Statement by South Africa

The 51st session of the Scientific and Technical Subcommittee (February 2014)

Committee on the Peaceful Uses of Outer Space

Delivered by Ms Lydia Greyling: Chargé d'Affaires, South African Permanent Mission, Vienna

14 February 2014

Agenda Item 4: General exchange of views

Mr Chair,

It is with great pleasure that the South African delegation participates in this 51st session of the Scientific and Technical Sub-committee of COPUOS.

Allow me to begin by congratulating you on your election as the chair of this Subcommittee. We are confident that under your able leadership the Subcommittee will make significant progress in its consideration of the various agenda items before us. We assure you of our delegation's full support.

We also wish to express our appreciation for the work carried out by the Office for Outer Space Affairs, and the Secretariat for their dedicated work in the preparations for this session.

I would like to express our support for the candidatures of Luxembourg, as member, and the African Association of Remote Sensing for Environment (AARSE) as permanent observer of COPUOS.

Mr Chair,

TshepisoSAT is South Africa's first nanosatellite in space, which was developed by students and staff at the Cape Peninsula University of Technology with funding from the government. The satellite, carrying the spacecraft registry number ZA-003, was launched on 21 November 2013 from Yasny, Russia.

As South Africa mourned the passing of former President Nelson Mandela, TshepisoSAT transmitted the great statesman's clan name "Madiba" every thirty seconds from space as a tribute to the father of our democratic nation. The satellite's callsign was received by amateur radio enthusiasts and other CubeSat groups around the world, as it was transmitted from space as a radio beacon during the mourning period. Whilst TshepisoSAT measures no more than 10 x 10 x 10 cm, which makes it tiny among spacecraft, it paid dignified respect to a political colossus.

Mr Chair,

South Africa places great importance to the development of space science and technology. This is informed by the important role space technology can play in the

socio-economic development of our country and our continent in pursuit of a better world for all.

In November 2012, the African Ministerial Committee for Science and Technology (AMCOST) requested the African Union Commission to establish a Space Science Working Group comprising representatives of member states from all five regions within Africa, to develop an African Space Policy and an African Space Strategy, thus providing a framework for promoting the development of the African space sector. The Working Group, chaired by South Africa, concluded the development of an African Space Policy. The Policy is currently awaiting approval of AMCOST, scheduled to meet in Namibia in October/November of this year.

We are also delighted to report that the development of the African Space Strategy is well underway and it too, once finalized, will be served for approval at the next AMCOST meeting. It is important to note that these developments are fully resourced and supported by the African Union Commission.

Mr Chair,

South Africa recognizes the monitoring of space weather as being of great importance, not only from technological but also from an industrial developmental perspective. To contribute in this global endeavor, South Africa has established a Regional Warning Center for Space Weather in Africa under the International Space Environment Service (ISES). Various research and application development projects are underway to establish a capability to predict and forecast the regional impact of space weather over the African region. South Africa's interest lies in the technological impacts of space weather, particularly within the communication, navigation, aviation and energy sectors. We appreciate the international collaboration that has been extended to South Africa and look forward to being a global player in this arena. In this regard, Dr Lee-Anne McKinnell from the South African National Space Agency (SANSA) represented our delegation at the Expert Meeting on Improving Space Weather Forecasting in the Next Decade that was held as a side meeting to the STSC this year.

Mr Chair,

The increase of space debris is also a matter of concern for my delegation due to the risk that it poses to space systems, and a consequent risk of disruption of the many space-based services on which we all rely. In this regard, we are pleased to note the

progress of the Working Group on the Long-Term Sustainability of Outer Space Activities, under the chairmanship of Dr Peter Martinez from South Africa. We acknowledge with appreciation the excellent work of the many experts that participated in the four expert groups established under this working group. The expert groups have proposed a series of candidate guidelines that will greatly support the objective of the Working Group to produce a set of voluntary guidelines that may be applied by all space actors to enhance the safety of outer space activities and preserve the space environment for future generations. We call on all Member States to continue supporting the Working Group.

South Africa also applauds the work of the Subcommittee on the issue of Near Earth Objects. The impact of a small body over Chelyabinsk at this time last year was a chilling reminder that impacts by solar system bodies are a very real form of natural disaster that can strike anywhere at any time. Unlike most other natural disasters, cosmic impacts are highly predictable in both time and location, provided we devote adequate observational resources to the discovery and tracking of such objects. South Africa is currently exploring the potential of collaborating with the National Aeronautics and Space Administration (NASA) on the Asteroid Grand Challenge Initiative.

