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Author: Prof. Mwangi Mbutia
Kenya, jmbuthia@uonbi.ac.ke

1KUNS TO NASPUON TO NASPUON – 0GPM2030: STRENGTHENING SPACE CAPACITY IN
KENYA THROUGH UNIVERSITIES

Abstract

Kenya's emerging space activities have been cemented with the establishment of the Kenya Space Agency in 2017. On 1th May 2018, the 1st Kenyan University NanoSatellite – Precursor Flight (1KUNS-PF), developed by University of Nairobi (UoN) and Sapienza University of Rome, was deployed from ISS as the 1st beneficiary of the UNOOSA/Japanese KiboCube cooperation. In this presentation, we focus on the progress that has been made since the 1KUNS project and highlight one of the capacity building efforts that the University of Nairobi is engaged in, with the support of the Kenya Space Agency (KSA). The NanoSatellite Platform of the University of Nairobi (NaSPUoN) is a student nanosatellite bench model project at UoN that is funded by KSA. It started in October 2020, with the goal of equipping students with the necessary skills for developing a space-grade model in the near future. This objective is oncourse with the signing of the agreement for NaSPUoN-Zero Gravity Peace Mission 2030 (NaSPUoN-0GPM2030) in March 2021. This is a 3U CubeSat that will be developed as a collaborative project between the University of Nairobi, University of Arizona (UofA) and Space Trust. In this presentation, the authors will present a first-hand account of the lessons learnt in these capacity building efforts. We will also review the results of international cooperation, which have contributed significantly to the strides that UoN, as well as Kenya, has made in space capacity building. UoN already has a rich experience in international collaborations for space matters. This includes collaboration with University of Rome, University of Arizona, Space Trust, UNOOSA and JAXA (through KiboCUBE program). We believe that such collaborations are essential for developing countries to nurture their space programs. However, there is need to set local structures to ensure that space activities continue beyond the lifetime of the collaborations. Hence, the presentation will aim to postulate on how developing countries can organically develop space capacity through dedicated and persistent collaboration with local universities and KSA that is fundamental in developing the human and technical skills to feed nascent space programs. We will also present some of the technical details from NaSPUoN and NaSPUoN-0GPM2030 projects. This will highlight the technical capacity that has been built over the years and the structures being laid to ensure that this capacity is retained and nurtured over the years to ensure that a developing country attains maturity in optimal space utilization.