SKA Organisation Director-General Prof. Phil Diamond's Speech at the MeerKAT Inauguration Ceremony

South Africa, 13 July 2018

Mr President, your excellencies, distinguished guests, colleagues & friends,

It is an honour to be here today. A generation ago, South Africa set out a bold vision to transform and empower the country, and we in the rest of the world have watched your journey with hope and admiration ever since.

In this journey, our South African colleagues have built on a small existing astronomy infrastructure to develop and create a thriving field, with astronomy degrees in universities up and down the country, an enthusiasm for science, and some of the best telescopes in the world. Using home-grown talent, innovation, and ambition, they have created MeerKAT, a proudly South African instrument, yet attracting collaborators from around the world. And today we stand here, in the Northern Cape, in South Africa, in Africa, to inaugurate what is the most powerful radio telescope in the world. A telescope that sets a new benchmark in astronomy, and a new benchmark in the internationalisation of South African science.

South Africa has seen a knowledge revolution, and now, with this new instrument, it stands poised to be at the forefront of astronomy and data science. The advances that will come, from South African scientists and others from all over the world, will be many-fold. Their origin will be right here, in this magnificent new infrastructure.

I want now, to look to the future.

In 2012, South Africa and Australia were chosen as the sites to co-host the Square Kilometre Array -SKA for short.

What is unique about the SKA is that no single country owns it. The SKA is a global project. It is Desmond Tutu who said that "Differences are not intended to separate, to alienate. We are different precisely in order to realize our need of one another." The SKA is a testament to this. Twelve sovereign countries & their governments fund it, and this number is growing. Instruments, antennas, technology and software are being developed in 20 countries from Canada to Spain, Sweden to South Africa, the Netherlands to China. And eventually, all of this equipment will make its way to the sites in Australia and here in South Africa.

This wouldn't be possible without the strong and continuous support of the governments of all of our partner countries, and the large investments being made, in particular in the SKA's three host countries: Australia, South Africa, and the UK, where the SKA Global Headquarters is just being completed as we speak. In South Africa, the infrastructure, the roads, the power, the fibre optic networks, the telescopes, the supercomputing centres you have built, but also the skills you have taught and the experts you have trained, are crucial in making the SKA possible.

In doing so, MeerKAT and the SKA are having an impact well beyond science, delivering opportunities in technology development and big data, promising spinoffs, creating jobs, skills, and providing education. In this respect the Human Capital Development Programme our SARAO colleagues have been successfully running in the country is in itself exemplary, having awarded academic financial support to over a thousand recipients since its inception in 2005, and having contributed to support and uplift the local communities around the site. The SKA's top international governing body, the Board of Directors which I report to and which is here with me today, keeps a keen eye on those developments.

"It always seems impossible until it's done" said Nelson Mandela. Today, MeerKAT is done. It stands at the end of a chapter, and at the start of another one. South Africa and the South African people should be proud: this is a fantastic milestone for the country, that will certainly make history. Now the science can start in earnest, and you can reap the scientific benefits of all your hard work.

The SKA is at the end of a chapter too. With the detailed design wrapping up this year, and the imminent creation of the intergovernmental organisation that will run the international SKA Observatory, the start of construction is around the corner.

MeerKAT, as well as the HERA telescope here in South Africa, and ASKAP and MWA in Australia, are what we call precursor instruments, and alongside several other pathfinder facilities located around the globe in SKA countries, they are providing invaluable lessons to us in how to do things. And in a few years' time, when it has conducted its major science programme, MeerKAT will become an integral part of SKA, and so the anticipated success of the SKA heavily relies upon the success of MeerKAT. In fact some receiver bands for the future SKA telescope are being tested on MeerKAT as we speak, showing a seamless compatibility between these instruments.

Earlier today we saw the the SKA Prototype Dish, which arrived here on site just a few days ago and is due to be assembled in the next few weeks. Its makeup symbolises the SKA: made in China, Germany and Italy, it includes instruments from Sweden, South Africa and the UK, and contributions from Canada and France. It is only the first of many. In due time, another 133 SKA antennas plus the 64 MeerKAT dishes will fill this plain, and, eventually, we hope, more will extend into other African countries, creating without doubt, the largest research infrastructure on the planet.

It is the job of the SKA Organisation that I lead to deliver this, and so, Mr President, Excellencies, I look forward to continuing to work with you and your officials, your scientists and engineers; and to engage with the African partner countries represented here today, and other interested African countries, to deliver on this bold vision that we all share.

Congratulations to all of you,

Thank you.