Mr Chair,

I'm pleased to report in this meeting, progress in space related activities in my country that we have achieved since the last Scientific and Technical Sub-Committee meeting in February last year.

We value the importance of international cooperation and collaboration for the development of space science and technology.

In this regard, South Africa is a co-chair and founding member of the Group on Earth Observations (GEO), which is charged to implement the Global Earth Observation System of Systems (GEOSS). In addition South Africa Co-Chairs the Post-2015 and Data Sharing Working Groups, and also participated in the GEO Ministerial Summit Working Group in Geneva. These working groups are critical for the free and open data exchange between the developed and developing countries for the advancement of Earth Observation for sustainable development. The GEO Ministerial has endorsed the continuation of GEO beyond 2015, which acknowledged the collaboration of member states and participating organizations in GEO, in an effort to continue the studies of the different Earth's systems.

In response to GEO, at a national level, South Africa is pleased to report that the National Earth Observation and Space Secretariat – NEOSS was established to enhance collaboration between all Earth observation stakeholders and promote GEO's data-sharing principles. This has demonstrated how national organizations can save costs on projects that could be shared and can discourage working in silos. To date South Africa has managed to bring together government, private sector, academia and research institutions under one roof to assist policy makers in shaping the future of Earth observation nationally.

In the EU-RSA Space Dialogue two thematic areas, Earth Observation and Navigation were chosen as priority areas for cooperation. To this end, South Africa is also playing a leadership role in advancing the implementation of the Global Monitoring of Environment and Security (GMES) and Africa initiative, also known as the Bridging Actions for GMES and Africa (BRAGMA), an (European Union Framework Programme 7) FP7 project. In November 2013, South Africa, together with the African Union and European Commission, hosted a validation and calibration workshop on GMES and Africa. The outcome of this meeting **called for the implementation of GMES & Africa,** to be coordinated under the African Space Policy once finalized. The finalization of crosscutting issues such as governance, infrastructure and capacity building, are still deemed necessary.

The EU Commission and South Africa agreed on a step-wise approach for the provision of EGNOS services to support air navigation in Southern Africa. An initial performance level corresponding to Non-Precision Approach (NPA) shall be provided, with subsequent steps towards the provision of Approach with Vertical Guidance (APV-I) navigation performance. The higher performance could be achieved either through augmentation of the RIMS density or through upgrade of the RIMS with dual-frequency capability.

Mr Chair,

South Africa is also currently completing a proposal for the establishment of a Pan African University (PAU). We believe this is a laudable initiative given the work in progress on the African Space Policy and Strategy, as well as the African Resource Management Constellation. The PAU concept involves the promotion, networking and development of programmes and research centers within some existing universities in the five geographic sub-regions of the continent. Southern Africa has been earmarked to host the Space Science component of the PAU and South Africa will be proposing existing programmes as nodes that will cater for Earth observation, satellite communications, navigation and positioning, space physics and astronomy.

Mr Chair,

South Africa has identified the SKA and the MeerKAT, given its immense implications for information and communications technologies on the continent, as one of eighteen Strategic Infrastructure Projects (SIPS) by the Presidential Infrastructure Coordinating Committee. It is one of two knowledge SIPs that is expected to make a significant contribution to South Africa's transition to a knowledge-based economy.

South Africa is proud to report that the development of the ROACH digital processing and high-speed data reduction board, as part of South Africa's research and development work towards the SKA, has been immensely successful and is currently in use by many radio observatories around the world. South Africa is currently looking into 3rd generation developments and commercialisation of the ROACH board. The ROACH board will have applications in such diverse fields as computational bioinformatics, financial modeling and seismic data processing.

South Africa is also making significant progress with respect to the development of the African VLBI Network, a network of radio astronomy and space geodesy observatories across the African network. Work has started on the conversion of a 32-meter dish in Khutunse, Ghana. South Africa is also currently hosting six Ghanaian engineers for training for six months in order to build the engineering capacity needed for the conversion, operations and maintenance of the dish in Ghana. We will also be installing a 7.6-meter training telescope in Mozambique in June of this year.

Mr Chair,

As we develop our space activities, South Africa remains committed in utilising space for peaceful purposes and for the benefit of humankind.

Thank you, Mr Chair.