Address by the Minister of Science and Technology
(South Africa), Naledi Pandor MP, to Namibian MPs,
Hilton Hotel, Windhoek, 12 August 2014

Honourable Minister David Namwandi, Minister of Education
of the Republic of Namibia
Honourable Members of Parliament,
Ladies and gentlemen

It's a pleasure to be here today and I greatly appreciate the
invitation extended to me by Minister Namwandi.

As you will know in 2012 a group of African nations, led by
South Africa and Namibia, was successful in winning an
international bid to host the Square Kilometre Array (SKA) in
2012. I come here from Pretoria to share with you some
reflections on why we entered the bid competition, what we
did to win it, and how our experience can perhaps help
Namibia.

Most importantly, however, I want to discuss with you the
importance of concerted investments in science, technology
and innovation, as key drivers for sustainable growth and
development in our countries, the region and the continent.
In this regard, astronomy partnerships, present us with
unique and invaluable opportunities.

I accordingly greatly appreciate the invitation to address you
on the importance of astronomy for science and development
in Africa.

I want to discuss with you why investing in astronomy should
be a strategic priority for Namibia and the entire African
continent. I do not need to tell you about the many, pressing socio-economic challenges facing our continent. The African development challenges related to food security, poverty, and unemployment are well documented and often discussed. Today our focus is different, it highlights the role of science and technology, and specifically the building of Africa’s own research and innovation capacities, in boosting growth and development, eradicating poverty and fostering global sustainable development. Of course, investment in research can help address many of our development challenges, but today, we focus on astronomy.

Africa must commit to building its own knowledge generation and innovation capacities. The harnessing of science and technology is not only an opportunity, but also an essential requirement for our continent to extricate itself from the trap of poverty and low growth. There are several African-led science and technology initiatives that are starting to deliver concrete results, paving the way for Africa to play its full part in global knowledge-based activities. For example, South Africa’s MeerKAT telescope programme is already in use and demonstrates radio astronomy’s potential to be an unrivalled platform for training the next generation of African scientists and engineers, and for driving innovation in vital economic sectors, such as ICT infrastructure and energy.

In the first decade of democracy we decided to focus on those science and technology domains where we enjoys a comparative advantage in geography or knowledge. Astronomy is one such discipline where Africa enjoys a considerable comparative advantage, due to the excellent
conditions for observation on our continent. We have access to the Southern skies, with large territories unscarred by light pollution or radio-interference.

We must exploit this geographic advantage for the maximum benefit of our people. South Africa is already investing in astronomy as a priority science mission. The Southern African Large Telescope (SALT), MeerKAT, SKA. Namibia is already investing in astronomy. You already host the HESS gamma-ray telescope, a unique African-European partnership initiative, which in 2007 was awarded the European Union’s prestigious Descartes Prize for scientific excellence.

In our experience, astronomy creates great excitement among our youth. Training programmes in astronomy are helping us to expand Africa’s future workforce of knowledge workers and engineers. We already have promising results. As a result of the various human capital development programmes associated with Africa’s SKA bid, new astronomy programmes have been established at several African universities, including in Kenya, Madagascar and Mozambique.

We used to talk about a brain drain from developing countries. We now talk about brain circulation rather brain drain. This is what is happening through astronomy. Under our programmes, several post-graduate African students are working at European universities, contributing to knowledge generation in Europe, but leading European astronomers
have also taken up positions in Africa through, for example, the South African Research Chairs programme.

A small statistic proves the impact of our initial investments. In 2003 there were 12 practicing radio astronomers in Africa. Today there are more than 180, all contributing not only to Africa’s growth and development, but also to the global scientific enterprise of discovery. We have had a dedicated human capital development programme as part of our astronomy sciences strategy. Bursaries at honours, masters and Phd level have been provided to young scholars.

Astronomy not only benefits human capital development. The development of research infrastructures is also significantly boosted through targeted investments in a discipline such as astronomy. These investments also encourage the development of research infrastructures for use by the broader scientific community such as high-speed research networks and computing resources. The latter is for example important to enable our life and climate scientists to share and analyze huge datasets – a pre-condition for the development of new drugs and vaccines, as well as effectively fighting climate change.

Honourable Members I would like to share with you a few thoughts about the SKA bid.

First of all, few gave Africa a chance to be successful in its bid to the host the SKA. But we did it. We proved the doubters wrong and today our continent is the proud co-host with Australia of the most exciting global science project for the 21st century.
I know that we achieved this, because we stayed the course, and we did not doubt ourselves. When others expected that we would falter, we stuck to our strategy and made the required investments in developing our human capital and research infrastructure – which we knew was necessary not only for the SKA but also for putting science and technology to work for the benefit of our people.

Hard work is rewarded, and our reward came when the African bid came out top in a technical assessment of the competing bids by independent experts. Given the complexity of decision-making in global science projects, with multiple scientific and non-scientific factors having to be taken into account, the final decision was for Africa and Australia to co-host the SKA. This does not make the African victory in any manner less significant.

In the end the international community in its wisdom decided to split the hosting of SKA in order to retain the best of both our bids. SKA can be split. It can be split on the basis of the different types of instruments, the high- and mid-frequency dishes to be built in Africa, the low-frequency antennae to be built in Australia, whilst it’s head office will reside in yet another country. That’s how international mega science projects often work to build a strong global alliance.

The message I want to leave with you today is this: irrespective of what will happen with CTA, Namibia should stay the course. Stay true to your principal objective. Continue to invest in education, science and technology – and let me congratulate you on the establishment of the
Namibian National Commission for Research, Science and Technology - truly an important milestone. We cannot predict what will happen with CTA, but I know Namibia's hard work, in terms of investment in science and education, will be rewarded. Future generations will benefit from your investment in science and technology.

Just as the final SKA site decision was influenced by external factors beyond Africa's control, determining the outcome of the decision for the CTA is not within our exclusive remit. But we are masters of our destinies. The futures of our children, our countries and region, are ours to determine – and that will be a better, brighter future through science and technology. So let our astronomy programmes continue to inspire and guide us, as we build globally competitive knowledge-based activities here in Southern Africa.

It was hard work to win the SKA bid and it took a long time, close on ten years. We put a lot of funding on the table and we have budgeted for more. It is our biggest basic science project yet. We backed it to the hilt, from universities to government, to technology companies. Namibia must do the same with the CTA. The Namibian Government must continue to back the investment in science and technology, especially astronomy, even though the benefits may seem intangible and may seem too far into the future. I urge you to think of the next generation who will thank you for your foresight and your fortitude.

South Africa will support you. We are friends and partners, and the destinies of our countries are intertwined.
Honourable Members, it is my hope that our engagement today will serve to further strengthen science partnerships between South Africa and Namibia and also in Africa. This can only be achieved through a more strategic, concerted approach to opportunities, such as those presented by astronomy. Indigenous knowledge systems and climate science are other areas where we can do more together. South Africa is committed to work with you in this regard. I thank you.