

SKA millions fund R&D

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The R500 million allocated to astronomy in the budget this year will be used in the development of digital signal processing for the Square Kilometre Array (SKA) telescope, software development and “innovative telescope antennas, using composites”. This is according to science and technology minister Mosibudi Mangena.

The SKA will be the largest radio telescope constructed and will cost at least R10 billion to build. SA is on a shortlist with Australia to host the international project.

“A final decision on the matter [the host country] is not expected before the end of the decade,” Mangena told Parliament in his annual budget vote speech on Friday.

Some of the half-billion-rand budgeted will be spent on starting construction of the Karoo Array Telescope (KAT), a 1:100-scale pilot project for the larger telescope. Mangena adds KAT “will, in turn, provide the means to train scientists and engineers to acquire relevant capabilities and skills” to construct and run the SKA.

“Initially, in our bid for the SKA, we intended to be considered only as a site. However, during the bid process it soon became clear we could play a far greater role in the development of the SKA technology and its science. And this, in turn, has, in a short time, ushered us into a leading role in the global SKA development.

“One of the welcome results of this mission-driven innovation has been a steady attraction of key personnel back to SA in affirmation, once again, of the correctness of the path we have chosen.

Collaboration

“The KAT team has already been recognised for its competence and is being called upon to assist and advise the international SKA project office on system engineering, costing and other key technology areas. The team is playing a lead role in collaboration with researchers in the UK, Holland, Australia and the US.”

Mangena says other infrastructure projects that he expects SA to benefit from in the near-term include the Centre for High Performance Computing, and nanotechnology. “With regard to nanotechnology and nanoscience, we are in the process of creating the physical infrastructure that will enable first class basic research, exploration of applications, development of new industries and the commercialisation of innovations,” Mangena told fellow MPs.

The minister also confirmed legislation leading to the creation of a South African Space Agency was on track “and we hope to present it to Parliament later in the year”.

Another Bill that Mangena wants passed this year will have a closer bearing on the SKA and will seek to keep a patch of the Karoo near Carnarvon free of manmade electromagnetic emissions. "...the Astronomy Geographic Advantage Bill... will enable the introduction of the measures to protect the sensitive astronomy sites and maintain SA's geographic advantage," he says. By this he means radio transmissions and cellphone masts are likely to be banned from the area.

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