and hence attract government attention to start considering the formation of a national space legislation. The local team will continue to explore new ways to involve both private and public space-related institutions to their activities. One technique is the distribution of SGAC Newsletters by email, WSW flyers and SGAC Annual Reports. Hubert plans to utilise his education and outreach efforts in order to encourage young Cameroonians to pursue space education and promote the use of space technologies for socio-economic development.

ETHIOPIA

SGAC AND SPACE SCIENCE RELATED ACTIVITIES IN 2010

HIGH SCHOOL SCIENCE BAZAAR

The Addis Ababa Education Bureau organised a three-day science bazaar involving high schools in Addis Ababa with the theme "Development through Education". The bazaar took place in each of the sub cities in Addis Ababa. A competition was held in which students could present their inventions and ideas. Winners were awarded prizes accordingly. SGAC NPoc Bekele Tujuba participated in this event and introduced SGAC and its activities to the participants.

SCIENCE WITH AFRICA CONFERENCE

The Science with Africa Conference had the theme "Science, Innovation and Entrepreneurship". The participant of this conference included representatives of African countries, UN agencies, universities, and funding agencies. Bezaye Hailu (member of SGAC) and Bekele Tujuba (Ethiopia NPoc) were invited and actively participated at the conference.

UN-SPIDER REGIONAL WORKSHOP

The workshop was held with the objective of building upon existing regional space based solutions for disaster management and emergency response in Africa. Agnieszka Lukaszczyk (SGAC Chairperson) and Bekele Tujuba (Ethiopia NPoc) were fully funded to participate in the workshop.

SGAC CHAIRPERSON MET SGAC ETHIOPIA MEMBERS

Agnieszka Lukaszczyk had a lively meeting with the SGAC Ethiopia university student members where she presented SGAC and opportunities within the organisation. Afterwards, a fruitful discussion took place regarding



SGAC, youth space activities, and the situation in Ethiopia. Students shared their ideas, voiced concerns, and asked questions.

SGAC CHAIRPERSON AND SGAC ETHIOPIA MEMBERS VISITED SYSTEMS AFRICA

On 9 July, 2010 Agnieszka Lukaszczyk (SGAC Chairperson), NPoC Bekele Tujuba and Bezaye Hailu visited eSystems Africa, which supports SGAC with web service.

APPOINTMENT OF SECOND NPoC FOR ETHIOPIA

Ms. Beza Tesfaye was appointed as a second NPoC for Ethiopia in August 2010.

ETHIOPIA NPoC PARTICIPATED ON SGC 2010

Bekele Tujuba participated for his first time at SGAC's annual congress 2010 in Prague, Czech Republic. While there, he was awarded the 2010 Young Leader Scholarship.

INTRODUCING SGAC TO ETHIOPIAN PHYSICAL SOCIETY

For the outreach programme we are working with the Ethiopia Space Science Societies and Ethiopian Physical Society. They have helped by providing telescopes and professional assistance. Due to the shortage of telescopes in Ethiopia, the event is only held once a month.

CELEBRATION OF WSW 2010

Ethiopia celebrated WSW at the Addis Ababa University Science facility. The event was organised by WSW National coordinator Bekele Tujuba. More than 70 high school students, teachers, university students, professionals and young space enthusiasts participated in the event. Bekele Tujuba, Ethiopian Astrophysicist Dr. Legesse Wetso, and manager of Ethiopia Space Science Societies Professor Gezahegne made presentations. The programme also included public lectures, videos, group discussion, and question & answering sessions.

LOOKING AHEAD – TENTATIVE PLANS FOR THE FUTURE OF SGAC ETHIOPIA

- Find more people to join Ethiopia SGAC
- Increase Ethiopian member's activities and participation in SGAC
- Create national, continental, and international symposiums and discussion forums
- Connect Ethiopians with the rest of the world through SGAC
- Establish stronger relationships with other NPoCs within SGAC

TENTATIVE PLANS FOR 2011

- Form more SGAC clubs in high schools, colleges, and within interested groups
- Host seminars and invite professional guests from around the world
- Conduct outreach programmes with the help of the Ethiopian Space Science Society
- Celebrate the coming Yuri's Night event in April
- Participate in the coming Ethiopian Space Science Society general assembly meeting and present information about SGAC
- Facilitate member activities in SGAC
- Help Ethiopian SGAC members participate in SGAC international conferences
- Celebrate WSW



GHANA

The year 2010 saw a lot of challenges regarding the development of space in Ghana.

Projects executed in the year 2010 are as follows:

- Seminar on space sciences and Astronomy
- Stand up and kick out poverty
- Inauguration of schools networks

SGAC Ghana organised events mentioned above to mark the World Space Week. About 200 participants were drawn from junior and senior high schools in Ghana for the celebrations of the WSW. The first day entailed a seminar on space science and astronomy. There was also a welcome address given by the SGAC NPoC for Ghana, Mr. Abdul-mumin Yussif. Mr. Abdul-mumin explained to participants what the SGAC is about and the importance of space sciences in the development of a nation. Key issues he addressed included international space policy and the management of spatial knowledge for cultural development. He further elaborated on the importance of space for a generation yet unborn.

The head of the science department from Ghana Senior High School, Abdallah Issah, explained the need to take science seriously. He drew parallels between Archimedes's principles on the law of flotation and Newton's law of gravity and their relationship with how ships and airplanes work.

The second day consisted of a tour to the Northern Regional Airport Metrological Service Station. Students had the opportunity to interact with the airport staff and ask about operations.

The third day was a campaign "Stand Up and Kick out Poverty" movement took place throughout the day, along with a drama on climate change. It culminated with a rally at Aboabu Market to educate the market women on climate changes and the need for them to be ambassadors for change in our local communities.

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC GHANA

In the coming year we intend to inaugurate a number of schools into the SGAC Ghana network and partner with the Ministry of Environment Science & Technology, Ministry of Youth & Sports, Ministry of Energy and Ghana Astronomy Club.

KENYA

Kenya is located in the Eastern part of Africa. It has a population of 36.5 million people. There are six public and several private universities, most of which offer science courses. Two years ago Nairobi University, the first university in Kenya, pioneered a bachelor's degree programme in astronomy. Astronomy is also covered in high school and primary curriculums under geography, biology, and physics. There are a number of international organisations that do education and public outreach in astronomy.





FIGURE 9: KENYA OUTREACH EVENT

GOVERNMENT AND SPACE SCIENCE

The Kenyan government recently offered to build a radio telescope in the coming years, which will contribute to the growth of astronomy and space science within the country.

Charles Bolden, the current administrator of NASA, passed through Kenya in July of 2010. He visited companies like SERVIR Kenya and the Regional Centre for Mapping and Resources. He also gave a talk to students and teachers about his work as an astronaut.

ASTRONOMY AT LEARNING INSTITUTIONS

- Astronomy, as mentioned earlier, is now offered as a bachelor degree programme at Nairobi University. In total there are about 35 students studying the course. The curriculum includes practical assignments and tutorial classes.
- At high school and primary school astronomy is only taught as an after school programme. There are many clubs in several schools across the country that participate in space sciences through different outreach organisations such as Hands-on Universe, Universe Awareness, and 100 Hours of Astronomy.
- There is a mobile planetarium in the country that is used for education and public outreach.
- Plans have been put in place to start a mentor programme between high school students and primary school students in the country. This collaboration is between Kenyan schools and the University of California and El Cerrito High School in California.

SPACE SCIENCE WORKSHOPS

During the month of July, 2010 the first regional GNSS workshop was conducted. Positive feedback was received from scientists from all over Eastern and Central Africa. This included countries such as Sudan, DRC Congo, Burundi, Rwanda, Uganda, Tanzania, Zambia, South Africa, US, Portugal, Italy and Ethiopia. The workshop also included students and professors from many universities all over the country. Our Assistant Minister of Higher Education, Science and Technology, Dr. Kilemi Mwiria, opened the event, which was sponsored by Air Force Research Laboratories, International Union of Radio science, International Centre for Theoretical Physics (ICTP) and University of Nairobi. The event comprised of presentations from various speakers and workshops held at local colleges.

Kenya continues to partner with other African nations in the Astronomy and Space Science fields. The fairly new African Astronomy Society is an organisation setup to bring African space scientists together to share resources. There are also plans to start an East African Astronomical society.



LOOKING AHEAD - SPACE SCIENCE EVENTS FOR 2011

1. Galileo Teacher Training Programme Nairobi January-February 2011
2. Mentor programme between various universities and clubs
3. World Space Week
4. Astronomy without borders

For more information please visit the following websites:

[<www.unawe.org>](http://www.unawe.org)

[<www.universeawarenesskenya.blogspot.com>](http://www.universeawarenesskenya.blogspot.com)

[<www.africahoukenya.blogspot.com>](http://www.africahoukenya.blogspot.com)

[<www.handsonuniverse.org>](http://www.handsonuniverse.org)

NIGERIA

ACCOMPLISHMENTS IN 2010

In the year 2010, Nigeria recorded great success in space ventures including the 80% completion of the two satellites by Surrey Technologies in the United Kingdom, for launch in the February, 2011.

For more information on these satellites please visit:

[<http://www.stfc.ac.uk/News%20and%20Events/6118.aspx>](http://www.stfc.ac.uk/News%20and%20Events/6118.aspx)

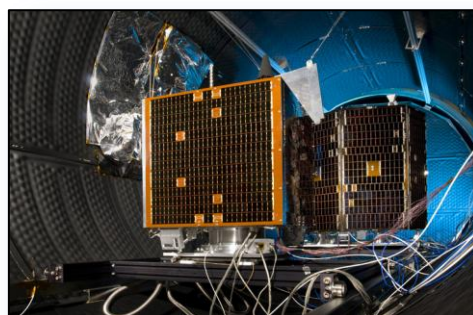


FIGURE 10: NIGERIA SAT2 AND NIGERIA SATX

SGAC Nigeria has geared a lot of efforts toward grass-root involvements of the youth in space related events. Presently, night sky observations are held weekly at the University of Nigeria in collaboration with the Centre for Basic Space Science (an arm of the National Space Research and Development Agency) located within the University.

The former RC for Africa, Mr. Nyeng Gyang, gave a presentation on SGAC at a workshop organised by the Centre for Space Science and Technology Education, Ile-Ife, Nigeria. The audience included primary and secondary school students from selected schools in the North-Western part of the country.

Two SGAC Nigeria members, Mr. Leye Salu and Mr. Etim Offiong, were among the four winners of the IAASS/SGAC Space Safety Paper Competition. Eventually, Mr. Etim Offiong received a scholarship to participate and present his paper at the 4th Annual IAA Space Safety Conference in Huntsville, Alabama, US.



In the second edition of the IAF Youth Grants Awards, three members, Mr. Taslim Alade, Ms. Funmi Erinfolami and Mr. Etim Offiong, made the final ten recipients of the programme. They received funding from the IAF to attend IAC 2010, SGC 2010 and the UN/IAF workshop, all of which took place in Prague, Czech Republic.

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC NIGERIA

SGAC Nigeria has a variety of programmes outlined for 2011. These include an essay competition, workshops and seminars. The workshops will cover astronomy, satellite communication, remote sensing and geodynamics. Details of the workshops will be made known when plans are concluded. A programme is scheduled for 12 April, in commemoration of Yuri's Night. SGAC Nigeria also hopes to work in conjunction with the National Space Research and Development Agency and its activity centres. An extensive outreach programme is planned for members, these are listed as follows.

- STK workshop, 1st quarter, ARCSSTE-E,
- Geographic Information System (GIS) and mobile applications seminar, 2nd quarter, NCRS. This will include stuff on EO, location based services,
- Geodesy and Geodynamics, 2nd quarter, Centre for Geodesy and Geodynamics,
- Astronomy/Astrophysics seminar, 3rd quarter, Centre for Basic Space Science,
- CanSat/Small Satellites workshop, 4th quarter, Centre for Satellite Technology Development, and
- Rockets and rocket propulsion, 4th quarter, Cooperative Scholarship Testing Programme.

SOUTH AFRICA

CURRENT STATE OF SPACE AFFAIRS

South Africa is increasing its capabilities in space ventures, from agricultural applications to improving health services and education. Space technology has become an indispensable component in today's modern information society. In 2008, the South African cabinet approved the establishment of a South African Space Agency, and in 2010, the SANSA was launched. Among the major projects, the space agency will promote space science research and implement a national space programme. SANS will help to lead South Africa's contribution to space science and exploration in collaboration with other existing organisations such as the South African Space Association (SASA), who recently hosted the first annual SASA Congress in 2010, the National Research Foundation and the South African Astronomical Observatory (SAAO).

SGAC SOUTH AFRICA'S OBJECTIVES

- Encourage and engage the youth of South Africa to take part in the space initiative,
- To create activities such as Youth Rocket Workshops and Yuri's Teleconference to promote space science to students, and
- To provide a dynamic forum for members to participate in active discussions and expand their knowledge.

ACCOMPLISHMENTS IN 2010

YURI'S TELECONFERENCE 2010

The first Yuri's Teleconference was held in 2010 to initiate conversations between students from around the world with similar interests in space science. The event aimed to bring students together across geographic boundaries to form a unified vision for the future exploration of space. The focus of this event was the topic of globalisation of space and the need to use space exploration for peace and progress. Students from South Africa, Australia and



Cameroon did an exceptional job of answering questions, and provided interesting perspectives for the future of space technology in their respective countries and on a global scale.



FIGURE 11: YURI'S TELECONFERENCE, SOUTH AFRICA

ROCKET BUILDING AND LAUNCHING WORKSHOP

A rocket building workshop was hosted by SAAO and SGAC members for forty Grade 7 and 8 students and teachers during WSW. From learning about the basic principles of rocketry to the different types of rockets and their core components, the students built their own rockets using everyday materials including cardboard tubes, glue and craft knives. With the rockets reaching heights of 300 metres and higher, the students found the workshop informative and enjoyable.



FIGURE 12: SOUTH AFRICA'S WSW: YOUTH ROCKET BUILDING AND LAUNCHING WORKSHOP

EXPLORATION UPLINK SESSION WITH NASA AMES RESEARCH CENTRE

During WSW, a live Exploration Uplink event was held between SAAO and NASA Ames Research Centre in California, US. Students were given the opportunity to chat with Dr Yvonne Pendleton, US Astronaut Dr Yvonne Cagle and their colleagues at the NASA Lunar Science Institute. The participants were given the opportunity to control a research rover via an internet simulated for movement on lunar soil. The event was a great success, enjoyed by all participants.

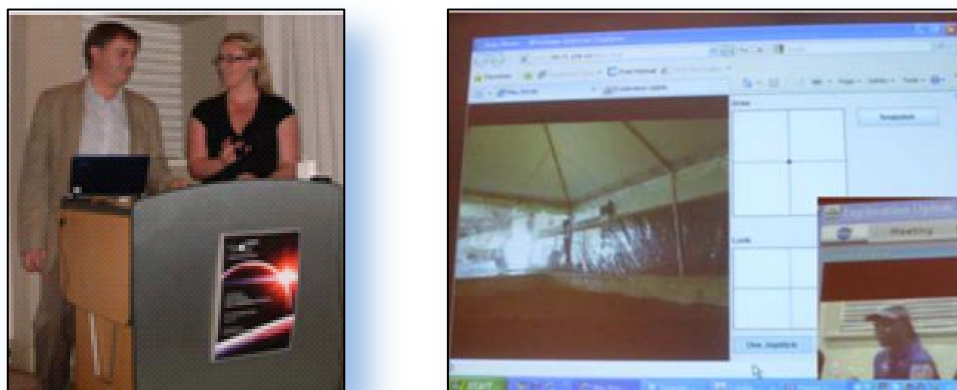


FIGURE 13: SOUTH AFRICA'S EXPLORATION UPLINK SESSION WITH NASA AMES RESEARCH CENTRE

SPACE SAFETY AND SUSTAINABILITY WORKING GROUP

Members of SGAC South Africa are currently in the process of establishing an SSS Working Group. Comprising of a team of students and young professionals in both developed and developing space-faring nations, the SSS working group allows for an international space forum to showcase the next generation's perspective of the future of SSS. The working group aims to contribute to the advances in allowing for the dissemination of key safety principles by improving the synergy of communication, cooperation and information exchange in addressing the technical, organisational and socio-political aspects of SSS.

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC SOUTH AFRICA

WE WANT OUR FUTURE: OUTREACH POSTCARD ACTIVITY

In association with the “We Want Our Future” initiative, a space-based outreach campaign, SGAC South Africa will be collaborating with young South African students to recognise the importance of Science, Technology, Engineering and Maths. The postcard activity aims to challenge students to create postcards of their dreams for the future of space and to spark creativity and motivation in students.

SGC SOUTH AFRICA 2011

Upon returning from SGC 2010 in Prague, the SGAC Local Organising Committee (LOC) was quickly formed in preparation for SGC 2011 South Africa. Comprising of SGAC members and the SGAC Executive Committee, the LOC aims to make SGC 2011 in South Africa a great success. South Africa is privileged to host SGC in 2011, and it is awaited the opportunity to showcase Africa's capabilities to the international space community. As the boundaries that once separated nations are breaking down and as the world comes closer together, our united visions for space are increasingly realised.

REFERENCES AND LINKS

- For more information about SANSA please visit: www.sansa.org.za
- For more information about SASA please visit: www.spacesa.org
- For more information about SAAO please visit: www.sao.ac.za
- For more information about Space School Africa – NYDT please visit: www.nydt.org

SUDAN

The space sciences and technology industry in Sudan is still a new specialisation. In recent years research has been invested into possibly establishing a space agency and hence launching a Sudanese satellite.

The Future University in Sudan established a faculty of Geoinformatics in 2010 along with its Space Technology Centre. The university has the capability and intent to sponsor and host space activities such as seminars and workshops.

ACCOMPLISHMENTS IN 2010

Space Generation in Sudan has been active for the last 3 months, since then efforts have been made to contact people in the space field. The process has been very slow and tough due to highly scattered individuals and unknown organisations.

SGAC Sudan started by visiting universities including, Khartoum, Future and Alnelien University to negotiate possible collaboration, recruit SGAC members and to make presentations about SGAC.

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC SUDAN

There are many ideas and plans in place for the future of SGAC Sudan including fruitful ideas for year 2011, these are the following.

- Visit 10 universities and 25 schools in Khartoum state every four month,
- Encourage more members in Sudan and worldwide to join to SGAC,
- Present at conferences and workshops,
- Find an additional NPoC to support and help in SGAC activities, and
- Develop activity proposals that enable Sudan SGAC members to work together to efficiently achieving SGAC goals.

ZAMBIA

The Space Generation Advisory Council in Zambia has been very successful throughout the year 2010. Space Generation Clubs have been created in schools and outreach activities have been conducted to schools that have Space Generation Clubs, including Mpelembe Secondary School, Mufulira High School, Butondo High School and St John Convent School. Other activities included the commemoration of World Space Week which took place from 7 – 8 October, 2010, at Copperbelt University. The commemoration of WSW in Zambia was significant because it included education for the trainers and users of 275 Galileo Telescopes that were donated by the Developing Astronomy Globally Project. These Galileo Telescopes were given to schools, colleges and Universities.

ACCOMPLISHMENTS IN 2010

YURI'S NIGHT, 12 APRIL, 2010

On 12 April, 2010, members of the Space Generation Advisory Council in Zambia celebrated the spirit of Exploration at Copperbelt University. These members collaborated on space related presentations for the annual national and international space event at the Copperbelt University. A presentation focused on the commemoration of the first man into space, Yuri Gagarin in 1961.

SGAC ZAMBIA OUTREACH IN SCHOOLS, JULY 2010

On 19 July, 2010, Zambia SGAC NPoC Misheck Mutuzana and African RC, Prosperity Simpemba made an Outreach Programme at Mpelembe Secondary School and successfully formulated a Space Generation Club. Along with



Mpelembe Secondary School, Space Generation Clubs have been formulated at Mufulira High School, Butondo Secondary School and St John Convent School.

During the formulation of Mpelembe Space Generation Club, Prosperity Simpemba gave a presentation about Cultural and Astronomical Beliefs of the Ancient Zambian Community. This was based on findings from the study project conducted during IYA 2009. The event was also a part of the Indigenous Astronomy Network which was strengthened at the 2010 Communicating Astronomy with the Public (CAP) Conference held in Cape Town, South Africa, in March. For more information follow the following link.

<http://www.spacegeneration.org/index.php/eventsttopics/news>

BLUE MARBLE SPACE- DISTRIBUTION OF MARBLE SPACE STICKERS, JULY 2010

Mpelembe Secondary School Space Generation Club took part in the distribution of Marble Space stickers to the surrounding community to raise awareness about the importance of space.

<http://www.oneflaginspace.org/Home/efforts/Mpelembe>

2010 SCHOOL ON ASTRONOMY AND SPACE SCIENCE, JULY 18-21

The School on Astronomy and Space Science was organised at the Copperbelt University in conjunction with the International Astronomical Union, Commission 46 through the NASE programme.

WORLD SPACE WEEK COMMEMORATION 7-8 OCTOBER, 2010, COPPERBELT UNIVERSITY

- Attended by Physics and Science teachers, Lecturers, Provincial JETS coordinators and School managers from the nine provinces of Zambia,
- Participants were given the opportunity to subscribe to become members of the Galileo Teacher Training Programme (GTTP),
- Participants received hands on training and were educated on the use of the Astronomy Software,
- Participants were shown how to assemble the parts of Galileo Telescopes,
- Presentations were made on various topics including the following,
 - Introductory to Astronomy,
 - Celestial Mechanics,
 - Astrobiology-Models for Life on Other Planets,
 - Astrochemistry-Chemistry of Matter in the Solar System and Beyond,
 - Applications of Space Science and Astronomy Technologies *by Prosperity Simpemba – African RC SGAC,*
 - The National Academy of Science, Space Research and Philosophy,
 - Climate Change and Mitigations Strategies,
 - Astronomy in Class-Tools and Resources,
 - Relevance of Astronomy – *group discussions,* and
 - Dark Skies Awareness-Prevention of Light Pollution *by Misheck Mutuzana NPoC SGAC-Zambia,*
- At the end of the workshop and the commemoration of World Space Week each school was given a Galileo Telescope and Astronomy Software.

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC ZAMBIA

- Global Astronomy Month (GAM) - April 2011,
- Yuri's Night –12 April, 2011, and
- World Space Week 4-10 October, 2011.





ASIA PACIFIC

2010 was a busy and exciting year for youth space advocates and enthusiasts in the Asia Pacific region. SGAC NPoCs and members in the region organised and participated in community events and represented SGAC at national and international events. There was a significant rise in the interest shown in space activities by youth from space-faring nations such as China, India, Japan, South Korea and many emerging nations in the region. We are thrilled that Michael Brett, from Australia, was elected as the first SGAC Co-Chair from Asia Pacific to co-lead this dynamic organisation for the next couple of years. In addition, Julie Rowe, NPoC for New Zealand, was selected as the SGAC Treasurer to oversee all financial matters of the organisation, and Sonja Russell, from Australia, was selected as the new Intern in the SGAC Vienna Office.

CHANGES TO SGAC ASIA PACIFIC

WELCOMED TO SGAC

Countries

During 2010, SGAC welcomed South Korea and Malaysia from the Asia Pacific regions to the world's largest space youth network.

NPoCs

Over the year 2010 the SGAC Executive Council selected several youths from the Asia Pacific region to represent their countries. Asia Pacific has now grown to include 22 NPoCs from 14 countries.

Andrea Boyd and Shannon Ryan were welcomed as the new NPoCs of Australia and Julie Rowe as the NPoC for New Zealand to support youth space initiatives down under.

After the SGC and the IAC were held in Daejeon, 2009, efforts were invested into establishing a permanent SGAC presence in the Korean peninsula. This aspiration was realised in 2010 with the appointment of Yeongju Kim and Heejin Jeong as the first NPoCs for South Korea.

SGAC welcomed Ahmad Kassim and Harridon Mohd as the NPoCs of Malaysia.

The Executive Council selected Athiye Jawad as an NPoC for India and Ravit Sachasiri for Thailand to further strengthen SGAC activities in their countries.

Other

In December, SGC 2010 delegate Joyeeta Chatterjee from India was elected by the Asia Pacific NPoC to serve as the new co-Regional Coordinator in the SGAC Executive Board.

FAREWELL

In December, we bid farewell to Muhammad Shafiq of Pakistan who completed his two year term as RC for the Asia Pacific region. Miftachul Hasana (NPoC for Indonesia), Jackson Wood (NPoC for New Zealand), Duangkaew Noppornprom (NPoC for Thailand), Nebojsa Pajkic (NPoC for Australia), and Aung Chan (NPoC for Myanmar) also departed during 2010.



2010 REGIONAL HIGHLIGHTS

MEMBER OF THE MONTH

The Asia Pacific region was delighted to see two outstanding NPoCs selected as the SGAC Member of the Month throughout 2010. Patthara Limsira (NPoC for Thailand) and Catherine Doldirina (NPoC for Georgia) were selected for the months of May and November respectively for their diligent efforts.

ANNULAR ECLIPSE OUTREACH EVENT

Yohan Ferreira, Asia Pacific RC, and a large number of astronomy enthusiasts travelled to northern Sri Lanka to witness the annular solar eclipse 15 January, 2010.



FIGURE 14: VIEWING THE ANNULAR SOLAR ECLIPSE, SRI LANKA

APRSAF

In January SGAC was represented at the 16th APRSAF by Patthara Limasira, the NPoC of Thailand. He attended the meeting in Bangkok and made a presentation on “YGNSS Project and the Asia Pacific”.



FIGURE 15: PATTHARA (THAILAND) AT APRSAF 17

Michael Brett, SGAC Co-Chair, represented SGAC at the 17th APRSAF session in Melbourne, Australia.

