Paper ID: 10722 oral student

## 45th IAA HISTORY OF ASTRONAUTICS SYMPOSIUM (E4) History of South African contribution to astronautics (4)

Author: Dr. Danielle Wood The John Hopkins University, United States

Dr. Annalisa Weigel Massachusetts Institute of Technology (MIT), United States

## SOUTH AFRICA'S SPACE JOURNEY: STORIES FROM YESTERDAY AND DECISIONS FOR TOMORROW

## Abstract

South Africa is celebrating an exciting rebirth in its space journey with the founding of a national space agency and hosting of the 2011 International Astronautical Congress. South Africa is at a pivotal time in its space history. The government is pursuing new efforts to promote and coordinate space-related programs. The government acknowledges that space-enabled technologies already play a key role in their society. They seek to promote this as a valuable industrial sector. This paper reports on the results of extensive field work in Cape Town and Pretoria during October and November 2010 that explored historic and current issues in South Africa's space activity, especially with regard to satellite technology. From a historic perspective, the paper examines what made it possible for South Africans to develop and operate Africa's first indigenous satellites. The study considers the role of international collaboration and contributions from players in government, industry and academia. The information for the study is based on in-depth interviews with key players at organizations such as Stellenbosch University and SunSpace and Information Systems. The paper closes with an analysis of the current state of the South African national space program as it lays a foundation for a new era. This analysis builds on a framework developed by the author that divides the strategic decisions facing South Africa into three broad categories: decisions about investment in national programs and capabilities for space; decisions about the relationship between national space activity and domestic institutions in government, industry, academia and the non-profit sector; and decisions about how the national space activity involves relationships with foreign and multilateral organizations and firms. The study considers the role of key institutions and the driving issues that are shaping South Africa's space efforts. The paper concludes by reflecting on how South Africa's historical trajectory is influencing the approaches taken in space today.