APR10-2009-000144

Abstract for an Invited Paper for the APR10 Meeting of the American Physical Society

## African Astronomy and the Square Kilometre Array GORDON MACLEOD, Department of Science & Technology

We highlight the growth of astronomy across Africa and the effect of hosting the Square Kilometer Array (SKA) will have on this growth. From the construction of a new 25m radio telescope in Nigeria, to new university astronomy programmes in Kenya, the HESS in Namibia and the Mauritian Radio Telescope, to the world class projects being developed in South Africa (Southern African Large Telescope and Karoo Array Telescope) astronomy is re-emerging across the continent. The SKA will represent the pinnacle of technological advancement in astronomy when constructed; requiring ultra high speed data transmission lines over 3000 km baselines and the World's fastest computer for correlation purposes. The investment alone to build the SKA on African soil will be of great economic benefit to its people, but the required network connectivity will significantly drive commercial expansion far beyond the initial value of the SKA investment. The most important consequence of hosting the SKA in Africa would be the impact on Human Capital Development (HCD) on the continent. Major HCD projects already underway producing excellent results will be presented.