UN ECOSOC

In February, Wajahat Nassar (NPoC for Pakistan) was selected to represent SGAC at the UN ECOSOC in New York, coordinate UN tasks with the SGAC Executive Director in Vienna and update the SGAC Executive Council about activities.

UN COPUOS

Hiroshi Yamashita (NPoC for Japan) attended the 53rd session of the UN COPUOS held on June 9 – 18, Vienna, Austria.



FIGURE 16: HIROSHI (JAPAN) AT UN COPUOS

ICIST-KAIST CONFERENCE

From 26 – 30 July, Ariane Cornell (SGAC's Executive Director) and Yeongju Kim (South Korean NPoC) attended ICIST at the Daejeon campus of the KAIST.

UN SYMPOSIUM

In August, Thu Vu (NPoC for Viet Nam) was invited and funded to attend a UN Symposium on small satellites in Graz, Austria. While he was there he presented his work and highlighted SGAC's presence in important international space policy forums.

SGC 2010

In September, several Asia Pacific members were selected, and some were awarded scholarships, to participate as delegates at the SGC 2010 in Prague, Czech Republic. Young Leader Awards were presented to Catherine Doldrina (Georgia) and Muhammad Shafiq (Pakistan). The Peter Diamandis Scholarship was awarded to Yohan Ferreira (Sri Lanka).



FIGURE 17: ASIA PACIFIC DELEGATES AT SGC 2010 CLOSING DINNER

ASIA PACIFIC DELEGATES MEET AT SGC

SGC 2010 delegates from the Asia Pacific region met on 24 September at Charles University in Prague, Czech Republic, and discussed youth space activities in the region. A variety of ideas to improve activities were exchanged at this meeting.



FIGURE 18: ASIA PACIFIC SGC MEETING, PRAGUE

IAF ASIA PACIFIC REGIONAL FORUM

SGAC was invited to attend IAF's Asia Pacific Regional Forum held on 16 September prior to the 61st IAC in Prague, Czech Republic. The meeting was attended by representatives of national space agencies in the Asia Pacific region. SGAC was represented by the Executive Director, Ariane Cornell (France/US) and Asia Pacific Regional Coordinators, Muhammad Shafiq from (Pakistan) and Yohan Ferreira from (Sri Lanka).

YURI'S NIGHT AND WORLD SPACE WEEK

SGAC members in the region organised and participated in Yuri's Night events in April and WSW events in October, sharing space activities with their local communities and countries.

WORKSHOP ON SPACE LAW

Patthara Limsira (NPoC for Thailand) attended a workshop on space law organised by the United Nations, Thailand and ESA, held from 16 – 19 November in Bangkok, Thailand.

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC ASIA PACIFIC

SGAC Asia Pacific looks forward to taking part in the following activities.

- Increasing awareness of SGAC in the Asia Pacific region,
- Recruiting more members,
- Expanding the existing NPoC network to cover more countries,
- Participating in, assisting and organising space events in communities, and
- Educating the public at large of the importance of and reliance on space technology in daily life.

For more information on SGAC in the Asia Pacific Region please visit:

<http://www.spacegeneration.org/index.php/sqac-regions/asia-pacific>

ASIA PACIFIC NATIONAL REPORTS

AFGHANISTAN

SGAC Afghanistan tries to pave the way for the future by promoting space and astronomy among young people as well as pooling Afghan talents and building international collaborations. The goal of our efforts is to encourage people to join the space sector, know the importance of astronomy and space education, as well as understand that astronomy and space applications are key factors of current and future technological advancements. Furthermore, SGAC Afghanistan seeks to encourage students, young professionals and the government agencies to help initialise astronomical societies throughout the country. Hopefully, Afghanistan will see another Afghan astronaut in space, following the footsteps of Abdul Ahad Momand, the first Afghan astronaut in space who spent nine days aboard the MIR Space Station in 1988.

Although space is rarely given attention in war-torn countries like Afghanistan, the SGAC NPoC has been trying for almost three years, to initialise space-related activities and projects throughout the country. So far, as stated in earlier reports, the space-related work in Afghanistan is done in individual uneven levels. There are, unfortunately, no professional space societies in the country thus far. Therefore, for 2010, the space-related updates to report are, while limited, very important for Afghanistan.

SGAC NPoC ATTENDS THE JAPAN AEROSPACE EXPLORATION AGENCY (JAXA) ASIAN WINTER SCHOOL (AWS)

In March 2010, the NPoC for SGAC Afghanistan, Ahmad S. Hakimyar, had the chance to participate in the JAXA-AWS 2009. This is a programme organised by International Society of Aeromedical Services/JAXA in Japan, aiming to inspiring students and young professionals in Asian countries to study space sciences and technology and be part of a very important sector, the Space Sector. The programme included lectures by JAXA Scientists and university professors. It also included a visit to Tsukuba Space Centre. During his stay in Japan, Ahmad also met the NPoC for SGAC Viet Nam with whom he discussed and exchanged ideas on their favourite topic, the CubeSat Development.

NPoC OF AFGHANISTAN WINS AN IAC 2010 YOUTH GRANT

Ahmad Hakimyar, NPoC for Afghanistan, was awarded an IAC 2010 Youth Grant to attend the IAC in Prague. Encouraging this initiative, SGAC partnered with IAC and offered Ahmad the opportunity to attend SGC 2010. Ahmad S. Hakimyar was one of the ten students and young professionals selected for this grant from over 70 applicants from 31 countries.

LOOKING AHEAD –THE PLAN FOR SGAC AFGHANISTAN

GALILEOSCOPES ARE YET TO ARRIVE

During 2009, which was declared IYA, a proposal was submitted by the SGAC NPoC, Ahmad Hakimyar, to the corner stone project of the IYA 2009, Developing Astronomy Globally. The proposal was successful and Afghanistan was awarded with one hundred Galileoscopes.

Ahmad Hakimyar planned a space-related contest to be held among local primary and high schools, where the winning school would be awarded with a telescope plus an education package featuring space-related books, DVDs and SGAC flyers. Unfortunately, Ahmad has not yet secured funds for transporting the Galileoscopes from China to Afghanistan. That still remains a challenge to be faced and he hopes that during 2011, he can manage to receive these telescopes and help promote space in Afghanistan.

WORLD SPACE WEEK



Ahmad Hakimyar, as the NPoC for SGAC Afghanistan, had the honour of celebrating World Space Week for the first time in 2008. Ahmad will be glad, to continue celebrating this global event in Afghanistan every year.

AUSTRALIA

CURRENT STATE OF SPACE AFFAIRS

2010 marked a breakthrough year for space technology and development in Australia. The Space Policy Unit (SPU) of the Department of Innovation, Industry, Science and Research, announced in the 2009 Federal Budget, completed its first full year, making significant progress towards a whole-of-government space policy. The new policy is expected to be announced in early 2011 and is eagerly anticipated by the space community. Under the Australian Space Research Programme, the SPU awarded grants worth over \$34 million (approximately EU26 million) for education development and project grants. The Australian Space Industry Innovation Council was also formed in May of 2010, bringing together local experts in policy, industry, and technical subject matter to champion the local space sector and provide strategic advice on innovation priorities to the prime minister.

Australia announced two major international partnerships in space with the US. The first involves the relocation and refurbishment of an optical sensor to Western Australia for integration in the US Space Surveillance Network (SSN). Providing key tracking information to the SSN, the partnership will increase Australian access to key space situational awareness information. The second, a joint "Statement on Bilateral Cooperation in the Civil Use of GPS and Civil Space Activities", established framework for "collaboration on important space application such as satellite based land and sea remote sensing, climate change research and meteorology, and space-based PNT, as well as opportunities for early discussions on new systems and future civil space-related missions under development".

On an astronomy front, the joint Australian/New Zealand bid on hosting the Square Kilometre Array Project remains one of the two shortlisted options (the other being South Africa). The final site decision is expected in 2011 or 2012.

There were many opportunities for young people to participate in Australia's re-emerging space community throughout 2010. Space schools were held in most states at a year 10 level, the National Space Camp Woomera (NSCW) in South Australia was attended by an ESA astronaut and the Australian Youth Aerospace Forum (AYAF) in Queensland was hosted for students in year 11 and 12. For University students the Aerospace Futures careers conference was a highlight of the year. The Victorian Space Science Education Centre (VSSEC) co-organise the VSSEC-NASA Australian Space Prize also offered an undergraduate student the opportunity to attend the NASA Academy Programme at NASA Ames Research Centre. There continued to be a lot of activity within the AIAA student groups and final year projects at university including work on small satellites, experimental supersonic ramjets, Zuni payloads, rocket gliders and more.

ACCOMPLISHMENTS IN 2010

With the increased pace of space activity in Australia there were many events held throughout the year involving SGAC members. More detail on these events and other space activities from 2010 was provided on the Australian national page of the SGAC website.

YURI'S NIGHT, ADELAIDE, 16 APRIL AND SYDNEY, 12 APRIL

The night was attended by many students and young professionals, including SGAC members. Adelaide held a pub night once again at the Astor hosted by The University of Adelaide AIAA Student Branch. 4pines came on board in Sydney and even their staff dressed up with us to celebrate a truly space evening, including a "space beer" (low carbonation -- true microgravity potential!). The space beer was created especially for the occasion by Saber



Astronautics, the company of young aerospace professional Jason Held, which was flight tested later in the year on a Zero-G flight.

For more information about The University of Adelaide AIAA please visit:

[<http://mecheng.adelaide.edu.au/aiaa/>](http://mecheng.adelaide.edu.au/aiaa/)

For more information about the space beer please visit: [<vostokspacebeer.com>](http://vostokspacebeer.com)

HAYABUSA, WOOMERA, JUNE 13

The Japanese spacecraft returned to Earth from Asteroid Itokawa, landing successfully June 13 in the Woomera desert, as predicted by the range safety calculations of the SGAC Co-chairperson, Michael Brett's team at Aerospace Concepts, an Australian company. Andrea Boyd, NPOC for Australia, was fortunate enough to be invited on site with The Australian Government, Space Licensing Office and JAXA to witness the spectacular re-entry, which lit up the whole night sky.

For more information about Aerospace Concepts please visit: [<www.concepts.aero/news>](http://www.concepts.aero/news)

AEROSPACE FUTURES CONFERENCE, BRISBANE, JUNE 28-30

Representatives from aerospace organisations gave presentations throughout the conference to guide university students on their career path. The delegates were predominantly comprised of university students studying an aerospace related degree at any university within Australia. Aerospace Futures also provided fantastic networking opportunities for delegates to meet both other students with similar interests and aerospace professionals. Co-chaired by NPOC Andrea Boyd, speakers included SGAC Chair Michael Brett, past Director Dr Chris Boshuizen, SGC and ISU alumna Dr Kimberley Clayfield and delegates included Julie Rowe, New Zealand NPOC and SGAC Treasurer.

For more information about the Aerospace Futures Conference please visit:

[<www.aerospacefutures.com.au>](http://www.aerospacefutures.com.au)

11TH ASDC, ADELAIDE, 5-7 JULY

The ASDC is held once every two years and was again run at the Hilton in Adelaide. The conference built on the success of the 10th ASDC and provided a forum for discussion and implementation of the Australian Space Research Programme. In conjunction with the ASDC, for the first time Engineers Australia hosted the National Space Engineering Symposium organised by Dr Kimberley Clayfield to provide a forum for discussion and implementation of the Australian Space Research Programme. Students and Young Professionals provided the staff and the International Space University inaugural Southern Hemisphere Summer Space Programme (SH-SSP) was announced to be held at the University of South Australia in January 2011. Many SGC Alumni were present as staff and a presentation about SGAC was made to the Australian space industry by Michael Brett and SGAC Intern Sonja Russell presented her team's final year honours project on small satellites.

For more information about the ASDC please visit: [<www.nssa.com.au/ASDC11/>](http://www.nssa.com.au/ASDC11/)

For more information about the National Space Engineering Symposium please visit:

[<http://www.engineersaustralia.org.au/committees-panels/space-engineering/events/>](http://www.engineersaustralia.org.au/committees-panels/space-engineering/events/)

AYAF, UNIVERSITY OF QUEENSLAND, BRISBANE, 5-9 JULY

The forum gave 60 high school students in Year 12 nationwide the opportunity to gain unparalleled exposure to the aviation, aerospace, aeronautical and astronautical industries. It involved presentations and lectures followed by practical experiments, group activities, tours and various social engagements. NPOC Shannon Ryan was a special guest speaker.

For more information about the AYAF please visit: [<http://ayaf.com.au/>](http://ayaf.com.au)

SOUTH AUSTRALIAN SPACE SCHOOL (SASS), ADELAIDE, 5-7 JULY

The SASS introduced students to career options they may never have considered, and provided an opportunity for ten of them to be selected to attend the NSCW in 2011. Dr Adrian Brown from NASA Ames attended as a special guest and spent the days with the Year 10 students who undertook activities at the Defence Science and



Technology Organisation, Royal Australian Air Force, the Planetarium and The University of Adelaide along with building and launching their own model rockets and using the pipehenge at Hamilton College. Dr. Kimberley Clayfield, SGAC alumni, and Andrea Boyd, NPoC for Australia, are amongst the teaching staff that organise SASS annually.

For more information about the SA Space School please visit: www.spaceschool.com

VICTORIAN SPACE SCHOOL (VSS), MELBOURNE, 5-7 JULY

Year 10 students at the School spent three days visiting Melbourne Universities, meeting leading Australian Space Scientists and Engineers, and experiencing what it would be like to be an astronaut and mission controller at VSSEC's state of the art Mars Simulation facility including the Mission to Mars and Mission to the Orbiting Space Laboratory. VSSEC and VSS are run by young Aerospace Engineer Dr Naomi Mathers, an amazing advocate of space education and of SGAC.

For more information about the VSS please visit:

www.vssec.vic.edu.au/events/victorian-space-school/

SPACE GENERATION CONGRESS

The SGC in Prague was attended by Australian representatives Chris Boshuizen, Ben Stepin, and IAF Youth Grant winner Mary D'Souza.

NSCW, WOOMERA AND ADELAIDE, 1-5 OCTOBER

NSCW was held over the October long weekend for students in Year 11. It was great to see many familiar faces from the state space school alumni Year 10s of 2009. In the city the students attended lectures, undertook activities at the University of Adelaide, Department of Physics and also built their own Gnome rockets. ESA Astronaut Hans Schlegel was a special residential guest speaking at a public lecture in Adelaide before the students and SASS staff, who organise NSCW. The group travelled to Woomera for the remainder of the programme including Zuni rockets, launching their own model rockets on the Woomera Prohibited Area (WPA) range, seeing the Woomera Rocket and Spacecraft history and a private tour of the current range facilities along with the Canguroo gamma ray telescopes. An Australian specific "where to now" presentation was given to explain to the students about the continuing opportunities from here, including AYAF in Year 12 and University space, engineering and science opportunities.

For more information about the NSCW please visit: www.spaceschool.com

AUSTRALIAN SPACE RESEARCH INSTITUTE (ASRI) ZUNI ROCKET LAUNCHES, WOOMERA, 3-4 OCTOBER

As they do annually, ASRI launched several Zuni rockets at Woomera over the October long weekend containing payloads of primarily university student projects. It was possible to attend and view from a safe distance at Launch Area 9 for those who had contacted ASRI early enough to organise security clearance to be on the WPA range. The University of Queensland, University of Adelaide and NSCW were among those in attendance.

For more information about ASRI please visit: www.asri.org.au

17TH SESSION OF THE APRSAF, MELBOURNE, 23-16 NOVEMBER

APRSAF-17, under the main theme entitled "The role of space technology and industry in addressing climate change" was jointly organised and co-hosted by the Department of Innovation Industry Science and Research of Australia, the Ministry of Education, Culture, Sports, Science and Technology of Japan, and the JAXA. APRSAF-17 saw a gathering of 234 participants from 23 countries and region and 9 international organisations. Staff included SGC Alumna Crystal Forrester who travelled to Melbourne for the event.

For more information about APRSAF please visit:

http://www.aprsaf.org/annual_meetings/aprsaf17/meeting_details.php

INTERNATIONAL SPACE UNIVERSITY SOUTHERN HEMISPHERE SUMMER SPACE PROGRAMME, ADELAIDE



The ISU SH-SSP is being held also for the first time in the southern hemisphere summer this January-February in Adelaide. Students have been selected, including SGC Alumna Crystal Forrester and on 17 December the international staff arrived to meet with the Australian staff, including SGC and ISU Alumnus Rogan Shimmin at the University of South Australia in preparation for the opening and commencement of the programme shortly after New Years.

For more information about the ISU SH-SSP please visit:

<http://spacegeneration.org/index.php/sqac-regions/asia-pacific/australia/249-southern-hemisphere-summer-space-program->>

Sonja Russell was selected as the 2010-2011 SGAC Intern at the Vienna Head Office and will reside in Austria over the summer to produce the 2010 Annual Report, work on new marketing materials, support SGAC's efforts at the United Nations, work with ESPI reports, as well as help with the daily operations of the organisation.

CHINA

With the developments of astronautics related projects and activities, the government and people of China are beginning to pay more attention to the humanity aspects of space. However, due to little precedents in promoting Non Government Organisations (NGO) such as SGAC in the area of space, the building of relationships for projects and sponsorships are tentative. Through those tentative activities, some useful experience and information has been collected.

ACCOMPLISHMENTS IN 2010

The IAF General Assembly in Prague selected the host city for the 64th IAC for 2013. The congress will be held in Beijing, China and hosted by the Chinese Society of Astronautics.

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC CHINA

China is looking forward to seeing the expansion of SGAC in China with some niche targeting projects and activities to encourage Chinese sponsors to contribute their enthusiasms. To promote space under the name of SGAC in China it's beneficial to begin with the educational aspects, such as essay or translation contests. These projects can therefore be useful in the utilisation of universities, NGOs and educational organisations with a strong focus on aerospace.

SGAC China would like to become more involved and to contribute more to the international activities on promoting space among the youth.

GEORGIA

THE CURRENT STATE OF SPACE AFFAIRS

The activities in Georgia related to space are very scarce. Georgia is not a member of COPUOS, which is a factor that signifies low priority of space and space technologies for the country. Georgia does not have a satellite of its own and, according to the available information, has no plans to develop one in the near future. Taking this into account, interest in space for the younger generation is also quite low. It is hard to imagine what space technologies could be useful for if there is no public debate about the development of space activities.



With the less awareness, there is a strong potential in the country, at the national level, to spread the word about space as well as to plan several space awareness programmes and organising public outreach events. It is great to see that the Georgian student community is turning to the topics of technological development and progress, which soon may lead to initiatives directly related to outer space activities. In March 2010 the NANO-2010 conference was held and sponsored by the St. Andrew the First-Called Georgian University of the Patriarchy of Georgia from 23-24 March in Tbilisi. This became the first meeting devoted to nanochemistry and nanotechnologies. In December, at the Caucasus University, Tbilisi, a seminar titled “Innovation Product in the XXI Century” gathered students from various faculties and specialisations to discuss innovation and its promotion in a Georgian context.

The Global Earth Observation System of Systems (GEOSS) initiative is coming to Georgia, the workshop “Bringing GEOSS Services into Practice” was organised in Tbilisi in November. It was sponsored by the EC’s 7th Framework Programme and was aimed to teach the participants to use the data that will be available within the GEOSS framework. Catherine Doldirina, the NPoC for Georgia, contacted the organisers of the workshop to discuss possible collaboration.

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC GEORGIA

The goals for SGAC Georgia in 2011 remain the promotion of space events like Yuri’s Night and World Space Week. Organisation of these events in Georgia might attract more attention to space activities and promote Georgian engagement in space matters in the long run.

INDIA

CURRENT STATE OF SPACE AFFAIRS

In 2010 India’s space programme continued to focus on benefits for society such as tele-medicine, tele-education, telecommunications and remote sensing applications. As a result, space in India has become an integral part of the daily lives of Indian citizens which has inspired both young and old. Year after year, India establishes its goal to offer space services in a self-reliant and cost effective manner.

The Indian Space Research Organisation (ISRO) has been putting in place the building blocks for future technologies. It successfully tested the solid and liquid stages of the next generation Geosynchronous Satellite Launch Vehicle (GSLV) Mark III (Mk-III) and tested the advanced sounding rocket. Its workhorse vehicle, the Polar Satellite Launch Vehicle (PSLV) saw the successful launch of the CARTOSAT-2B, which enhanced the Indian Remote Sensing Programme.

ISRO also made progress in space exploration by selecting the payloads for the next lunar mission, Chandrayaan-II, finishing the solar coronagraph for Aditya-1 and with work progressing on the Astronomy Satellite, ASTROSAT. Nevertheless, in 2010 India suffered from two failures of its GSLV. The Government has shown its confidence in ISRO by enhancing its budget for 2010-11.



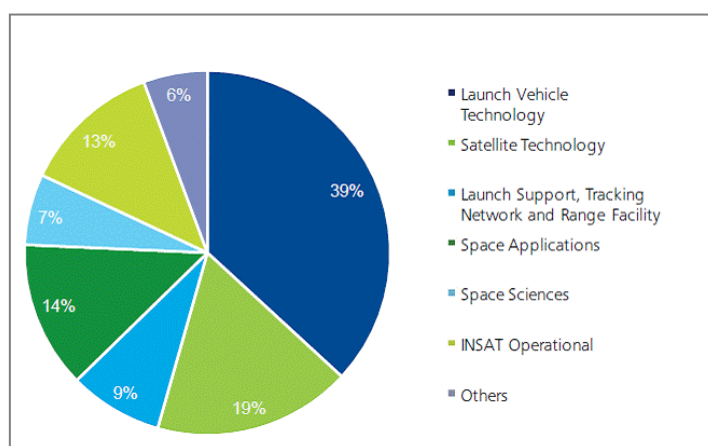


FIGURE 19: INDIAN EXPENDITURE IN SPACE

ISRO 2010 ACTIVITIES

- Successfully static tested the S-200 solid rocket engine, the second largest of this type of engine in the world and the liquid engine stage for the GSLV Mk-III,
- Successfully flight tested an advanced sounding rocket which was the heaviest built by ISRO,
- An RH-200 sounding rocket was launched with a student payload from Vellore Institute of Technology,
- Successful launch of PSLV-C15 which carried CARTOSAT-2B, Student Satellite (STUDSAT) from students of engineering colleges in Karnataka and Andhra Pradesh states of India, NLS 6.1 and NLS 6.2 from the University of Toronto, Canada and ALSAT-2A from Algeria,
- Failure of the GSLV-D3 and GSLV-F06 missions,
- Antrix Corporation (ISRO's commercial arm) built Hylas-1 satellite for the European Aeronautic Defence and Space Company N.V. (EADS) Astrium, and
- Chandrayaan-I's Moon Impact Probe shared results of the discovery of water and carbon dioxide in the lunar exosphere.

YOUTH EVENTS

SGAC interacts with different youth organisations in the country that contribute to the achievement of space outreach. For a successful outcome from Indian youths, a bridge is to be created between organisations. The events held by the Indian youths are as follows.

SEDS

- Organised annular solar eclipse viewing sessions and trip to Ooty Radio Telescope,



FIGURE 20: INDIA'S SOLAR ECLIPSE VIEWING SESSION



- Held the annual SEDS India National Conference with multiple space related engineering challenges including suggestion for student payloads on Chandrayaan-II, lunar rover challenge, Orinthropter, and water rockets,
- Held Antariksh-2010, a space themed Independence Day festival for college students, school students and orphanages,



FIGURE 21: INDIA'S SPACE THEMED INDEPENDENCE DAY FESTIVAL

- Signed up with Microcomm India Ltd. for collaborative research and development projects, and
- In 2010, SEDS started working on their projects for Met Sounding Payload, Rocket for Drop Sonde, Acoustic Wind Profile, Aerial Delivery System and Light Detection and Ranging on Earth Orbiter.

PLANETARY SOCIETY

- NASA's Cassini Scientist for a Day, India,
- Space Simulator Project for school students in India to simulate conditions of eclipse up to 2012, as seen from 50 different countries, published on the web and sent to different embassies for awareness,
- Annular Solar Eclipse observation and awareness activities,
- Mass awareness activities conducted with newspaper and television coverage on topics related to celestial events,
- Astronomical Observatory proposal mooted for Near Earth Object research involving government and private support in Andhra Pradesh, India, and
- Student members of Society participated in STUDSAT projects and similar projects involving engineering colleges initiated.

MOON SOCIETY

- Outreach with 4 issues of the newsletter, Moon Miners Manifesto India Quarterly,
- Presented Dr. A P J Abdul Kalam with the University of Luna Award, and
- Working on two technical projects - Lunar Analog Research Station LARS and Earth to Moon Transportation Architecture.





FIGURE 22: UNIVERSITY OF LUNA AWARD, INDIA

OUTREACH

The National Space Society and the International Space Society have conducted outreach activities related to space science and astronomy groups such as the Amateur Astronomy Associations around the country. SPACE has also conducted various astronomy outreach activities and observation campaigns.

SGAC OUTREACH

SGAC India has worked as a helpline for students and young enthusiasts who are interested in space activities, conferences and workshops. Efforts continue to reach out to youth activities and other international organisations in order to send out the message of SGAC. The current focus is to engage the youth organisations with the mission to have a maximum outreach on space activities within India and allow international exposure for youths in India to space activities internationally. SGAC India has also reached out to various diverse communities such as the Air and Space Law conference in Delhi and the Space Art Initiatives with Art Students in order to engage with them in space science.



FIGURE 23: SGAC INDIA

In the future, SGAC India hopes to connect with the young professional community within ISRO and strives to connect the student and young professional communities within India.

