



South African Programme 2014

The Goals of the 2014 Programme

Implement school level awareness programme for young women with a view to expand into to a mentorship programme

Increase undergraduate and postgraduate opportunities for African women in aerospace including a funding programme

Implement a graduate internship programme and collaborate with industry and Government to increase employment opportunities for women in aerospace

These programmes address different age groups and requirements and will include:

Primary school activities (6 - 12 years)

High School activities (13 - 18 years)

- Rocket Building Workshop

- CANSAT Programme

Undergraduate Students

- Participation in supplementing youth programmes

- Mentorships and internships

Post Graduate Students

- Graduate programmes

- Proposed International Space University Bursary Scheme

Aerospace Industry participants

- Networking

- Conferences



Primary school activity programme:

Primary school activities would be a coordinated effort with the science centres and activities to interest young minds in STEM subjects with an activity focus on aerospace. The activities would include a visit or online interactive discussion with a female astronaut. Live uplinks to NASA facilities allow for interactive activities such as remotely driving the test Mars rover. This activity was well received in 2010 and significantly impacted the youth that participated. Fun learning for younger children would include space art activities and water rocket launches.

A high school activity programme:

This would be a fun and informative day on the importance of space in our everyday lives and how satellites work to peak the curiosity of the students. The follow up activities for interested students would include the Rocket Building Workshop and the CANSAT programme.



The Rocket Building Workshop

Parallel workshops will be hosted in order to demonstrate to science teachers how they can teach the basic principles of rocketry, different types of rockets and the basic components of a simple solid fuel rocket and of course safety principles. The students would then built their own rockets using simple every-day materials, such as cardboard tubes, glue and craft knives. This programme will ideally roll out into schools across the country and WIAA South Africa would coordinate this with the participation of the SA Space Association student Chapters.

This programme was coordinated in 2010 as a SA Space Association World Space Week initiative. Grade 7 and 8 scholars and their teachers from various schools in the Western Cape were invited to the South African Astronomical Observatory to participate in a rocket building workshop. The students learnt about the The highlight was the launch event. Many of the rockets reached heights of 300m, or higher.





The CANSAT Building Workshop

At the end of September 2011, two teams represented SA Space Association UCT student chapter at a CANSAT competition at the Overberg Test Range near Arniston, South Africa. Each team (One team incorporating local high school students) was required to build a CANSAT.

A CANSAT is essentially a model of a satellite, the size and weight of a soda can, that takes pressure and temperature readings with additional functionality (chosen and implemented by the teams). They were then launched on board a rocket built by Delft University.

Both teams were very successful in receiving all real-time data from their CANSAT's and the event has inspired SASA UCT student chapter to run the activities annually.

Some local private schools have also offered to make their laboratory facilities available to collaboration in the project with less advantaged schools in the area.





Undergraduates, Post Graduates and Educators

WIA Africa looks to establish a bursary fund with contributions from government, industry and the International Space University to enable further space science studies for African female graduates.

Increase undergraduate and postgraduate opportunities for African women in aerospace by the provision of funding mechanisms as well as implementation and collaboration in graduate internship programmes and.

Space Foundation, USA runs a number of programs planned for Educators and offers a number of scholarships for educators, covering part or all of the costs for teachers to attend.

Competitions

WIA Africa would like to set up an annual student design-build-launch competition for space-related topics.

This would be open to open to teams from universities and colleges. Teams must be able to design and build a space-type system, following the approved competition guide, and then compete against each other to determine the winners. Rockets would be provided by WIA Africa.

The prize would be a trip to space camp or Zero G in the USA with all costs covered by WIA Africa and its sponsors.



Training

One of the main goals of WIA-Africa is to enable our members to fully realise their potential. To help them do this, we will regularly organise training workshops and seminars on a wide variety of topics, with skilled and experienced trainers.

Networking opportunities

WIA Africa would like to host networking events as well as formal and informal discussions and interaction with leading aerospace professionals from government, academia and the private sector.

Mentorships and Big Sister Programme

WIA Africa would like to set up a mentoring programme would put potential mentors and mentee in touch (either in person or remotely) so that experience can be shared and learned from.

All members would be welcome to put themselves forward as mentor for a specific subject or to ask for support as a protégé, and we would be able to put these parties in touch to create a valuable and interesting experience.



Women in Aerospace Africa Programme 2014

Annual Conference

To be held in conjunction with SA Space Association Conference annually in South Africa. This could be a South African initiative or could become the start of an African conference initiative hosted in a different African country annually.

Annual Dinner and awards:

Annual dinner and awards evening to be held, for all WIA Africa members and sponsors.

WIA Africa recognises the achievements of outstanding individuals in aerospace and upcoming talents - young professionals and students alike - and for this we set up our awards programme to be given out at the annual dinner.

This event could either be sponsored by a company or tickets could be sold to cover venue and food costs.