# Short Abstract Template

## The South African Virtual Observatory

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Virtual Observatories (VO) have been in development over the last decade to deal with the large upsurge in data volumes from large telescopes on the ground and in space. VO provides tools for storage and retrieval of vast quantities of data, and for the management, analysis, visualization and mining of the data. The Virtual Observatory initiative at SAAO is a major effort to utilize the most recent advances in computer hardware and software technology to develop a new generation of data analysis, visualization and mining tools. These tools will be able to address many Terabytes of data volumes generated by SALT and SKA. SAAO's VO initiative has undertaken a project with a aim to provide VO enabled access to the SALT data archive (SALT-VODAS). SALT-VODAS is in it's initial stages of development and will consist of highly sophisticated programmes which will be executed through simple user interfaces. Using SALT-VODAS, astronomers and students across the South Africa as well as the world will able to retrieve and download the SALT data which is available for public use without any cost. SALT-VODAS will be equipped with variety of VO tool which will help astronomer to do complicated analysis in an easier and time saving way. This add value to science projects which are being planned by scientists with SALT. It will also help to share SAAO VO expertise to future big projects such as SKA.

Virtual Observatory tools are a powerful medium student training as they bring vast astronomical resources, along with very easy to use but highly sophisticated tools. SAAO VO has started programmes to train students with NASSP and developed several student projects for demonstrating the interesting and latest results in astronomy, and at the same time to expose the students to modern developments taking place in the astronomy as well as in IT domain. SAAO VO is helping other institutes and universities within South Africa to developed similar student projects. A comprehensive list of VO-compatible applications, software's and tools are available on SAAO Virtual Observatory web page which also keep a local copy of all tools so that it can be downloaded easily. VO-News service of SAAO VO provides a regular update on existing VO tools. SAAO has been selected by the International Astronomical Union (IAU) to host the prestigious IAU Office for Astronomy Development (OAD) and will be the central point for capacity building using astronomy within South Africa and globally as well as new VO developments to South African astronomy community.