JAPAN

CURRENT STATE OF THE SPACE PROGRAMME

In 2010 most space news covered Mu Space Engineering Spacecraft C (MUSES-C) “Hayabusa”, which successfully returned to Earth after collecting some samples from the asteroid Itokawa. In addition to Hayabusa, in 2010 H-IIA rocket had two symbolic launches from Japan. The first H-IIA deep space mission, PLANET-C “Akatsuki”, launched in May as a Venus observation satellite, but failed to enter the orbit of Venus in December. Piggybacked on this launch was the Interplanetary Kite-craft Accelerated by Radiation of the Sun (Ikaros). Ikaros successfully tested a solar sail system. Also piggybacked were four university and (non-commercial) company satellites, these were the Asia-Pacific Satellite Communications Council (UNISEC) Technology Experiment Carrier-1 (UNITEC-1) “Shin-en”, “Negai☆”, KSAT “Hayato”, and “Waseda-Sat2”. These satellites successfully separated to enter their respective orbits. Unfortunately, almost all of these satellites are currently in bad communication conditions. A GPS technical verification satellite, Quasi Zenith Satellite 1 (QZS-1) “Michibiki”, was successfully launched on H-IIA in September. The satellite was inserted into a quasi zenith orbit over Japan with a centre longitude of about 135 degrees. It can communicate for approximately eight hours at a time. Quasi Zenith Satellite Systems need at least two more quasi zenith satellites for around the clock operation. Soichi Noguchi was an astronaut that worked onboard the International Space Station (ISS) as the 22nd and 23rd expedition crew from December 2009. Soichi stayed in the ISS for over 160 days in total, recording the longest stay among the Japanese astronauts, and returned to the earth in June. In April, our second female astronaut Naoko Yamazaki finally launched onboard the Space Shuttle about ten years after becoming an astronaut candidate. Over 100 people from Japan, through JAXA’s invitation, have travelled to Cape Canaveral to witness the beautiful launch at dawn.

Recent space policy remains confusing in Japan. The Democratic Party tried to cut the science budget including space exploration by the screening process, “Zigyo Shiwake”. However, the effects of the Hayabusa mission prevented a further decrease in the space exploration budget. On the other hand, the information centre, JAXAi, in central Tokyo closed at the end of December due to ineffective use of the governmental budget. The government has many meetings about the new National Defence Programme Outline. Finally, the Outline did not include a revision of the nation's three-point ban on exporting weapons and manufacturing products for military use to the “white countries” except the US.

The technological executive director at JAXA, Mr. Yasushi Horikawa, was elected the next Chairman of COPUOS from 2012, joining the Japanese astronaut, Takao Doi, who has worked at UN OOSA in Vienna since September 2009 as an important member of the UN space community, strengthening Japan’s contribution to the UN. Aside from the governmental and defence space, commercial space in Japan remains a small market and very difficult to spread into non-space companies or the general public. However, in the last few years, to open up the use of outer space for everyone and to trade directly with companies abroad, our colleagues have established new networking organisations, including the following.

- Spaceland Japan: <http://www.spaceland-j.com/english/english.pdf>,
- Next Generation Space System Reliability: <http://www.nestra.jp/eng/>, and
- White Label Space Japan LLC: <http://whitelabelspacejapanoffice.blogspot.com/>.

ACCOMPLISHMENTS IN 2010

SGAC JAPAN MEMBERS NETWORK

The SGAC Japan mailing list group expanded in 2010 to 25 members. This year, Shuji Ogawa, Yuri Takaya, Makiko Arahori, and Naomi Kuwahara joined the mailing list group.



LUNAR EXPLORATION NATIONAL MEETING, APRIL

Seiichiro Morizawa attended the Lunar Exploration National Meeting. The "Conference on Lunar Exploration" is planning unmanned lunar exploration by advanced robots to be achieved around 2020. The next step is lunar exploration through collaboration between humans and robots. Presentations were made on the considerations of this conference and the latest information related to the Moon, as well as the current state of Japanese and US efforts. The presentations were themed "What is *Japanese* Lunar Exploration". Following this, a panel discussion was held with an astronaut, the minister of space development and students who had applied to participate in had discussions with exchanges of views with participants in the audience.

NEWSPAPER COVERAGE, APRIL

Noriaki Inami was covered in one of the biggest Japanese newspapers, Asahi Shinbun, on 8 February.

For more information please visit:

<https://aspara.asahi.com/blog/science/entry/lmdEr6uqMB>

YURI'S NIGHT JAPAN 2010, APRIL

Under the cherry blossoms, Yuri's Night Tokyo 2010 was held at Asukayama Park in Tokyo on 10 April. From late March through April, Japan has the "Ohanami" (cherry blossom viewing) season. This year, Yuri's Night met at this traditional Japanese event. Over 40 space enthusiasts joined the event.

UN COPUOS OBSERVER, JUNE

Hiroshi Yamashita attended UN COPUOS in Vienna, 14 – 18 June. Hiroshi closely observed the sessions and has reported back his point of view as a member of SGAC's delegation to COPUOS.

For more information please visit:

http://www.spacegeneration.org/images/stories/Newsletters/SGAC_Newsletter_September.pdf

TELEVISION PROGRAMME SPACE ROMAN NIPPON HOUSOU KYOUKAI, JULY AND AUGUST

Noriaki Inami, and other SGAC Japan members, talked about romantic space on the television programme Nippon Housou Kyokai. The television programme aired on 30 July and 6 August.

WHITE LABEL SPACE JAPAN, SEPTEMBER

The first X-Prize competition team in Japan was established in September, 2010. In 2009, Professor Yoshida joined White Label Space, one of the official entry teams of the Google Lunar X-Prize, located mainly in Europe. To collaborate with them, the team president, Takeshi Hakamada, registered White Label Space Japan.

SGC 2010, PRAGUE, SEPTEMBER

Three Japanese members were delegated to SGC Prague. Naomi Kuwahara presented "Nano-satellite Constellation Mission Idea Contest" on the last day of the SGC. Daichi Nakamura attended the exploration group session and participated actively, continuing on from last year's efforts. Hiroshi Yamashita received gifts from two Japanese companies supported by Misuzu Onuki of the Space Frontier Foundation.

MILESTONE EVENT AT SPACEPORT AMERICA, OCTOBER

Noriaki Inami participated in the Milestone event at Spaceport America.

For more information please visit:

http://current.com/groups/learn/92741165_milestone-event-at-spaceport-america-new-mexico.htm

SPACE EVENT AT WASEDA UNIVERSITY, NOVEMBER

Noriaki Inami talked about training experiences as one of the founders of Virgin Galactic's Space Ship Two flight. Takeshi Hakamada, president of White Label Space Japan, presented the project to take on the Google Lunar X-Prize challenge. The emcee of the event was Ad Balloon, a young comedian.

MEETING WITH SGAC MEMBERS IN EUROPE, APRIL - NOVEMBER

Hiroshi Yamashita stayed in Europe from April to November. During this time he met many SGAC members including Tee and Bee Thakore, Virgiliu Pop, Maria-Laura Voda, Bojan Pecnik, Alex Carl, and Foo Yee Chong. In



addition, he was warmly hosted by SGAC head office members, Agnieszka Lukaszczyk and Ariane Cornell, Bernardo R. Dos Santos and Vanessa Passoni during the COPUOS week in Vienna.

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC JAPAN

A new NPoC, Daichi Nakamura, will replace Yuki Takahashi in the beginning of 2011. SGAC Japan will hold a New Year on 10 January, Tokyo. SGAC Japan will try to reconnect participants of past SGC as an alumni organisation.

NEPAL

SGAC Nepal was successful in promoting space science and astronomy during 2010 through various educational outreach activities throughout the nation in collaboration with Nepal Academy of Science and Technology (NAST), Tribhuvan University (TU) and Nepal Astronomical Society (NASO). In 2010, SGAC members were successful in attending useful conferences in Space Science and Astronomy held in China, Germany, India, Italy, South Africa and the United Kingdom. During 2010, SGAC Nepal was able to expand its activities in Eastern, Central and Western Development Regions of Nepal amongst school students, youths and the general public. SGAC Nepal is proud of its contribution to the promotion of space science education in Nepal.

NATIONAL ACCOMPLISHMENTS IN 2010

SOLAR ECLIPSE OBSERVATION CAMPAIGN, 15 JANUARY

An observation campaign was organised by NASO on the premises of NAST in January, 2010. The programme was a grand success with approximately 550 participants. The whole programme was live telecasted on Sagarmatha Television.

GLOBAL ASTRONOMY MONTH 2010, APRIL

- Astro Quiz Contest 2010, NASO in collaboration with National TV asked four questions related to astronomy with three options from National television during the GAM2010,
- Talk programme at Celebrated Co-Ed School, Narayan Taar, Jorpati, Kathmandu, 1 April,
- Interaction Programme at RIA School, Kapan, Kathmandu, 2 April,
- Star party at Handigaun, Kathmandu on the occasion of 30 nights of star peace in Nepal, 6 April,
- Solar observation to mark Sunday, global programme of GAM 2010 at Lalitpur, Nepal, 11 April,
- SGAC member Riway Pokhrel made a presentation about the Central department of Physics, TU Kirtipur, Kathmandu, 16 April, and
- Chattedunga Exploration and Educational Outreach activities at Eastern Nepal, 20-28 April.

8TH NATIONAL SCHOOL ON ASTRONOMY AND ASTROPHYSICS, 18-24 MAY

SGAC members Sudeep Neupane and Riway Pokhrel participated in the 8th National School on Astronomy and Astrophysics, organised by BPKM Planetarium, Observatory and Science Museum Development Board in Sankar Hotel, Lazimpat, and Kathmandu.

ASTRONOMY SCHOOL, PARASI, 24-27 MAY

NASO organised Astronomy School for Kids in collaboration with Filters for Families, a renowned NGO in Parasi. Different astronomical topics and events about Space Science were introduced by Professor of Astrophysics of Colorado University, Suzane Taylor and SGAC members Sudeep Neupane and Riway Pokhrel.



INTERNATIONAL CONFERENCE ON "ACCRETION AND OUTFLOW IN BLACK HOLE SYSTEMS", KATHMANDU, NEPAL, OCTOBER 11 - 15

SGAC members Suresh Bhattarai, Rijendra Thapa, Sudeep Neupane, and Riway Pokhrel participated in the conference. The scientific scope of this conference was to understand the process of accretion onto the central black hole and outflows from the system (including the jet formation) in Black Hole binaries, Active Galactic Nuclei and Gamma Ray Bursts.

BILATERAL AGREEMENT BETWEEN CENTRAL DEPARTMENT OF PHYSICS, TU, NEPAL & NICOLAUS COPERNICUS ASTRONOMICAL CENTRE, POLISH ACADEMY OF SCIENCES, POLAND, 18 OCTOBER

Both parties agreed to collaborate in the field of Physics, more specific Astrophysics and Cosmology and related research work. This includes three following fundamental areas:

1. Collaborative research work between the faculties,
2. Exchange visit programme between the faculty members, and
3. Organising scientific meetings, schools and the conference.

INTERNATIONAL HIGHLIGHTS

APRSAF-16, 23 - 25 JANUARY

Nepal participated in APRSAF-16 Space Education and Awareness Working Group water rocket event held in Thailand during 23 – 25 January, 2010.

CAP2010, CAPE TOWN, SOUTH AFRICA, 15 – 19 MARCH

Riway Pokhrel, SGAC member, presented a paper on "Impact of Astronomical Outreach in Nepalese Society" in the conference "Communicating Astronomy with the Public 2010 — Building on the International Year of Astronomy 2009".

SUMMER SCHOOL ON COSMOLOGY, ICTP, TRIESTE, ITALY, 19 – 30 JULY

Sudeep Neupane, SGAC member, participated in a summer school on cosmology organised by ICTP at Trieste, Italy during July 19 - 30. After the school, he participated in "13th Global Hands-on Universe Meeting" held during 1 – 7 August, 2010.

US-INDIA WORKSHOP ON WORLD WIDE TELESCOPES, AT THE INTER-UNIVERSITY CENTRE FOR ASTRONOMY AND ASTROPHYSICS (IUCAA), PUNE, INDIA, 4 SEPTEMBER

A group of Nepalese delegates including an NPoC for SGAC Nepal attended the conference organised by Microsoft Corporation and IUCAA, Pune, India.

INTERNATIONAL METEOR CONFERENCE 2010, 16 – 19 SEPTEMBER

Suresh Bhattarai, SGAC NPoC, presented his paper on "Visual Observation of Meteors in Nepal".

APRSAF-17, 19 – 26 NOVEMBER

Nepal participated in the APRSAF-17 Water Rocket Event, 19 – 22 November, and Poster Design Competition, 23 – 26 November, based on the theme of "Space Technology to Help the Earth" at VSSEC, Melbourne Australia.

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC NEPAL

SGAC Nepal plans to motivate the Nepalese Youth Community on Space Science and Astronomy through various educational outreach activities throughout the nation. SGAC Nepal plans to present talks in all five development regions and assist in forming local clubs motivating college and school students for a better educational outreach network.



NEW ZEALAND

CURRENT STATE OF SPACE AFFAIRS

INDUSTRY

New Zealand (NZ) currently does not have a government supported space programme, however, there are privately owned aerospace companies currently operating, such as “Rocket Lab”, and various space related projects, such as the MOA (Microlensing Observations in Astrophysics) collaboration, running throughout the country.

The New Zealand company “Rakon” also acquired the assets of the French company “Temex”, which will enable it to work on applications like Galileo navigation satellites as well as transportation vehicles for the ISS.

EDUCATION

There are currently no specific Aerospace programmes available at a tertiary level in New Zealand; however some universities offer Astronomy and Astrophysics, either as a subject or a major.

ACCOMPLISHMENTS IN 2010

The NPoC for New Zealand was involved in the formation of the New Zealand Space Foundation as a founding director. The strategies of the organisation include capacity building and outreach.

For more information about the foundation please visit: www.spacefoundation.org.nz

As a first initiative, the organisation successfully ran the Cassini Scientist for a Day competition for the first time in NZ in which the NPoC for New Zealand acted as the NZ National Co-ordinator for NASA.

The NPoC for New Zealand also joined the NZ Rocketry Association, meeting other people interested in experimental rocketry, and attended launch days.

In April, The NZ NPoC joined SGAC’s delegation to the 49th session of the Legal Subcommittee on the Peaceful Uses of Outer Space at the UN in Vienna in March.

YOUTH SPACE ACTIVITIES

In February, the NZ Rocketry Association held their National Rocket Day on a farm in Taupiri, just south of Auckland. Hundreds of members of the public of all ages attended and not only watched rockets being launched but had the opportunity to launch one themselves with a beginner’s rocket kit.





FIGURE 24: NATIONAL ROCKET DAY - NEW ZEALAND

Stardome Observatory and Planetarium in Auckland hosted events throughout the year including shows for children and schools, as well as viewing evenings for adults. On 21 December, Stardome held an eclipse viewing evening for the first lunar eclipse visible from NZ in three years. Approximately 1500 members of the public attended the event.

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC NEW ZEALAND

Through the NZ Space Foundation, NZ NPoC will be involved in running further initiatives in 2011 now that the organisation is established with a strategy in place. Whilst the next initiatives have not yet been confirmed, they will tentatively be either educational (such as essay contests) and/or rocketry focused, with not only students but also targeted towards including the general public as participants.

PAKISTAN

CURRENT STATE OF THE SPACE AFFAIRS

The Space enthusiasm in Pakistan increased over the year 2010. The year 2009 brought forward the IYA, lighting the flame for space programmes. The year saw many astronomy sessions around the country and the celebrations of the WSW 2010.

LIVE VIEWING OF THE 2010 SOLAR ECLIPSE, 15 JANUARY, 2010

A live viewing of the 2010 solar eclipse was arranged at the Quaid-e-Azam Campus, Punjab University Lahore.

ADVANCED TRAINING COURSE IN RS & GIS, 5-16 APRIL, 2010

A course aimed at providing concepts and knowledge on the advanced techniques being used in GIS development and applications. This was arranged by Pakistan's National Space Administration and covered important topics related to operationalisation of remote sensing and GIS in different discipline areas.

YURI'S NIGHT, ISLAMABAD, 8 APRIL, 2010

Yuri's Night, the world's largest gathering commemorating the first human flight to space and the launch of the first space shuttle mission, was celebrated in Pakistan in 2010.

ASIA-PACIFIC SPACE COOPERATION ORGANISATION (APSCO) SECOND INTERNATIONAL SYMPOSIUM ON FOOD SECURITY AND MONITORING OF AGRICULTURE THROUGH SATELLITE TECHNOLOGY, SEPTEMBER 13 – 17, 2010

A symposium was arranged in Islamabad and focused on the issue of food security in the country, highlighting the use of space technology for monitoring agriculture.

NINTH FALAKYATI MELA, SEPTEMBER 17, 2010

A Falakyati Mela was arranged in Lahore University of Management Sciences, Lahore, to observe the lunar landscape and Jupiter, Andromeda Galaxy, Ring Nebula and the star cluster M13.

WATCH AND TALK ASTRONOMY SESSION, SEPTEMBER 18, 2010

Karachi Astronomers Society arranged a public astronomy session on September 18, 2010, at the Pakistan Air Force Museum Karachi comprising of presentations, live discussions and live observations through telescopes.

TENTH FALAKYATI MELA, 4 OCTOBER, 2010

The Tenth Falakyati Mela was organised as a part of WSW 2010 in Lahore. The Mela focused on Jupiter, the nebulae and star clusters.

SPACE AWARENESS LECTURES FOR SCHOOLS, 4 – 8 OCTOBER, 2010

As part of WSW 2010, lectures on applications of space technology were delivered in different schools of Lahore.

SKY SIMULATION SHOW, 8 OCTOBER, 2010

As part of WSW 2010, Space related movies and lectures with animated presentations were arranged for schools.

ESSAY/STORY WRITING COMPETITION, OCTOBER 9 – 10, 2010

An Essay/Story Writing Competition was arranged for schools of Lahore. The final was held on October 10, 2010.

DECLAMATION CONTEST, 9 – 10 OCTOBER, 2010

A Declamation contest was arranged for schools of Lahore. The final was held on October 10, 2010.

STAR PARTY, 10 OCTOBER, 2010

Karachi Astronomers Society arranged a sky viewing event at scenic Hingol National Park on 10 October, 2010.

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC PAKISTAN

- Encourage more members from Pakistan to participate in SGAC,
- Hold more space events in Pakistan like Yuri's Night and World Space Week,
- Participate on the SGC talk list and hold discussions with delegates from other countries, and
- Report activities in Pakistan to SGAC Executive Committee annually.



For the year 2011, SGAC Pakistan will continually seek more events for Pakistan to increase the awareness related to the space issues and the presence of SGAC in the country. We are planning for the following events in Pakistan.

- Space settlement competitions,
- Essay competitions,
- Quiz competitions,
- Role playing, and
- Space Traffic Management research and discussion.

SOUTH KOREA

CURRENT STATE OF SPACE AFFAIRS

KOREAN SPACE LAUNCH VEHICLE-1 (KSLV-I), NARO-1 SECOND LAUNCH

The Naro-1, previously designated as Korea Space Launch Vehicle (KSLV), is the first carrier rocket of South Korea. It is built by Korea Aerospace Research Institute (KARI), the national space agency of South Korea, and Korean Air, with the first stage provided by Khrunichev, Russia.

This year, the KSLV was launched for a second time, which failed last year. The launch was at 08:01 UTC, on 10 June, this was one day behind the schedule. Unfortunately, the launch ended in failure after 137 seconds due to a midair explosion. Engineering experts from both South Korea and Russia discussed and analysed this explosion and concluded, officially, that the launch had “failed”.

Though the first and second launch attempts of the KSLV-I were not successful, the technological feats achieved in the process of developing and launching the KSLV-I are valuable assets for future developments.

ARIRANG-5 TO BE LAUNCHED IN 2011

The Ministry of Education, Science and Technology and KARI announced that Arirang-5 or Korean Multipurpose Satellite 5 (KOMPSAT 5), the first all-weather Synthetic Aperture Radar (SAR) earth observation satellite of Korea, will be launched in June or July, 2011.

Arirang-5 is the third multipurpose satellite to be launched in Korea; it will have an altitude of 550 kilometres, will be active for five years, and will orbit the Earth fifteen times a day to produce image information of Earth. Arirang-5 is a satellite equipped with a SAR, which allows it to produce image information in cloudy weather or at night.

NATIONAL SPACE EVENTS IN 2010 AND PLANNED FOR 2011

- The Busan Exhibition and Convention Centre 2010 Space Science Exhibition “The Adventure”, Busan, was held from 7 February to 29 August, 2010. This event celebrated the launch of KSLV and raised public awareness.

For more information please visit: <http://space.bexcoesk.co.kr/>

- The 6th Gyeongnam Sacheon Aerospace Exhibition was held from 22 – 24 October, 2010. The event included an air show, competitions, exhibitions, a symposium, night events and public relations offices for universities and companies.

For more information please visit: <http://festival.aerospace.go.kr/index.php>

- The Seoul International Aerospace and Defence Exhibition, 2011, is planned to take place at Seoul Airport from 18 – 23 October, 2011. The Korean government is now forming a national support policy to promote the exhibition as the representative aerospace and defence exhibition of the Asia-Pacific region.

For more information please visit: <http://www.seoulairshow.com/dbhome/user/airshoweng/>



SGAC KOREA ACCOMPLISHMENTS IN 2010

WEBSITE AND NPOCs

This year, Yeongju Kim and Heejin Jeong became the NPOCs of South Korea. With the addition of these NPOCs, the national webpage on the SGAC website was created.

SGC 2010, PRAGUE

The two NPOCs of South Korea, Yeongju Kim and Heejin Jeong, participated in SGC 2010. They were involved in helping local organising staff with banners which covered the advantages and experiences of hosting SGC 09 in Daejeon. The Korean NPOCs also worked with the Industry group and Exploration group, respectively. Yeongju and Heejin were successful in working towards creating a concrete community of new friends, sharing ideas, and making a combined effort with other members to help improve SGAC.



FIGURE 25: SOUTH KOREA'S NPOCs AT SGC, PRAGUE, 2010

ICIST-KAIST 2010

The International Conference for the Integration of Science and Technology into Society was held by ICIST, the university social group in KAIST. Heejin Jeong, one of the NPOCs of SGAC Korea, attended the Space Engineering workshop which had valuable speakers including Ariane Cornell, the Executive Director of SGAC.

KOREA SPACE ASSOCIATION FOR YOUNG GENERATION (KSAY)

KSAY is an association for the young generation of Korea, which was suggested by Heejin Jeong, organised by a selection of young people including both of the NPOCs in SGAC Korea. The objective of the association is to encourage young people in various fields to focus on space at its maximum and highlight the importance of the space field. The organisation is in its second planning phase with revised organising members. Until now, about 93 young people have shown a keen interest in this association.

OTHER YOUTH SPACE ACTIVITIES IN KOREA

YOUNG ASTRONAUTS KOREA (YAK)

YAK held the commemorative ceremony for its 21st year on 13 November, 2010. YAK also made a programme called the Winter-international Exchange Camp, providing a special lecture of the astronaut Mamoru Mori.

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC SOUTH KOREA

- Raise awareness about SGAC in Korea focusing on several research institutes and colleges which are related directly to the space industry,
- Contribute to some activities for the young generation in Korea and try to make a cooperative relationship with SGAC Korea to give international and peaceful information about space according to SGAC's vision, and
- Recruit SGAC members in Korea, and create a network.

SRI LANKA

The year 2010 was a great year for the Sri Lankans as many events were conducted for Global Astronomy Month (GAM). Many school and national events were organised and some Sri Lankans had the opportunity to take part in international astronomy events such as Space Generation Congress and the International Astronomy Olympiad.

With help from many people around the country, this report covers a summary of the past year's events. It is hoped that the year 2011 will also be a successful year for SGAC Sri Lanka.

EVENTS IN 2010

STAR PARTY – ORGANISED BY THE ANADIAN ASTRONOMICAL SOCIETY

Just as its name states, STAR PARTY is not merely a function for night sky observation, but an aesthetic introduction to the field of Astronomy. The event is an enigmatic experience for an apprentice and an unforgettable night for all participants. It is the dream of every star gazer in Sri Lanka to witness and become involved with STAR PARTY. When STAR PARTY was commenced in 2004 with the Astronomical Society of Mahamaya Girls' College in Kandy, the pioneers of observation competitions in the South Asia region, it was evident that a gleaming future for Sri Lankan astronomy was lying ahead. Consequently this turned out to be the official launch of a mammoth event on the local astronomy calendar.



FIGURE 26: STAR PARTY, 2010, SRI LANKA

FOURTH IOAA 2010, BEIJING, CHINA AND SRI LANKAN ASTRONOMY OLYMPIAD



FIGURE 27: FOURTH IOAA 2010, BEIJING, CHINA AND SRI LANKAN ASTRONOMY OLYMPIAD

Five Students took part in the 4th International Olympiad on Astronomy and Astrophysics opening.

GLOBAL ASTRONOMY MONTH (GAM) – ONE PEOPLE, ONE SKY

GAM in April 2010, was celebrated around the world on all levels. For Sri Lanka, the efforts were led by Sri Lanka Astronomical Association with collaboration from Skylk Website for Online Programmes. Since April is filled with local elections, New Years, school holidays and heavily affected by rain, GAM2010 – Sri Lanka focused on online or in-house programmes and it was an utter success.

ASTRONOMY IN SINHALA LANGUAGE – WEBSITE

In 2010 the new Astronomy in Sinhala Language website was launched. This Website conducts lectures and articles on Astronomy and Physics: <http://maqeahasa.blogspot.com/>

SCHOOL ASTRONOMY CAMPS

An astronomy workshop was held in Galle, South Sri Lanka on 26 and 27 March, 2010 for students and teachers of Sacred Heart Convent. The workshop was conducted by Sri Lanka Astronomical Association as a part of UNAWE – Sri Lanka, Saturn Observation Campaign, Dark-Sky Astro-Tourism project and pre- GAM programme.



FIGURE 28: SCHOOL ASTRONOMY CAMPS, SRI LANKA

THAILAND

CURRENT STATE OF SPACE AFFAIRS

Thailand is a developing nation with more than half the population employed in the agricultural sector, however agriculture's contribution to the GDP is considerably lower and approximately 6% of the GDP is contributed by the tourism industry.

Keeping this in mind, and the fact that Thailand faces some form of natural disasters almost on an annual basis, it can be seen why earth observation (EO) is very important for Thailand. A few of the uses for Thailand's only EO Satellite, Thailand Earth Observation Satellite (THEOS) includes education, agriculture, forestry, fire and waste management, maritime activities and natural disaster management. This satellite was launched on 1 October, 2008 and is currently in its third year of operations. THEOS is operated by the Geo-Informatics and Space Technology Development Agency (GISTDA), which also operates a ground station for the downlink of several other satellites. GISTDA is currently involved in the preliminary phases of developing the second Thailand EO Satellite, steering Thailand's space domain in a positive direction.

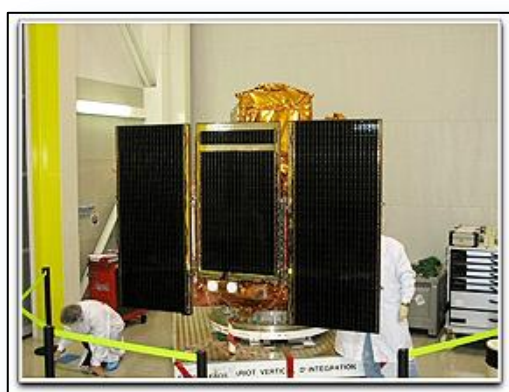


FIGURE 29: LEFT: THEOS SATELLITE. RIGHT: THEOS RECEIVING STATION, THAILAND

Thailand has been involved with satellite communication and broadcasting since the first Thai communication Satellite, THAICOM 1, was launched in 1993. In the communication and broadcasting satellite domain, Thailand has played "big brother" to its neighbours in South-East Asia.

ACCOMPLISHMENTS IN 2010

UNITED NATIONS/THAILAND WORKSHOP ON SPACE LAW

Each year, the United Nations General Assembly, in its resolution on international cooperation in the peaceful uses of outer space, reaffirms the importance of international cooperation in developing the rule of law. National space laws, and other regulatory frameworks, are necessary for States to implement their obligations under the United Nations treaties and to meet their specific national requirements. Given the growing number of benefits derived from space science and technology applications, the conduct of space activities by States, intergovernmental and non-governmental entities as well as the private sector continues to expand. In developing international and regional space cooperation States should ensure that all actors conducting space activities comply with requirements of international space law and that this branch of public international law properly reflects the needs of contemporary space activities.



FIGURE 30: UN/THAILAND WORKSHOP ON SPACE LAW

In order to promote the ratification of the five United Nations Treaties on outer space and to assist States to build their capacity in space law, the UN OOSA, Government of Thailand, ESA, and APSCO jointly organised the United Nations/Thailand Workshop on Space Law. The workshop was titled “Activities of States in Outer Space in Light of New Developments: Meeting International Responsibilities and Establishing National Legal and Policy Frameworks”. This workshop was hosted by GISTDA from the 16 to 19 November 2010 in Bangkok, Thailand. This was the seventh United Nations Workshop on space law and aimed to benefit countries in the Asia and the Pacific regions. An overview of the legal regime governing the peaceful uses of outer space was provided. Furthermore, various aspects of existing national space legislation were examined and the current state and ways of enhancing the availability and development of university level studies/programmes in space law were compared and considered. The workshop had the following five objectives.

1. To promote understanding, acceptance and implementation of the United Nations treaties and principles on outer space,
2. To promote exchange of information on national space legislation and policies for the benefit of professionals involved in national space activities,
3. To consider trends and challenges to international space law, such as commercialisation of space activities and increase of actors involved in space activities,
4. To consider development of university level studies and programmes in space law, with a view to promoting national expertise and capability in this field, and
5. To consider mechanisms for increasing regional cooperation in the peaceful uses of outer space.

It was unfortunate that some of the SGAC members were not successful in their application for a scholarship due to the fact that the selection committee wanted to focus on participants from the Asia Pacific region. Nonetheless, on behalf of SGAC, representatives who were present participated in every session of the workshop and contributed in editing the conclusion.

For more information about the workshop please visit the following link:

<http://www.oosa.unvienna.org/oosa/SpaceLaw/workshops/index.html>

CASSINI SCIENTIST FOR A DAY – THAILAND EDITION

The year 2010 marked the first edition of the Cassini Scientist For a Day Essay Writing competition. The Cassini Scientist For a Day Essay Writing competition is an annual essay writing competition hosted by NASA in the United States of America on the images captured by the Cassini satellite. This year topics revolved around the planet “Saturn”. In recent years, NASA has promoted to host such a competition in the international arena and with the support of SGAC and GISTDA; Thailand had its first edition of the competition. The competition was promoted over



the internet and a poster was placed at the annual Geo-Infotech Conference from 15 – 17 December, 2010, hosted by GISTDA.

The competition was received warmly by both the youth and the academics alike, however it was not received as well as expected. This may be due to the difficulty of the competition for younger students who are not very familiar with astronomy.

We hope to be having a competition every year from now on and will work on increasing the publicity as well as work with students to provide a better suited competition for youth.

For more information about Geoinfotech 2010 please visit:

[<http://mapgeo.gistda.or.th/>](http://mapgeo.gistda.or.th/)

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC THAILAND

- With the New Year, SGAC Thailand plans to organise several events in order to be in line with SGAC's goals and visions,
- Carrying over the Cassini Scientist For a Day – Thailand Edition is part of the plan. We will work to make the competition better suited for Thai students in order to improve the response,
- For the year 2011, SGAC Thailand also plans to have its first spinoff of Yuri's Night. Yuri's Night is on 12 April, which falls on a national holiday for Thai New Year; this would make it very difficult to find any attendees. Also, as astronomy and space does not have a wide interest group, attempts will be made to integrate Yuri's Night with another event – the candidates being the "THEOS Satellite Ground Station Public Day" and "Mahidol University Educational Festival",
- GISTDA has also expressed their interest to host the "United Nations/ESA Symposium on Small Satellite Programmes for Sustainable Development: Payloads for Small Satellite Programmes". Several Thai attendees to this event held in Graz, Austria, 2010 expressed their interest in hosting the event in the future,
- The next APSCO meeting will be held in Thailand and we will continue to work with all the international and regional space agencies and associations. Further information regarding any upcoming meetings will be advertised via SGAC website when the details are available.

VIET NAM

CURRENT STATE OF SPACE AFFAIRS

- Viet Nam Posts and Telecommunications Group announced the award of a contract to Lockheed Martin to build the Viet Nam Satellite, VINASAT-2 telecommunication satellite. The satellite will feature 24 Ku-band fixed high power communication channels, providing uplink and downlink coverage over Viet Nam, Cambodia, Thailand and Laos. In-orbit delivery is slated for the end of 2012 or early 2013. Lockheed Martin successfully delivered VINASAT-1, the first satellite for Viet Nam, in 2008.
- Work on the first Viet Nam-France satellite officially began on 26 November, 2010 with a ceremony in Ha Noi to announce that preparations for the US\$77.4 million three-year project were complete. The Viet Nam Natural Resources, Environment and Disaster Monitoring Small Satellite (VNREDSat-1) satellite would monitor natural resources, the environment and potential disasters. Two French companies, ASTRIUM SAS of EADS Astrium Group and VEGA Technologies, have been selected to support Viet Nam in manufacturing and launching the satellite. The project is the key to realising the national space technology development strategies approved in 2006.





FIGURE 31: FIRST VIET NAM – FRANCE SATELLITE

- “Space Technology and Application” conference was held at the Viet Nam Academy of Science and Technology in 16 December, 2010, involving people from public and private sectors working in space-related fields. The last day of the conference saw a proactive round-table discussion on how to build capacity and promote space application in Viet Nam.

ACCOMPLISHMENTS IN 2010

YURI’S NIGHT EVENT

SGAC Viet Nam organised the first Yuri’s Night event in Hanoi to celebrate Yuri Gagarin's first flight into space as well as to promote space exploration. The presenters gave a brief history of space exploration and its application and importance to our modern society in general and to Viet Nam in particular. The event attracted about 30 attendees, mostly young students.



FIGURE 32: YURI’S NIGHT EVENT IN HANOI, 21 APRIL, 2010

SPACE TALK AT HANOI UNIVERSITY OF TECHNOLOGY



FIGURE 33: TALKING TO STUDENTS AT HANOI UNIVERSITY OF TECHNOLOGY ON SPACE APPLICATION AND F-1 CUBE\$AT PROJECT DURING A JOB FAIR, 8 MAY, 2010

F-1 CUBE\$AT PROJECT

Going into the second year, F-1 CubeSat project has overcome many difficulties and achieved some good progress. The project continues attracting Vietnamese space enthusiasts and has grown to 10 full-time members and many supporters. F-1 is a picosatellite known as a CubeSat which has the dimensions of a ten centimetre cube, weighing one kilogram. F-1 carries a small camera to take photos of the Earth and magnetic and temperature sensors to study the space environment. The team from FSpace laboratory hopes to find a launch for F-1 into orbit by the end of 2011.



FIGURE 34: FSPACE TEAM BUILDING GROUND STATION FOR COMMUNICATION WITH LOW EARTH ORBITING SATELLITE, VIET NAM

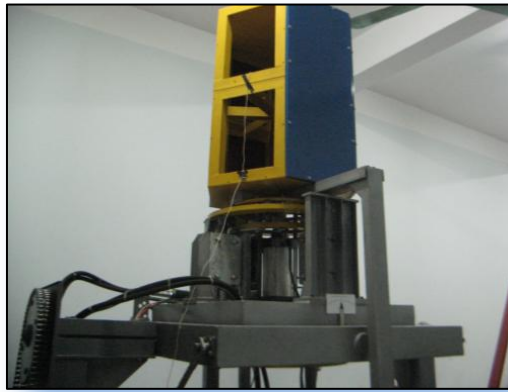


FIGURE 35: LEFT: TESTING SOLAR CELLS FOR F-1 CUBE SAT. RIGHT: F-1'S SHOCK TEST, VIET NAM

ATTENDING INTERNATIONAL SPACE CONFERENCES



FIGURE 36: TRI AND THU WITH MR CHARLES BOLDEN, NASA ADMINISTRATOR AT 61ST IAC IN PRAGUE

OTHER YOUTH-ORIENTED SPACE ACTIVITIES IN VIET NAM IN 2010

AMATEUR ASTRONOMY ACTIVITIES BY HANOI AMATEUR ASTRONOMY SOCIETY



FIGURE 37: 26 JUNE, 2010, LUNAR ECLIPSE OBSERVATION. VIET NAM

WORLD SPACE WEEK

World Space Week 2010 – Mysteries of the Universe was held at Trung Vuong secondary school in Hanoi and in several cities around Viet Nam in October, 2010. It aimed at introducing basic astronomy knowledge to young school pupils.

THIRD ASTRONOMY CAMP IN HOCHIMINH CITY

Hochiminh Amateur Astronomy Club organised the annual 2-days camping event in March 2010 with the goal of bringing basic astronomy knowledge to the public. These events attracted many young participants from local schools and universities.

“SCIENCES DE L’UNIVERS” ASTROPHYSICS CONFERENCE IN HANOI

From 1-4 November, professors from the National University of Hanoi, University Pierre and Marie Curie and Paris Observatory gave lectures in Astrophysics, Planetology and Climatology to students from the Physics department and interested attendees. This was a great chance for young students to learn about the latest progress of world space research. The professors brought a wide range of topics to the audience including exoplanets, climate change and the study of Titan’s lakes.

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC VIET NAM

- SGAC Viet Nam expects to have a second NPoC in 2011,
- Broaden the network,
- Continue tradition by organising Yuri’s Night and World Space Week events in big cities including Hanoi, Danang and Hochiminh city with the goal of attracting more attendants than 2010, and
- Reach out to the growing community of young space professional in the country by participating in exhibitions and organising talks at local schools and universities on space topics.

2010 was the second successful year for SGAC Viet Nam and we look forward to increasing this success in 2011.





EUROPE

The European Region was very active in 2010, and all major goals set for the year were successfully met. The main emphasis was on consolidating the internal structure of the region by improving communication between members, expanding representation in already represented and especially in previously unrepresented countries. New RC, Damian Maria Bielicki, was elected, and several National Points of Contact were recruited, establishing SGAC's presence in three additional countries, Czech Republic, France and Ireland. Additionally, the presence was strengthened by appointing new NPoCs in Italy, Poland and Portugal. In result, SGAC has now 22 representatives in 16 European countries.

In 2010, the existing RC, Daniela Petrova, provided strong support to the newly elected European representatives of SGAC and helped them establish stronger local and regional links. She represented SGAC at several events in the Czech Republic and the United Kingdom. In addition, she has also represented SGAC at several organisations, including the International Space University and the United Kingdom (UK) Space Biomedicine Association.

The new RC also represented SGAC in several places, including schools and academic institutions, in such countries as the Czech Republic, Hungary, Malta, Poland and the United Kingdom. He also started negotiations with three potential Partners, including space agencies and educational organisations. However, because of the long-term process of the negotiations, they will continue in 2011 and the final results will be presented in the next report.

Europe was very well represented at the 11th Space Generation Congress in Prague, Czech Republic. Several European delegates were awarded SGAC scholarships to attend this Congress, and four representatives from Germany were awarded annual scholarship by courtesy of DLR. Furthermore, seven Europeans became SGAC Members of the Month in 2010, Ariane Cornell from France, Oana Sandu from Romania, Sanjoy Som from Switzerland, Christopher A. Vasko from Austria, Vanessa Passoni from Italy, Ondrej Bruna from the Czech Republic and Juergen Schlutz from Germany.

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC EUROPE

Plans are being made to ensure the highest possible European representation during the next SGC in Cape Town, South Africa. The RCs are going to focus on fundraising to allow people from the region to attend the Congress.

Next year brings the 50th Anniversary of Yuri Gagarin's first flight into space. The RCs are now focusing on wide advertisement of the event, including European presence and participation during Yuri's Night. Until December 2010, the event has been registered in 14 European cities. The Anniversary will also be a strategic element for the RCs to further the expansion of SGAC, including membership and fundraising.

From next year, European NPoCs will be able to use SGAC blogs to produce information in the official languages of their respective countries. It will be a big step forward for SGAC for further cooperation not only on the regional but also on global level.



EUROPE NATIONAL REPORTS

AUSTRIA

Austria's public interest in space-related sciences and engineering is increasing. Despite public surveys indicating that the Austrian public does not have a lot of knowledge in scientific and space-related industrial work, Austria is participating in more international science and space related projects. The year 2010 brought many new projects to Austria including international scientific collaborations and structural changes at Universities for the engineering and natural sciences departments. The international economic crisis left its marks in Austria and forced ministries to cut financial support for some important space-related institutions (for example the future is unsure for the Erwin Schrödinger Institute, the famous Mathematics institute in Vienna). Scientists from both the scientific and engineering sector depend on private funding or have to be members of different consortia to ensure financial support for their work. The ministry contemplated dropping the European Organisation for Nuclear Research project this year but this proposal was neglected due to strong protest. The European Southern Observatory (ESO) was also under discussion, despite Austria's late membership since 2008. Austrian scientists overcame this crisis and assured the ministry that these organisations are the leading scientific institutions that also attract foreign scientists. To ensure a positive outlook, Austria should participate in international projects, despite the lack of funding, to give Austrian scientists the chance to be a part of world-leading science, this strategy worked perfectly in 2010. Examples of these projects include the satellite missions HERSCHEL and Globales Astrometrisches Interferometer für die Astrophysik (GAIA). The ESA's HERSCHEL Space Observatory (formerly called Far Infrared and Sub-millimetre Telescope or FIRST) has the largest single mirror ever built for a space telescope. With a diameter of 3.5 metres, the mirror will collect long-wavelength radiation from some of the coldest and most distant objects in the Universe. In addition, HERSCHEL is the only space observatory to cover a spectral range from the far infrared to sub-millimetre. GAIA is an ambitious mission to chart a three-dimensional map of our Galaxy, the Milky Way, revealing the composition, formation and evolution of the Galaxy. These two projects are partly led by the University of Vienna. The University of Graz is home to the Bright Target Explorer (BRITE) -Constellation. The BRITE-Constellation consists of UniBRITE and BRITE-AUSTRIA (TUG-SAT1), two 20 cm cube nanosatellites. Each will fly a small aperture telescope with a CCD camera to perform high-precision two-colour photometry of the brightest stars in the sky ($\leq 4^{\text{th}}$ mag) continuously for several years.

The primary science goals are studies of massive and luminous stars in our neighbourhood, representing objects which dominate the ecology of our Universe and evolved stars (giants) to probe the future development of our Sun. This is an Austro-Canadian project. Since joining ESO, the Austrian industry and the Universities are participating in planning the European Extremely Large Telescope. In particular Austria is working on algorithmic software for the movement of the big mirror which is the size of a football field.

For more information about UniBRITE please visit:

<http://www.univie.ac.at/brite-constellation/unibrite.html>

For more information about BRITE-AUSTRIA (TUG-SAT1) please visit:

<http://www.tugsat.tugraz.at/index.html>

ACCOMPLISHMENTS IN 2010

Many voluntary organisations have been holding courses and lectures about spaceflight and space-related sciences during the year. These organisations are well organised and are provided with professional help to keep the lectures up to date. Two of the most important events were Yuri's Night 2010 in Vienna and The Astronomy Day.





FIGURE 38: CHRIS VASKO TALKING TO MR. POTTER ON SKYPE AT YURI'S NIGHT 2010, AUSTRIA, CREDITS: KLAUS KORNFIELD



FIGURE 39: PEOPLE ON TOP OF THE BIG TOWER OF THE OUTSTATION OF THE UNIVERSITY OBSERVATORY VIENNA. CREDITS: KLAUS KORNFIELD

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC AUSTRIA

- SGAC Austria and the Executive Director will try to combine forces to make the upcoming SGAC meetings in Vienna a success,
- The NPoC will try to establish contact with not only space-related media, but with the public television stations, newspapers and internet forums,
- Increasing the awareness of space throughout the Austrian public,
- Observing the development of the educational system in Austria and attempting to encourage improvements, and
- Mobilising the Austrian youth to participate in the SGAC due to the possibility that the current NPoC may not be in Austria for the next NPoC term.

BELARUS

The year 2010 was the first full year of SGAC's official "presence" in Republic of Belarus. The fruit of the cooperation – "Memorandum of Understanding. Support for Belarusian National Space Law" is quite a remarkable achievement for both parties. The idea of creating a preliminary draft of a National Space Law for Belarus, utilising the resources of such an organisation as SGAC, first aired in March of 2010, during the presentation on SGAC given to the Belarusian officials who oversee the implementation of the National Space Programme of the Republic of Belarus. The final Memorandum of Understanding was signed on 15 November, 2010. The document lays out the foundation for future fruitful cooperation of two parties. 2011 is going to be a very intensive year for students, young professionals and SGAC members engaged in the work on this exciting project.

BELGIUM

Belgium is a very blessed country when it comes to Space related activities. The country already has two astronauts, Dirk Frimout embarked on a 10-day mission with the Space Shuttle in 1992. Ten years later in 2002, Frank De Winne became the second Belgian in space with a 10-day mission to the ISS followed by a six-month stay on board the ISS in 2009. He became the very first European commander of the station. By consequence, there is a lot of interest and awareness from the public, and the government has an active space education policy. Belgium has many space enthusiast organisations along with SGAC Belgium. For this reason there are many high quality public and private initiatives and events organised by both professional and non-professional organisations. SGAC Belgium's main task is to aid existing organisations to reach more people and to provide them with help in promoting events.

CURRENT STATE OF SPACE AFFAIRS

2009 was very good year for space interest in Belgium, with the historical ISS mission of Belgium's second astronaut, Frank De Winne. Following this, the IYA, 2010, was a relatively calm year for space related events in Belgium. That is, with regards to extraordinary events. The normal activities, organised by the many private and public organisations, continued as normal.

An overview of the most important space related organisations in Belgium, and the activities which they organised during 2010 are as follows.

EURO SPACE SOCIETY

This organisation, founded by Belgium's first astronaut Dirk Frimout, aims to bring space closer to all youths and provides a very broad offering of different activities, events, conferences and contests in Belgium. The organisation also acts to select the Belgian candidates in international youth space programmes for International Space Camp.

An example of a contest organised by the Euro Space Society is the ODISSEA-Prize, which is awarded annually to students for outstanding space related theses from their final year of study.

A new contest, which commenced in December, calls for scientific projects from secondary school students, to add to a specially organised stratosphere-balloon experiment.

For more information please visit: <http://www.eurospace.be/default.aspx>



SPACE CENTRE

Belgium has a Space Centre in Transinne comprised of a permanent exposition and indoor theme park for families to visit and learn about all aspects of space. The centre organises many activities including stargazing events and Astronaut, Rocket and Space Camps. The events are mainly organised for schools that frequently visit the centre during the year, however the activities and visitors increase during holiday seasons.

For more information please visit: <http://www.eurospacecenter.be/hoofd.html>

EUROAVIA

This European Aerospace student organisation has a department in Belgium in Leuven, Brussels. It organises lectures and offers visits at aerospace companies within and outside of Belgium. Each year they have a very active programme.

For more information please visit: <http://leuven.euroavia.eu/>

PLANETARIUM AND OBSERVATORIES

Belgium has a large number of star-observatories that offer activities almost weekly. Events are held on National Stargazing-days each year in February and March and during the annual Perseid meteor shower in August. Most stargazing opportunities, for example lunar-eclipses, are announced in multiple media several days in advance, which creates a lot of awareness in all layers of society.

For more information on the above and other events please visit: www.spacegeneration.org/belgium

During the second semester of 2010, Belgium held the European Council Presidency. No specific events for youth were organised, but several gatherings of industry leaders and European decision-makers were organised in Brussels. "AeroWeek" was held between 30 November and 2 December.

ACCOMPLISHMENTS IN 2010

- In 2010 the NPOCs continued to aid existing organisations, to reach more people and to provide them with help in promoting events,
- The national page for the SGAC website was completed: <http://www.spacegeneration.org/Belgium>

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC BELGIUM

- As the number of SGAC-organisation members living in Belgium has been increasing for some time now, the members started working together on a plan to organise an event in Brussels on Yuri's night. This event is to celebrate the 50th year anniversary of Yuri Gagarin's first manned space flight,
- SGAC Belgium will continue to aid space related activities and organisations in Belgium that bring space in all its aspects closer to the public,
- SGAC Belgium will continue to creating an exhaustive list of links of related organisations on the Belgian webpage of the SGAC-website.



CZECH REPUBLIC

The first NPoC for the Czech Republic, Pavel Paces, was nominated in September 2010, this report covers his activities performed in the name of SGAC at the end of the year 2010.

CURRENT STATE OF SPACE AFFAIRS

Since the Czech Republic has been a full ESA member from 2008 there have been opportunities for collaboration on ESA's space projects. The support for local companies is provided by the Czech Republic government and designated organisations such as "Ministry of Transport", "Ministry of Education, Youth and Sports", "Space Technologies and Satellite Systems Department", Czech Space Office (CSO), etc.

Czech Republic approved its National Space Plan on European Union level. It represents the plan for the development of Czech industries and academia and their integration into the international space community. The main purpose is to enhance the competitiveness of Czech industries and its technological and innovative levels.

For more information on the National Space Plan please visit:

[<http://www.spacedepartment.cz/storage/Narodni_kosmicky_plan/national_space_plan_en.pdf>](http://www.spacedepartment.cz/storage/Narodni_kosmicky_plan/national_space_plan_en.pdf)

The EU Council confirmed the placement of the administrative centre of the Galileo Navigation System (GSA) in Prague.

For more information please visit:

[<http://www.spacedepartment.cz/en/wiki/GSA_will_seat_in_Praque_en>](http://www.spacedepartment.cz/en/wiki/GSA_will_seat_in_Praque_en)

The Czech Republic government and industry also aims to take part in ESA's projects offering highly reliable and valuable products and services including flight hardware, image processing and ground segment products and services.

An important part of the National Space Plan is the support of education and training activities. There is an important gap in the training of professionals to support the Czech space industry; this will need to be addressed. This gap may have an adverse impact on the performance of the Czech industry and its growth. It is essential to support qualified professionals in raising their qualifications to keep them "current" in space activities (courses, programmes, training, and grants).

Currently, space education and development is supported by following universities and organisations

- Czech Technical University in Prague:
 - Aerospace and Space Systems programme,
[<http://kybernetika.fel.cvut.cz/mqr-obor-letecke-a-kosmicke-systemy/>](http://kybernetika.fel.cvut.cz/mqr-obor-letecke-a-kosmicke-systemy/)
 - participation in EU Space Master programme,
[<http://www.spacemaster.cz/>](http://www.spacemaster.cz/)
- CSO, [<www.czechspace.cz>](http://www.czechspace.cz/)
- Czech Astronomical Society, [<www.astro.cz/>](http://www.astro.cz/)
- Czech Space Alliance (Industry Associations): [<http://www.czechspace.eu/>](http://www.czechspace.eu/)

ACCOMPLISHMENTS IN 2010

SGC IN THE CZECH REPUBLIC, PRAGUE, SEPTEMBER 23 - 25, 2010

The SGC 2010 was held in the Czech Republic. On Pavel's recommendation Milan Vesely and Ondrej Bruna, a couple of his students helped with the SGC organisation. Ondrej was appointed as a member of the month November 2010 for his achievements during SGC organisation.





FIGURE 40: SGAC STAND AT IAC PRAGUE (IMAGE CREDIT: YOHAN FERREIRA)

EUROPEAN STUDENT MOON ORBITER (ESMO) PROJECT

Currently, Pavel leads a team of university students that participate in an ESA project, constructing a remote probe that will go to the Moon in 2014. An integration module between spacecraft's sensors, actuators and onboard data network has been designed and constructed. The team works together with the English company Surrey Space Technology Ltd. as a subcontractor for the ESMO Attitude and Orbit Control System Interface Module. They deal with project management, electrical design, mechanical construction and product qualification issues. The ESMO Czech Core team members are Pavel Paces, Jaroslav Laifr, Ondrej Bruna, Bronislav Robenek, Jan Petras and Vojtěch Petrucha.

For more information on ESMO Czech please visit:

[<http://esmo.edu.esa.int/>](http://esmo.edu.esa.int/)

INTERNATIONAL LUNAR OBSERVATORY ASSOCIATION (ILOA) GALAXY FORUM EUROPE – PRAGUE, SATURDAY 2 OCTOBER 2010

ILOA in Hawaii, US places great emphasis on 21st Century Education. In order to spread knowledge about space among young people and educators in the Czech Republic, Pavel helped with organisation of the first International Galaxy Forum in Europe where an international group of lecturers shared their space experience with the general public. The forum was organised at Stefanik's observatory in Prague with help from Pavel's students Kateřina Štemberová and Bronislav Robenek. The presenters were Steve Durst (ILOA US, Hawaii), Jean Luc Josset (SPACE-X, France) and Yuki Takahashi (UC Berkeley, US).

For more information on ILOA Galaxy Forum Prague please visit:

[<http://www.iloa.org/galaxyforum.html>](http://www.iloa.org/galaxyforum.html)

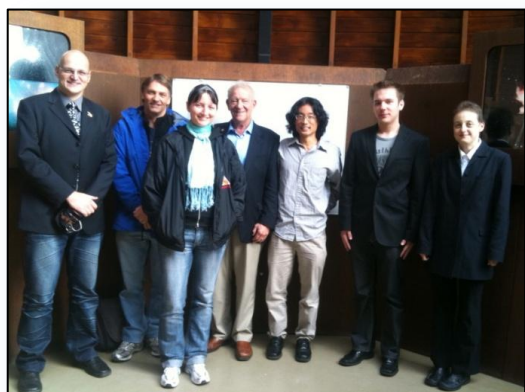


FIGURE 41: ILOA GALAXY FORUM IN THE CZECH REPUBLIC: ORGANISERS, PRESENTERS AND STUDENTS; STEFANIK'S OBSERVATORY VISIT AND PRESENTATIONS (IMAGE CREDIT: STEVE DURST AND PAVEL PACES), CZECH REPUBLIC

OTHER SPACE ACTIVITIES FOR YOUTH IN THE CZECH REPUBLIC IN 2010

61ST INTERNATIONAL ASTRONAUTICAL CONGRESS

Prague (and CSO) was proud to be the organiser of the 61st International Astronautical Congress 2010. This event was visited by more than 2000 space professionals and companies. Thanks to CSO, the congress, and especially industry exhibition, was opened for university students from the Czech Republic.

SPACE TECHNOLOGY COURSES

There were multiple courses organised in 2010 including the 1st Space Technology Course, November 2011, organised by the Faculty of Transportation Sciences; Quality Assurance for Space Projects, organised by ESA and CSO; and various seminars related to specific ESA programmes.

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC CZECH REPUBLIC

In 2011, we will focus mainly on young people to ignite interests in space among university students and to interconnect them with space professionals and industry. We will continue with current activities (such as ESMO) to build on experiences with passion, enthusiasm, and strong will in space and related technologies to help our planet and mankind. We plan to also extend our activities to non-technical events.

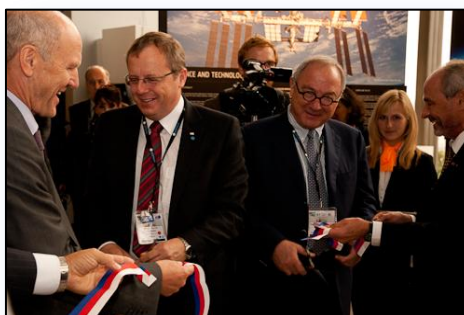
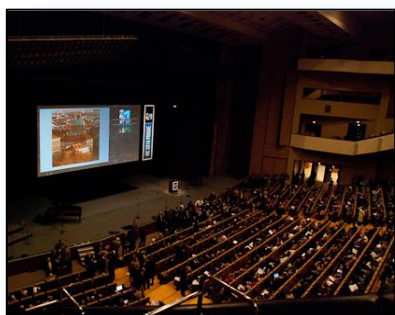


FIGURE 42: IAC OPENING CEREMONY AND INDUSTRIAL EXHIBIT OPENING (IMAGE CREDIT: CSO), CZECH REPUBLIC



FIGURE 43: FUTURE SPACE FLIGHT SIMULATOR: STUDENTS ENTER CTU'S FLIGHT SIMULATOR DURING A CTU'S DAYS OF OPEN DOORS (IMAGE CREDIT: CTU AND PAVEL PACES), CZECH REPUBLIC

In order to successfully perform our aims we would like to actively look for sponsors to support SGAC related activities. We definitely want to organise our first Yuri's Night in the Czech Republic and to rebuild the interior of our flight simulator on a spacecraft and simulate space flights and docking to the International Space Station.

For more information on the Current Flight Simulator please visit:

http://www.youtube.com/watch?v=iPH_eeze5sg

GERMANY

Germany continues to play a large role in the European and global space arena. As a major contributor to the ESA, the country's institutions and industries support and enable space exploration and exploitation activities. The most noticeable projects include extensive research on the ISS, the TerraSar-X and Tandem-X radar constellation, the Mars500 project as well as numerous technology developments and research activities.

On 30 November, 2010, the German government ratified a new National Space Strategy and it was publicly released on 1 December, 2010. Implementation of the strategy in national programmes and in international cooperation will allow Germany to act in many fields of spaceflight in the upcoming years.

ACCOMPLISHMENTS IN 2010

Germany is currently represented by two NPoCs, Oliver Troll and Juergen Schlutz. Both are actively pursuing their careers in the space sector, at the European Launch Centre in Kourou, French-Guyana, and at DLR in Bonn. In particular through Juergen Schlutz, SGAC continues to develop a strong partnership with DLR which is mutually beneficial.

YURI'S NIGHT 2010 – WORLD SPACE PARTY

Both of the German NPoCs used the Yuri's Night events to promote space at their current working towns. The different Yuri's Night activities in Germany were coordinated through a joint website and in direct interaction with the local organisers.

YURI'S NIGHT 2010, STUTTGART

Juergen Schlutz, organised a space information day in the Planetarium which included an exhibition, talks, rocket building, a mini-drop tower, a quiz, cocktails and more. The event was attended by about 500 people from local

and international student groups. These groups included the Rocket Experiments for University Students (REXUS) rocket teams, the HyEnD thruster development team, as well as people from the 501st legion.

YURI'S NIGHT 2010, KOUROU

On 11 April, the first edition of Yuri's Night was celebrated in French Guiana, Kourou, where Europe's spaceport is situated. This event was organised by Oliver Troll, a space enthusiast, SGAC member and NPoC for Germany. The participants consisted of mainly students from the spaceport, the future space generation. The evening included regional drinks and space discussions.

More Yuri's Night 2010 events were coordinated by Juergen Schlutz, with local organisers in Munich, Heidelberg, Berlin and Rostock.



FIGURE 44: IMPRESSIONS FROM YURI'S NIGHT 2010 IN STUTTGART

SPACE GENERATION CONGRESS 2010, PRAGUE, CZECH REPUBLIC

SGC 2010 was again well supported by Germany and a record total of 8 German participants attended the SGC in Prague. DLR enabled SGAC to award two full-paid and two partial scholarships to selected German delegates to allow their participation in the SGC and the IAC. The four scholarship candidates were Johannes Weppeler, Christian Blank, Christine Hill and Andreas Fink.

The winners have been introduced on the Website:

<http://www.spacegeneration.org/index.php/eventtopics/news/232-sqac-announces-the-winners-of-the-2010-dlr-german-delegate-assistance-award>

The scholarship winners produced a summary report of their experiences, which is available at the DLR homepage:

http://www.dlr.de/desktopdefault.aspx/tabid-4743/7838_read-27835/

Furthermore, DLR sponsored special material for the SGC delegate bags that were distributed to all SGC attendants.



FIGURE 45: LEFT: GERMAN PARTICIPANTS AT SGC 2010 IN PRAGUE. RIGHT: DLR SCHOLARSHIP WINNERS AT SGC/IAC 2010 (FROM LEFT TO RIGHT: CHRISTIAN BLANK, JOHANNES WEPPLER, CHRISTINE HILL, AND ANDREAS FINK)

German NPoC Juergen Schlutz attended the SGC and IAC 2010 in Prague as ambassador for the “One Flag in Space” initiative, founded by SGAC member Sanjoy Som. Together with Ana Alexandra Pérez from Venezuela, he presented and promoted the idea of the Blue Marble flag as a symbol for unity in space to SGC and IAC delegates as well as international space experts.



FIGURE 46: SGAC MEMBERS PROMOTING THE BLUE MARBLE FLAG AT IAC 2010

DEVELOPMENT OF DLR-SGAC COOPERATION

For the third consecutive year, DLR has significantly supported SGAC in the realisation of the SGC. DLR helped to increase awareness and participation of German delegates to the SGC and SGAC activities in general. German NPoC Juergen Schlutz is currently in close contact with DLR in order to further secure and exploit the synergetic cooperation. Both parties are currently formulating a Memorandum of Understanding which will emphasise the support of DLR to SGC. DLR is also planning a national event at their Oberpfaffenhofen site, to be held in June/July 2011, which will invite all DLR-sponsored SGC participants of the last years. They will receive tours of DLR and will have the chances to interact with each other and with DLR management. Juergen is working closely with DLR to organise the event.

OTHER YOUTH-ORIENTED SPACE ACTIVITIES IN 2010

GERMAN AEROSPACE CONFERENCE

The 59th German Aerospace Conference was held in Hamburg, 2010, which included a dedicated session for students and young space professionals.

REXUS - BALLOON EXPERIMENTS FOR UNIVERSITY STUDENTS (BEXUS) PROGRAMME

The successful balloon flights of BEXUS 10/11 and the ongoing campaign for REXUS 9/10 rocket flights are planned for February, 2011. A selection of experiment proposals for BEXUS 12/13 and REXUS 11/12 were completed in December, 2010.

For more information please visit: www.rexusbexus.net.

AEROSPACE LAB

There is now a new youth research centre "Aerospace Lab" in Herrenberg.

For more information please visit: <http://www.aerospace-lab.de/>

DLR NEXT

There is now a new DLR information website for young people.

For more information on _DLR_next please visit: <http://www.dlr.de/next/>

SPACE STATION DESIGN WORKSHOP 2010 HELD AT UNIVERSITY OF STUTTGART

An interdisciplinary design challenge was held for 31 international students on human exploration.

For more information please visit: www.irs.uni-stuttgart.de/ssdw

SCHOOL LABS

DLR continues to organise "School Labs" which is focused on science and technology.

For more information please visit: <http://www.schoollab.dlr.de/>

MOON BUGGY RACE

The Space Education Institute, Germany, won the NASA Moon Buggy Race in 2010, this was the first non-US team to win this competition.

GREECE

CURRENT STATE OF SPACE AFFAIRS

Against the backdrop of the current difficult economic conditions in Greece, the Greek space programme has maintained its momentum. Recently ESA gave the first major boost to the country's struggling economy by announcing the investment of five million Euros into research on space technology by Greek organisations. It is important to note that around one billion Euros will be allocated in the near future. The proclamation will be published in January 2011 with the first contracts expected to be signed during summer 2011. Four million Euros will be invested in the development of flight hardware and the remaining one million Euros will be designated to research and development. This new proclamation was an initiative of the ESA-Greece Task Force. The government recently appointed Stamatis Krimigis to spearhead Greece's drive for research and technology breakthroughs. Stamatis Krimigis served as Greece's alternate head delegate to ESA from 2006 until 2011 and is one of the world's most distinguished space scientists, Honorary Director of the Space Department of the Applied Physics Laboratory, John Hopkins University, US and the Chief researcher in various NASA space missions. His new job, as the president of the newly established National Council for Research and Technology (NCRT), is to invest the one billion Euros in European Union funds recently secured by Greece. The NCRT operates as an independent advisory and consultative body to the Minister providing direction on a number of research and technology issues.



One of the goals is to turn the general aims into specific implementation plans, in a timely manner, to influence the next EU budget cycle. The Greek space programme has been focused on four major directions, these are atmospheric sciences, geodesy and geodynamics, Earth observation and satellite communications. The country's scientific community has gained international recognition in space physics and has participated in several US space missions and international missions.

The Greek Trainee project at ESA was reactivated and the recruitment procedure for 2011 has begun.

For more information please visit:

<http://www.iky.gr/IKY/content/gr/greek-scholarships/loipes/esa.html>

In the previous report, the main concern for SGAC Greece was to reassure the continuity of the programme inactive since 2008. The aim was then to work toward the direction of extending the programme from one year, to two similar to the other countries that participate to ESA's National Trainee programme. After discussions between the organisations responsible for the programme, the bilateral agreements between the Space Agency and the Greek State Scholarships Foundation IKY have changed. Currently the programme offers recent university graduates the opportunity to gain practical hands-on experience for eighteen months at ESA in a variety of space-related disciplines. Moreover the salary has increased by a multiple of four from 2008 to 2011. IKY and the ESA-Greece Task Force cover all of the costs, including moving costs and health insurance. As a recent graduate who has benefited from ESA's student programmes, the NPoC for Greece, Angeliki Kapoglou, has the strong belief that this National Trainee programme is vital for Greece and should continue towards improvement.

ACCOMPLISHMENTS IN 2010

CASSINI SCIENTIST FOR A DAY COMPETITION

The Cassini Scientist for a Day competition is an essay contest designed to give students a taste of life as a scientist. Students compare and research three possible targets that the Cassini spacecraft can image. They are to choose the one observation they think will yield the best scientific results and explain their reasons in an essay.

CUBESAT COMPETITION

The First European CanSat Competition, which took place from 15 – 19 August, was organised in collaboration with the Norwegian Centre for Space-related Education and ESA. It was open to teams of approximately four high school students (aged 16+) from ESA Member States and Cooperating States, assisted by a tutor.

CANSAT COMPETITION

CanSat offered a unique opportunity for students to experience their first real space-related project. Greece was represented by the 3rd Lyceum of Mytilene and the team Icaromenippus.

For more information please visit: http://www.esa.int/SPECIALS/CanSat/SEMJ2HCKP6G_0.html

For a video from the launch please visit:

http://www.esa.int/SPECIALS/Education/SEME8TAO3DG_0.html

NPOC ACTIVITIES

- Angeliki Kapoglou worked to raise awareness about the contests among Greek students and made presentations to schools about the contests and the current space education programmes in Greece.
- Angeliki represented SGAC in several places, including conferences and academic institutions.
- SGAC Greece proposed the affiliation procedure between ESA and SGAC. This affiliation is already underway.
- The NPoCs translated some of the Space Generation Advisory Council press releases to Greek.
- Members of the Greek delegates to ESA-SPC and the National Experts Committee for Space Research were contacted. These committees include ex ministers, military staff or even CEOs of industrial companies that



are hard to locate. Details were sent about SGAC activities and aims, and, more specifically, the role of SGAC Greece.

- Attempts were made to seek cooperation in order to increase the opportunities for active participation and engagement of the Greek youth community to space technology and exploration.
- Information was requested about the current common programmes between Greece and the European Union regarding the space sector (Seventh Framework Programme-FP7)

For more information about ESA-SPC please visit:

http://www.spacegeneration.org/images/stories/RegionsCountries/Europe/Greek_delegates_to_ESA_SPC.pdf

For more information about Space Research please visit:

http://www.spacegeneration.org/images/stories/RegionsCountries/Europe/National_Experts_Committee_for_Space_Research.pdf

- The NPoC for Greece has also contributed to the Media Coverage of the SGAC activities (like the Charles F. Bolden, participation at SGC 2010, in Prague), through personal twitter and Facebook pages.
- Angeliki sent letters about the SGAC Space Technology for Disaster Management Group to relevant Greek organisations and universities. Mr. Ioannis Papadakis from the Ministry of Education, Life Long Learning & Religious Affairs and General Secretariat for Research & Technology showed particular interest about SGAC Space Technology for Disaster Management.

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC GREECE

1. Grow the Greek SGAC network and encourage Greek youth to become actively involved in SGAC activities.
2. Promote SGAC activities to the national news network.
3. Meet with more representatives of Greek Academia and space institutes in order to promote SGAC and seek collaboration.
4. Organise more space events like Yuri's Night which has never been organised in Greece.
5. Put efforts into providing more funds and sponsors to the organisation, to sponsor members for SGAC related activities.
6. Seek collaboration with Xprize. Xprize already contributes to educational programmes and Peter Diamandis from Greece.
7. Focus on preserving ESA's Greek Trainee Programme which provides a unique opportunity to the Greek youth to work on real space projects.

In conclusion, 2010 was an active year and all major goals were successfully met. The diversity of activities reported here has been achieved within limited time. The New Year will be even more productive as relationships have now been established with the major players in the Greek Space sector and academia.



PHOTOS FROM EVENTS IN 2010**FIGURE 47: CANSAT COMPETITION, GREECE**IRELAND

2010 was a successful year for space related research in Ireland. Ireland successfully participated in numerous spaces related programmes and competitions including the Rexus-Bexus competition run by ESA. In July 2010, SGAC appointed Patrick Crowley the first NPoC for Ireland. Patrick has an engineering background and participated with other members of the SGAC in the Space Studies Programme run by the International Space University at NASA Ames California in 2009. SGAC Ireland is a focal point for networking within the Irish space community and beyond. The Irish NPoC, Patrick Crowley, is currently in the process of raising awareness of SGAC to schools, colleges, universities, space industry researchers, space groups and societies and space enthusiasts to amalgamate one Irish space community.

ACCOMPLISHMENTS IN 2010**SPACE STUDIES PROGRAMME JUNE-AUGUST, 2010**

There have been a number of Irish participants and SGAC members attending the International Space University Space Studies Programme (SSP) over the past few years. During the intensive course, students are exposed to a broad curriculum of space subjects and perform scientific research along with space related activities and individual and team projects.

ALPBACH SUMMER SCHOOL JULY, 2010

A number of Irish participants attended the Alpbach summer school in Austria, July 2010. It is a ten day intensive course of lectures, workshops and projects which provides in depth teaching on space science and space technology subjects. This year's theme was to develop "New missions for Understanding Climate Change". Enterprise Ireland currently funds Irish students to attend this annual event.

REXUS-BEXUS

A team of Irish students from Dublin Institute of Technology were selected to fly their experiment as part of the Rexus-Bexus competition organised by ESA. Their telescopic probe system, for taking experimental measurements, will be launched on Rexus sounding rocket in 2011. The team is part of the DIT space research group headed by Dr. Marek Rebow; the members aim to promote space research throughout the college. They have organised some interesting presentations over the past few months including a presentation by Laurie Peterson from NASA Johnson Space Centre. Laurie presented, to staff and students, her experiences of the different projects that she has worked on and also her current assignment to do with the process improvement using Lean-Six Sigma project management techniques.

An event was organised in November which included an audience of secondary school students, college students and researchers. Dr. Leo Metcalfe, Herschel Science Operations Manager of Herschel Science Centre, European Space Astronomy Centre, ESA, gave an interesting presentation on "The ESA's Herschel Space Observatory: Systems and Operations in the Science Ground Segment". Patrick Crowley gave a presentation on SGAC and the objectives for SGAC Ireland at the event. The main focus was to raise awareness of SGAC and to introduce students to space studies and opportunities available to them, along with instructions on how to sign up and utilise the SGAC website.

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC IRELAND

- Work closely with schools and organisations throughout Ireland to ensure space is introduced to the students from an early age and throughout their time at primary and secondary level education.
- Promote space and SGAC to third level students in Ireland and enlighten them that space related subjects can relate to almost any subject in which they hold an interest. This includes spreading awareness of employment opportunities in the space industry and highlighting scholarships available for space related education for Irish students.
- Increase the number of active Irish members within SGAC to enhance the awareness of space and the organisation.
- Organise and highlight events such as World Space Week and Cassini Scientist for a Day essay contest among other competitions.
- Collaborate with space associated parties in Ireland to build the SGAC Ireland homepage as a focal point for space information and networking in Ireland.
- Have an Irish representative at SGAC events for the first time building a relationship and working collectively with members of SGAC on promoting the peaceful uses of outer space.
- Promote SGAC via magazines, posters and presentations.





FIGURE 48: CLASS OF ISU SSP 09

ITALY

Two new NPoCs were appointed for Italy in 2010, Vanessa Passoni, from Padua and Tiziana Nunzia Paradiso from Rome. The NPoCs are quite new to the organisation and therefore agreements have not yet been reached with significant Italian space institutions. However, the NPoCs participated actively in some events, serving the organisation when required.

ACCOMPLISHMENTS IN 2010

In 2010, the first SGAC Advisory Board meeting was held at the United Nations premises in Vienna during the 47th UN COPUOS Session. The SGAC delegation consisted of the Chairperson, the Executive Director, the NPoC for Japan and the NPoC for Italy. The SGAC Italian delegation attended both events, helped and assisted the Executive Director during the board meeting and taking part in the SGAC delegation during the UN COPUOS session.

Progress was made on a possible collaboration between SGAC and the Space Academy Foundation, an organisation co-funded by Telespazio and Thales Alenia Space. Nothing is confirmed yet but during the forthcoming months the NPoCs will try to implement something concrete.

SGAC Italy was formally present during the 19th ESA- European Centre for Space Law Summer Course on Space Law and Policy. The NPoCs represented the organisation, networked with students and experts and worked to raise awareness about the SGAC roles and activities.

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC ITALY

For 2011, NPoCs are planning to strengthen SGAC in Italy, participating in several conferences and organising events. SGAC will also work towards collaboration with academia, in particular, the University of Padua, and research consortium in the Veneto region. Furthermore, the NPoCs are considering working on collaboration with the Italian Space Agency (ASI).

POLAND

In the year 2010 new developments shaped the slowly beginning rise of the country's accession into becoming an active member of ESA as the current government plans call for the year 2012 to join ESA. In December 2010 an additional 15 million Polish zlotys (approximately 3.75 million Euros) were inserted into the Polish expenses in the Plan for European Cooperating States programme, which is a programme intended for countries aiming to join ESA.

There are two different satellite programmes in Poland with the hope of accomplishing launch in 2011. One is the Students' Space Association Studencki Satelita Politechniki Warszawskiej project. This CubeSat project will launch on the maiden flight of the Vega Rocket. Its aim is to test new ways for spacecrafts to de-orbit with the help of a solar sail system.

The second satellite is called Lem, after the famous Polish science-fiction author. The astronomical satellite is being built by the Centre for Space Research in Warsaw and is part of the Bright-star Target Explorer-Poland (BRITE-PL) constellation. To increase awareness, the centre is selling, in the form of charity auctions, inscriptions which will be engraved on the satellite's walls. The charity event is called Great Orchestra of Christmas Charity, which is an annual event in Poland with long traditions and with a very high profile. Launch is planned for the 4th quarter of 2011 from Sriharikota.

The other satellite of the BRITE-PL constellation is called Heweliusz. Both the names Lem and Heweliusz were chosen by the public in an open contest organised by the ministry of science. The year 2011 has been chosen by the Polish Parliament as the year of the astronomer Heweliusz. Many events are planned for the 400th anniversary of his birth. The events included Amateur Radio contact with the ISS, space model and meteorite exhibitions featuring a 1:1 model of the internals of the US Lunar Lander.

The year 2010 was very positive for Polish students in the space sector. Apart from the PW-Sat project, Polish students have managed to secure funds for the ESMO project, the first student mission to the Moon. The campaign was in the Polish media, and the students were invited to talk with the minister of science. The Stabilised Camera Observation Platform Experiment team, which managed to launch a stabilised camera platform on a balloon from Kiruna, has also celebrated a mission success.

The Mars Society was the centrepiece of 2010 youth space events in Poland. The only European Team in the University Rover Challenge, co-organised by the Mars Society in the US, came from Poland, from the Polytechnic of Białystok receiving the 3rd prize. Preparations are being made to host a Europe-wide Rover Challenge in Poland in the upcoming 2-3 years. The Mars Society had its 10th European Convention in Warsaw, with the founder of Robert Zubrin present.

The year 2010 was important for the internet side of astronautics. The biggest forum is now the site astronautyka.org. The site kosmonauta.net has celebrated two years of existence and its 2000th written article. The site has also transformed into a commercial firm.

A new society, the Polish Rocketry Organisation, was formed with the aim to develop rocketry technologies in Poland based on the Meteor sounding rocket experiences from the 60s. In May, 2011, the first launches, as high, as 3 km, are planned with the assistance of the Polish military.



PORTUGAL

CURRENT STATE OF SPACE AFFAIRS

In December this year, celebrating the ten years of Portugal's participation in the European ESA, a Study of the Impact of Portugal's Participation in ESA was presented, revealing a new image of the country's space sector. According to this report, Portugal received a geographical return (roughly the ratio between the income of projects and the country's contribution) from ESA of around 99% in 2009. This meant that, for the first time, the Portuguese space community was absorbing the investment that the government was making on ESA. These projects are split between industry (90%) and academia (10%).

The space industry in Portugal has grown considerably. Although the size is still not comparable to the major European space players, the number of companies increased by a multiple of seven over the past ten years and the number of contracts with ESA has grown from 4, in 2000, to 58, in 2009, representing a value of more than seventeen million Euros. There are now more people employed in the space sector and the area of intervention is wider incorporating software, consulting, services and hardware.

This trend has been reflected in academia. The Research and Development institutes have increased the number of projects, although this has been as much as in the industry. Universities are opening more vacancies for space related subjects and even creating space dedicated branches in their degrees.

ACCOMPLISHMENTS IN 2010

In late 2010, SGAC Portugal recruited a new NPoC. This will increase the motivation and the ideas to start lining up the activities for 2011.

OTHER EVENTS AND ACTIVITIES

JOINT EUROPEAN AND NATIONAL ASTRONOMY MEETING (JENAM) 2010, LISBON

JENAM is organised each year in a European country jointly by the European Astronomical Society and one of the national astronomical societies. JENAM 2010 was the 18th Annual Meeting of the European Astronomical Society and the 20th Annual Portuguese Meeting of Astronomy and Astrophysics.

SEMANA MUNDIAL DO ESPAÇO 2010

World Space Week 2010 was celebrated throughout Portugal. Events ranged from mounting a telescope and stargazing activities to rocket launching, conferences and round table sessions for youths.

JORNADAS AEROESPACIAIS

Jornadas Aeroespaciais was an aerospace exhibit organised by APAE (Associação Portuguesa de Aeronáutica e Espaço), with workshops for engineering students and presentations from industry.

FOURTH PORTUGUESE SPACE FORUM, 2010

This forum celebrated ten years of the Portuguese participation in ESA with the participation of the Portuguese Ministry of Science, Mariano Gago, and ESA's Director General, Jean-Jacques Dordain. A study of impact, together with policies for the future, was presented. The event, attended by the Portugal NPoC, included an open area for companies and research centres.



LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC PORTUGAL

2011 will be the first year National Points of Contact will be a resident in Portugal and therefore the range of activities that can be carried out will be wider with a greater effect. The realistic plan is to grow slowly but solid and steady. Below are the first steps that we propose to take.

CREATE THE INFRASTRUCTURE

The first step is to create a modern and effective way of communicating with all the students and young professionals interested in space. Following the example of SGAC Global, platforms like Facebook and Twitter will be explored to reach as many people in Portugal as possible.

PRESENT SGAC TO THE COMMUNITY

SGAC Portugal will select a few of the most relevant entities that work on the space sector from groups organising science events for children to offices monitoring space activities in industry and academia. Partnership propositions will be made with discussions on collaboration that can benefit both parties.

BUILD UP THE NETWORK

SGAC Poland will work on bringing together students, enthusiasts, professors and companies in the space industry. Networking platforms will be maximised in many ways including creating regular discussion topics on Facebook. The purpose of this will be to bring people together around space issues.

MONITOR THE SPACE SECTOR

The NPoCs from Poland will attend events and interacting with companies and students. The NPoCs will work on monitoring the status, trends and evolution of the space sector in Portugal and report findings to SGAC.

ROMANIA

In 2010, Romania became a full member of the ESA.

IMPORTANT PARTICIPATIONS IN INTERNATIONAL PROJECTS

Within the ESA:

- Romanian Knowledge-Centred EO:
<http://www2.rosa.ro/index.php/en/esa/article/proiecte/proiecte-internationale/12-esa/308-rokeo.html>
- On demand Grid Services for High Education and Training in EO
<http://www2.rosa.ro/index.php/en/esa/article/proiecte/proiecte-internationale/12-esa/55-qisheo.html>

Within the European Union:

- Security Research for the National Points of Contact network – phase I
<http://www2.rosa.ro/index.php/en/ec/article/proiecte/proiecte-internationale/13-ce/314-seren-i.html>
- DonQ Air - Promoting RTD in aeronautic SMEs of Poland, Romania, and Turkey
<http://www2.rosa.ro/index.php/en/ec/article/proiecte/proiecte-internationale/13-ce/313-donq-air.html>
- Towards an Operational GMES Land Monitoring Core Service
<http://www2.rosa.ro/index.php/en/ec/article/proiecte/proiecte-internationale/13-ce/56-qeoland2.html>

Within the United Nations:

- Land Cover/Land Use Inventory by Remote Sensing for the Agricultural Reform
<http://www2.rosa.ro/index.php/en/un/article/proiecte/proiecte-internationale/14-onu/4-proiectul-fao.html>



ACCOMPLISHMENTS IN 2010

WORLD SPACE WEEK EVENTS – 2010

The year 2010 saw more than 100 WSW events in Romania, making Romania one of the hot spots for WSW. The WSW representatives in Romania have developed a blog which includes photos and even 3D movies from different events.

For more information about WSW, Romania please visit:

<http://wswromania.blogspot.com/2010/10/world-space-week-at-gheorghe-titeica.html>

The list of all the events that took place in Romania during the WSW can be found at:

<http://www.worldspaceweek.org/countrysearchresult.php>



FIGURE 49: PHOTO EXHIBITION AND EXCHANGE OF VIEWS AT GHEORGHE TITEICA SCHOOL IN CONSTANTA, ROMANIA



FIGURE 50: ET HOUSE, SPECIAL EVENT AT SABIN DRAGOI ART SCHOOL OF ARAD, REGARDING THE ALIEN CIVILISATIONS, WITH PRESENTATIONS AND DEBATES, ROMANIA





FIGURE 51: YOUTH HOUSE OF TARGOVISTE – THE ROMANIAN METEOR ASTRONOMIC SOCIETY HELD SEVERAL COURSES AND SPEECHES ABOUT ASTRONOMY, PLANETARIUM AND THE SOLAR SYSTEM, ROMANIA

PARTICIPATION IN THE SGAC ACTIVITIES

The Romanian SGAC actively took part the SGC and the IAC in Prague, 2010.

ASTROCLUB BUCHAREST AND RELATED EVENTS

Astroclub Bucharest is the meeting point for the astronomy community within the country, comprising of students and young professionals. The projects developed within the Astroclub include debate forums, discussions, astronomy contests, Astronomy Summer Camps within the country, Galilean Nights, an online astronomy library, astronomy blogs and guides on how to use astronomical instruments.

PARTICIPATION IN THE EUROPEAN INTERPARLIAMENTARY SPACE CONFERENCE (EISC), 25 – 26 OCTOBER, BUCHAREST

The annual Plenary Conference in October was an appreciated opportunity for the members of EISC to meet and discuss current space related issues. This conference, under the theme “Space Benefits for Society”, was the highlight of the Romanian EISC Presidency in 2010. The Conference was hosted by Ms. Liana Dumitrescu, MP, and Chairperson of EISC. As her first formal act, Liana was able to welcome Luxembourg as a new Permanent Member following unanimous acceptance by the members present. The Plenary Session included speeches from Jean-Jacques Dordain the Director General of the ESA, Reinhard Schulte-Braucks, Head of Space Research and Development Unit, Aerospace and Defence Directorate, DG Enterprise and Industry in the EC, and a video message from Vittorio Prodi, Member of the European Parliament and Chairman of the Sky and Space Intergroup. With the latter message, the Romanian Presidency launched a new approach for partnership between EISC.

SGAC - ROMANIA VISION FOR 2011

- Become more actively involved in the SGAC tasks,
- Create a more effective sponsoring process in order to give as many people as possible the opportunity to attend SGAC events, and
- A more comprehensive strategy to increase the SGAC visibility in coordination with the other European countries.

RUSSIA

CURRENT STATE OF SPACE AFFAIRS

Various space events and activities took place in Russia during the year 2010. These activities cover many space areas from human space research such as Mars 500 to the development of a new launch pad Vostochniy. Furthermore, international cooperation was enhanced and new agreements were signed with the Indian Space Agency and ESA.

Special attention was given to space events for young professionals and students. In the beginning of the year, Yuri's Night parties were held at several institutions around Russia. The number of participating organisation increased in 2010, which shows an increased interest from youths.

From April to October four Rocket Festivals were organised for amateur rocket modellers. High school kids, students and members from the community could launch their rockets assembled from a rocket kit or from original designs. This activity has become more and more popular among young enthusiasts of all ages.



FIGURE 52: PHOTOS TAKEN DURING ROCKET FEST, RUSSIA, 2010 (CREDITED FROM: <[HTTP://RAKETOFF.RU/](http://raketoff.ru/)>)

Youth Space Centre of Bauman Moscow State Technical University held a workshop this summer on space development having many participants from Russia and foreign countries. This event was supported by Roscosmos and Bauman University. Student from all over the world had the chance to share their passion for space, visit various space sites in Russia, meet Russian cosmonauts and even have a chat with the ISS crew. This workshop was a big success.

Moscow Aviation Institute organised in October annual school-seminar “Russian Aerospace Decade- 2010” for university students in aerospace engineering and space science. This event included different sessions where participants could present their research results and share knowledge. The programme included a photo exhibition devoted to the celebration of the 50th anniversary of the first man in space that will take place in 2011.



FIGURE 53: A PHOTO TAKEN AT RUSSIAN AEROSPACE DECADE- 2010 IN ALUSHTA

In November 2010, the 9th international conference on Aviation and Astronautics took place in Moscow. This event had more than 500 participants and representatives from 80 different companies.

Moscow exhibition centre held the 2nd National Scientific Youth Forum “Young people and the future of Aviation and Astronautics 2010”.

ACCOMPLISHMENTS IN 2010

- In 2010 the first attempt was made to build collaboration between SGAC and Roscosmos. Together with SGAC, Executives and RCs prepared an official letter for the Federal Agency. The official letter was successfully received, however no response from the agency officials has been obtained.
- SGAC became a partner with the Robert A. Heinlein Flight into the Future Project Contest 2011 organised for Russian and English speakers.
- SGAC Russia sent invitations to some of the Russian Space clubs and local committees for space events to aid with networking.

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC RUSSIA

- SGAC Russia will reinforce attempts to build cooperation with Roscosmos in 2011.
- Attempts will again be made to contact officials with some proposals, however changes will be made to the approach,
- Plans are in place to prepare and distribute brochures and posters in aerospace institutions in Russia,
- SGAC groups will be created in local social networks by inviting students and youths working in the space area,
- Yuri’s Night events in Moscow will officially belong to the big network and improve their status, and
- During the 2011 youth forum “Young people and the future of Aviation and Astronautics 2011”, a presentation about SGAC is planned.

SPAIN

In this report, there is a summary of the space activities promoted and organised by student organisations and space professionals that have taken place in Spain. Other relevant space activities have also been included.

EUROPEAN SPACEPORT (“YOUTH IN ACTION”)

The European Spaceport, in collaboration with Laboratory for Space and Microgravity Research (LEEM), offered five young Spanish, the opportunity to participate in a unique experience within the EU programme “Youth in Action”. This programme allowed twenty four young Europeans to visit and interact with experts at the European Spaceport in Kourou, French Guyana. The activity focused on promoting youth cooperation and space activities by providing a venue to further understand and value and importance of space for activities on Earth.



FIGURE 54: SPAIN'S YOUTH IN ACTION PROGRAMME

SPANISH SPACE STUDENTS – S3 CONGRESS, 25-26 NOVEMBER, MADRID

From 25-26 November, Madrid's City Museum hosted the 5th edition of the Spanish Space Student Congress - S3 organised yearly by LEEM. The event was a total success with more than 250 participants. The congress, which is included in the programme that the city of Madrid prepared for the presidency of the Ariane Cities Community, included technical sessions, workshops and an exhibition as well as a guided visit in Madrid's City Museum.

For more information please visit: <http://s3.leem.es/>



FIGURE 55: SPANISH SPACE STUDENT CONGRESS

INTA “RESEARCHERS NIGHT”

INTA organised the Researcher Nights, which included the “Geocaching: Adventure & Technology” on September 24, 2010. In this event, scientists and others gathered to better understand the scientific career path technology talks.

ZERO-G AEROBATICS WITH POLYTECHNIC UNIVERSITY OF CATALONIA (UPC)

During the IAC in Prague, Dr. M. Trujillo, an NPoC of Spain, met with Dr. Antoni Perez-Poch from UPC Barcelona Tech, the originator of the Zero-G Aerobatics idea. Since the idea originated, coordination with other SGAC members made a collaboration opportunity possible to experience Zero-G in an innovative manner while being able to fly small experiments.

The Barcelona Aerobatics Zero-G Challenge is an international contest in which graduate and undergraduate students from different countries worldwide are challenged with designing and building a Zero-G experiment in a limited period of time. The winners are offered the unique opportunity of flying their own experiment with the UPC Microgravity Aerobatics Platform held in Sabadell Airport. This innovative infrastructure is a result of research led by Professor Antoni Pérez-Poch from the Space Research Group at UPC, the first of its kind in Europe.



FIGURE 56: ZERO-G AEROBATICS WITH UPC, SPAIN

For the next edition of the Barcelona Aerobatics Zero-G Challenge in Autumn 2011, SGAC members will have the opportunity to participate thanks to the collaboration between SGAC and UPC.

For more information please visit: <http://window2theuniverse.org>

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

Having been appointed for a second term to the position of NPoC in late 2009, Rishi's aims have been to improve the visibility of SGAC within the UK and to encourage the involvement of new members. To this end, the following initiatives have been undertaken.

ALIGNMENT WITH UKSEDS

In order to encourage SGAC activity within the UK, increased involvement with the UKSEDS organisation has always been an aspiration of UK NPOCs. On 5 May, 2010, Rishi Sharda attended a meeting with the UKSEDS Executive committee at the British Interplanetary Society in London to discuss possible ways for the organisations to mutually support each other's growth.

An introduction and overview to SGAC was discussed with the group to provide them with a greater understanding of the organisation's structure and current activities. The discussion was held as an additional agenda item to the UKSEDS committee meeting, hence provided Rishi with additional visibility of the current operations within the UKSEDS and future opportunities for collaboration.

It became apparent during the discussions that there was a mutual respect for each organisation and a common interest to support the growth of both organisations. The problems within the UK were discussed to seek root causes and potential improvements. Typical problems include the recruitment of new members, continual engagement of existing members and awareness of youth activities at national agency level.

It was agreed that, in order to support the mutual growth of both organisations within the UK, collaborative efforts are required by the sharing mailing lists, potential website space to promote events and slots at conferences to promote the respective organisations.

It was suggested that a presentation could be made at a UKSEDS conference during the UK Space Conference in April, 2011.

AWARENESS OF UK SPACE AGENCY ACTIVITIES

During 2009 it was announced that a UK Space Agency is to replace the existing British National Space Centre as a single umbrella organisation for the nation's space activities. Although this won't be formally established until April, 2011, the objectives for the UK Space Agency are currently in development.

To this end, a workshop was held at the National Space Centre on September 8, to brainstorm issues within the UK and to develop roadmaps for the development of UK capabilities. Although Rishi's presence was primarily from an industry perspective, the development of student activities and encouragement of students into the space engineering field was a topic raised at many occasions and when possible continued support to existing organisations (such as SGAC) was a route to support workforce development.

These comments were applauded and contacts were made with potential supporters with the agency and within industry. Continued attendance to these events is important to ensure SGAC, where applicable, is promoted to new and existing supporters.

ONGOING OBJECTIVES FOR 2011

1. Encourage publicity opportunities to develop exposure of SGAC activities through magazine publications or presentations at national conferences and to ensure all activities are coordinated with the SGAC communications team.
2. Attend national space events and where possible promote SGAC to event participants.
3. Attend the SGC in 2011 to support the completion of SGC projects. Plans are also in place to support younger SGAC members through the provision of mentoring and guidance and where relevant an offering of an industry perspective during brainstorming exercises.
4. Support the recruitment and initiation of a new UK NPOC prior to Rishi's term completion at the end of 2011.
5. Encourage regular exchanges between European NPOCs through the use of the SGAC blogging method.





MIDDLE EAST

STRATEGIC GOALS IN 2010

From the 2010 strategy document prepared by Mahsa Taheran with help from Ghanim Alotaibi at the end of 2009, the strategic goals of the region in 2010 were as follows.

- Involve the space sector in the Middle East in SGAC activities,
- Further introducing SGAC to the region,
- Develop the network of SGAC, both quantitatively and qualitatively, and
- Increase participation through outreach from early 2010 and SGC promotion in relevant media in the region.

REGIONAL REPRESENTATIVES

There are four NPoCs from three countries listed in Table 1, with a candidate for NPoC for Iran.

Table 1 NPoCs in Middle East

Middle East National Points of Contact

Name	Country
Ghanim Alotaibi	Kuwait
Daniel	Israel
Metehan Sezgin	Turkey
Tugca Sener	Turkey

NPoC CANDIDATES

Toward the end of 2010, Behnoosh Meskoob also applied as a candidate for the NPoC of Iran position.

CHANGES IN REGIONAL REPRESENTATIVES

Aysegul Tansen finished her service as RC and Aziz Kayihan was elected as RC in February.

INTRODUCING SGAC TO THE REGION

In 2010, SGAC was presented to the following media and organisations.

- Iranian Space Agency,
- Iran national TV administration in the most well known astronomy TV show broadcasted on Iranian national TV (the show is available on DVD and will be given to the executive office),
- Saudi Arabian amateur astronomers, through Shauquat Alam, and
- Iraq amateur astronomers, through Azhy Hasan.



Participation in SGC 2010

Table 2 displays the name and nationality of the Middle Eastern delegates in SGC 2010.

Table 2 Middle Eastern delegates in SGC 2010

SGC delegates from the Middle East			
First Name	Last Name	Gender	Country (Main)
Hussain	Al Ansari	Male	United Arab Emirates
Farnaz	Ghadaki	Female	Iran, Islamic Republic of
Ahmad Shah	Hakimyar	Male	Afghanistan
Lisa Reneé	LaBonté	Female	United Arab Emirates

DEVELOPING NETWORK OF SGAC

Templates have been prepared and sent to the NPOCs to develop the network in the region and increase the knowledge of the countries Country Profile. The profile includes the following details.

1. Governmental Space Organisations,
2. Other relevant Science and Technology organisations,
3. Remote Sensing organisations,
4. Space Industry (companies),
5. Science and Technology universities,
6. Amateur and Professional Astronomy groups,
7. Major Conferences relevant to space,
8. Space Policy or National Space Legislation,
9. Delegates in COPUOS (if known),
10. National Space Programme (if there is any, concentration of activities, budget, etc),
11. Media, and
12. Scientific Journals.

The profiles are planned to be ready in the first quarter of 2011. Also, media contact lists have been created for Iran and Kuwait including the major media we can use to cover SGAC activities.



MIDDLE EAST NATIONAL REPORTS

ISRAEL

CURRENT STATE OF SPACE AFFAIRS

June 2010 saw the successful launch of the Ofeq 9 Imaging Satellite, by the indigenous Shavit Launcher. This launch followed the TecSar launch in 2009 and the Ofeq 7 launch (also by the Shavit) in 2007.

A major effort to expand the civilian space programme is underway, with a promised yearly budget of 300 Million NIS (approximately 90 million USD). The programme is based on recommendations from the industry and academy and has won the support of the Israeli Government. The programme should be enacted in 2011.

VISIONS OF SGAC ISRAEL

1. Recruit members from Israel to join SGAC,
2. Hold more space events to encourage outreach and innovation, and
3. Encourage and sponsor Israeli delegates to SGC.

ACCOMPLISHMENTS IN 2010

REFORMATION OF ISRAEL SGAC CHAPTER

After a few years of inactivity, the Israel chapter of SGAC has been reformed, in order to renew the sharing of information and fun between young Israeli space-professionals and students with the International community.

PERSEIDS METEOR SHOWER

During August 2010, as part of the nation-wide activities to observe the Perseids Meteor Shower, a mainly student observation was organised in the Israeli desert, as both an outreach event to the public and a way to involve local students.

KUWAIT

CURRENT STATE OF SPACE AFFAIRS

A national space programme in Kuwait does not yet exist, the only space activity in Kuwait is Remote Sensing data analysis which is a small department at the Kuwait Institute of Scientific Research. Moreover a small department on college of science – Kuwait University is teaching remote sensing.

There is a group in Kuwait made up of youths of different ages that are highly enthusiastic about establishing a national space programme and sending an astronaut to space. Over the year 2010, youths of Kuwait have produced a space proposal to be sent to decision makers in Kuwait. This proposal is not yet completed but hopefully the year 2011 will witness the success of the Kuwait space proposal written by Kuwaiti space enthusiasts. A parallel effort in Kuwait to establish a space programme is to successfully make a space research project such as a high altitude balloon. The main idea of this project is to demonstrate to decision makers in Kuwait that Kuwaiti youths are able to work on a national space programme. Thus far the project is moving very slowly due to administration problems; however the year 2011 should see an advance in the area.



KUWAIT NATIONAL RADIO OBSERVATORY FIRST LIGHT

The Kuwait National Radio Observatory team successfully operated the first Radio Telescope in Kuwait. The first official radio waves detected were from the sun on 6 October, 2010. The Kuwait National Radio Observatory team is encouraging youths from Kuwait to join this exciting project.



FIGURE 57: THE KUWAIT NATIONAL RADIO OBSERVATORY

STAR PARTIES OR STAR OBSERVATION

In 2010 a total of five star observation events were organised by the Department of Astronomy and Space Sciences (DASS) and one star observation event organised by the astronomy club in College of Sciences – Kuwait University. A total of approximately 200 people attended these events.

In previous years, star parties were organised every month but, due to some management problems at the Department of Astronomy and Space Science, the number of the events has decreased. Volunteers are trying to solve the problems to increase the number of astronomy and space activities.



FIGURE 58: HIGH SCHOOL STUDENTS SUN OBSERVATION, KUWAIT

SOLAR ECLIPSE OBSERVATION

On 15 January, 2010, a partial solar eclipse occurred in Kuwait. During the event members of the DASS explained some facts for the public about solar eclipses and astronomy in general. About 150 people attended the event.

THE BEGINNING OF HIGH ALTITUDE BALLOON PROJECT

Several meetings were organised between five space enthusiasts to launch the first stage of the first high altitude balloon in Kuwait. The project is completely funded and supported by the DASS. There are plans to launch the first stage "5 Kg payload" in six months from February 2010. The project is moving slowly due to administrative problems.

SEDS CAMPAIGN ON KUWAIT UNIVERSITY

A space campaign was organised in order to attract more members to SEDS. The campaign includes a booth on the campus of Kuwait University for two days and flyers were distributed to the students. Throughout the campaign twenty students registered for the programme.

ASTRONOMY AND SPACE COURSES AND LECTURES

During 2010 five astronomy and space related courses, with a total of 69 participants, were organised by the DASS.

ACCOMPLISHMENTS IN 2010

Over the year 2010 SGAC representatives organised the following events.

INTRODUCTION TO SPACE SCIENCES COURSE

The introduction to Space Sciences Course is a unique course in Kuwait. This is the only course available in the space field. The course covered different subjects in the space field such as the space environment, space policy, life support systems, space missions and programmes and much more. The course was organised at DASS for six days and it is planned to be again presented later in 2011. At the end of the course, a questioner was distributed for the eight participants, the feedback was encouraging.

YURI'S NIGHT

As a tradition, Kuwait celebrated Yuri's Night. Yuri's Night 2010 was organised by DASS and the Students for the exploration and development of Space "Kuwait – SEDS". A total of 35 people attended the party.

TURKEY

The year 2010, was one of the most active years for astronomy and space sciences in Turkey. Turkey not only hosted many international meetings but also organised many country wide events which increased public awareness.

ACCOMPLISHMENTS IN 2010

NEW NPOCs FOR TURKEY

This year Turkey had two new NPOCs. The former NPoC, H. Aziz Kayıhan was elected the RC for Middle East and the other former NPoC, Cem Karako had to resign his duty as NPoC due to work commitments. Both were assets to SGAC Turkey. With these changes, two new NPoC were appointed, Metehan Sezgin and H. Tuğça Şener Şatır. Metehan Sezgin is undergoing a bachelor degree at Erciyes University in Astronomy and Space Sciences. H. Tuğça Şener is a PhD student in Armagh Observatory.

SPACE GENERATION CONGRESS 2010

This year ten people from Turkey applied to attend the SGC and all of them were selected as a delegate. Metehan Sezgin, an NPoC for Turkey, and Burak Yağlıoğlu, a Masters student in Kiruna University, were the only two of the ten that could make it to the congress. Both Metehan and Burak were in the Climate project. After the congress Metehan Sezgin presented his experiences from SGC 2010 to the students in Erciyes University. He also shared his experiences about IAC 2010.

17TH NATIONAL ASTRONOMY CONGRESS AND 6TH NATIONAL STUDENT ASTRONOMY CONGRESS

The National Astronomy Congresses is held every two years. This year the congress organised from 31 August to September 4 in Çukurova University, in Adana. In this year's congress H. Aziz Kayıhan and H. Tuğça Şener Şatır presented a paper at both congresses. The paper titled "Young Generation's Active Roles in Space Exploration and SGAC's Contribution", presented by H. Aziz Kayıhan, captivated audience.



COUNTRY SPECIFIC EVENTS

UN/TURKEY/ESA WORKSHOP ON SPACE TECHNOLOGY APPLICATIONS FOR SOCIO-ECONOMIC BENEFITS

The UN/TURKEY/ESA workshop took place from September 14-17, 2010, in Istanbul. The objectives of the workshop were the following.

- To identify ways and means to create a supportive space environment to facilitate governmental, institutional and industrial participations in the space arena,
- To address principles for national, regional, and international cooperation in space technology development and its applications,
- To explore socio-economic benefits of using satellite remote sensing, satellite meteorology, satellite communications, and GNSS,
- To strengthen regional information and data exchange networks on the use of space science and technology, and
- To initiate pilot projects for joint work at the regional and international level.

Education, capacity building and space and society initiatives will be pursued to ensure that Turkey develops the requisite human capital to support national space activities, including the development of space application products and services. The policy also promotes enhanced space awareness at all levels of society as a means to build public understanding of the societal benefits of space technology.

FROM DEPTHS OF SPACE TO THE PAST OF THE HISTORY – GAP ASTRONOMY VOYAGE

The Presidential Project GAP Astronomi Yolculuğu (GAP Astronomy Voyage) ,was held from 11-22 October, 2010. The aim of the project was to reach students and the public in the south-eastern Anatolia. The Astronomy Van, composed of astronomy students, research assistants and professors, travelled the southeast part of the country, which is generally abandoned due to terrorist incidents in the region. The van travelled to eight cities of the region and conferences and presentations were made for the students. The project also included an exhibition and a planetarium. The project was a great success, reaching more than ten thousand students. The RC for the Middle East, H. Aziz Kayıhan, also took part in this team.



FIGURE 59: GAP ASTRONOMY VOYAGE, TURKEY

65 THOUSAND GREAT STUDENT PLANETARIUM AND OBSERVATORY

The efforts from 65,000 students' lead to a planetarium and observatory in one of the least developed cities, Amasya. There have been many more new planetariums opened all over the country but this one was organised by students and was completed in a year.



FIGURE 60: PLANETARIUM OBSERVATORY, TURKEY

INTERNATIONAL EVENTS

Some international events that the public have had the opportunity to take part in include the following.

- Dark Skies Awareness Week, 4-10 April,
- Yuri's Night, 12 April, 2010
- World Space Week, 4-10 October,
- Great World Wide Star Count, 14-28 October,
- Dark Matter Awareness Week, 1-8 December, and
- International Epsilon Aurigae Campaign.

One of the most remarkable international events organised by Turkey was a conference in honour of M. Ali Alpar, a famous Turkish astrophysicist. The conference was titled "Astrophysics of Neutron Stars 2010" and was held in Izmir. The SGAC NPoC for Turkey, H. Tuğca ŞENER-ŞATIR, was one of the organising committee members.

In 2010 there was an increase in Yuri's Night Parties in Turkey. The Istanbul Astronomy Community (IAT), which is composed of astronomy clubs of six universities in Istanbul, sponsored this year's Yuri's Night in Turkey which was well attended by many SGAC members. With this event, IAT undertook one of the most important missions in astronomy, this was to increase interest and promote educational activities. Yuri's Night tried to fulfil this mission during a week-long educational event carried out in the Istanbul University and Istanbul Culture University, which were open to public participation.

During WSW, many events that combined entertainment and space music took place throughout the country. Concerts were organised with the participation of various Turkish bands. Students of the Department of Astronomy and Space Science presented amateur astronomy and other astronomy-related topics to the public. Exhibits on astronomy, the space flight of Yuri Gagarin, and related issues were presented to participants at nine different locations. Young children were treated to an inflatable portable planetarium. Games suitable for all ages were designed and prepared by members of the IAT to entertain while educating the participants on astronomy.

More specifically, Kayseri Erciyes University Astronomy Club organised a space event at the Marianne Molu amphitheatre in the university campus. The event offered participants with a joyful environment combining music and star gazing. In Ankara, Yuri's Night featured a famous Turkish music band. Over the course of the evening, the



Middle East Technical University astronomy community prepared many surprises such as simulations and visuals to complement the musical guest. Finally, at the Technological Research Council of the Turkey National Observatory, in Antalya, an event was focused around star observations. The institute rented the telescope at a southern hemisphere observatory to provide participants with a spectacular view of the southern hemisphere's sky, which had never been seen before by many of the attendees. In Adana and Izmir, the astronomy communities prepared day-long observations and also promoted a musical event at Yuri's Night.

Yuri's Night was a great success in Turkey at inspiring people of all ages about the beauty and value of space. IAT looks forward to another successful evening next year.

Positive results have come from the efforts and cooperation of the public, demonstrated by members of the public winning various international prizes. For example Sezgin Babacan, a Turkish student from Aydin, received third prize in the Hubble Pop culture Competition.

Turkey is now joining the ESO Science Outreach Network (ESON). ESON has been one of Turkey's most promising progresses over the year.





NORTH, CENTRAL AMERICA AND THE CARIBBEAN

The North, Central America and Caribbean (NCAC) region has always been active in space activities due to the US space programme, and Canada's involvement with the International Space Station. However, the year 2010 also showed an increased in space activities in Central America and the Caribbean. In April, Mexico's congress decided to create a new national space agency which could someday launch rockets from the Yucatan peninsula. In the space outreach field, the first space e-magazine in Spanish language, its founder an SGAC member (Marco Pirateque from Colombia), launched its first edition in October. In the same month the National Space Society Puerto Rico hosted the Puerto Rico Space Congress in the hope that this would boost space activities in its territory. SGAC and the National Space Society Puerto Rico hosted a Puerto Rico Essay Competition for SGAC members to attend. The Sixth Space Conference of the Americas was held in November, in Pachuca, Mexico, to drive discussions for space activities in the Latin-American Region. Last, but not least, at the very end of the year, there were celebrated Space Forums in Mexico with the intention to gather different opinions to define the National Space Programme of Mexico.

ACCOMPLISHMENTS IN 2010:

There have been increased activities in the NCAC region within SGAC, these include the following.

NATIONAL SPACE SYMPOSIUM

As part of NextGen initiatives, SGAC Executive Director, Ariane Cornell, served as the Master Moderator at the 2010 National Space Symposium in Colorado Springs, Colorado, held by The Space Foundation. Several other SGAC members, including the RC for South America, Nicole Jordan, and the RC for NCAC, Stephanie Wan, were in attendance, and SGAC NCAC hopes to have more collaboration with The Space Foundation in 2011.



FIGURE 61: NCAC RC STEPHANIE WAN MEETING CHINA'S FIRST TAIKONAUT, YANG LI WEI

There were continued activities from regional members outside of the region, such as participation at the Space Generation Congress and the International Astronautical Congress in Prague.



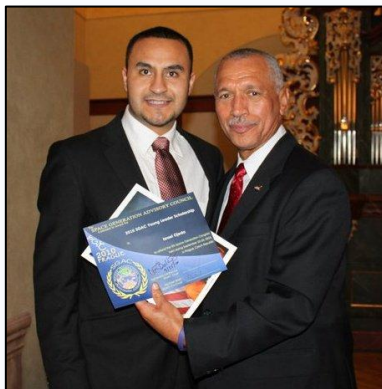


FIGURE 62: NCAC RC ISRAEL OJEDA MEETING NASA ADMINISTRATOR, MR. CHARLES BOLDEN AT SGC 2010

PARTICIPATION AT THE SIXTH SPACE SCA IN MEXICO

From 15-19 November, SGAC's Chair, Agnieszka Lukaszczuk (Poland/US), Executive Director, Ariane Cornell (US/France), RC for South America, Nicole Jordan (Colombia), and NPoC for Mexico, Jorge Vega Rodriguez (Mexico), attended the sixth SCA in Pachuca, Mexico on behalf of SGAC. SGAC was invited to the event to help drive the Youth Forum, an important element of the SCA.

The Youth Forum, held in parallel with the SCA meetings from 16 – 17 November, gathered 200 university students and young professionals from the Americas region to lead discussions on the four main topics of the SCA:

- Space Policy, Space Law and Youth Vision,
- The Environment, Natural Disasters and Protecting Our Heritage,
- Education and Health, and
- Technological Development, Industry and Scientific Research.

SGAC'S NCAC REGIONAL COORDINATOR FEATURED IN A MEXICAN NATIONAL RADIO INTERVIEW

Israel Ojeda Coronado (Mexico), RC for the North, Central American and Caribbean Region, was featured as a guest on Mexican "Radio Red 88.1", a national news radio station. He discussed SGAC and the SGC as well as the Mexican Space Agency (MEA) and benefits of space applications for Mexico. Following his interview, Israel wrote a piece about his experience with Radio Red focusing on how other SGAC members can get involved in space outreach.

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC NCAC

The goals for 2011 in the North, Central America and the Caribbean region are the following.

- Further participation at National Space Symposium and increase collaboration with The Space Foundation's NextGen Initiatives,
- Increase SGAC regional activity in North, Central America and the Caribbean,
- Strengthen relationships with other space outreach organisations across the region,
- Foster competitions and events across the region with a major focus in Central America and the Caribbean, that can prove the benefits of the use of space applications for the benefit of society, and
- Help to develop space material according to the countries in the region, to do Space Outreach and foster space education.



NORTH, CENTRAL AMERICA AND THE CARIBBEAN NATIONAL REPORTS

CANADA

CURRENT STATE OF SPACE AFFAIRS

HUMAN SPACEFLIGHT

NASA announced that Canadian astronaut, Chris Hadfield, will launch to the ISS aboard a Soyuz spacecraft in 2012 for a 6-month mission on Expedition 34/35. During the second of the expedition, Chris Hadfield will be the first Canadian Commander of the ISS – a Canadian milestone.

EDUCATION AND SPACE AWARENESS

Videoconferences between Bob Thirsk on ISS and high school students were a tremendous success.

CSA, with its education branch, continued to work with educators from all the provinces to generate interest about science and technology through the study of space topics in primary and high school.

The Canadian Space Agency had a national competition for undergraduate and graduate students to participate in NASA Academy at Ames Research Centre. This year, Laura Drudi, a third year medical student from McGill University, was selected from 650 applications to be the only Canadian involved with NASA Academy.

INTERNATIONAL ASTRONAUTICAL CONGRESS 2010

The Canadian Space Agency (CSA) sponsored 26 students and young professionals to attend the IAC in Prague.

AEROSPACE MEDICAL ASSOCIATION ANNUAL SCIENTIFIC MEETING 2010

The Aerospace Medical Association (AsMA) holds a meeting on an annual basis. In early May 2010, the AsMA conference was held in Phoenix, Arizona. It was an occasion to meet aerospace medicine experts from the civilian industry and the military. This year, 2 Canadian students attended this annual meeting.

This conference was also an occasion to network with students, professionals and flight surgeons from the only two civilian aerospace medicine residencies in North America, University of Texas Medical Branch and Wright State University. Admissions personnel at these universities provided detailed information on prerequisites and essential information needed before applying to these residencies.

SPACE COMMUNITY

Many Canadians spread the passion for space in their community during various events, conference, lectures and school projects. This year, a group of students and young professionals represented Canada at the SSP at the ISU as well as at the master's programme in Strasbourg, France.

CANADIAN ALUMNI OF THE ISU

The Canadian Alumni of the International Space University is a successful network of professionals and students who participated to the ISU. This channel of communication allowed transfer of information about activities related to space and encouraged the members to stay in contact and share their experiences with other Canadians. This mode of communication has been used this year to communicate information from SGAC to the Canadian Space Community. The group also put effort into presentations of the ISU programmes to invite as many Canadians to apply for the Canadian Foundation for the International Space University scholarship to attend their different programmes. This year, the foundation attributed ten scholarships.



CANADIAN SPACE SOCIETY

More than one hundred of participants of the Canadian Space Society across Canada attended the 2010 Canadian Space Summit in Ontario. The society was very effective this year in gathering people together to increase networking amongst professionals and students in the space field. Their participation and implication in a large number of space events across Canada are very important.

CANADIAN AERONAUTICS AND SPACE INSTITUTE (CASI) STUDENT SUMMIT

The CASI 2010 Canadian Space Summit was held at McGill University and had many invited speakers who are renowned in the Canadian aviation and space industry. 70 delegates and speakers participated in the day-long event.

In conclusion, 2010 generated a lot of enthusiasm all across the country. Canada still needs to develop a clear vision for space exploration to provide a strong basis in future development of space technologies and programmes.

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC CANADA

The year 2011 will certainly be another great year in the Canadian aerospace industry. The presence of Canadians in the space industry will continue to evolve and will move forward in order to spread even more passion for space and further increase interest about space related issues.

- Continue to propagate the enthusiasm for space activities throughout the country and maintain space awareness in regards to human spaceflight,
- Promote accessibility to scholarships for undergraduate and graduate students from universities across Canada to work on space-related projects and increase the number of scholarships awarded, and
- AsMA's 2011 annual scientific meeting will be held in Anchorage, Alaska. Leaders in the Canadian aerospace medicine industry attend this conference on an annual basis with hopes of developing the space life sciences field in Canada.

COSTA RICA

Costa Rica has seen an evolution of 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 and thus it is in an early stage compared to other nations, however it is advancing in an outstanding pace. For more information on these technologies please visit the following links.

Ad Astra Rocket Company: <http://www.adastrarocket.com/aarc/>

Space Research Centre of the Universidad de Costa Rica: <http://www.cinespa.ucr.ac.cr/>

Other nations in Latin America have experienced similar developments, and it is therefore necessary to work together in order to accomplish goals of mutual interest. An example of such developments is the project "UN Satellite en el Aula" (a satellite in the classroom) which has been successfully implemented in Ecuador by the Ecuadorian Civilian Space Agency (EXA). This project brings access in real-time to a network of remote sensing satellites to primary and high school students. This project intendeds to provide students from a broad range of ages the tools that will enable them to understand the different phenomena that occur in Earth's atmosphere, how the climate on Earth changes and to familiarise them with the technologies required to obtain such data. Collaboration between Costa Rica's NPoC and EXA is being executed to bring this programme to schools in Costa Rica.

For more information about EXA please visit: <http://exa.ec/index-en.html>

Another exciting new project, Daedalus, is being carried out by the "Asociacion Centroamerica de Aeronautica del Espacio", (Aeronautics and Space Central America Association in Spanish). This project pursues uniting young



students from a variety of engineering and physics backgrounds to build a platform that will allow the study of atmospheric phenomena, perform remote sensing tasks and develop technologies necessary to obtain data. The first step towards deploying such a platform was developing and testing an atmospheric balloon as part of the Aether project, under the sponsorship of Ad Astra Co. This balloon allowed the students participating in the project to understand design concepts, launch and recovery techniques for space probes.

For more information about ACAE please visit: <http://acae-ca.org/Default.aspx>

For more information about Project Aether please visit: <http://www.projectaether.org/about.html>

For more information about the aerostatic balloons launch please visit: <http://tinyurl.com/4odyeau>

These projects intend to provide students from a broad range of ages the tools that will enable them to understand the different phenomena that occur in the Earth's atmosphere, how the climates in this region change and also to familiarise them with the technologies required to obtain such data.

Finally, the NPoC helped a team from BBC, London, film an episode about Neptune on the north coast of Costa Rica. This episode is part of a series that will be broadcasted during the spring of 2011. The NPoC, with the help of personnel from the Planetarium of the Universidad de Costa Rica, organised the observation of Neptune through a telescope and provided information regarding the planet during a short interview with the filming crew. The episode, along with the rest of series, will be shown worldwide.

For more information about Universidad de Costa Rica's Planetarium please visit:

<http://www.planetario.ucr.ac.cr/>

JAMAICA

The year 2010 was one of several astronomy and space outreach events in Jamaica for adults, students, children and visitors. These events were pioneered by Jamaica's premier astronomy and space group, the Astronomical Association of Jamaica (AAJ), which is the main SGAC liaison for space and scientific education and outreach activities. Many of these events, such as the GAM events in April, built on momentum created by the IYA in 2009 and utilised the hundreds of Galileoscopes received from the Galileoscope Initiative. The AAJ also received a 500 British pounds (approximately 55,000 Jamaican dollars) grant from the GTTP to help in its outreach and education efforts with the Galileoscopes.

In preparation for the distribution of Galileoscopes to schools in Jamaica, the AAJ opted to group schools by area. Astro Club launched events for these area groups instead of a "Star Party" for each school to establish "Astro Clubs". The first event took place halfway across the island in the town of Moneague which is approximately a two hour drive from Kingston, where the AAJ is based. Moneague is an ideal site for any astronomy venture as it is free of light pollution. The venue was the Moneague Training Camp of the Jamaica Defence Force with who the AAJ works closely to gain access to safe and ideal locations for astronomy activities. Several schools were present in the lecture hall of the venue and were the documentary "400 years of the telescope" which was presented. Errol Rickman, the AAJ president, demonstrated how to dismantle and rebuild a Galileoscope. After the demonstrations the schools were presented with free Galileoscopes to be used to further educate and inspire the students. Moneague College and High School, Fern Court High School, Iona High School and Jeffreyville All Age School received Galileoscopes. After presentations the attendees were treated to excellent views of Saturn and Mars.





FIGURE 63: LEFT: SCHOOL REPRESENTATIVES RECEIVING GALILEOSCOPIES AT THE OFFICIAL LAUNCHING OF THEIR ASTRO CLUBS. RIGHT: AAJ PRESIDENT ERROL RICKMAN. CREDIT: WAYNE M. CHIN, JAMAICA

Receiving the grant from the GTTP, the AAJ improved its efforts in teacher training and outreach. AAJ's resident telescope expert, Bobby Rodriques, has modified a telescope in an effort to demonstrate possibilities for adaptation to teachers where students participate in the assembly process. Mr Rodriques modified a telescope to house a star diagonal for teachers who work with young students and might find it difficult to bend below the eyepiece. Mr Redriques also added a screw focus on the outside of the tube which made it much easier to change focus. Additionally, he adapted the mount to easily attach the telescope to an equatorial tripod. Schools that may not have the resources and expertise to carry out these modifications were encouraged to cooperate with their Camera Clubs where the camera tripods can be used with the versatile Galileoscope. AAJ has also been exploring options for providing tripods to schools that do not have Camera Clubs.



FIGURE 64: ADAPTED GALILEOSCOPE (UNOFFICIALLY REFERRED TO AS THE BOBBYLOSCOPE). CREDIT: ERROL RICKMAN, JAMAICA

AAJ has continued to organise viewing events at the Ritz Carlton hotel, which involve multi-day return trips through the mountains from Kingston, the city where the AAJ group is based, to Montego Bay at the opposite end of the island with several telescopes and viewing equipment. These outreach activities are aimed at visitors vacationing on the island, many of whom have never peered through a telescope before. Several visitors have joined the AAJ mailing list in a bid to maintain contact with the group and receive astronomy information.



FIGURE 65: LEFT: A YOUNG BOY TAKES HIS FIRST LOOK THROUGH A GALILEOSCOPE. RIGHT: A YOUNG WOMAN IS ENGAGED BY THE VIEW THROUGH THE CASSEGRAIN. CREDIT: AAJ, JAMAICA

2011 will see a continuation of the AAJ Astro Club and Galileoscope outreach and training drive as more schools are invited to form Astro Clubs. The AAJ has also endeavoured to participate in global astronomy and space events which include the GAM, Yuri's Night and World Space Week. AAJ is viewed as a valued partner for SGAC in Jamaica due to its continued work in outreach and promotion of astronomical, space and scientific education. AAJ reaches thousands of youths potentially accessible through their school Astro Club initiative. SGAC Jamaica looks forward to a productive partnership with AAJ for 2011.

MEXICO

CURRENT STATE OF SPACE AFFAIRS

2010 was a huge year with regards to aerospace developments in Mexico. On 31 July, the federal government approved a law that created the MEA. Since then the academy, and industries involved with the Mexican aerospace activities, have been working on the approach and statutes that will rule this institution. This has been conducted via consultancy forums and assemblies organised by different academic and government organisations such as:

- Industry Development (October 2010; Querétaro, Querétaro) organised by The Academy of Engineering
- International Relations and Legal Framework (November 2010; Pachuca, Hidalgo) organised by the Secretariat of Foreign Affairs
- Scientific and Technological Research (December 2011; Ensenada, Baja California) organised by the National Autonomous University of Mexico
- Human Resources Training (January 2011; Puerto Vallarta, Jalisco) organised by the National Polytechnic Institute

The consensus was to have conclusion forum, organised by the Secretariat of Communications and Transportation, which will be held in February 2011 in Mexico City.

The MEA is a public space agency that is formed by a governing board, a general administration, and a supervisory organisation. The governing board consists on fifteen members. The chairperson of the board is the Secretary of Communications and Transportation. Other members include the Secretariats of Governance, Foreign Affairs, Public Education, Finance and Public Credit, National Defence and Mexican Navy, the heads of the National Council of Science and Technology, the Mexican Academy of Sciences, the Academy of Engineering, the National Academy of Medicine, the National Institute of Statistics and Geography, the National Autonomous University of Mexico



president, the National Polytechnic Institute director, and a representative from the National Association of Universities and Higher Education Institutions.

As part of the 2010 Mexican schedule, the city of Pachuca, Hidalgo hosted the sixth SCA, a continental forum of regional and international cooperation. The main goal of this conference is to create a place where the leaders of the worldwide space community can discuss initiatives. These leaders can promote and strengthen the convergence between nations, their space sectors, and other useful applications that they can provide to accelerate social and economic development in the particular Latino-American block.

SGAC IN MEXICO

SGAC was present at the sixth SCA by Agnieszka Lukaszczyk (SGAC's Chair), Ariane Cornell (SGAC Executive Director), Nicole Jordan (RC for South America), and Jorge Vega Rodriguez (NPoC for Mexico).



FIGURE 66: SGAC AT THE SIXTH SCA

Also the SGAC Advisory Board members in Pachuca, Hidalgo included Sergio Camacho, the Secretary General of the Regional Centre for Space Science and Technology Education for Latin America and the Caribbean (CRETELAC) Chris de Cooker, the Head of International Relations for the ESA and Yolanda Berenguer (Space Education Programme Coordinator for the UNESCO).

Along with presentations from SGAC's Chairperson and Executive Director, the NPoC for Mexico, Jorge Vega Rodriguez, lead a presentation about basic principles of aerospace engineering at an UNESCO space outreach event held at local a middle school.

SGAC's members at Pachuca were invited to help drive SCA's Youth Forum, an event held in parallel with SCA's main conference. Young space enthusiasts made their voices heard. The RC for South America, Nicole Jordan, presented the ten final resolutions of the Youth Forum to the SCA.

THE 2010 MEXICAN YOUTH

At Pachuca it was evident that Mexican youths are taking a very active role toward the national space development. Through the year 2010, many youths undertook projects in classrooms, workshops, and labs of Mexican universities. These achievements are even more impressive when considering the fact that these projects were produced without funding.

These projects addressed branches of engineering such as mechatronics, aeronautics, and telecommunications. Some of the final products include unmanned aerial vehicles, prototypes of satellites, and remote control robots. SGAC Mexico is looking forward to working with these students in 2011.



FIGURE 67: PROJECT BY MEXICAN YOUTH

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC MEXICO

At SGAC Mexico we are looking forward to working alongside with the administration committee of the MEA consultancy forums. SGAC will participate in two assemblies that will be held during the first quarter of 2011. Also, to enable a communication path between organisations, societies and universities in Mexico City, there are plans to establish a second NPoC for Mexico. SGAC Mexico will work towards uniting the independent work teams of space enthusiasts on the SGAC network and to look for multilateral collaboration.

UNITED STATES OF AMERICA

The United States has a long history of youth involvement in the space field. Multiple SGAC members in the United States belong to SEDS, a university-based organisation dedicated to expanding the role of human exploration and development of space. Others are highly involved in Yuri's Night Celebrations around the country, as well as other local events. While SEDS and SGAC are the largest youth space organisations, there are smaller student organisations active on a local level are dedicated to space activities.

For more information on SEDS please visit: <http://www.seds.org/>

YURI'S NIGHT 2010

In 2010, SGAC US co-organised a series of Yuri's Night events across the country. In addition, Alan Steinberg, NPoC for the US, served as a liaison with the 501st Legion. Thousands of people attended the Yuri's Night events held across the country in celebration of Yuri Gagarin and the first flight of the US Space Shuttle. In addition, through approval of both Yuri's Night and the 501st Legion, a special patch was produced to commemorate the events.

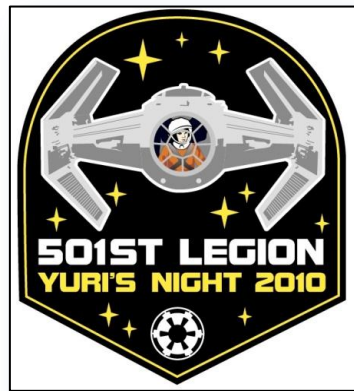


FIGURE 68: 501ST LEGION – YURI'S NIGHT 2010, US

CONFERENCE PARTICIPATION

Over the course of 2010, SGAC members have participated in a wide variety of events in the United States and abroad. SGAC Assistant Project Coordinator Tabatha Smith, attended and presented at the SpaceUp DC conference, held from 27-28 August, 2010 at the George Washington University's (GWU's) Funder Hall Auditorium. With support from multiple space organisations, such as the GWU student group, this was the second space "un-conference". Participants decided the topics, schedule, and structure of the event. Un-conferences have been held for different themes, but this one was focused specifically on space. Tabatha's presentation focused on the background of SGAC and her experiences in space and with SGAC. She talked about SGAC's history, members, and how to join, among other topics.

For more information about the SpaceUp DC conference please visit: spaceupdc.org

Stephanie Wan, RC for North America and YGNSS Project Lead, gave a presentation at the UN/IAF workshop "GNSS Applications for Human Benefit and Development". Her presentation was on youth involvement in understanding the uses of GNSS and how this knowledge, through the work conducted by the Space Generation Advisory Council, has educated students on its operation and creation of more applications to benefit more users.

Multiple SGAC members and supporters from the United States attended the Space Generation Congress 2010 in Prague. Massachusetts Institute of Technology student Ben Corbin presented his paper "Implementing Advanced Technologies and Models to Reduce Uncertainty in a Global, Cost-Effective Asteroid Mitigation Strategy," which won the Asteroid Warning System competition in 2010. In addition, SGAC supporters made a series of presentations for the event. Consultative Committee for Space Data Systems (CCSDS) Chairman Mike Kearney presented on the CCSDS and GWU professor John Logsdon presented "Once, We Went to the Moon". NASA Policy and Strategic Communications Manager Barbara Adde also presented "Space Communications & Navigation International Cooperation." SGC 2010 delegates attended the premier of a short movie on the history, present and the future of human space exploration. This endeavour was a collaborative project between SGAC and the UNL. "Space Generations: From Sputnik to Today to Tomorrow" was presented during the plenary session of the second day of SGC 2010. The production was completed through a partnership between SGAC and the UNL's Space and Telecom L.L.M. Programme. Responsible for putting together this short feature were Art Anisimov, SGAC NPoC of Belarus and space law student at UNL, and Andy Bacon, head of SGAC's NEO working group, who led the effort of putting together a video about NEOs. The short feature is the first achievement of a partnership that will ideally continue into the future.

WEBSITE RESOURCE

Over the course of 2010, continuous updates and revamping of the United States specific Space Generation pages have been an important endeavour. Now members from the US can go directly to this page to see news and events



that are most closely related to them. Many members have used this resource to work together to start designing regional and state points of contact in order to increase SGAC presence in the country.

LOOKING AHEAD- THE PLAN FOR THE FUTURE OF SGAC US

While there are many organisations that exist in the United States that promote space interest, SGAC is looking to continue to expand its impact and presence in the country.

Some specific goals include:

1. Encourage more members from the United States to participate in SGC 2011
2. Hold more space related events like Yuri's Night and World Space Week
3. Increase participation on the SGAC Forum and social networking sites
4. Work to better report on activities of SGAC members





SOUTH AMERICA

The South American Region has always been a very active and enthusiastic group within the SGAC. The visionaries and leaders of the past few years have created a strong foundation for the core values and milestones of the group. In the past year the region has experience changes and therefore this year it is necessary to strengthen and redefine the goals of the group. While there is a lot of work to be done within the region, the action plan has been narrowed to three focal areas as follows.

1. Recruit new NPoCs and general members,
2. Set up and fix the South American SGAC region blog, and
3. Redefine what it means to be a member of the SGAC South America.

REGIONAL SGAC ACTIVITIES AND HIGHLIGHTS

SOUTH AMERICAN BLOG – SGAC BEGAN REGIONAL BLOGS

SGAC started offering regional blogs beginning with the South American region in order to easily share relevant information on events and news related to space. While there has been some progress in this front, there is still a lot to be accomplished in this next year, to satisfy both SGAC requirements and the SGAC South American member's expectations.

YURI'S NIGHT CELEBRATION 2010

- 1st Uruguayan Yuri's Night Party
Victoria Alonsopérez, SGAC NPoC for Uruguay, organised the first Yuri's Night party in Uruguay. The event was a success and was funded by the Institute of Electrical and Electronics Engineering (IEEE) Uruguay section.
- Yuri's Night Venezuela
Ana Alexandra Pérez, SGAC NPoC for Venezuela, organised several activities for young students from Maria Inmaculada School in Aragua in order to raise their interest in space exploration and also to celebrate the Yuri's Night event.

SPACE GENERATION CONGRESS 2010

During the SGC 2010, Julio Aprea from Argentina, Victoria Alonsopérez from Uruguay and Ana Alexandra Pérez from Venezuela were the representatives for the South American region. Nicole Jordan was given the opportunity to be a part of the SGC organising team, in which she was the Fundraising Coordinator. Due to travel issues Nicole was not able to attend the full SGC but joined the rest of the group for the closing ceremonies. It is worth mentioning that Israel Ojeda, NPoC from Mexico was also present at the SGC and has recently worked hand in hand with the Latin American region to promote more involvement in the South, Central and North American SGAC regions.





FIGURE 69: LEFT TO RIGHT: ANA (RC FOR SA), NICOLE (RC FOR SA), CIRO AREVALO (SGAC ADVISORY BOARD MEMBER), ISRA (NORTH AMERICAN RC), SERGIO CAMACHO (SGAC ADVISORY BOARD MEMBER), VICTORIA ALONSO PEREZ (URUGUAY NPOC), AND JULIO APREA (PAST RC FOR SOUTH AMERICA)

SPACE CONFERENCE OF LAS AMERICAS

Nicole Jordan attended the Space Conference of Las Americas that took place in Pachuca Hidalgo Mexico. This conference is very important because it only takes place every four years. Nicole helped organise the Youth Forum to create recommendations for the Pachuca declaration regarding space activities in the Latin American region.



FIGURE 70: PRESENTACIÓN DE LAS RECOMENDACIONES DEL FORO DE LA JUVENTUD, A LA COMISIÓN 1-CEA 2010

ACTIVITIES IN COLOMBIA

- The University Sergio Arboleda, in Conjunction with the Secure World Foundation and the International Astronautical Federation, hosted a space law seminary to increase awareness within the region, and
 - The Sergio Aboded University hosted several Monthly Astronomy seminars.
- For more information please visit: www.astropuerta.com.co

ACTIVITIES IN URUGUAY

- Students continue their work on different systems to create the first CubeSat for Uruguay. This initiative is named Laí project and commenced in 2007,
- The first Yuri's Night Party in Uruguay was organised by Victoria Alonsopérez.
- Uruguayan students participated in the global forum; RASC-AL, and
- A space educational project, E-Scientia, was created to encourage high school students to pursue engineering careers.



ACTIVITIES IN ARGENTINA

- A new NPoC was recruited in Argentina

ACTIVITIES IN VENEZUELA

- National Astronomy meetings took place throughout the year,
- Astronomical Observations were organised by University Group for Astronomical Research,
- Space Educational Activities were organised by Ana Alexandra Pérez, and
- Yuri's Night Venezuela was celebrated for the third time and was organised by Ana Alexandra Pérez this year.

LOOKING AHEAD – THE TENTATIVE PLANS FOR THE FUTURE OF SGAC SOUTH AMERICA

- Develop, fix and organise the Latina America blog to comply with the SGAC requirements as well as satisfy the current members in the region,
- Recruit new member as well as qualified NPOCs,
- Promote Yuri's Night events and WSW celebrations, and
- Connect South American space universities and associations with SGAC.



SOUTH AMERICA NATIONAL REPORTS

COLOMBIA

Most of the space initiatives and activities that take place in Colombia are thanks to the [Colombian Space Commission](#) (CCE). This commission acts as the national space agency of Colombia. The CCE is a high level body, chaired by the Colombia Vice President and comprised of the Foreign Affairs, National Defense, Agriculture and Rural Development, Interior of Justice and Transport Ministers; the Colombian Air force Commander and the directors of the National Planning department, the Augustin Codazzi Geographic Institute (IGAC) and the Presidential Agency for the Social Action. The CCE was created by the presidential Decree 2442, in July 2006 as a result of multiple request regarding the establishment of an institutional mechanisms for the development and use of space technologies. The CCE conducts research in the fields of Telecommunications, Satellite Navigation, Earth Observation Astronautics, Astronomy and Aerospace Medicine.



This year the country focused on five different projects:

- Satellite development research Program and applications in earth observation
- National Geographic data recovery
- National Image Bank (BNI)
- Geographic Information System for territorial planning (SIGOTN)
- Colombia Airforce propulsion laboratories

SGAC ACTIVITIES IN 2010

Nicole Jordan, the NPOC for Colombia attended the Space Generation Congress that took place in Prague, as well represented the organisation in various conferences including, the



International Astronautical Congress, the National Space Symposium and the Sixth Space Conference of the Americas. The Space Congress of the Americas was probably the most important of all, since the conference only takes place every four years. Furthermore, it is not very often that Latin American countries get together to discuss space related activities and issues. At the conference, Nicole worked with the youth forum to create and compose a set of recommendations that were incorporated into the final Pachuca Declaration, something very similar to UNISPACE III's Vienna Declaration.

A second important event in 2010 was the space law seminar that took place in Bogotá Colombia. Here conversations were started between members of the SGAC executive council and the Colombian Space Commission, with the purpose of allowing the Commission to nominate one of the NPoC for Colombia. As of the end of 2010, SGAC has drafted an MOU and, we are waiting on the Colombian Space Commission legal department to approve it.

OTHER YOUTH ORIENTED SPACE ACTIVITIES IN COLOMBIA 2010

The University Sergio Arboleda in conjunction with the Secure World Foundation and the International Astronautical Federation, hosted a space law seminary, that took place in Bogotá, Colombia. The purpose was to increase awareness within the region about space. The seminar was well attended and it looks like there is a possibility of hosting another one in 2011.

On a similar note The Sergio Aboded University started a program known as Astropuerta, in which the university hosted several astronomy seminars to engage the community.



www.astropuerta.com.co



Last but not least, the former Colombia NPoC, Marco Piquete, has started a Colombian Space Magazine, known as “Al Espacio.” The idea behind the event is to collect different information about space related activities in Colombia.

PLANS FOR 2011

- Seal the MOU with the Colombian Space Commission and recruit a second National Point of Contact who is local in the country and can be more active in the local youth oriented space activities.
- Coordinate a SGAC Latin America region summit in conjunction with Colombia’s Sergio Arboleda University and the International Astronautical Federation.

URUGUAY

In Uruguay most of the aerospace related activities are youth oriented. In particular, this year there were many activities aimed to encourage young students to pursue science careers. Furthermore, several Uruguayan university and high school students participated in international aerospace competitions.

ACCOMPLISHMENTS IN 2010

1ST URUGUAYAN YURI’S NIGHT

Yuri’s Night was celebrated for the first time in Uruguay in 2010. It was organised by Uruguay’s SGAC NPoC, Victoria Alonsoperez, at the Student Branch of the Institute of Electrical and Electronics Engineering from the Universidad de la Republica and it was funded by the IEEE Uruguay Section. The party was a great event to promote space to young people. At the beginning, Engineer Marcel Keschner made a presentation about the Space Race.



FIGURE 71: THE FIRST URUGUAYAN YURI’S NIGHT, VICTORIA ALONSOPEREZ, SGAC NPoC AND SOME OF THE ATTENDEES.

LAI PROJECT

The objective of Project LAI is to put the first Uruguayan CubeSat into orbit. This project is led by Professor Juan Pechiar who saw this as a way to involve students in the practise of engineering in aerospace activities. The project



is being completed at the Institute of Electrical Engineering at the Universidad de la República (UdelaR), and is the result of work and research completed entirely by undergraduate students.



FIGURE 72: GLOBOSAT, URUGUAY

For the first stage of the LAI project, four Stratospheric Balloons were released called "GloboSat", which carried a custom-made device for testing cosmic ray effects on new generation RAM chips. Sixteen students have been directly involved in the development of the GloboSat platform, including the NPoC of SGAC Uruguay, Victoria Alonsopérez. Currently, there are three groups of students working on different systems that compose the CubeSat. Each one is composed of three undergraduate students. One group is responsible for developing and implementing a complete power system and of making a complete thermal analysis. Another group is in charge of making the telemetry system. The third group, which includes Victoria Alonsoperez, is working on the Attitude Determination and Control System. It is hoped that in 2012 the CubeSat will be completed and ready for testing.

For more information please visit: <http://iie.fing.edu.uy/investigacion/grupos/lai>

SPACE GENERATION CONGRESS 2010-PRAGUE

Victoria Alonsoperez was a part of the SGC 2010 team as a projects co-coordinator. Thanks to the SGAC Young Leader Scholarships, she could attend the SGC in Prague. During the SGC, she discussed Uruguay's current situation and ways to promote space in developing countries. She also discussed these issues at the SGC Booth at the IAC. Furthermore, during her stay in Prague Victoria spoke to important representatives from Latin America and from the rest of the world.



FIGURE 73: VICTORIA ALONSOPEREZ (URUGUAY) DURING HER STAY IN PRAGUE.



REVOLUTIONARY AEROSPACE SYSTEMS CONCEPTS – ACADEMIC LINKAGE

The National Institute of Aerospace, in collaboration with NASA, organises the annual RASC-AL forum. In 2010, the forum had its first and only foreign participation which was by a multidisciplinary team of Uruguayan students. In order to take part in the forum the students collaborated with a team from Rutgers University.

The project, submitted by the Uruguayan student Bidu Guiday, worked on the design of a lunar base, taking into consideration the aspects that are necessary for human life. They developed a self-sustaining and economically viable base. Furthermore, it was designed for the comfort of the human being, for example, they planned the construction of a “Piazza” as a place to relax. The Uruguayan group consisted of students from the Universidad del Trabajo del Uruguay and Udelar. The group was made up of an architecture student, two computer science students, two graphic design students and four electrical engineering students, Victoria Alonsoperez was one of the members. The experience was truly unforgettable for all the Uruguayan students that could exchange ideas with people from NASA. The project had two mentions, "Most Innovative Architectural Design" and "Best Title". In Uruguay the students went to several conferences and schools to encourage young people to get involved in aerospace activities and in international competitions.



FIGURE 74: LEFT: STUDENTS AT THE KENNEDY SPACE CENTRE. RIGHT: STUDENTS DURING PRESENTATIONS.

INTERNATIONAL ASTRONAUTICAL CONGRESS 2010

Victoria Alonsoperez, SGAC NPoC, presented a paper at the IAC 2010 named “Enhancing Undergraduate Studies in Uruguay with Aerospace Activities” at the 11th UN/IAA Workshop on Small Satellite Programmes at the Service of Developing countries. She described the aerospace activities in Uruguay and specifically the LAI Project. She also emphasised the need for international cooperation and proposed a programme based on a global network to integrate international cooperation.

E-SCIENTIA

E-Scientia is a project that was developed by the Uruguay Section of IEEE in collaboration with the IEEE Educational Activities Board. The objective of this project is to encourage high school students to pursue engineering careers. Groups of ten students enter the base and become part of a mission where they must work on different modules. They are given electronic devices and instructions and with that they must build a circuit. It is a great way to initiate students in engineering and there was a great receptivity from the students. Victoria Alonsoperez volunteered as the captain of the mission.

For more information please visit: <http://www.e-scientia.org/es/>





FIGURE 75: E-SCIENTIA, URUGUAY

LOOKING FORWARD – THE PLAN FOR THE FUTURE OF SGAC URUGUAY

SGAC Uruguay will continue to attend several youth events promoting SGAC. The aim is to keep encouraging young people in aerospace activities and let them know that every field has something to do with aerospace.

SOCIAL EVENTS

There are plans to make the Second Uruguayan Yuri's Night event in 2011.

COMPETITIONS

Continuing this year's successful experience at international aerospace competitions, there are plans to participate in several students competitions.

E-SCIENTIA

The project E-Scientia will continue and it will be taken to other parts of the World.

VENEZUELA (BOLIVARIAN REPUBLIC OF)

Space related activities in Venezuela for youth include rocket competitions, astronomy observations, aeronautical projects and space education activities in schools. WSW and Yuri's Night have been the main focus of recent SGAC activities. These events have been developed in the past years to educate the public about the benefits of space, and the opportunities offered by space agencies and associations.

ACCOMPLISHMENTS IN 2010

YURI'S NIGHT VENEZUELA

On 16 April, 2010, Venezuela celebrated Yuri's Night through an innovative event, different from the networking event organised in 2009. This year, Ana Alexandra Pérez, SGAC RC for South America, organised several activities for young students from Maria Inmaculada School, Aragua, in order to raise their interest in space exploration.



FIGURE 76: URUGUAY'S YURI'S NIGHT (PHOTO BY ANA ALEXANDRA PÉREZ)

Short lectures explaining the story of Yuri Gagarin and his achievements were presented in several classrooms. After the presentations the children gathered together in an exhibition area, where their posters and drawings were showcased. They also modelled their costumes of astronauts, aliens or stars.

To check out the photos, visit: <http://picasaweb.google.com/sqaclatin/YuriSNightVenezuela2010>

SGC & IAC, 2010, PRAGUE, CZECH REPUBLIC

Venezuela's representative during the SGC and IAC 2010 in Czech Republic was the RC for South America, Ana Alexandra Pérez, who was one of the winners of the SGAC Young Leader Award.

HIGHLIGHTS

OPPORTUNITIES OFFERED BY CENTRO DE INVESTIGACIONES DE ASTRONOMÍA

Centro de Investigaciones de Astronomía (Astronomy research centre), Venezuela, provides opportunities to physics, mathematics and engineering students from the space field to participate in summer astronomy courses every year. In 2010, Karla Mariana Dominguez, chemical engineering student of the Simon Bolivar University, received a scholarship to attend to this course. The course consists of theory and practical classes about amateur astronomy, telescopes and light history, star and galaxies classifications, the solar system, the origin of the universe and cosmology in general.

VENEZUELAN ASTRONOMY MEETING MÉRIDA 2010

During December's second week the astronomy research centre of Venezuela organised a Venezuelan Astronomy Meeting which gathered university students and young professionals from all over the country to share their achievements in astronomy.

LOOKING AHEAD – THE PLAN FOR THE FUTURE OF SGAC VENEZUELA

Venezuela is looking forward to continuing participation in annual space celebrations, as they are a great opportunity to raise awareness. One of the main objectives for 2011 is to promote space by educating young people and by organising competitions or astronomical observations.



SGAC
SPACE GENERATION ADVISORY COUNCIL

APPENDICES

APPENDIX A: ADDITIONAL SGAC WEBSITES

FACEBOOK

[<http://www.facebook.com/group.php?gid=2218401662&ref=ts>](http://www.facebook.com/group.php?gid=2218401662&ref=ts)

YOUTUBE

[<http://www.youtube.com/profile?user=spacegeneration>](http://www.youtube.com/profile?user=spacegeneration)

WIKIPEDIA

[<http://en.wikipedia.org/wiki/Space_Generation_Advisory_Council>](http://en.wikipedia.org/wiki/Space_Generation_Advisory_Council)

TWITTER



[<http://twitter.com/sqac>](http://twitter.com/sqac)



APPENDIX B: SGAC 2010 EXECUTIVE TEAM

The SGAC Executive Team members

Executive Office






	Title: Chairperson
	Name: Agnieszka Lukaszczyk
	Location: Poland/US
	Title: Co-Chairperson
	Name: Michael Brett
	Location: Australia

Executive Office

	Title: Executive Director
	Name: Ariane Cornell
	Location: France/US
	Title: Treasurer
	Name: Julie Rowe
	Location: New Zealand

	<p>Title: Executive Secretary</p> <p>Name: Maria Laura Voda</p> <p>Location: Romania</p>
	<p>Title: Communications & Public Relations Lead</p> <p>Name: Oana Sandu</p> <p>Location: Romania</p>
	<p>Title: Project Coordinator</p> <p>Name: Cem Ozan Asma</p> <p>Location: Turkey</p>
	<p>Title: Assistant Project Coordinator</p> <p>Name: Tabitha Smith</p> <p>Location: US</p>
	<p>Title: Executive Office Intern</p> <p>Name: Sonja Russell</p> <p>Location: Australia</p>

Regional Coordinators (Executive Council)

	<p>Title: Regional Coordinator – Africa</p> <p>Name: Prosperity Simpemba</p> <p>Location: Zambia</p>
	<p>Title: Regional Coordinator – Africa</p> <p>Name: Hubert Foy Kum</p> <p>Location: Cameroon</p>
	<p>Title: Regional Coordinator – Asia Pacific</p> <p>Name: Muhammad Shafiq</p> <p>Location: Pakistan</p>
	<p>Title: Regional Coordinator – Asia Pacific</p> <p>Name: Yohan Fereira</p> <p>Location: Sri Lanka</p>
	<p>Title: Regional Coordinator – Europe</p> <p>Name: Daniela Petrovna</p> <p>Location: UK</p>

	<p>Title: Regional Coordinator – Europe</p> <p>Name: Damian Maria Bielicki</p> <p>Location: Poland</p>
	<p>Title: Regional Coordinator – Middle East</p> <p>Name: Mahsa Taheeran</p> <p>Location: Iran</p>
	<p>Title: Regional Coordinator – Middle East</p> <p>Name: Hasan Aziz Kayihan</p> <p>Location: Turkey</p>
	<p>Title: Regional Coordinator – North, Central America and the Caribbean</p> <p>Name: Israel Ojeda Coronado</p> <p>Location: Mexico</p>
	<p>Title: Regional Coordinator – North, Central America and the Caribbean</p> <p>Name: Stephanie Wan</p> <p>Location: US</p>

	Title: Regional Coordinator – South America
	Name: Nicole Jordan
	Location: Colombia
	Title: Regional Coordinator – South America
	Name: Ana A. Perez
	Location: Venezuela

APPENDIX C: SGAC 2010 NATIONAL POINTS OF CONTACT

The SGAC NPoCs

Name	Country
Africa	
Hubert Foy Kum	Cameroon
Bekele Tujuba	Ethiopia
Beza Tesfaye	Ethiopia
Abdul-Mumin Yussif	Ghana
Susan Murabana	Kenya
James Okwe Chibueze	Nigeria
Etim Offiong	Nigeria
Minoo Rahnasabapathy	South Africa
Hosham Gala	Sudan
Misheck Mutuzana	Zambia
Asia Pacific	
Ahmad S. Hakimyar	Afghanistan
Andgie Boyd	Australia
Shannon Ryan	Australia
Yuqian Dong	China
Catherine Doldirina	Georgia
Athiye Jawad	India
Pradeep Mohandas	India
Hiroshi Yamashita	Japan
Yuki Takahashi	Japan
Ahmad Kassim	Malaysia
Harridon Mohd	Malaysia
Rijendra Thapa	Nepal
Suresh Bhattarai	Nepal
Julie Rowe	New Zealand
Muhammad Atteeq	Pakistan
Wajahat Nassar	Pakistan
Heejin Jeong	South Korea
Yeongju Kim	South Korea
Thiwanka Chameera	Sri Lanka
Pathara Limsira	Thailand
Ravit Sachasiri	Thailand
Thu Vu Trong	Viet Nam



Name	Country
Europe	
Klaus Kornfeld	Austria
Artiom Anisimov	Belarus
Pieter Bettybier	Belgium
Pieter Jan Van Asbroeck	Belgium
Pavel Paces	Czech Republic
Juergen Schlutz	Germany
Oliver Troll	Germany
Angeliki Kapoglou	Greece
Patrick Crowley	Ireland
Vanessa Passoni	Italy
Nunzia Paradiso	Italy
Michał Moroz	Poland
Pedro Rodrigues	Portugal
Vera Alves	Portugal
Maria-Laura Voda	Romania
Ekaterina Rezugina	Russia
Maite Trujillo	Spain
Rishi Sharda	United Kingdom
Middle East	
Daniel Rosenberg	Israel
Ghanim Al-otaibi	Kuwait
Metehan Sezgin	Turkey
H. Tuğça Şener Şatır	Turkey
North, Central America & Caribbean	
Annie Martin	Canada
Laura Drudi	Canada
Andres E. Mora Vargas	Costa Rica
Marc Cornwall	Jamaica
Jorge Vega Rodriguez	Mexico
Alan Steinberg	US
South America	
Nicole Jordan	Colombia
Victoria Alonsoperez	Uruguay
Ana A. Perez	Venezuela



APPENDIX D: THE SGAC BOARDS

The SGAC Advisory Board

Name	Title
Adigun Ade Abiodun	Founder of the African Space Foundation
Ambassador Ciro Arevalo	Former chairman of the United Nations Committee on the Peaceful Uses of Outer Space
Ben Baseley-Walker	Legal & Policy Analyst for Secure World Foundation & former SGAC Chair
Yolanda Berenguer	Space Education Programme Coordinator for the United Nations Educational, Scientific and Cultural Organization
Lance Bush	Chief Strategy Officer, Paragon Space Development Corporation
Sergio Camacho	Secretary General of the Regional Centre for Space Science and Technology Education for Latin America and the Caribbean (RECTELAC)
Chris de Cooker	Head of International Relations for the European Space Agency
Clay Mowry	President of Arianespace, Inc.

The SGAC Honorary Board

Name	Title
Barbara Adde	Policy and Strategic Communications Manager for NASA's Space Communication and Navigation programme
Jim Burke	Former NASA Jet Propulsion Lab employee and former International Space University faculty member
Lin Burke	Former International Space University programme assistant
Gernot Groemer	Professor and researcher at the University of Innsbruck in Austria
Johannes Ortner	Former president of the International Astronautical Federation and Vice-President of Eurisy
Kai-Uwe Schrogl	Director of the European Space Policy Institute
Loretta Whitesides	Co-Founder of Yuri's Night



APPENDIX E: THE SGAC 2010 TEAMS

The SGAC Communications and Public Relations Team

Name	Country	Position
Communications and Public Relations Team		
Oana Sandu	Romania	Communications & Public Relations Lead
Marc Cornwall	Jamaica	Graphics Lead
Alexandra Ruths	Austria	Newsletter Lead
Beata Mäihäniemi	Poland	Reporter
Web Team		
Hasan Aziz Kayihan	Turkey	Web Editor
Christopher Vasko	Austria	Web Editor
Iram Meer	India	Web Editor
ECOSOC Representatives		
Wajahat Nassar	Pakistan	ECOSOC Representative
Jose Rojas	Spain	ECOSOC Representative
Translation Team		
Ana A. Perez	Venezuela	Spanish Translator
Assad Anathallee	Mauritius	French Translator
Klaus Kornfeld	Austria	German Translator
Ghanim Alotaibi	Kuwait	Arabic Translator
Yuqian Dong	China	Chinese Translator
Rosie Shaddock	UK	Spanish Translator
H. Tuğça Şener Şatır	Turkey	Turkish Translator
FP 7 Fundraisers		
Magdalena Jecz	Poland	FP 7 Fundraisers
Alessandra Badino	Italy	FP 7 Fundraisers





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